Report on Assessment Tools:
Appendices
December 2021

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MARYLAND HIGHER EDUCATION COMMISSION
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Appendix A - Narrative Reports

Community Colleges

Allegany College of Maryland

Narrative Report: Process for Selecting Current Assessment Procedures

From Fall 2015 through Spring 2017, the Task Force for New Initiatives in Developmental Education convened monthly at Allegany College of Maryland (ACM) to address multiple issues, including placement procedures and program revisions. The Task Force reviewed current literature and internal data, and then made recommendations. Based on these recommendations, the following procedures were implemented to place students in the appropriate English course.

Beginning in Spring 2018, students who graduate high school with a GPA of 3.0, or who meet the cut scores on PARCC, SAT, and/or ACT are eligible to enroll in college-level English. Students who do not meet one of these benchmarks are required to take the Next Generation Accuplacer. For placement in English courses, students take two tests: WritePlacer (an essay test), and the Reading Accuplacer test. The cut scores for Reading were based on the concordance tables provided by Accuplacer during the transition from the Classic Accuplacer to the Next Gen Accuplacer. The required WritePlacer scores were based on our previous placement scores because WritePlacer did not change in the transition to Next Gen Accuplacer. Based on the Reading Accuplacer score and the WritePlacer score, students are placed into one of the following English courses: English 92, English 93, English 95, or English 101. Students who score below 233 on the Reading Accuplacer are required to take a one-credit Critical Reading course (READ 97) or the five-credit Reading/Writing Workshop I or II (ENG 92 or ENG 95). *(Appendix A: Next Gen Accuplacer Placement Grid)*

The Accuplacer WritePlacer essay test uses automated scoring, which English faculty have found to be generally accurate; however, Advisors occasionally ask English faculty to read an essay that was auto-scored if they believe the student was under-placed. In addition, essays with an automated score of 5 are always read and scored by English faculty to determine the appropriate placement since students with this score could enroll in either ENG 101 or developmental English, including the Accelerated Learning Program (ALP) called English 93 Leap. *(Appendix B: Placement Advising)*

Since students cannot self-register for Developmental English courses, they always have a conversation with an Advisor, which has improved placement immensely. In addition to these procedures, students are allowed to retake the Accuplacer while enrolled in the course if they believe they can test out of the course. From ACM's Academic Regulations, Section 6-A2:

While enrolled in a developmental course, students may retake the corresponding section of the placement assessment with permission from the Division Chair of Mathematics or the Chair of Academic Development. If a student achieves a score high enough to exit that course, then the student will be given a grade of "C" for the course.

Appendix C contains grades and pass rates 2019-2020 for Academic Development courses.

Method Used to Determine Optimum Placement into Mathematics Courses at Allegany College of Maryland

During the 2018 academic year a Developmental Education Committee was organized. All critical personnel were on this committee. The Institutional Research Department analyzed data from all students from the previous year. A correlation matrix was calculated that had the correlation and regression equation between the independent variables (Grade in High School Algebra II, High School GPA, SAT/ACT score, and Accuplacer Math Placement Assessment Score) with the dependent variable (Grade in the college-level mathematics course). Students that had taken a developmental course prior to the college-level mathematics course were removed from the data, since their grades would have been higher due to the knowledge and skills gained through their developmental math course. Each college-level math course was looked at individually.

The results of this study showed that Grade in high school Algebra II was the best predictor of grade in College Algebra. The regression equation predicted that if a student got a grade of B or higher in their high school Algebra II course, then the students predicted grade in College Algebra would be a middle C grade.

The results in Statistics and Liberal Arts math courses showed that high school GPA was the best predictor of grade in these two math courses. The regression equation showed that if a student had a high school GPA of 3.0 or higher, then the expected grade in either of these two courses should be at least a middle C grade.

We therefore used this method to determine placement into college-level math courses. The Statistics course and the Liberal Arts Math courses had only Elementary Algebra as a prerequisite before the study was performed. The College Algebra course uses Intermediate Algebra as the prerequisite, since College Algebra is the next sequential course after Intermediate Algebra, which is equal to high school Algebra II.

A timeframe of three-years was used as the limit to how long high school grades and high school GPA could be used as a reliable data value. This information came from the committee's research into placement methods at other colleges in the US. This method of placement verifies many other studies that found that grades in Algebra II and high school GPA are much better predictors of student success than placement tests.

Students that do not meet these criteria who wish to start at a college-level math course can take the Accuplacer Math Assessment or supply SAT/ACT scores. Students can also supply college transcripts showing that they completed an equivalent developmental math course at a different college.

Appendix A

NEXT GENERATION ACCUPLACER

ENGLISH/READING

*Writeplacer requires an essay of a minimum of 300 words and evaluates the writing based on purpose and function, organization and structure, development and support, sentence variety and style, mechanical conventions, and critical thinking. Students may retake Writeplacer, the essay portion, without retaking the Reading portion.

Writeplacer (Essay)*	Placement
0-2	ENG 92
3	ENG 95
4	ENG 95 or ENG 93/101 (LEAP)
5	Hand-score (ENG 95 or LEAP or ENG 101)
6-8	ENG 101

Students who score 252 or lower in Reading may opt to retest once and may retake the Reading or Writeplacer test or both.

Next Gen Reading Score	Placement
200-232	ENG 92
233-252	ENG 95 or ENG 93/101 LEAP **plus** RDG 97
253-300	ENG 93/101 LEAP or ENG 101 (No Reading)

For essays that need to be hand-scored (Writeplacer score of 5), the person evaluating the writing should use the following Accuplacer Rubric as a framework to guide the decision. Students who maintain a high level of quality in the following categories would probably do well in LEAP or ENG 101.

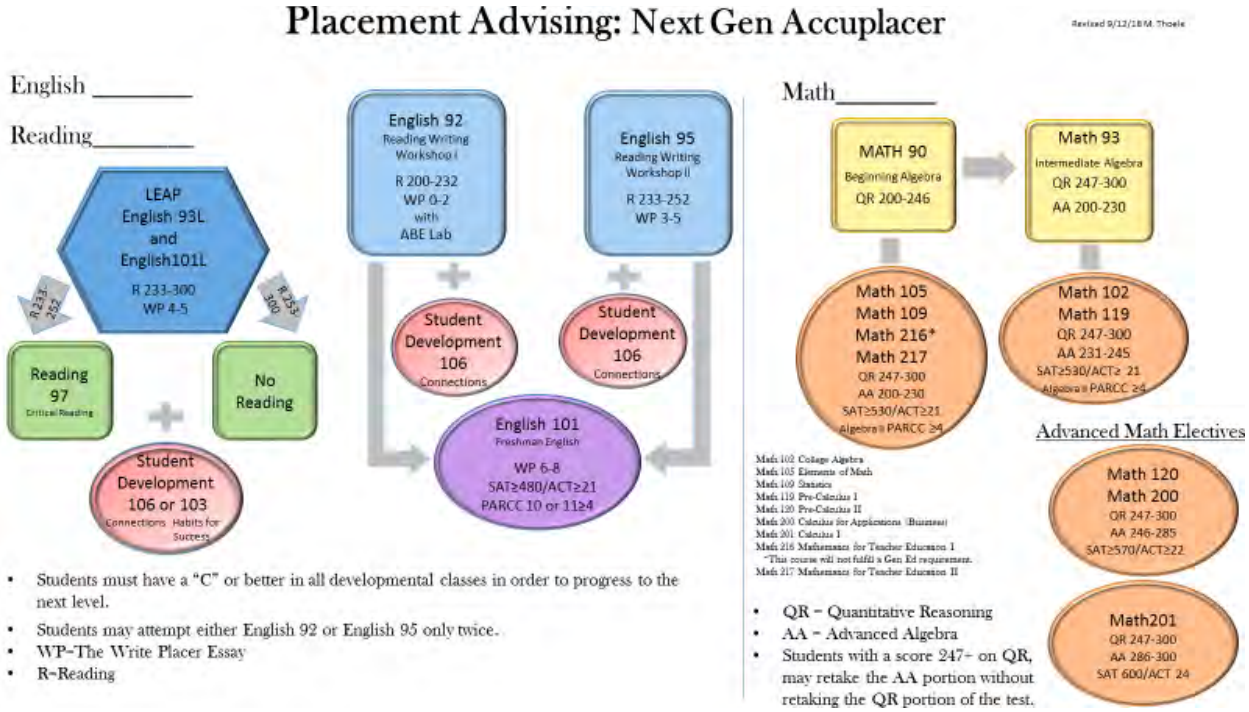
Eight Point Rubric Score of 5	An essay in this category demonstrates adequate mastery of on-demand essay writing although it will have lapses in quality. A typical essay:
	• develops a viable point of view on the issue
	• may stray from the audience and purpose, but is able to refocus
	• is generally organized and focused but could lack coherence and logical progression of ideas
	• exhibits adequate but inconsistent control of language
	• demonstrates some variety in sentence structure
	• contains some minor errors in sentence structure, grammar, spelling, and punctuation

MATH

Quantitative Reasoning	Advanced Algebra**	Math Placement
200-238	-	MATH 90
239-246	-	MATH 90 OR 96
247-300	200-230	MATH 93, 105, 109, 216, or 217
247-300	231-245	MATH 102 or 119
247-300	246-285	MATH 120
247-300	286-300	MATH 200 or 201

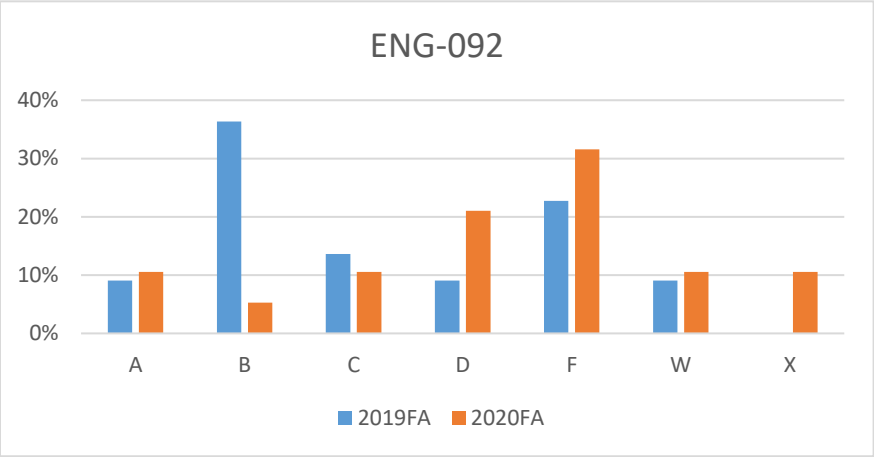
**Students who score 247 or higher on the Quantitative Reasoning but do not score well on the Advance Algebra may retake the Advance Algebra portion without retaking Quantitative Reasoning. The Advanced Algebra portion may also be used to determine the placement of high performing students (PARCC, SAT/ACT, or high school grades) into advance math courses.

Appendix B

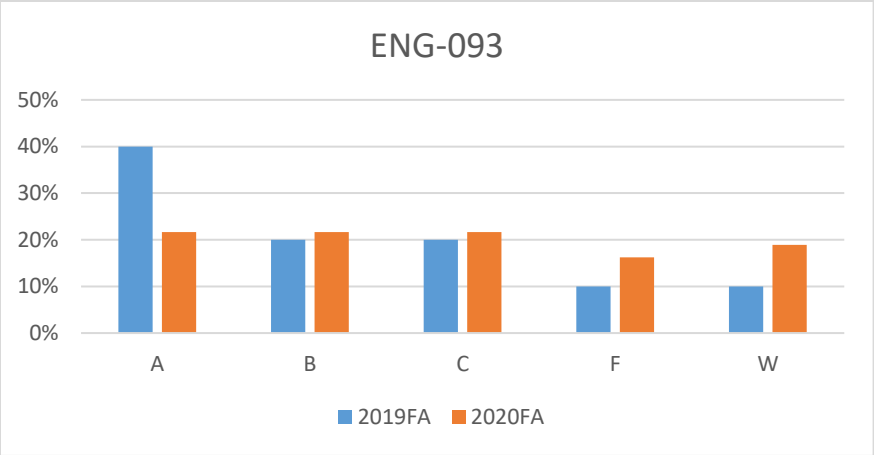

Placement Advising: Next Gen Accuplacer
Revised 9/12/18 M. Thoele
English _____
Reading_____
LEAP English 93L and English101L
R 233-300
WP 4-5
R 233-252
R 253-300
Reading 97
Critical Reading
No Reading
Student Development 106 or 103
Connections Habits for Success
English 92
Reading Writing Workshop I
R 200-232
WP 0-2
with ABE Lab
English 95
Reading Writing Workshop II
R 233-252
WP 3-5
Student Development 106
Connections
Student Development 106
Connections
English 101
Freshman English
WP 6-8
SAT≥480/ACT≥21
PARCC 10 or 11≥4
Students must have a "C" or better in all developmental classes in order to progress to the next level.
Students may attempt either English 92 or English 95 only twice.
WP-The Write Placer Essay
R-Reading
Math_____
MATH 90
Beginning Algebra
QR 200-246
Math 93
Intermediate Algebra
QR 247-300
AA 200-230
Math 105
Math 109
Math 216*
Math 217
QR 247-300
AA 200-230
SAT≥530/ACT≥21
Algebra II PARCC ≥4
Math 102
Math 119
QR 247-300
AA 231-245
SAT≥530/ACT≥ 21
Algebra II PARCC ≥4
Advanced Math Electives
Math 102 College Algebra
Math 105 Elements of Math
Math 109 Statistics
Math 119 Pre-Calculus I
Math 120 Pre-Calculus II
Math 200 Calculus for Applications (Business)
Math 201 Calculus I
Math 216 Mathematics for Teacher Education I
*This course will not fulfil s Gen Ed requirement.
Math 217 Mathematics for Teacher Education II
Math 120
Math 200
QR 247-300
AA 246-285
SAT≥570/ACT≥22
Math201
QR 247-300
AA 286-300
SAT 600/ACT 24
QR = Quantitative Reasoning
AA = Advanced Algebra
Students with a score 247+ on QR, may retake the AA portion without retaking the QR portion of the test.

Appendix C

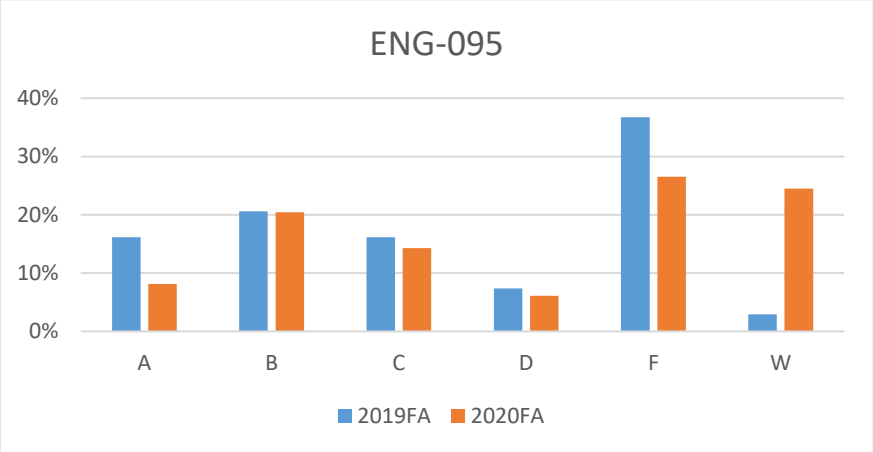
ENG-092	2019FA	2020FA	2019FA	2020FA
A	2	2	9%	11%
B	8	1	36%	5%
C	3	2	14%	11%
D	2	4	9%	21%
F	5	6	23%	32%
W	2	2	9%	11%
X		2	0%	11%
Total	**22**	**19**		
Pass with D	68%	47%		
Did Not Pass	32%	53%		
Pass Factoring Out W and X	75%	60%		
Did Not Pass Factoring Out W and X	25%	40%		



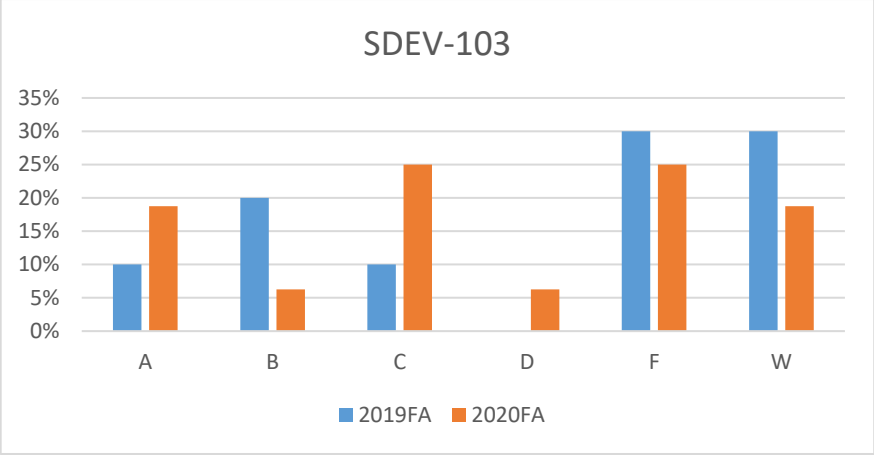
ENG-093	2019FA	2020FA	2019FA	2020FA
A	20	8	40%	22%
B	10	8	20%	22%
C	10	8	20%	22%
F	5	6	10%	16%
W	5	7	10%	19%
Total	**50**	**37**		
Pass with D	80%	65%		
Did Not Pass	20%	35%		
Pass Factoring Out W and X	89%	80%		
Did Not Pass Factoring Out W and X	11%	20%		



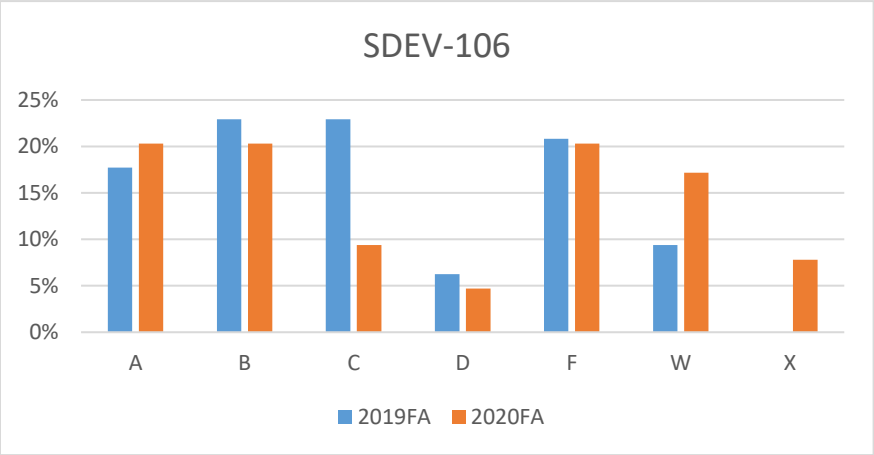
ENG-095	2019FA	2020FA	2019FA	2020FA
A	11	4	16%	8%
B	14	10	21%	20%
C	11	7	16%	14%
D	5	3	7%	6%
F	25	13	37%	27%
W	2	12	3%	24%
Total Headcount	**68**	**49**		
Pass with D	60%	49%		
Did Not Pass	40%	51%		
Pass Factoring Out W and X	62%	65%		
Did Not Pass Factoring Out W and X	38%	35%		



SDEV-103	2019FA	2020FA	2019FA	2020FA
A	1	3	10%	19%
B	2	1	20%	6%
C	1	4	10%	25%
D		1	0%	6%
F	3	4	30%	25%
W	3	3	30%	19%
Total Headcount	10	16		
Pass with D	40%	56%		
Did Not Pass	60%	44%		
Pass Factoring Out W and X	57%	69%		
Did Not Pass Factoring Out W and X	43%	31%		



SDEV-106	2019FA	2020FA	2019FA	2020FA
A	17	13	18%	20%
B	22	13	23%	20%
C	22	6	23%	9%
D	6	3	6%	5%
F	20	13	21%	20%
W	9	11	9%	17%
X		5	0%	8%
Total Headcount	96	64		
Pass with D	70%	55%		
Did Not Pass	30%	45%		
Pass Factoring Out W and X	77%	73%		
Did Not Pass Factoring Out W and X	23%	27%		



Additional Data Points

Average Grade for all courses attempted by Term for Students who did not pass ENG-092	
2019FA	0.419
2020FA	0.273

Average Grade for all courses attempted by Term for Students who did not pass ENG-095	
2019FA	0.399
2020FA	0.394

Final: August 31, 2021

Anne Arundel Community College
Narrative Report on Placement Process and Analyses for MHEC
September 1, 2021

Prepared by Dr. Alicia Morse, Dean of the School of Liberal Arts, with support from Dr. Shuang Liu, Associate Vice President for Continuous Improvement and Innovation Analytics, and Dr. Kerry Taylor, Assistant Dean of English, Academic Literacies, and Communications and PRIA Data Analyst

Part 1: Narrative: A 1000-word summary regarding the process and procedure that was used to select the current assessment tools (and cut off scores) for testing students to see if they need remediation/developmental coursework or support.

Placement Testing Philosophy and Tools

Anne Arundel Community College (AACC) respects the diverse set of knowledge, skills, and experiences that our students possess and as such, we provide students with multiple tools for placement testing to support student success. AACC currently uses the following placement (i.e., assessment) tools: unweighted high school grade point average, course grades in high school mathematics courses, Next Generation Accuplacer (Reading Placement, Writing Placement, Quantitative Reasoning/Statistics, Advanced Algebra and Functions), IB, SAT, ACT, AP, CLEP, GED, PARCC, and previous college coursework. AACC utilizes a ***disjunctive*** multiple measures approach to placement to increase access to college-level courses: the student's placement in developmental, corequisite, or credit-level courses is determined by the highest placement among all assessment scores submitted.

Process and Procedure Used to Select Current Placement Tools

In spring 2016, the Dean of the School of Liberal Arts convened a cross-divisional "Placement Test Implementation Team" consisting of department chairs in the Mathematics, English, and Academic Literacies (formerly Reading) Departments, the Director of Testing Services, the Dean of Planning, Research and Institutional Assessment, and representatives from the Registrar's office, Admissions, Advising, Information Services, and the English as a Second Language program. The team underwent a comprehensive two-year research phase of current and new assessment tools using local and national data and published research. In June 2018, the team made the following recommendations (effective fall 2019):

1. Reduce the use of standardized placement testing by using existing assessments. Accepted assessments will include: unweighted high school grade point average (GPA); grades in high school math courses; standardized test scores (e.g., SAT, ACT, PARCC, AP, IB, TOEFL); GED; course work from an accredited higher education institution or military transcript (e.g., ACE).
2. Unweighted high school GPA will be used for placement into the English composition sequence. A combination of unweighted high school GPA and grades in high school math classes will be used for placement into mathematics courses.

The primary focus of the Placement Test Implementation Team's work then turned to the two *new* tools being adopted for placement purposes to determine cutoff scores for developmental, corequisite, and

credit-level courses: (i) College Board's *Next Generation Accuplacer* and (ii) the high school transcript. The process used to determine cutoff scores for each of these new tools follows.

Next Generation Accuplacer The Director of Testing Services hosted a meeting with a representative of the College Board in spring 2016 for faculty stakeholders in the Academic Literacies, English, and Mathematics Departments. The representative provided information about the number and type of assessments and the skills-based approach of *Next Generation Accuplacer*. Over the next year, faculty stakeholders explored the new placement tests using their professional knowledge of student skill levels and AACC's curriculum. They examined the types of questions, the scores associated with different skill levels, and the association between *Next Generation Accuplacer* assessments/scores and developmental, co-requisite, and credit math and literacy/composition course learning outcomes. Faculty and staff stakeholders then compared College Board's *Skills Insights* documentation[1] to learning outcomes in developmental, co-requisite and first-level courses outcomes in literacy, composition, and mathematics. In addition, the Mathematics Department chair used her professional network to obtain cutoff scores in use for mathematics courses from ten higher education institutions across the United States who had previously implemented *Next Generation Accuplacer.* In early fall of 2018, we sent recommended cutoff scores for *Next Generation Accuplacer* assessments in *Reading* and *Writing* for placement into English composition sequence and cutoff scores for the *Quantitative Reasoning/Statistics* and *Algebra and Advanced Functions* assessments for each of the three mathematics pathways to the Vice President for Learning. After a final review of how AACC's cutoff scores compared to proposed cutoff scores from sister community colleges in Maryland, AACC's cutoff scores were finalized and implemented for the fall 2019 term.

High School Transcript as a Placement Tool In 2018, the presidents of Maryland's community colleges mandated the use of an unweighted high school grade point average of 3.0 or higher for placement into first-level credit composition and mathematics courses. In order to maximize access to credit-level English courses, we looked at fall 2017 data for students enrolled in the English composition sequence for whom AACC has access to the students' unweighted high school GPA (n=298) to and compared ranges of GPA with the distribution of grades in the courses. Based on that study, we recommended that students with an unweighted GPA of at least 2.6 be eligible for credit English composition. To maximize access to credit-level mathematics coursework, the process was more complex as "first level" mathematics courses have a wide range of prerequisite skills necessary for success. For example, the algebra skills needed for success in Elementary Statistics are different than the precalculus skills needed for success in Calculus 1, yet both are "first level" mathematics courses. Thus, AACC placed students in a liberal arts math course using an unweighted GPA of at least 3.0. Placement by high school transcript in all other "first level" mathematics courses was determined by a minimum unweighted GPA of XX and a minimum course grade in the specified prerequisite high school mathematics course.[2]

Other Placement Tools AACC has used scores on standardized exams for placement for over twenty years. Currently, AACC accepts standardized test scores for placement from the following: SAT, ACT,

[1] *Skills Insight* is a College Board publication that provides descriptions of skills attained for specified ranges of scores on each of the Next Generation Accuplacer assessments.

[2] For example, placement in AACC's Precalculus I (i.e. MAT 145) required a minimum unweighted GPA of 3.0 and a grade of at least C in high school Algebra II.

PARCC, AP, IB, TOEFTL, and GED. AACC's cutoff scores conform to the agreement established by MHEC and MSDE. AACC also accepts transfer credit from accredited higher education institutions and ACE. Credit from transfer courses can also serve as an indirect placement tool. For example, a student who has transfer credit at AACC for *Composition I* and *College Algebra* from a different institution, are not required to submit placement test scores at AACC.

Part 2: For formal studies, institutions can upload presentation slides, reports, and other materials that were shared with audiences. For less formal work, please summarize the studies and findings and limit to no more than three pages (plus appendices). The survey limits validity study uploads to no more than five items.

Continuous Improvement in Placement Testing at AACC

In Fall 2019, eight research questions were developed to assess the substantial changes to placement at AACC. The research plan can be reviewed in the attachment *Report-Placement Measures Study-Questions 1 through 8-following Fall 2019***.**

In January 2020, a 46-page report was prepared by the office of Planning, Research, and Institutional Assessment (PRIA) that responded to the eight research questions. Three documents are attached that relate to this analysis:

(i) *Report on the New Placement Criteria Implemented Fall 2019*, the 46-page report
(ii) *2020 - 2021 Mathematics Literacy Placement Protocol (2.21.20),* detailed information on adjustments to the placement cutoffs based on the two previous reports.
(iii) *Report on Revised Placement Criteria Implemented Fall 2020*

Summary of Findings: New Placement Criteria PRIA analysts conducted a complex, descriptive analysis showing relationships between placement and course success. The complete report is attached. The following high-level takeaways were observed.

English composition sequence

- 75% of placements were based on unweighted high school GPA
- Approximately 75% of students who placed using *Next Generation Accuplacer* placed into developmental or co-requisite courses
- 70% and 75% of students who placed by SAT or ACT scores, respectively, placed into credit composition
- Successful students (e.g. grades of A, B, C) represented by this study were retained at a rate of 89% in spring 2020; unsuccessful students represented by this study were retained at a rate of 44%
- Unweighted high school GPA alone is an indicator of success in credit composition for GPAs of at least 3.0. High school GPA is not a useful indicator of success in developmental or corequisite literacy/composition courses.

Mathematics Pathways

- Coursework plus unweighted high school GPA was the most common placement tool used, representing 75% - 90% of placements, depending upon the mathematics course.
- Coursework plus high school GPA resulted in increased access to credit mathematics courses.
- In general, students who placed using Accuplacer were more likely to place in a developmental course.
- High school GPA alone was not an indicator of student success in mathematics courses; high school GPA plus another measure is an indicator of student success in mathematics courses.

Adjustments to Cutoffs using Next Generation Accuplacer and High School Transcripts Based on the February 2020 analysis, adjustments were made to the cutoff scores for *Next Generation Accuplacer* and for high school transcript data. In general, we sought at least 60% success as a benchmark for an effective placement range of scores (where success is defined as the percentage of students earning a grade of A, B, or C). Since the 2019 – 2020 new placement tools cutoff scores indicated significant over placement with GPAs below 3.0 in both English composition and mathematics, we restricted GPAs to at least 3.0 for placement purposes. In addition, certain ranges of Accuplacer scores were also associated with significant over placement. In both cases, placement ranges were adjusted up to better ensure student success based on placement. A complete listing of the adjustments made is in the attached document *2020 - 2021 Mathematics Literacy Placement Protocol (2.21.20).* The adjustments became effective in fall 2020 and remain in effect for the 2021 – 2022 academic year.

In summary, we believe our data indicate an unweighted high school GPA of 3.0 to be an effective measure of success in first-level English composition. In first-level mathematics courses, a high school GPA of 3.0 along with a grade of at least C in the equivalent level high school math course is an effective measure of success in the same college level mathematics course (i.e. GPA of 3.0 plus a grade of C in *high school precalculus course* is a predictor of success in *AACC's precalculus course*).

Follow Up Study in January 2021 In March 2021, PRIA analysts repeated the initial study for students enrolled in fall 2020 under the revised placement cutoff scores. The complete report is attached. The following high-level takeaways were observed.

English composition sequence

- Final placement for fall 2020 cohort of students in the English composition sequence was 83.4% credit level composition, 10.1% co-requisite composition, and 3.4% developmental literacy.
- 89.0% of students placing in college-level composition were placed using unweighted high school GPA and 10.6% using SAT scores
- Placement in credit composition by unweighted high school GPA of at least 3.0 is associated with an overall success rate of 72.7%
- Placement in credit composition by a measure other than unweighted high school GPA is associated with an overall success rate of 71.4%

- Successful students (e.g. grades of A, B, C) represented by this study were retained at a rate of 85.5% in spring 2021; unsuccessful students represented by this study were retained at a rate of 42.3%

Mathematics Pathways

- High school transcript data (i.e., GPA plus other coursework) is most likely to place a student in the following first-level credit math courses: Liberal Arts Math (75%), College Algebra (82.6%), Finite Math or Statistics (80.6%), or Precalculus (94.1%).
- The percentage of students who place at any level math course (e.g., developmental, co-requisite, or credit) using high school transcript data ranges from 35.5% (Calculus pathway) to 51.0% (Quantitative pathway).
- Placement by Next Generation Accuplacer testing is more likely to place a student in a developmental or co-requisite course in any of the three math pathways.
- Placement by SAT or ACT scores is more likely to place a student in a credit level math course.
- The association between placement using the updated placement cutoffs and course success showed improvements for co-requisite and credit mathematics courses. Students placing in standalone developmental mathematics courses (e.g., MAT 036, MAT 044) using Next Generation Accuplacer did not improve. Detailed success rates are available in Tables 6a – 6k in the report titled *Placement Measures Study for Fall 2020.*

In summary, AACC has successfully implemented the use of high school transcripts as a tool for placement. We have identified strong correlations between high school GPA and other coursework and success in credit composition and co-requisite and credit mathematics courses as documented in AACC's June 2021 *PRIA Research Brief* that focused on developmental student success. The use of *Next Generation Accuplacer* as a placement tool is less successful. Students who rely on Accuplacer for placement are likely to not have standardized test scores or high school transcript outcomes that can be used for placement. Accuplacer results tend to place students into standalone developmental courses or co-requisite courses. In addition, students who place in lower via Accuplacer are likely to not be successful in their college-level English and mathematics courses. AACC will continue to seek refinements in placement protocols.

Baltimore City Community College's (BCCC) College-level Readiness Assessment and Course Placement Policy is used to determine the course level a student will start on their path to success at the College in mathematics and reading/English and other transferable courses. Prior to the College-level Readiness Assessment and Course Placement Policy, most entering students were assessed for placement using a standardized placement test. The new policy will allow for students to be assessed and placed via additional forms of assessment utilizing a rubric following the Memorandum of Understanding (MOU) signed by the Public-School Superintendents Association of Maryland and the Maryland Association for Community Colleges (MACC).

State/Federal Regulatory Requirements

The College and Career Readiness and College Completion Act of 2013 (CCR-CCA)

Senate Bill 740 update the CCR/CCA Toolkit 2019

http://www.dsd.state.md.us/COMAR/subtitle_chapters/13B_Chapters.aspx

Baltimore City Community College (BCCC) will utilize a variety of assessment measures to demonstrate college readiness for initial course placements in math, reading/English as well as for placement in other college-level courses. The form of assessment(s), subject area, score(s), date(s), and placement recommendation(s) will be captured in the student information system for every student's assessment.

Initial Placement at Baltimore City Community College

Students can demonstrate readiness to succeed in college-level courses via one or more of the options noted below.

1. BCCC Alternative Math and English Assessment
2. Transferable College Level Coursework
3. Degree from an Accredited College or University
4. SAT and/or ACT Tests
5. Advanced Placement (AP) Exam
6. Official High School Transcript Review
7. High School Transition Course
8. College Level Exam Program (CLEP)
9. Prior Learning Assessment
10. Standardized Placement Exam e.g. Accuplacer, TOEFL®

Documentation is required at the time of registration including official transcripts, College Board exams and CLEP results. Admissions and advising do the initial review of the transcripts and make placement determinations based on rubrics as developed by Academic Affairs. Any questions on placement are directed to the Dean or Associate Dean in the content area. Once the placement is determined the Registrar places the proper exemption/placement on the students record allowing the student hen to register. Students taking the ACCUPLACER do so at the testing center and the score is uploaded to the students record.

Reassessment

A student may retake some portions of the alternative assessment. Please meet with an advisor to discuss reassessment and other placement options.

Carroll Community College: process and procedure used to select placement tools:

In 2018, College Board announced the rollout of *Accuplacer Next Gen* for Math and English, thus a review of placement test tools ensued. Collaboration with other colleges (data sharing) and review of academic literature was persuasive in selecting our instruments and implementing high school GPA placement.

Carroll began placing students using junior-year, unweighted, high school GPA for students starting in the 2019/Summer and Fall semesters. A student with a 3.0 or higher GPA was deemed college-ready for ENGL-101 and General Education non-calculus Math. A 2.5 – 3.0 GPA was deemed ready for ENGL-101/ALP (co-requisite Accelerated Learning Pathway). Students with lower GPAs were referred for traditional placement testing (lower GPA placements were not calculated).

In academic year 2018-19, Math faculty participated in an ALT-Placement Project Pilot through the University System of Maryland Foundation – Kirwan Center for Academic Innovation. Data was collected and analyzed using ALEKS PPL (Assessment and Learning in Knowledge Spaces; Placement, Preparation, and Learning) for math placement for randomly selected students from July 2018 through Fall 2018. Subsequently, we adopted ALEKS PPL as our official Math placement method for AY19-20. Math faculty cited these reasons for selecting ALEKS PPL over NextGen Accuplacer or any other method for placing transitional students:

- ALEKS uses open-ended responses only; NextGen uses open-ended and multiple-choice.
- ALEKS places using a single assessment; NextGen requires 2 tests.
- ALEKS provides personalized prep and learning modules based on the student's first test. NextGen requires use of outside remediation resources such as Khan Academy.
- ALEKS allows required pre and learning module study time before re-testing.
- ALEKS retesting can be managed (students are allowed up to four re-tests).
- ALEKS recommended cut scores that we adjusted state-wide based on course structure. NextGen math did not provide concordance tables.

ALEKS was utilized beginning with 2019/Summer placements. Due to COVID, placement testing for 2020/Summer and 2020/Fall Spring was un-proctored.

English faculty utilized recommendations from College Board and data from other institutions, as well as our own research to set Next Gen English placement scores. Carroll had been using writing sample review for English placement test appeal and to confirm placement on the first day of English classes. During COVID, students wrote samples un-proctored and emailed their submissions for placement by trained English faculty.

In summary, in addition to our own research, we relied on our peer institutions and the academic literature to make significant revisions to our college-level placement methods starting in 2018. Our goal with these changes was to reduce barriers to educational progress and tuition expense to students. We are tracking our student data following these changes to ensure they are serving students and setting them up for academic success at a reasonable cost as is consistent with our mission as a public community college.

CECIL COLLEGE
VALIDITY STUDIES IN PLACEMENT
2021

MULTIPLE MEASURES AGREEMENT

Each year the Maryland Association of Community Colleges and the Public-School Superintendents Association of Maryland update a Memorandum of Understanding that outlines agreed-upon criteria for college and career readiness. These criteria were negotiated based on Students who meet these standards in 11th or 12th grade are automatically placed in college-level English and Math courses. Cecil College uses these criteria to place students in college-level English and Math courses. Those criteria are:

Criteria	English Language Arts	Math
MCAP	English 10 score of 750	Algebra II score of 750
SAT	Old SAT score of 500 on EBRW New SAT score of 480 on EBRW	Old SAT score of 500 in Math New SAT score of 530 in Math
ACT	Average of 21+ on English and Reading	21+ on Math
AP	English Language and Composition OR English Literature and Composition score of 3, 4, or 5	Calculus AB, Calculus BC or Statistics score of 3, 4, or 5
IB	Lang A: Lit SL or HL OR Lang A: Lang and Lit. SL or HL Grade of 4 or above on one or more	Math Studies Math SL, Math HL, further math Grade of 4 or above on one or more
Next-Generation ACCUPLACER	Writing score of 263 Reading score of 263	Score of 263 on Next-Generation quantitative Reasoning Algebra and Statistics (QAS) assessment for Intermediate Algebra; Liberal Arts Math; Topics in Math Literacy; First or only Statistics Course; Finite Math. Score of 272 on Next-Generation QAS for College Algebra; Concepts for Elementary Teachers I, II, & III; AND ALSO Intermediate Algebra; Liberal Arts Math; Topics in Math Literacy; First or only Statistics Course; Finite Math
Dual Enrollment	Admission to and enrollment in a Maryland IHE's appropriate ELA college credit-bearing course; Existing local agreement	Admission to and enrollment in a Maryland IHE's appropriate math college credit-bearing course; Existing local agreement
GPA	Verified cumulative unweighted high school GPA of 3.0 or better within the past 5 years	Verified cumulative unweighted high school GPA of 3.0 or better within the past 5 years

College analysis of the success of these criteria for placement is positive. From Fall 2018 to Spring 2021, students who were placed in college-level math or English courses through their verified cumulative high school grade point average were at least slightly more likely to earn an A, B, or C in the college-level course than students placed through another measure.

	Placement Type	Number earning an A, B, or C	Number placed in college-level course	% who earned an A, B, or C
College-level Math	GPA	146	240	61%
	Other	113	198	57%
College-level English	GPA	240	343	70%
	Other	230	410	56%

MATH:

The Cecil College Mathematics Department currently uses multiple tools for placement as detailed in the table above. Previously, the department used ACCUPLACER. When this tool changed in early 2019, community college mathematics faculty statewide examined all placement options. Data was shared at statewide community college math meetings and costs were considered. Cecil College was already using ALEKS in our developmental math courses so there were advantages to choosing ALEKS Placement Preparation and Learning (PPL) for placement.

Cut scores for the ALEKS PPL placement were discussed both internally and statewide and a common set of cut scores was agreed upon.

Course	ALEKS PPL Score
MAT 096 Math Fundamentals	0-21*
MAT 097 Introductory and Intermediate Algebra	22-45
MAT098 Advanced Intermediate Algebra MAT123 Finite Math MAT127 Introduction to Statistics MAT 133 Mathematical Concepts and Structures I MAT134 Mathematical Concepts and Structures II	46-60
MAT121 Precalculus	61-75
MAT201 Calculus I with Analytic Geometry	76-100

*In fall 2021, MAT 096 will no longer be offered. Students who receive an ALEKS PPL score less than 22 will be advised to take a week-long math boot camp course to prepare them for MAT 097.

Many of the larger schools in the state provided data on placement scores. With ALEKS PPL students can attempt the placement test up to 5 times. We have students use 1 or 2 of these attempts as practice so the student is still able to take the proctored placement test twice.

ENGLISH:

The Cecil College English Department currently uses the multiple tools for placement as detailed in the Table above. In addition, the College has an agreement with the Cecil County Public Schools that if students take the equivalent of EGL 093 Integrated Reading and Writing Level II in their senior year of high school and pass both the course and the final exam with a 70% or higher, they may enroll in the first semester college-level English course.

The College previously used ACCUPLACER to assess students who lacked other assessment measures. After considering the changes to ACCUPLACER that took effect in 2019, English faculty designed their own placement tool, which involves a brief self-assessment and a timed essay in response to a reading (thus, both reading comprehension and writing skills are assessed). On our placement site, students can access tips for completing the assessment tasks, and they are encouraged to contact the Writing Center for

pre-assessment tutoring. Once they complete the tasks, their essays are read by a team of English Faculty who may also consult with point persons for particular courses to determine the most appropriate placement. English Department faculty are tracking the pass rates for students placed by the English Essay and other methods in order to determine the reliability of the Essay placement tool. Data for students who were placed between May and December 2020 showed that students placed through the Essay option passed the course they were placed into at similar or greater rates when compared to students placed using all placement options.

	Placement Type	**% who passed**
Integrated Reading and Writing Level II (Developmental)	Essay	64%
	All	62%
College Composition (College-level)	Essay	83%
	All	64%

JCR Assessment and Validity Study Survey

Chesapeake College

Please upload the Narrative report. PDF format only. Narrative report should be no longer than 1000 words and summarizes the process and procedures used to select your institution's current assessment tools.

The current assessment tools, and the available exemptions, are the product of the work of the Developmental Studies Committee. The Developmental Studies Committee (DSC) is a standing committee that meets monthly during the fall and spring terms. Recommendations for placement practices originate with the DSC and are approved by the VP of Workforce and Academic Programs. The Accuplacer Next Generation is used as the primary placement test for math. This assessment, published by the College Board, is a well-researched and broadly used tool designed for college placement. The WritePlacer is used for writing assessment and English placement. This assessment was selected because it includes assessment of an actual writing sample, rather than a multiple choice test. The writing focus aligns closely with the content of our English 101 course.

As criticism of standardized college placement tests have become known, the college began accepting exemptions for placement. The forms of exemption are numerous and come from the recommendations of the Maryland Association of Community Colleges (MACC) which included English and math sub-groups comprised of community college faculty. Guidance on placement exemptions has also been provided by several of the affinity groups including Maryland Council of Community College Presidents (MCCCP), Maryland Council of Community College Chief Academic Officers (M4CAO), Maryland College Testing Association (MCTA), and Maryland Two-Year Colleges Math Leaders Affinity Group (MTYCMLAG). Students may receive exemptions based on their high school GPA, SAT scores, ACT scores, GED score, CLEP scores, AP exam, a transition course in high school, or instructor recommendation. Instructor recommendation is only used in English courses and only after completing a writing sample. All developmental English students are given a first-day diagnostic to provide a secondary assessment of their reading comprehension and writing composition skills. The diagnostic is also used to determine if the students are indeed appropriately placed in the developmental course.

The Developmental Studies Committee is continually evaluating and working to improve the quality of developmental instruction and promote student success. There have been several adjustments made over the years, including transitioning to the math emporium model to accelerate developmental completion, developmental English course redesign, the use of a Challenge Essay for English placement, alternative assessments should

a student challenge his/her Accuplacer score, the advent of using high school GPA as an exemption to placement tests, the development of a co-requisite English course (also known as ALP), and adjusting cut scores on the Accuplacer NextGen. All of these changes were based on information and/or data shared through the DSC. The committee regularly assesses progress of the students in developmental courses including the course success rates and rates of retention.

College of Southern Maryland
Assessment and Validity Statement

The College of Southern Maryland uses a few nationally normed assessment instruments for placement into college-level courses: Next Generation ACCUPLACER for English and reading placement and ALEKS for math placement. The College also uses AP, SAT, and ACT nationally normed assessments for placement and a high school GPA measure recent high school graduates. Below is a chart that outlines the various assessment options and the corresponding placement scores at the College of Southern Maryland.

Assessment Measure	College-level Placement Score	Comments
ACT Reading or English	21 or higher	
ACT Math	21 or higher	
SAT Reading and Writing (combined score)	480 or higher	
SAT Math portion	530 or higher	
Next Generation ACCUPLACER (Writing)	263 or higher	
Next Generation ACCUPLACER (Reading)	254 or higher	
Next Generation ACCUPLACER (Quantitative Reasoning, Algebra, and Statistics)	263 or higher	
Advance Placement/ English	3 or higher	
Advance Placement/ Math	4 or higher	
Grade Point Average (GPA)	2.75 or higher	Cumulative Unweighted GPA on the transcript
ALEKS	15-29 or higher	College-Level Math with in-time support for Non-STEM Majors: MTH 1010T
ALEKS	30 or higher	College-Level Math for STEM Majors: MTH 1010, MTH 1011

The community colleges within the State of Maryland often collaborate in a system type approach when it comes to assessment and placement measures. Collaborating on the assessment measures provides a high level of support for our students who may move between community colleges to complete their goals. Hence, part of the selection process is vetting the assessment measures through the discipline affinity groups, such as the math and English affinity groups which are made up of discipline faculty and mid-level managers from the community colleges across the State of Maryland. As part of the selection process, the affinity group members review the assessment measure, review concordance information, hold cut score setting meetings, meet with representatives from the organization sponsoring the instrument, take the assessment as part of their data information experience. For instance, before selecting the Next Generation ACCUPLACER, members of the affinity groups met with representatives of The College Board, reviewed use and placement data on implementing the Next Gen ACCUPLACER, and

attended conferences on the Next Generation ACCUPLACER before agreeing to its use. Part of the national and regional conversations included information and practices on cut score setting. For CSM, the discipline faculty met and discussed options for score setting. Within both math and English and Reading, we have followed some general practices that account for our establishment of the assessment measure and the cut score.

Generally, we have taken the following steps in determining assessment measures.

Several of the English and Reading faculty took the assessment instrument, multiple times, to test out various scenarios and levels of preparedness that our students may present. The discipline faculty at the College of Southern Maryland and in the English and Reading affinity group across the State reviewed the published concordances such as the ACCUPLACER Insights publication for ACCUPLACER, as one example, to determine how best to align our cut scores with the skill levels assessed in both the former and new instrument. Several community colleges across the State conducted score setting activities, the results of which were shared via the affinity groups and used as a data point in the cut score setting decision. The affinity group conversations allowed CSM faculty to confer with peer institutions to ensure that our scores aligned with expectations across the State of Maryland. At CSM, the faculty also conducted checks on placement to ensure that students who placed into developmental were appropriately placed. The faculty discovered that about 1 in 20 students were borderline for placement. These students were given the opportunity to assess again to better place them at the most appropriate level. For writing, the faculty used a writing sample; for reading, the faculty used MyReadingLab Lexile Locator software which was backed by research-based Lexile levels and college readiness in reading skills. Once the work of the affinity groups was complete, their work was presented to the chief academic officers (M4CAO) affinity group for review and approval. Upon approval by the M4CAO group, the college began to implement these standards for placement. Our math faculty followed the same process when considering a new assessment measure such as Next Generation ACCUPLACER for Math and the ALEKS assessment measure for placement. With ALEKS, the task group also included math discipline faculty who reviewed the alignment of introductory level college math courses to assure placement was aligned and equitable across institution type. This faculty work was also supported by University of Maryland's the First in the World Grant which brought two-year and four-year math discipline faculty together to discuss placement and course alignment.

The GPA placement measure which we use resulted from conversations with the local school districts to implement a placement measure based on students' work in high school, not just on an assessment instrument. Within this work across the State, there were many models that ranged from placements based on grades in specific courses to placement based on cumulative grade point averages. The community colleges across the State of Maryland again used their discipline affinity groups to create a state-wide systematic process for implementing GPA placement. The recommendations from the discipline task groups were presented to and approved by the M4CAO group as a state-wide consistent measure. The measure had been discussed among the peer and non-peer community colleges across the State of Maryland. They task group also reviewed national research data on the impacts and success of GPA placement measures in other community colleges to inform their decision. Additionally, one of the MACC Community College Completion Summits offered several sessions on GPA placement from local nearby experts on the topic. The presentations further informed the decision to support GPA placement measure at CSM. The resulting work of the task group was a mutual agreement among all 16

community colleges to implement GPA placement measure by Fall 2019 as another placement option for recent public high school graduates across the State.

The decisions for assessment instruments and assessment scores at the College of Southern Maryland has been a collaborative one.

Community College of Baltimore County
Report on Assessment Tools

Placement Processes

The Community College of Baltimore County (CCBC) ensures incoming students are prepared for college-level work by assessing academic reading, English, and mathematics skills. Before enrolling in their first semester, students who have never completed a college-level course must complete the placement process that utilizes multiple options to determine college readiness. Students who do not meet the college readiness standards in English or math enroll in developmental education courses. In English, students who need developmental education can enroll in Academic Literacy (ACLT) 052 or ACLT 053 or the Accelerated Learning Program (ACLT 053 and college-level English taken concurrently). In math, students may need to build skills by enrolling in Math 081 (Pre-Algebra), 082 (Introductory Algebra), or 083 (Intermediate Algebra). The student can enroll in each course sequentially or enroll in the Accelerated Mathematics Program (developmental education math and a next-level math course taken concurrently).

Placement Tools

Over the past ten years, students have demonstrated college readiness via several avenues that include formal testing and alternative placement processes. Standardized testing has involved assessments such as the SAT, ACT, AP/IB, PARCC, Accuplacer, and ALEKS. Alternative placement, also known as multiple measures, has involved High School GPA (overall, in English, or Mathematics) and Self-Directed Placement (in English). In the past five years, CCBC has been moving away from standardized testing toward more alternative placement measures but still accepts standardized test results that meet or exceed cut scores as an indicator of college readiness. Conversely, students who score below the minimum scores on formal tests or alternative measures are placed into developmental education.

Cut Scores

CCBC's placement process aligns with the cut scores for the revisions to the memorandum of understanding between MACC and Public-School superintendents for college-level coursework (attached). The underlying cut scores for developmental coursework were determined primarily by the academic department. For instance, Accuplacer Classic cut scores for developmental education placement were determined by Reading, English, and/or Mathematics faculty in collaboration with CCBC's former Office of Developmental Education. Accuplacer concordance was utilized to determine cut scores from its Classic to NextGen version. Cut scores to ALEKS, CCBC's current MATH placement tool, were based on a common course outline and curriculum review by ALEKS and finalized by the Mathematics department. Conversations were held in the statewide Math affinity group that informed these decisions. In spring 2020, CCBC piloted directed self-placement for Reading and English.

Recommendations for this process were developed by English, Academic Literacy, and Student Development faculty and staff.

Student Outcomes

Efforts to validate student placement at CCBC have focused primarily on determining whether alternative placement methods work well for students. Our studies examined the rates at which students who placed in developmental education completed their developmental education courses before and after alternative placement was instituted; rates of completing college-level course work before and after alternative placement; and pass rates in college-level courses (i.e., grade of A-D). We have also compared pass rates between students who complete a developmental course as part of a sequence versus the accelerated program.

In mathematics, we found that students who complete their developmental courses as part of the Accelerated Mathematics Program (AMP) pass Math 081 at significantly higher rates over the course of fall 2011 through fall 2020. We found similar results for Math 082 and 083. Students who complete AMP also complete a college-level mathematics course at a higher rate than students who take the developmental courses sequentially. These findings held within ethnic groups, specifically among African American students and White Students. In each semester compared between fall 2011 and fall 2019, students in AMP had higher pass rates than their same-race counterparts in sequential courses. These results did not examine outcomes relative to how students are placed into developmental education; however, we have results from two alternative placement processes that examine outcomes by placement method.

One alternative placement method is High School GPA. A study called High School GPA Analysis Multiple Measures Project examined the pass rate in English 101 for students at various GPA intervals. The results showed that students with overall high school GPAs of 2.5 or higher passed English 101 at rates of 83%-100%, while those with less than a 2.0 passed at 51%. At an overall high school GPA of 2.50 - 2.74, 77% passed a college-level math course. The rate dropped to 58% for GPAs between 2.25 and 2.49. More students failed than passed college math when their high school GPA was 2.24 or lower. This suggests that overall high school GPA is a useful measure for indicating college readiness.

Another study examined results from the Self-Directed Placement (SDP) process in English. This study, called Self Directed Placement Final Grade Analysis, examined placement rates into developmental education under SDP and the pass rates in English 101 students deemed college-ready based on SDP results. The study found a significant increase in the rate of placing as college-ready (up from 51% to 70%). Under SDP, students were more likely to attempt to complete English 101 (~75%) than they did under Accuplacer (~50%). However, while the attempt rate increased, the pass rate declined between fall 2019 and fall 2020, both in the Accelerated Learning Program (ALP) and stand-alone English 101. It is unclear what role the COVID-19 pandemic and the related shift to remote instruction played in these declines. In addition, the pass rate was lower at each GPA interval in fall 2020 than in fall 2019, and the pass rate decline was more considerable for students whose high school GPA was below 2.5. However, it is also clear that many students with GPAs below 2.5 enrolled in stand-alone English 101 under SDP and significantly fewer enrolled in ALP. More research is needed to determine the effect of using the SDP placement process on student outcomes. Still, one advantage to those with lower high school GPA is that 31%-43% completed college-level English in one semester instead of being placed in developmental education.

Frederick Community College (FCC) currently uses Next-Generation Accuplacer from CollegeBoard to determine student placement into developmental or credit courses. The College has used Accuplacer since 2009 when our site profile was created with CollegeBoard. In addition to Accuplacer the College has over 14 exceptions and exemptions to required placement testing listed in the Academic Assessment and Placement Policy. These exceptions include the state-wide 3.0 GPA exemption for students graduating from Maryland public high schools. If a student does not qualify for an exemption, they can also reach out to the Associate Vice President for the Center for Teaching and Learning to request an exemption providing additional justification.

In summer 2019, Next-Generation Accuplacer from CollegeBoard was adopted after a thorough review of the updates and an evaluation of ALEKS. The College initially reviewed Accuplacer concordance tables between Classic and Next Generation and participated as members of two state-groups identified by the Maryland Council of Community College Chief Academic Officers (M4CAO) to discuss cut scores. It was determined that for English a student must achieve a minimum score of 263 on the Next-Generation Writing Placement assessment and on the Next-Generation Reading comprehension score in order to place in college-level freshman writing courses. For Mathematics, a student must achieve a minimum of 272 on the Next-Generation Quantitative Reasoning, Algebra, and Statistics (QAS) assessment to place into college-level math including College Algebra, Intermediate Algebra, Liberal Arts Math, First Level Statistics, or Finite Math.

To determine additional placement along the credit and developmental sequence multiple options for setting cut scores were provided to the college by Next-Generation Accuplacer including the bookmark method, skills insight method, and student simulated testing method. The English department opted for the Bookmark method for Reading where a panel of English faculty took a test with items that started off easy and gradually increased in difficulty. Faculty then placed a bookmark on the items to mark their recommendation for placement into levels of developmental or college ready. The skills insight statement approach were opted to be used for writing, math, and Continuing Education and Workforce Development placement cut off score development. In these instances cut off scores were identified by NextGen Accuplacer based on the content of the placement exam questions. Below are sample tables for credit English and mathematics placement.

NEXT GENERATION ACCUPLACER ENGLISH PLACEMENT				
	Writing→			
Reading↓	**≤236**	**237-252**	**253-262**	**≥263 or exemption**
≤228	AE*	AE	AE	AE
229-236	AE	ENGL 70	ENGL 70	ENGL 70
237-248	AE	ENGL 75	ENGL 75	ENGL 75
249-252	AE	ENGL 75	ACCE 100-ENGL 101	ACCE 100-ENGL 101
≥253 or exemption	AE	ENGL 75	ACCE 100-ENGL 101	ENGL 101

*AE - Adult Education

ALEKS	NG QAS	NG AAF	ALEK PPL and NEXT GENERATION ACCUPLACER MATH PLACEMENT		
			Subject	Course	Description
0-13	200-236		MATH	50	Preparation for College Mathematics (2)****
14-29	237-262		MATH	67*	Educator Preparation in Mathematics (2)*
14-29	237-262		MATH	101A	Foundations of Mathematics & Instruction with Algebra (5)**
30-60	263-300	240-300	MATH	101	Foundations of Mathematics (3)**
14-29	237-262		MATH	67+110	Fundamental Concepts of Mathematics I (2+4)*
30-60	263-300	240-300	MATH	110	Fundamental Concepts of Mathematics I (4)**
14-29	237-262		MATH	67+113	Fundamental Concepts of Mathematics II (2+4)*
30-60	263-300	240-300	MATH	113	Fundamental Concepts of Mathematics II (4)**
14-29	237-262		MATH	120A	Statistics & Instruction with Algebra (5)**
30-60	263-300	240-300	MATH	120	Statistics (3)**
30-60	263-300	240-300	MATH	125	Business Statistics (3)**
30-60	263-300	240-300	MATH	127	Statistics with Probability (4)**
14-29	237-262		MATH	145S	College Algebra with Algebraic Support (6)***
30-60	263-300	240-300	MATH	145	College Algebra (3)***
61-75		261-300	MATH	165	Precalculus (4)***
61-75		261-300	MATH	170	Introduction to Discrete Mathematics (3)***
61-75		261-300	MATH	175	Applied Calculus (3)***
76-100		276-300	MATH	185	Calculus I (4)

*Educator Pathway - MATH110/113 course must be taken with MATH67 as co-requisite

** Non-STEM Pathway "A " Courses

***STEM/Business Pathway

****Student may opt to enroll in FREE Adult Education course (see flowchart)

As can be seen from the tables, the College has also made strides in developmental education reform by creating co-listed credit courses with developmental support. For example, in English ENGL 101, credit level English, is offered with ENGL 100 as a co-listed supplemental support. In Math, credit courses are offered with an A or S section which represents supplemental developmental preparations around algebra or STEM. This initiative has decreased developmental student credits 73% from Fall 2015 to Fall 2020 at FCC. Additionally, it has allowed students to begin their credit course sequence earlier in their academic career.

Incoming students who have been admitted to the College that do not first meet one of the placement testing exemptions (SAT, ACT, high school GPA, GED, AP courses, prior learning, CLEP, other) are required to take the Accuplacer Next Generation placement assessment to determine skill levels in writing, reading, and math. Transfer students are also exempt if they have successfully completed the equivalent of English 101 and college algebra or above. Exemption criteria have been expanded substantially in recent years, including the addition of a 2.8 cumulative high school GPA in 2017.

The Accuplacer suite of assessments has been utilized in some capacity for many years. Best practice suggests a review of assessment tool score ranges every three to five years. The College completed a recent evaluation in 2014. In 2019, the College completed another evaluation in order to successfully transition from the Accuplacer Classic assessment tool to the Accuplacer Next Generation assessment tool. Accuplacer next Generation assessments are based on research and evidence of what is most important for students to understand and be able to do in order to be successful in their first year of college. Accuplacer Next Generation takes in consideration the redesigned SAT suite of assessments and content is more closely aligned with states' college and career readiness standards. Since the transition, score ranges have been closely monitored by the developmental math and English faculty. All Accuplacer Next Generation test proctors must complete an annual test administration certification through Accuplacer.

As an open-enrollment college, about 80 percent of the College's incoming students have typically placed into at least one developmental course until recently. The attrition rate among this population is high, and in recent years, it has been increasing. For example, of the 162 students enrolled in one or more developmental courses in the fall of 2015, 123 failed to complete or transfer, an attrition rate of 76 percent. Recognizing the implications of these data, both for student success as well as retention, the College has made a commitment to substantially strengthen its developmental studies program.

In summer 2018, the College hired an Associate Dean of Academic Affairs, partially for the purpose of providing more focused leadership to the developmental studies program and for guiding a redesign of the curriculum. In November 2018, the College Council identified strengthening the developmental studies program as an institutional priority for inclusion in the FY2020 budget. As a result, funds are included in the FY2020 budget for two, new, full-time developmental faculty / hybrid AASC advisor positions, one in English/reading, and the other in math. (In the past, the College's developmental courses have generally been taught by adjunct faculty, often with minimal oversight.) The developmental English/reading position was filled prior to the start of the fall 2019 semester. After a failed search last spring, the search for the developmental math position was completed this fall and the successful candidate started in January 2020. In addition to teaching developmental classes, these new faculty are responsible for advising the students who are enrolled in developmental courses through work in the Advising & Academic Success Center.

As the College has developed and worked at improving its processes for assessing student learning, assessment tools and methods have been evaluated as to their validity and usefulness with respect to driving improvement. The results from these evaluations have then been used to plan and deliver a number of professional development activities focusing on various aspects of

assessment, for example: different types of assessment (i.e., qualitative versus quantitative, objective versus subjective), the use of direct versus indirect measures, the use of rubrics and test blueprints, etc. For students who are required to take the placement test, the College offers optional one-day refresher courses in math and writing/reading that may be taken prior to a first testing attempt or after initial testing in order to improve skills and retest. Of the students who took the refresher courses and retested in summer 2018, about half advanced either to the next level developmental course, or to a college-level course from their initial score.

In the last several years, the College completed revisions to its developmental course sequences, making it possible for the lowest level developmental students to complete their requirements in two semesters instead of three, as was previously the case. The College has recently taken several steps to improve retention and persistence among its relatively large population of developmental students where attrition rates have been high, averaging about 75 percent.

Developmental English/Reading Program –An analysis of retention data for students starting at the lowest level of the developmental English/reading program, which were considerably lower than the national average, indicated that a major factor affecting retention was the amount of time required for lower-level students to move through the multiple steps of the developmental English/reading sequence. As a result, a decision was made to restructure the program so as to condense coursework so it may be completed more rapidly. This was accomplished by first using A and B terms within a single semester that enable students to complete two 2-credit courses. Following that, it was determined that the lowest-level developmental reading course may be taken concurrently with the developmental English course. This reconfiguration allows the lowest-level developmental students to complete the required course sequence in one semester. These changes to the developmental English/reading program ensure more appropriate placement and should help to build confidence in ill-prepared learners, potentially increasing retention.

Developmental Math Program - The goal of the College's developmental math program is to prepare students for success in college-level Algebra. This program has been redesigned at least twice within the last 10 years, but assessment data have shown that more changes are needed. Analysis of data from placements in the College's two developmental-level math courses (MAT 073 and MAT 075) and subsequent placements in college-level math (MAT 105) showed that less than 50 percent of students in MAT 073 progress to MAT 075, and less than 5 percent of the students who started in MAT 073 actually make it to MAT 105. These and other findings supported the development and implementation of a corequisite course, MAT 105/097L or 098L, which, based on Accuplacer scores, enables students to complete their developmental requirement and college-level math at the same time through enrollment in a complementary lab (either MAT 097L or MAT 098L). The students who have taken MAT 105/097L or 098L have been more than 20 percent more successful than students taking MAT 075. Analysis of the data also showed that student success varied considerably with the instructor and was consistently higher in the sections taught by full-time faculty. These findings have provided support for the College's decision to hire full-time developmental faculty. The

College is also participating in a grant-funded pilot project where developmental students in non-STEM majors can elect to take a developmental statistics class (MAT 096) to progress to MAT 210, Introductory Statistics, rather than College Algebra. Data from MAT 096 have been analyzed for the past 3 years, but results so far have been inconclusive due to the low enrollment that has persisted in MAT 096.

Advising and Academic Success Center – The Advising and Academic Success Center (AASC) unit-level effectiveness plans and assessment results have been used to make multiple improvements to student support services from 2016 through the present. Examples include increasing the Testing Center capacity to 20 student workstations, combining the separate math and writing centers into a comprehensive tutoring center located in the Library and Learning Commons, doubling the tutoring center hours from 30 to 60 hours per week, improving the quality of academic advising, and increasing the use and effectiveness of Early Alerts to identify students who are academically at risk.

As evident in the work described over the prior ten years, the College has made a steadfast commitment to improving its placement practices, retention and persistence, and overall student success. Under leadership of the Associate Dean of Academic Affairs, initial course placement and developmental studies will continue to be a focus of institutional effort. A new CAO starts July 1, 2021 and will work with the assessment workgroup on curriculum mapping for academic year 2021-2022. After completion, there is a plan to assesses the developmental program annually as is done with the academic programs.

Joint Chairmen's Report Requirement for FY22- Report on Assessment Tools

Summarize the process and procedure used to select the current assessment tools (and cut-off scores) for testing students to see if they need remediation/developmental coursework or support:

Determining the best course placement for an incoming student at Hagerstown Community College (HCC) involves a multi-pronged approach: a consideration of their academic history, their assessment scores, and any prior postsecondary education. Incoming students at HCC are required to take a skills assessment if they are seeking an associate's degree or certificate and attempting their *first* college-level English composition or mathematics course (or are enrolled in a course that has a math or English prerequisite) unless they are "exempt" and able to enroll directly in a college-level course. The most commonly granted exemption at HCC is the "3.0 Exemption," which categorizes students as "college-ready" based on their high school grade point average (GPA) of 3.0 or above.

Students at (HCC) are exempt from remediation/developmental coursework or support in **mathematics** if they meet one of the following criteria:

- have a cumulative, unweighted high school GPA of 3.0 or higher;
- already have a college degree;
- earned a 237-262 on the NextGen Accuplacer Advanced Algebra and Functions test;
- earned a 263 or higher on the NextGen Accuplacer Quantitative Reasoning, Algebra and Statistics test;
- earned a 45 or higher on the Accuplacer College Level Math test;
- passed MAT090, MAT095, or MAT100 at HCC;
- have earned a SAT math score of 530 or higher;
- have earned an ACT math score of 21 or higher;
- have a high school MCAP (previously PARCC) Algebra II assessment score of 4 or 5 (750 or higher on the scale score);
- have a GED Mathematical Reasoning score of 165 or higher;
- have successfully completed a college-level mathematics course

Students at Hagerstown Community College are exempt from remediation/developmental coursework or support in **English** if they meet one of the following criteria:

- have a cumulative, unweighted high school GPA of 3.0 or higher;
- already have a college degree;
- have earned a SAT Evidence Based Reading and Writing score of 480 or higher;
- have earned an ACT English score of 21 or higher;

- have a high school sophomore or junior year MCAP (previously PARCC) English Language Arts/Literacy score of 4 or 5 (750 or higher on the scale score);
- have a GED Reasoning Through Language Arts score of 165 or higher;
- have successfully completed a college-level English course;
- have a 253 or higher on the NextGen Accuplacer Reading + test;
- have a 263 or higher on the NextGen Accuplacer Writing test;
- have a 351 or higher on the Classic Accuplacer ESL reading Skills +, the ESL Language Use +, and the ESL Sentence Meaning test

The assessment tools selected above align with best practices in the developmental education field and are commonly used across higher education at large to determine placement levels in mathematics and English. Furthermore, in 2017, the Maryland Association of Community College (MACC) Presidents requested that the Chief Academic Officers of the member colleges create an "Assessment Placement Study Group" to do the following:

- review the validity of the tests that have been used for assessment and placement over the past three years;
- evaluate current assessment and placement practices;
- recommend college-ready scores for the ACCUPLACER, ACT, the redesigned SAT, PARCC and GED;
- develop a framework and timeline to establish college-ready placement scores for the Next Generation ACCUPLACER once concordance tables and pilot data are available.

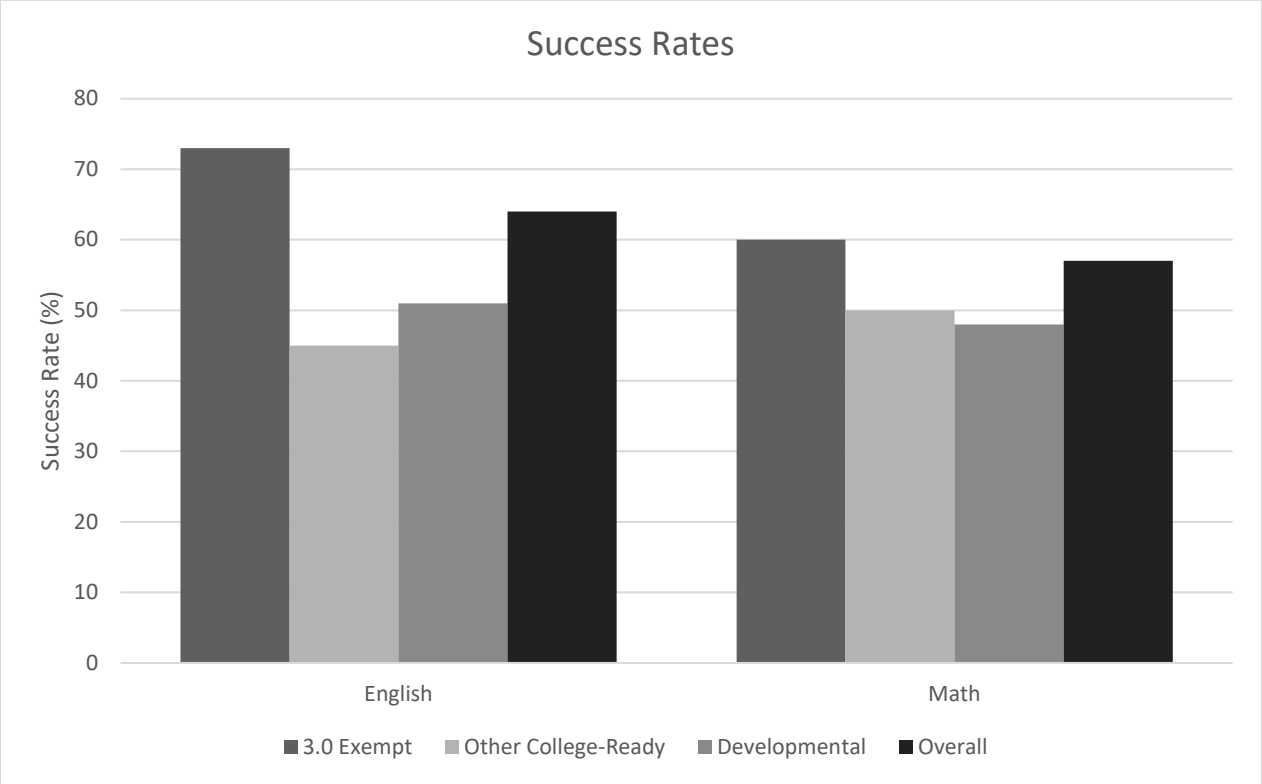
The standardized *test* cut-off scores established for the placement of students in remedial/developmental coursework at HCC are a direct result of the work of this study group.[1] Moreover, the decision to institute an exemption for remedial placement in mathematics or English if students present an unweighted high school GPA of 3.0 or higher was two-pronged. First, this process was implemented by other community colleges in Maryland and that served as a catalyst for change. Second, semesters of instructor observations noted that course success in mathematics and English was more directly tied to high school GPA than standardized test scores, especially in cases when there was a discrepancy or clear mismatch between the two (i.e., student had a high GPA, but tested poorly).

[1] Assessment and Placement: Recommendations from the MACC Assessment and placement Study Group. Maryland Council of Community College Chief Academic Officer's Report. May, 2017.

Data from the HCC Office of Planning and Institutional Effectiveness (PIE) show that the 3.0 exemption applies to a largest group of students, with 346 out of 562 (62%) full-time first-year (FTFY) students in AY20-21 qualifying for the exemption.

In looking at these data, the overall success rates of student placements are all quite high: 57% for math and 64% for English. Using success rates as a measure of correct placement, the 3.0 exemption is performing better than the other placements/exemptions because the success rates for that group are comparatively higher as evidenced by the data below.

Table 1. First-time First-Year Students Gateway Course-taking and Success



Institution: Harford Community College
Administrator of Record: Dr. Timothy Sherwood, Vice President of Academic Affairs
Contact: Elizabeth A. Mosser, Associate Dean of Academic Operations (emosser@harford.edu; 443-412-2319)

Among other measures which will be further described below, Harford Community College (HCC) uses the ACCUPLACER tests to evaluate new students' course placement based on Reading, Writing, and Math. The tests are available on campus at the Test Center as well as in a remote, online format. This tool is commonly used among 2-year institutions in Maryland as it allows for standardized measures of readiness. Cut off scores – detailed below – were recently updated during the fall 2019 semester based on an internal analysis using concordance ratings via the College Board. This was a collaborative process involving leadership from within the Student Affairs division and key faculty members. These scores were further refined after receipt of the May 1, 2019 agreement among Maryland Presidents, CAOs, and CSAOs regarding statewide placements scores for the Next-Generation Accuplacer in English and Mathematics.

English

- Next-Generation Accuplacer Writing and Reading score of 263 or higher

Mathematics

- Next-Generation ACCUPLACER Math (Quantitative Reasoning, Algebra and Statistics) is 263 or higher

With that said, HCC does accept alternative placement measures for college readiness. The 'English Readiness Test' is available online through the College's Learning Management System (i.e., Blackboard). This test is made up of two sections, Writing and Reading, and scores are available within 2-3 days after testing. In addition, there is an 'advanced math readiness test', which is for students who have pre-calculus or above and need further placement.

Finally, students with qualifying scores on SAT, ACT, PARCC, Accuplacer, GED, AP or IB tests or who have a high school cumulative GPA of 3.0 (unweighted) may be considered College and Career Ready, and are therefore exempt from placement testing. The cutoff scores for these items are outlined below and are the result of an agreement between the Maryland state superintendents and MACC group, which is updated annually. It is also important to note that assessment scores, SAT scores and ACT scores are valid for a period of two years. Students who do not begin the appropriate course sequence within the two-year time period must repeat the assessment.

English

- SAT Evidence-Based Reading and Writing score of 480 or higher
- ACT English and Reading score of 21 or higher
- PARCC English 10 OR 11 score of 4 or higher (750 or higher scaled score)
- GED Reasoning through Language Arts score of 165 or higher
- AP English Language & Composition OR English Literature & Composition score of 3 or higher
- IB Lang. A: Literature SL or HL OR Lang. A: Language & Literature SL or HL score of 4 or higher

Mathematics

- SAT Math Score of 530 or higher (570 will place students in Math 109)
- ACT Math Score of 21 or higher
- PARCC Algebra II score of 4 or higher (750 or higher scaled score)
- GED Math scores of 165 or higher are eligible for Math 216 or Math 102. Students needing college algebra or pre-calculus or above for program of study must take the Accuplacer test or a calculus readiness test.
- AP Calculus AB/BC OR Statistics OR Computer Science score of 3 or higher
- IB Math Studies or Math SL/HL OR Further Math score of 4 or higher

Howard Community College Report August 2021

Narrative

R*equest- A **1000-word summary r**egarding the p**rocess and procedure that was used to select** the current assessment tools (and cut off scores) for testing students to see if they need remediation/developmental coursework or support.*

Howard Community College utilizes three computer-based tests: Guided Self-Placement (GSP) or Next-Generation ACCUPLACER for English and ALEKS PPL™ for Mathematics. The results of the assessments, in conjunction with a student's academic background, goals, and interests, are used by academic advisors and counselors to determine the proper course selection. Placement tests are administered after students have applied for admission to the college. Students may be exempt from placement testing based on their high school GPA, grades in previous classes, and scores from the SAT, ACT, GED, or PARCC exams received within the last 5 years. The college publishes a chart with that information:

https://www.howardcc.edu/admissions-aid/apply-for-admission/testing/placement-credit-by-examination/

HCC faculty participated in state working groups to select and establish cut-off scores for the computerized tests such as Next-Generation ACCUPLACER and ALEKS PPL, and national tests such as ACT, SAT and PARCC. Next periodic evaluations of these placement methods were conducted within both the Mathematics and English divisions. These evaluations were designed to investigate if the different tools are placing students into the appropriate level course that provides the highest probability of success. The intent is to support the student in finding the shortest path to college level math and English requirements. When a new tool is added, a similar study is conducted.

For the fall of 2020 a new, remote, option was instituted called Guided Self-Placement (GSP). GSP is an online assessment tool that requires students to write an essay and respond to a series of questions administered in Canvas, the college's learning management system. Trained English faculty use the essay, as well as the questions, to place students into appropriate English courses. The assessment consists of eight self-reflection questions followed by a written response in essay format. Students have 90 minutes to complete the assessment. For this evaluation, each essay was reviewed by two faculty raters and given a placement. If the ratings agreed, the placement was finalized. If there was a discrepancy between the raters, a third rater was brought in. Our latest studies are discussed in the HCC Recent Validity Studies Summary Report uploaded later in response to this survey.

Assessment and Placement at Montgomery College

Montgomery College participates in statewide agreements among the Maryland community colleges regarding assessment and placement of students. Through the Committee on Appropriate Placement and Developmental Issues (CAPDI), discipline liaisons report on agreements through the statewide affinity groups and identify the cut-scores. These scores are standard across the state to assist student transfer among different community colleges.

1. The College uses several standardized instruments to determine college-ready placements in English and math:

   SAT exams (College Board)

	Old SAT (pre 3/1/2016)	**New SAT (post 3/1/2016)**
English	480+ Evidence-Based Reading/Writing	500+ Critical Reading
Math	530+	500+

   ACT exams (College Board)

English	21+ Reading
Math	21+

   Accuplacer (Next Gen) (College Board)

English	263+
Reading	263+
Math	NGAQ 250-262

   ALEKS (McGraw-Hill learning solutions)

Math	30-45

   GED (2014 or later)

English	165+ Reading Through Language Arts
Math	165+ Mathematical Reasoning

   TOEFL (Test of English as a Foreign Language)

English	575+ (paper and pencil) 90+ (internet-based)

   IELTS (International English Language Testing System)

English	6.5+

PTE (Pearson Test of English – Academic) 61 or higher (in addition to TOEFL and/or IELTS)

2. Students who present an unofficial transcript to the Office of Records and Registration that includes a passing grade of "C" or better in 100-level plus English courses from an accredited US institution will be considered eligible for courses that require college-level English assessment.

   Students who submit an unofficial transcript that demonstrates that they have an earned associate's degree or higher from an accredited US institution will also be considered eligible for college-level courses.

3. Montgomery College also participates in two statewide alternative placement programs as per an agreement between the Maryland Association of Community Colleges (MACC) and the Public School Superintendents' Association of Maryland (PSSAM) to consider student performance in high school as an indicator of academic success in college for student placement.

   Alternative Placement Program: Grade Point Average (APPG)

   Maryland public high school students may be exempt from English and Math assessment based on their high school transcripts according to the following conditions:

   - Completion of the first two quarters (first semester) of 12th grade at a Maryland public high school
   - An unweighted, cumulative grade point average (GPA) of 2.75 or higher
   - Option applies up to five years after graduation
   - ESOL classes are not included in GPA calculation

   Alternative Placement Program: **Subject** (APPE/APPM)

   Montgomery County Public Schools students may be exempt from English (APPE) and/or Math (APPM) assessment up to one year after graduation based on completion of certain high school classes with "B" or better in the final semester:

   - Honors English 12 (APPE)
   - AP Language/Composition (APPE)
   - Modern World History (APPE)
   - Algebra II (APPM)

   A preliminary review of student performance in college-level courses through APPG, APPE, and APPM indicates that students who are placed according to these programs have similar or better outcomes in comparison with students who are placed through Accuplacer scores.

4. Finally, as the COVID-19 pandemic has prohibited access to on-campus testing centers since March 2020, Montgomery College has established **remote placement processes** for students who previously had been assessed through Accuplacer for college-level English. These students present no other assessment measures listed above.

   Students self-identify as speakers of English as a Second or Other Language (ESL) if they do not speak American English as their first language and they have not completed 10 years or more of study in a US school. These students complete a short survey and a 30-minute writing sample submitted to the discipline, and they have a remote appointment the next day with an ESL professor to review the sample, complete a short spoken-English interview, and receive a course placement. Students may be placed in pre-academic ESL, academic prep English for Academic Purposes, or college-level English courses.

   Students who are native speakers of English complete a short survey and a 30 - minute writing task submitted to the discipline. They have a remote appointment with an English faculty member within 3 days to review the writing sample and discuss previous English coursework. The faculty member will provide the student a placement in pre-academic, developmental, or college-level English courses.

   Students continue to use the ALEKS math learning system via the internet to complete a diagnostic exam, a minimum of 3 hours of tutorials based on the results of the diagnostic, and a second remote exam to determine placement. Students meet remotely with academic advisors to receive their math placement as either developmental or college-level math.

   The CAPDI committee will be examining the performance of students placed via remote placement processes in comparison with more traditional placement methods to determine whether the emergency remote placement options should become standard procedures.

Summary of the processes and procedures used to select PGCC's current assessment tools

Prince George's Community College's adoption of ALEKS, Writeplacer, and the 3.0 GPA Waiver is based on validity studies conducted in a wide variety of environments. The College has relied on validity studies provided by the publishers of ALEKS and Writeplacer, as well as validity studies conducted by research entities such as the Community College Research Center (CCRC), Achieving the Dream, and other colleges and universities across the country.

In addition, PGCC has conducted internal validity studies which compared:

- The correlation between the old Accuplacer scores (math, reading and writing) and student performance in college-level English and Math
- The correlation between ALEKS and Writeplacer, on the one hand, and student performance in college-level English and Math, on the other

For example, we have used the old Accuplacer for some students and ALEKS and Writeplacer for other students in the same testing period, and then analyzed the results to determine how each placement method correlated with student performance in college-level coursework. Through these studies, we have observed that ALEKS and Writeplacer scores have a stronger correlation with student performance in college-level courses, compared to the old Accuplacer scores.

Furthermore, after reviewing external research, we conducted a pilot study to determine how students performed in college-level courses when placed into those courses based on having achieved a 3.0 or higher high-school GPA (3.0 GPA Waiver method). Based on the results of the pilot, we adopted a process to place students with a 3.0 or higher high-school GPA directly into college-level courses.

We continue to monitor student success in the classes into which students have been placed by ALEKS, Writeplacer, and the 3.0 GPA waiver. Not only do we conduct this review locally, but the Chief Academic Officers' group from the Maryland Association of Community Colleges reviews these data annually.

With regards to all other instruments (i.e., SAT/ACT, IB, AP, etc.), these have been used for a long time and are included in an MOU that PGCC has signed with the state's school superintendents, an MOU that is annually reviewed and renewed.

Process and Procedures for Selecting Assessment Tools.

Wor-Wic Community College uses multiple measures (attached chart below) that are based on Accuplacer Next Generation Scores, ALEKS Math placement scores, and waivers for high school GPA, PARCC, SAT, ACT and GED scores, and AP courses. The cut scores were determined by the Maryland Community Colleges Chief Academic Officers group based on what the majority of these colleges were using. The attached chart also has information on scores for prior resources used such as Tailwind and regular Accuplacer Classic before it was phased out and Next Generation was introduced.

The Wor-Wic Community College 2020-2021 Catalog contains specific information for students regarding placement testing processes and requirements.

Placement Testing:

To increase the student's chances for academic success, Wor-Wic administers free placement tests that analyze a student's academic strengths and weaknesses to assist in the appropriate selection of courses. The tests are mandatory for:

1. New students who are currently in high school.
2. New students who do not have a high school diploma or its recognized equivalent.
3. Special students who want to register beyond nine cumulative credit hours.
4. Students who want to register for an English or mathematics course or any college-level course that has an English or mathematics prerequisite.
5. Students whose test scores indicated the need for developmental coursework more than two years ago who never completed the coursework; or
6. Students who were exempt from testing more than two years ago who didn't complete any English or math classes at the college.

Exemptions are granted for:

1. Students who have associate or higher degrees from regionally accredited colleges in the U.S. who can provide unofficial or official transcripts; or
2. New students who are classified as special students who want to register for one course in a term that does not have a college-level English or mathematics prerequisite.

Exemptions are granted for the English and/or math placement test(s) for:

1. College transfer students who have received transfer credit for ENG 101 and/or a college-level mathematics course (MTH 152 or higher).
2. Students who have received a mathematics Scholastic Aptitude Test (SAT) subset score of at least 530 and/or an English score of 480 within the past two years.
3. Students who have received American College Testing (ACT) subset scores of at least 21 in mathematics and an average of 21 on the reading and writing sections within the past two years.

4. Students who have received a score of 165 or above on the GED within the past two years.
5. Students who have earned an English 10 or 11 and/or an Algebra II Partnership for Assessment of Readiness for College and Careers (PARCC) or Maryland Comprehensive Assessment Program (MCAP) score of Level 4 or 5 who register or start classes within one year after the student's date of high school graduation.
6. Students who have earned a grade 4 or above on the International Baccalaureate (IB) Language and Literature assessment and/or the IB Math Studies assessment.
7. Students who have successfully completed a high school transition course in English and/or mathematics who register or start classes within one year after the student's date of high school graduation.
8. Students who have earned a score of 3 or higher on the Advanced Placement (AP) English Language and Composition test or the English Literature and Composition test and/or the AP Calculus AB or BC test; and
9. Students who register or start classes within five years after the student's date of high school graduation and who earned at least a 3.0 cumulative unweighted high school GPA by the first semester of their senior year who want to take ENG 101, MTH 102 or MTH 152.

The need for placement testing is assessed by the enrollment coach during the required coaching session. Students interested in an exemption should forward their official transcripts and/or test scores to admissions. Enrollment coaches make testing center appointments for students who need to take placement tests. Students referred to the testing center must bring a photo identification (ID) card to the testing session. Testing center hours are provided on the college website.

Students are permitted to retake the placement tests one time, following a 24-hour waiting period. Placement is based on the student's higher score. Requests for exceptions can be submitted to academic advising. Test scores and waivers are valid for two years unless the student meets one or more placement testing exceptions. After two years, students must retest in subject areas for which developmental coursework was indicated and for which the coursework was not attempted or completed.

Multiple Measures - Placement Exam Chart

rev. 12/5/2019

HIGH SCHOOL GPA		
*Min 3.0 cumulative, unweighted GPA, final transcript		
*Completed within 5 years of enrollment to WWCC		
	CAN TAKE:	**WILL WAIVE:**
English	ENG 101	ENG 095, ENG 096
Math	MTH 102	MTH 091, MTH 092
	MTH 152	MTH 091, MTH 092
	MTH 099**	Must take ALEKS**

PARCC		
ELA - Grade 10		
Level 4	Cut: 750	Range: 750-793
Level 5	Cut: 794	Range: 794-850
ELA - Grade 11		
Level 4	Cut: 750	Range: 750-791
Level 5	Cut: 792	Range: 792-850
ALGEBRA II		
Level 4	Cut: 750	Range: 750-807
Level 5	Cut: 808	Range: 808-850
*Waiver only good for 1 year from HS graduation		
*Will accept either 10th or 11th Grade ELA Score		

ACCUPLACER			
ENGLISH/WRITING			
SCALE SCORE			**COURSE REQUIRED**
SS of 20 - 54			ENG 087
SS of 55 - 89			ENG 096
SS of 90 - 120			No Developmental
READING			
SCALE SCORE			**COURSE REQUIRED**
RC of 20 - 46			ENG 087
RC of 47 - 78			ENG 095
RC of 79 - 120			No Developmental
MATHEMATICS			
SCALE SCORE			**COURSE REQUIRED**
AR of 20 - 79	**OR**	EA of 20 - 35	MTH 091
AR of 80 - 120	**OR**	EA of 36 - 69	MTH 092
EA of 70+	**AND**	CLM of 20 - 44	MTH 099, 102, 152
EA of 70+	**AND**	CLM of 45+	MTH 103, MTH 121
EA of 70+	**AND**	CLM of 70+	MTH 122, MTH 160
CLM of 85+			MTH 201

TAILWIND	
WRITING MECHANICS (TSUM CODE:WM)	
CUT SCORE	**COURSE REQUIRED**
0 - 32	ENG 087
33 - 45	ENG 096
46 +	ENG 101 (If Reading Comp score is also 51+)
READING COMPREHENSION (TSUM CODE:RC)	
CUT SCORE	**COURSE REQUIRED**
0 - 29	ENG 087
30 - 50	ENG 095
51 +	ENG 101 (If Writing Mech. score is also 46+)

SAT SCORES
*Reading/Writing score of 480 or better
*Math score of 530 or better
*Waiver only good for test taken within last 2 years

ACT SCORES
*Reading/Writing and/or Math score of 21 or better
*Waiver only good for test taken within last 2 years

AP COURSES
*Score of 3 or higher
*Includes English Language & Composition, English Literature & Composition, Calculus AB or BC

HS Transition Courses
*Successfully complete Eng/Reading with 70% / C or better
*Successfully complete Math with 75% / C or better
*Waiver only good for 1 year from date of HS graduation

GED
*Score of 165 or higher (Math and/or English)

NEXT-GENERATION ACCUPLACER	
ENGLISH/WRITING (NGACP.W)	
SCALE SCORE	**COURSE REQUIRED**
200 - 240	ENG 087
241 - 262	ENG 096
263+	No Developmental
READING (NGACP.R)	
SCALE SCORE	**COURSE REQUIRED**
200 - 240	ENG 087
241 - 262	ENG 095
263+	No Developmental
MATHEMATICS	
SCALE SCORE	**COURSE REQUIRED**
AR 200 - 236	MTH 091
QA&S 237 - 262	MTH 092
QA&S 263 - 300	MTH 099, 102, 152
QA&S 272 - 300	MTH 103
AA&F 240 - 264	MTH 121
AA&F 265+	MTH 122, MTH 160
AA&F 276+	MTH 201
AR = Arithmetic Score	
QA&S = Quantitative Reasoning, Algebra, Stats. Score	
AA&F = Advanced Algebra and Functions Score	

ALEKS	
MATHEMATICS	
SCALE SCORE	**COURSE REQUIRED**
0 - 13	MTH 091
14 - 29	MTH 092
30 - 45	MTH 099, MTH 102, MTH 152
46 - 60	MTH 103, MTH 121
61 - 75	MTH 122, MTH 160
76 - 100	MTH 201

BIOLOGY 099
Earn 70% or
Earn 50 - 69% = Eligible for Re-test
Earn below 50% = Register for BIO 099

CEWD Multiple Measures - Placement Exam Chart

rev.

ESL	
READING	
SCALE SCORE	**COURSE REQUIRED**
20 – 59 (Level 1)	Adult Education
60 – 95 (Level 2)	ENG 081
96+ (Level 3)	exempt
LANGUAGE USE	
SCALE SCORE	**COURSE REQUIRED**
20 – 64 (Level 1)	Adult Education
65 – 95 (Level 2)	ENG 082
96+ (Level 3)	exempt
LISTENING	
SCALE SCORE	**COURSE REQUIRED**
20 – 59 (Level 1)	Adult Education
60 – 90 (Level 2)	ENG 083
91+ (Level 3)	exempt

COURSE OF INTEREST	MINIMUM PLACEMENT SCORES			
	Reading Score	**English Plcmt**	**Arithmetic**	**Math Placement**
Certified Nursing Assistant	225	ENG 087	220	MTH 091
Dental Assisting Intro	250	ENG 095	220	MTH 091
EKG Technician Intro	241	ENG 095	220	MTH 091
Medicine Aide Part I	225	ENG 087	220	MTH 091
Phlebotomy Skills Training	245	ENG 095	220	MTH 091
Veterinary Assistant Trng	245	ENG 095	220	MTH 091
Clinical Medical Assistant	225	ENG 087	220	MTH 091

Public Four-Year Institutions

Bowie State University
FY 2022 Joint Chairmen's Report on Assessment Tools
Summary Narrative

Below, in accordance with the Maryland Higher Education Commission's guidelines, is a summary of the processes and procedures used to select current assessment tools for placing students into credit-level English and mathematics courses.

At Bowie State University (BSU), the responsibility for selecting placement tools rests with the Language, Literature and Cultural Studies (LLCS) and Mathematics departments. Prior to the pandemic, these departments selected Accuplacer to determine college-level readiness for initial English and mathematics credit courses. The academic departments also set the Accuplacer cut score for credit-level work. The pre-pandemic cut scores for credit-level English and math courses aligned with Maryland community college scores. All first-year students were required to take a placement test before registering for classes. Students who demonstrated insufficient preparation for the rigor of a college curriculum were placed into English 100, and/or Math 90 or 099. Grades earned in developmental courses are calculated into the student's semester GPA; however, the credits earned for developmental courses do not count toward graduation nor cumulative GPA. Both the LLCS and Mathematics departments participated in a USM sponsored placement pilot project. The project included guest lectures from other institutions using innovative approaches to placement and shared research findings. Participation in the project was fortuitous in that it gave these academic departments a framework to support changes in placement processes and procedures resulting from the pandemic.

First-time and transfer student admissions criteria are guided by USM III-4.0 Policy on Undergraduate Admissions. Minimum qualifications include a high school diploma or equivalent, a C or better high school grade point average, a nationally-standardized examination (SAT or ACT), and minimum college readiness core of high school courses – English (four years), biological and physical science (three years), social science/history (three years), mathematics through at least Algebra II (four years), and two years of a language other than English. Because of the suspension of SAT testing during spring 2020, BSU applied for and received a waiver for the nationally-standardized examination for the fall 2020 and fall 2021 classes.

State health and safety restrictions prevented new fall 2020 students from taking the Accuplacer exam on campus. The LLCS determined that all new students would enter directly into ENGL101 – Expository Writing. The department decreased the size of each section to allow faculty to be able to provide more one-on-one assistance and provided online tutoring assistance through the Smith Vidal Literacy and Language Center.

The Department of Mathematics used a mixed methods approach to evaluating college readiness. High school GPA levels and SAT score ranges were established for each major. These levels were also consistent with Maryland Community College, College and Career Readiness guidelines for placement into credit-level courses. The department reviewed transcripts for new transfer students to determine math placement.

Both academic departments continued these practices for fall 2021 incoming students except for math placement for transfer students. New transfer students without math transfer credits are required to take the Accuplacer exam through remote proctoring. UTS contracted with Accuplacer's partner Examity to remotely proctor the math placement exam. If a student is flagged for a potential issue, UTS reviews the video of the exam to determine if the flag was in violation of UTS testing protocols.

Course-level assessment was conducted in English 101 to determine if direct placement into credit-level work had an impact on student success. The AY 2021 analysis found that the overall English 101 course success rate was slightly lower than in previous semesters. The Mathematics Department also found slightly lower student success rates in developmental courses. It was unclear if remote instruction was the primary factor or if the unpreceded demands and stress of the pandemic impacted student performance. Both departments adjusted their tutoring services to include evening and weekends in addition to working with course coordinators to ensure that tutoring services was in syllabi and in Blackboard course shells. Course-level assessment will continue in the fall 2021 semester.

COPPIN STATE UNIVERSITY
Brief Statement on Assessment Tools

Currently, students who score lower than 510 on the math section of the SAT are placed into a remedial math course. As of AY 2021-22, changes to the process will occur. First-year student advisors, in discussion directly with the student, will review the student's grades earned in High School math scores as well as the breadth and depth of all math courses taken. The student is then placed into a remedial course, depending on the student and advisor's recommendation on whether to proceed or not, into a college-level math course.

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FY 22 –JCR Report on Assessment Tools
Frostburg State University

Narrative: A 1000-word summary regarding the process and procedure that was used to select the current assessment tools (and cut off scores) for testing students to see if they need remediation/developmental coursework or support.

At Frostburg State University (FSU), all entering students' basic skills in composition, mathematics, and reading are assessed and students needing to develop basic skills in these areas are placed in appropriate courses. All entering first-year students are administered all three basic skills tests. Transfer students with more than 12 credits who have not transferred Freshman Composition and/or a college-level mathematics course that meets the FSU General Education Program or their intended major's requirement are required to take the appropriate placement test(s).

Language Skills Assessment:

Students' language skills are assessed by two tests: A twenty (20) minute essay on a prompt developed by FSU's Program for Advancing Student Success's (PASS) writing specialist and the Nelson-Denny Reading Test (20 minutes). The process, to utilize this assessment strategy to place student into appropriate English sections, has been supported by continual analysis of the pass rates of students placed in English sections.

Students take language placement assessments online. Students are sent a welcome letter that gives directions on how to log into our LMS system and begin placement testing. Directions are conveyed within LMS modules that guide the student. Students have the option of having the test reset if they are having technical difficulty. Each timed student essay is holistically assessed by two readers who each grade the essay on a scale from 1-6. The writing score is the total from each reader. The Nelson-Denny reading test is also timed and is scored through a computerized system online and downloaded into FSU's database; the reading test score is then combined with the essay score to produce a language level.

Using the scores from the placement tests and SAT scores (if available), individuals within the PASS Office determine if the student needs to be placed in a designated English composition section or select a regular English composition section. The scale developed by the English and PASS departments that is being used to determine the language level of students has been in place since the start of placement testing. Many revisions have been done to the components of the scale with the latest happening in the 2021 summer due to the optional SAT testing policy in place.

Currently, the English placement process is being reviewed to determine if a more diverse structure is needed to ensure students are being placed in the right sections of English.

Mathematics Placement Tests:

Mathematics skills have been, until Summer 21, assessed by one of two multiple-choice Mathematics Placement Tests, the Basic or Standard Test, developed by FSU faculty. The Basic Placement Test is administered to students who scored below a certain SAT and consists of 40 questions divided into two parts: arithmetic and algebra I. The Standard Test consists of 50 questions divided into three parts: algebra I, algebra II and trigonometry.

The assessment efforts include the evaluation of how effectively we identify and place students into DVMT, the pass rates of DVMT, and how well they retain and perform in college level math courses. An example annual report is appended to demonstrate the analysis used to verify the utilization of the existing assessment system. As of Summer 21, the Math placement procedures are done through ALEKS PPL, which has been calibrated to the cutoff scores from the tests developed by the mathematics department. The placement procedures are being reviewed to determine if other metrics can be used, such as high school GPA and high school math grades to result in more accurate placement (as judged by success rates).

Narrative: A 1000-word summary regarding the process and procedure that was used to select the current assessment tools (and cut off scores) for testing students to see if they need remediation/developmental coursework or support.

Between 2011 and 2014 the placement policy at Towson University focused on identifying students that needed mathematics remediation. Students with a low SAT math score (less than 500) or equivalent ACT math score were asked to take a proctored ACCUPLACER exam. Students who scored at least a 109 on the ACCUPLACER test were allowed to take a college-level mathematics course while students who scored less than 109 were placed into a developmental mathematics course. Students who had a SAT math score greater than or equal to 500 had no restrictions on what math course they could enroll in; these students essentially self-placed with the help of a first-year academic advisor.

In Fall 2014 the placement policy was changed to a multi-level placement model in order to simultaneously assess a student's readiness for college level mathematics and facilitate placement into various levels of college mathematics courses. Under this placement model all incoming students without college math credit were required to take the MAA's Basic Algebra Test (BAT), an unproctored online placement test. Students wishing to enroll in Calculus I had to take two placement exams: the student would need a sufficiently high BAT score (greater than or equal to 17) and then they would need a qualifying score on the MAA's Calculus Readiness Test (CRT).

In 2016 Towson University faculty expressed concern that students in Precalculus and Calculus I were underprepared. New cut scores were established by having several faculty review the BAT/CRT tests and determine the score a student ready for Precalculus would earn on the BAT and a student ready for Calculus I would earn on the CRT. Outliers were removed and the resulting scores were averaged. These new cut scores were implemented in Fall 2016. Changing the cut scores for BAT/CRT did not increase faculty satisfaction with the math placement policy.

In Fall 2018, Towson University adopted the ALEKS Placement, Preparation, and Learning Test after other institutions reported positive experiences with ALEKS[1]. Consistent with the previous multi-level placement policy all incoming students without college math credit are required to take the ALEKS placement test in an online and unproctored environment. The ALEKS cut scores were based on recommendations from the test developer. There are two noteworthy differences between the ALEKS based policy and the BAT/CRT based policy: the ALEKS test, unlike the MAA's BAT and CRT, is an adaptive test. Additionally, the placement test is part of a larger program where students can identify weaknesses in their mathematical understanding, work on these skills, and then retake the ALEKS placement test. Students are eligible to retake the ALEKS placement test after spending at least 5 hours in the learning modules.

[1] Reddy, A.A. and M. Harper. 2013. Mathematics placement at the University of Illinois. PRIMUS. 23(8): 683-702.

University of Baltimore
A brief narrative report for the Assessment Survey
Submitted by Haitham Alkhateeb, Mathematics Program Director

To fulfill a general education requirement or a major requirement, and to earn a baccalaureate degree, students must take at least one college-level mathematics course. Based on the results of ALEKS PPL (Placement, Preparation and Learning) entry exam (a commercially developed placement test sold by McGraw Hill) and SAT-Mathematics scores, some incoming first-year students are required to complete developmental coursework in mathematics before enrolling in a college-level mathematics course. ALEKS PPL was selected by the mathematics faculty after examining several options. It accurately places college students into courses ranging from developmental math through first-semester calculus. It also maps each student's unique state, then prepares each student for mathematics in a course-specific Prep and Learning Module. Overall, using different assessment measures, depending on the SAT-Mathematics score, ALEKS PPL entry exam score, and the high school mathematics courses (e.g., Algebra 2, Pre-Calculus, Calculus, Geometry, Statistics/Statistical Analysis) the student completed prior to joining the university, and developmental mathematics completed elsewhere, some students are not required to enroll in developmental mathematics.

UB offers a corequisite model in partnership with the Community College of Baltimore County. In the corequisite model, developmental mathematics is paired with college-level mathematics (college algebra and introductory statistics) and both are completed in the same semester. Students who do not meet the SAT/ACT threshold must take an entry placement test (ALEKS PPL). Those who test below the prescribed cutoff score on the entry level mathematics test are required to enroll in the corequisite model instead of the standalone credit-bearing mathematics courses.

With respect to validity, the content of the questions in ALEKS PPL is chosen from Algebra I, Geometry, and Algebra II topics. The test measures the material students know to place them into the correct course. In this case, we depended on McGraw Hill's construct validity. There are no formal campus-based validity studies in particular; however, a recent research study has been published regarding redesigning developmental mathematics education at UB. The study is titled "Redesigning Developmental Mathematics Education: Implementation and Outcomes" and is published in the journal, PRIMUS (Problems, Resources, and Issues in Mathematics Undergraduate Studies). As a supporting source, this research study is attached. Below are the assessment pathways in more depth.

<u>The UB Assessment Pathways</u>:

A. New Entering Freshmen Students

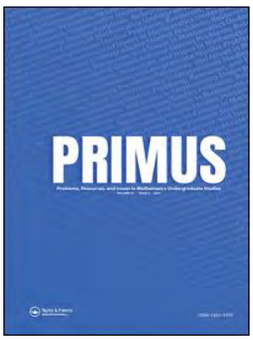
Students who have the following:
- a 500 or higher in SAT Mathematics; or
- a B or higher in Algebra II, pre-calculus, calculus, geometry, statistics/statistical analysis will be placed in college credit mathematics and will be exempted from taking the Mathematics Placement Test given that they have completed this within three years of admission to UB.

If the above is not applicable, the student will be required to sit for the mathematics placement test.

- Students who score above the cut score (a score of 46 or higher) in the ALEKS PPL entry exam (different commercial tests have different cut scores) will be placed in college credit mathematics.
- Students who score below the cut score in the ALEKS PPL entry exam will be placed in the co-requisite courses.

B. Transfer Students

Students who have the following:
- The transfer of foundational developmental mathematics equivalent to UB developmental mathematics will be placed in college credit mathematics without being required to sit for the ALEKS PPL entry exam.
- Taking mathematics courses or college level tests such as CLEP, which transfer to UB as electives, will be placed in college credit mathematics without being required to sit for the Mathematics Placement Test.
- Students that do not meet any of these two transfer options will be required to sit for the ALEKS PPL entry exam. In this case, these students will follow the same path as the freshmen above in “A” who are required to sit for the mathematics placement.



PRIMUS

Problems, Resources, and Issues in Mathematics Undergraduate Studies

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Redesigning Developmental Mathematics Education: Implementation and Outcomes

Haitham M. Alkhateeb

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Redesigning Developmental Mathematics Education: Implementation and Outcomes

Haitham M. Alkhateeb

ABSTRACT

Developmental mathematics is often a barrier to student progress and success in college. As a result and for this reason, this research study describes the redesign of a developmental mathematics course at a U.S. East Coast university to decrease the amount of time it takes for students to complete their developmental requirement and increase the success rate of students who move on to college-level mathematics. It also describes the motivation for the redesign and the implementation process. An analysis of quantitative data relating to student performance provides insight into how the course redesign presents opportunities and challenges for student progress and learning. The redesign demonstrated a high percentage of students passing the course over three years and has contributed to a high retention rate for developmental mathematics students. Recommendations for colleges and universities are included.

KEYWORDS

Redesign; developmental mathematics; performance; retention

1. INTRODUCTION

Research showed that for a large number of students, the traditional system of developmental mathematics is not producing the intended results. To address this issue and support students academically, colleges and universities have begun redesigning the developmental mathematics course structure (e.g., modularization approach), among other approaches. In a modularized approach, the traditional developmental mathematics course is broken into smaller modules. This study explores the modularization approach in achieving its goal of accelerating student progress through the developmental mathematics requirement. It also describes the redesign of the curricula and course structure. Over the past decade, emphasis has been placed on students in developmental (i.e., remedial) courses [4, 6] as concerns over student outcomes in developmental mathematics have been raised [11]. As a result, reform efforts in community colleges and universities have focused primarily on developmental mathematics. Cox and Dougherty [10] indicated that poor completion outcomes in developmental mathematics prompted reforms in developmental mathematics to increase students' chances of success. Such reforms included revisions to testing and placement policies; and the restructuring of the format

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and sequencing of courses. Developmental mathematics courses, in general, have the highest rates of failure and noncompletion of any developmental subject area [6]. Statistics indicated that roughly 60% of students who enrolled in community colleges were advised to take developmental mathematics upon entry as a prerequisite before they were eligible to enter college-level coursework [1, 25]. Hodara [16] stated that approximately 68% of students entering two-year colleges and about 35% of students at four-year colleges in the United States take some form of developmental mathematics. As far as the enrollment differences in two-year and four-year colleges in developmental mathematics are concerned, Stevenson [28] indicated that the average two-year college student has a weaker academic background than the average four-year student, simply as a result of the differing admission criteria of the two systems. A Maryland Higher Education Commission [20] study at the state level found that 61% of students who entered community colleges after having completed a high school core curriculum required developmental courses in mathematics.

2. BACKGROUND

By referring students to this course of developmental mathematics, the likelihood that they spend time in developmental courses for a year or more before being able to enroll in credit-bearing college-level classes increased [3]. While developmental courses may provide necessary support to underprepared students, research indicates that students placed in developmental education, particularly those placed in developmental mathematics, are highly unlikely to obtain an associate degree or transfer to a four-year college [3, 12]. Bailey, Jeong, and Cho [3] indicated that fewer than one half of the students who take developmental courses actually complete the entire recommended sequence. Furthermore, a low developmental mathematics pass rate has remained a concern [11], with different strategies being employed to investigate this problem and to implement a redesign of the developmental mathematics curriculum as an alternative model. For example, the developmental mathematics pass rate at a community college in Delaware was around 50 percent or below for a number of years, despite the implementation of a mathematics curriculum redesign, and this lack of improvement in the pass rate resulted in another redesign [7]. Additionally, among other challenges currently faced in higher education is student retention. Tinto and Pusser [29] noted that student retention is a widely studied topic in higher education. Geoff et al. [13] investigated various institutional variables that predict retention and found student academic preparedness was a positively contributing variable to retention.

Research has indicated several explanations for poor success rates, including the validity of placement into developmental mathematics [26], lengthy developmental mathematics sequences [15], and inadequate curriculum and pedagogy [14]. Bishop [5] studied the mathematics classroom of middle school students and found that resources and supervision to encourage students are needed so that they feel supported and motivated. Additionally, providing proper resources and supervision

can contribute to the simultaneous development of a willingness and a sense of confidence to tackle challenges in mathematics and creates positive attitudes towards the subject and the learning process [22]. According to [21], these factors can have a powerful impact on student's learning and achievement. Many states have begun adopting policies that accelerate students into credit-bearing courses [23]. Instead of requiring underprepared students to take multiple semesters of traditional developmental courses, some states have either revised their placement policies to allow for greater flexibility in terms of who is required to take developmental mathematics courses, or they have changed the way developmental courses are taught, such as by providing accelerated course options [2]. In 2013, Florida implemented both approaches by making developmental education optional for many students and changing the way developmental courses were taught for all students [23].

Overall, research has deemed developmental mathematics to be a barrier to student progress and success in community colleges and universities [6, 8–24]. As a response, many colleges and universities have redesigned the structure of their developmental mathematics courses to decrease the amount of time it takes for students to complete the requirements and increase the number of students who successfully move on to college-level mathematics. College-level mathematics are gateway courses, which are the first courses that provide transferable, college-level credit, allowing a student to progress in his or her program of study. The study that follows describes one successful course redesign based on increased rates of students passing and improved retention rates at the university overall. In this course redesign, the developmental mathematics course was broken into eight modules. This change allowed students to focus on the content within the specific module in which they struggled in, ultimately supporting their progress toward college-level mathematics. An analysis of quantitative data of student performance has provided insights into how the course redesign presented an opportunity to improve the success rate in developmental mathematics, a very important factor in the overall retention and success of students. To implement a successful developmental mathematics program, it is critical to meet the needs of the particular student population. In the literature, there has been limited research on how this type of redesign affects student performance levels and retention. This study explored student performance and retention rates using quantitative data collected over a three-year course redesign at a U.S. East Coast mid-size university. The mid-size university is a public undergraduate, graduate, and professional university consisting of four colleges specializing in business, law, public affairs, and the applied arts and sciences. The study is important as it contributes to the growing body of research on the impact of redesigning developmental mathematics on student performance and retention. Mathematics instructors and policy makers, especially those who deal with developmental mathematics, are the primary audience for this research that is applicable to university and community college settings, where a large body of students traditionally place into non-credit courses.

2.1. Developmental Mathematics Redesign

To fulfill a general education requirement or a major requirement, and to earn a baccalaureate degree, students must take at least one college-level mathematics course. Based on the results of the Accuplacer mathematics entry exam (a commercially developed placement test sold by The College Board) and SAT-Mathematics scores, many incoming first-year students are required to complete developmental coursework in mathematics before enrolling in the college-level mathematics course. Students are usually referred to one or more levels of developmental mathematics with one semester of each. Prior to fall 2014, developmental mathematics was a two-semester commitment of traditional elementary algebra (3 credit hours) and intermediate algebra (3 credit hours). It took some students a few semesters to complete these two developmental mathematics courses. However, depending on the score of the SAT-Mathematics, Accuplacer mathematics entry exam score, and the mathematics courses the student completed prior to joining the university, some students were not required to enroll in the elementary algebra course. The overall "satisfactory" completion or pass rate was 43% [30]. A grade of "Satisfactory" was placed on the student transcript if a "C" or higher was earned in any developmental mathematics course. The impending financial burden of two (or more) semesters of developmental mathematics and an accompanied effect on student morale, may have led to decreased success and retention rates. In fall 2014, a redesigned one-semester developmental course curriculum was launched to replace the old two-course developmental sequence of elementary algebra and intermediate algebra. The redesign consisted of Developmental Mathematics–Algebra (MATH 083) and Developmental Mathematics–Statistics (MATH 084), both of which are 3 credit hours each. Prior to fall 2014, a developmental statistics course(s) did not exist. The content of both courses (developmental mathematics–algebra and developmental mathematics–statistics) varied depending on the student's major. Students were required to take one-semester of Developmental Mathematics–Algebra (MATH 083) or one-semester of Developmental Mathematics–Statistics (MATH 084) as a prerequisite to prepare them for the following college-level mathematics courses or general education mathematics courses: College Algebra, Mathematics for Liberal Arts, or Introductory Statistics, all of which are credit bearing courses. The college-level mathematics courses were offered as stand-alone courses and completed after the student finishes the developmental mathematics prerequisite. The college algebra course was required for STEM majors, while mathematics for liberal arts and introductory statistics were required for non-STEM majors. The choice between MATH 083 and MATH 084 depended on the student's planned major; students in STEM majors took MATH 083 and students in non-STEM majors took MATH 084. Developmental Mathematics–Algebra (MATH 083) is comprised of eight modules and is aligned with College Algebra. This course mainly contains the same content of the two-semester developmental mathematics (elementary algebra and intermediate algebra) that existed prior to fall 2014, but is

reorganized into these eight modules. However, some content topics were condensed depending on their need as a prerequisite for the college algebra course. Developmental Mathematics–Statistics (MATH 084) also consists of eight modules and is aligned with Introductory Statistics. This course focuses on algebraic and numerical skills in the context of applications and problem solving to prepare students for introductory statistics, contemporary mathematics, or mathematics for liberal arts. MATH 084 was proposed by the state where this study was conducted in as a reform initiative, using tools and resources developed and tested by the Dana Center at the University of Texas, but the work in the state was directed and driven by the priorities and needs of the state and the state's higher education community. The focus in the course redesign was also to establish congruent and transferable college-level mathematics courses between and among state's higher education institutions with the goals of reducing remediation, increasing retention, and increasing student success. The course content was created to reflect prerequisite needs for college-level mathematics courses. The university system of the state standardized the prerequisite content of college credit mathematics courses for STEM and non-STEM majors. The modularized curricula content was developed by the Foundational Mathematics Committee for each module based on the state's curriculum guides that identified the content areas and learning outcomes of developmental mathematics. The following section lists the topics in both MATH 083 and MATH 084. Both courses, MATH 083 and MATH 084, were reviewed and approved by the university Undergraduate Curriculum Committee.

2.2. Facilitating the Redesign

To facilitate this redesign, the course descriptions and concepts for developmental mathematics (MATH 083 and MATH 084), where each is a one-semester course, sought to develop the essential background and prerequisite needs for college-level mathematics courses (college algebra, mathematics for liberal arts, and introductory statistics). The redesign of the developmental curriculum was thus aligned with the curriculum of the college-level mathematics courses. Students met three hours per week in MATH 083 and three hours per week in MATH 084 in an instructor-led lecture setting using paper-pencil exercise activities. Active learning, which involves students in the learning process more directly than other methods, was encouraged. MyMathLab in MATH 083 and MyStatLab in MATH 084, which are online interactive and educational systems designed by Pearson Education, were used throughout the course for homework assignments and exams to engage students with the material and to enable them to meet course outcomes. Outside of class hours, a walk-in Mathematics Learning Center was open approximately 25–38 hours per week for students seeking additional help. Free Mathematics tutors and thirty computers were made available in the Mathematics Learning Center for students in need of additional support, such as those struggling with homework assignments or modules and/or to complete module examinations through MyMathLab or MyStatLab. Free tutors were also available from the

university's Achievement and Learning Center. Moreover, course faculty were available to support students who were not making satisfactory progress by monitoring their progress and providing early-alert counseling. The developmental mathematics course (MATH 083 and MATH 084) was broken down into eight modules and each of these modules had to be mastered with a grade of 73% ("C" or higher). Grades for each module were determined based on the following breakdown: homework 20%, attendance 20%, and module exam 60%. Students were informed that a passing grade on the module exam may not constitute a passing grade for the module. For example, a student may have 80% for attendance, 40% for homework, and 70% for the module exam. By following the grade breakdown shown above, the student grade for the module is $(.2*80) + (.2*40) + (.6*70) = 66\%$, which is not a passing grade. The topics covered in these eight modules of MATH 083 were as follows: Operations with Real Numbers; Fractions and Decimals; Proportions, Ratios, Rates, Percents; Expressions, Linear Equations, Linear Inequalities; Graphs and Equations of Lines; Polynomials and Quadratic Applications; Rational Expressions and Equations; and Radical Expressions and Equations. The topics covered in the eight modules of MATH 084 were as follows: Performing Operations and Evaluating Expressions; Graphical and Tabular Displays of Data; Analyzing Data with Graphs and Summarizing Data Numerically; Probabilities; Graphing Linear Equations; Slope and Graphing Equations; Using Equations, Formulas, and Inequalities to Make Predictions and Solve Problems; and Using Exponential Models to Solve Problems. A great emphasis on conceptual and contextual learning was placed in each of these modules, contributing to an ultimate goal of achieving a deep understanding of mathematical concepts and the ability to perform required skills.

The mathematics program that houses developmental mathematics includes general education mathematics (college algebra, introductory statistics, and mathematics for liberal arts) and advanced mathematics (calculus, discrete mathematics, and applied probability and statistics), mainly for the applied information technology students. In this non-degree mathematics program, adjunct faculty (part time faculty) taught developmental mathematics and some of the general education mathematics courses. Graduate courses and graduate teaching assistants are not available in this mathematics program. It is also noted that a large portion of incoming students into these mathematics courses and the university are transfer students, mainly from community colleges.

In order to develop an effective scaling plan to institutionalize and provide the needed resources to sustain the redesign, so that it serves all students in developmental mathematics, the mathematics program director convened a committee comprised of a diverse group of faculty and administrators charged with examining the redesign, monitoring its implementation and analyzing student outcomes within the redesign. This committee shared outcome data with developmental mathematics faculty and administrators through meetings for extending the redesign beyond the first year of implementation. Given that the university is a small institution, which resulted in a small sample size, the redesign was implemented on

all developmental students from the start (beginning fall 2014). Community colleges are a piece of the larger puzzle of developmental mathematics educational outcomes, and given their focused missions, the redesign is scalable to work at a community college or liberal arts college. This is particularly useful to divisions or departments that are considering a redesign of their developmental mathematics.

2.3. Grading Procedure and the Variable Credit Policy

It is important to note that a student must pass each module of the total eight modules that make the developmental mathematics course (MATH 83 and MATH 84). To facilitate this, module retesting was allowed and proctored at the Mathematics Learning Center. Additionally, there were no midterm exams or final comprehensive exams. This course was module-based and self-directed. Students can work on homework assignments for modules and can attempt module exams if they achieve over 80% percent on the module homework. If a student performed poorly on one module, they were unable to offset a low grade with a high grade in another module. After passing the module homework with a performance of 80% or above, students were allowed to attempt the module exam multiple times, with tutoring being required after any unsuccessful attempt. At the end of the semester, the student received an overall course grade of "S" for Satisfactory (passing) if all eight modules were passed with a 73% ("C" or higher) score or more. The "S" was not computed into the student's grade point average. Students who did not successfully complete all eight modules would earn a grade of "CS" for Continuing Studies as the overall course grade and would be permitted to re-register for the course. The mathematics content was organized into a variable credit course. During a subsequent attempt(s), students would enroll in one credit, two credits, or three credits, depending on the number of modules they had already completed. However, they would not need to repeat any of the eight modules that were successfully passed during the previous attempt(s) of the course. The student would devote the remainder of the subsequent attempt(s) to pass the course and master the remaining modules. If a mastery of all eight modules was not achieved by the third enrollment in MATH 083 or MATH 084 (three semesters total), the student would earn a grade of "NS" for Unsatisfactory. Developmental mathematics does not count towards the 120 academic credits needed for graduation. However, the course does count towards fulltime status for students. The full-time semester is made up of 12 or more credits, including developmental mathematics. This study does not assess if the success rate of developmental mathematics is dependent on counting the course towards graduation credits and its potential effects on students' grade point averages.

The variable credit policy is 1 credit hour for students who are required to complete one to three modules, 2 credit hours for students who are required to complete four to seven modules, and 3 credit hours for students who do not pass the mathematics entry exam (Accuplacer) and are starting the first module (labeled as Module A). Unlike traditional courses that require completely restarting from the beginning, a student in MATH 083 and MATH 084 can carry any passed modules over to

the next semester. For example, if a student successfully completed five modules but was unable to pass the remaining three modules, he or she would register for MATH 083 or MATH 084 again, but only needs to complete these last three modules, which would count as one credit hour, since the course is a variable credit.

3. RESULTS

The data reported is based on student performance and retention collected over three years (fall 2014 to spring 2017).

3.1. Impact of the Course Redesign

One of the goals of the developmental mathematics course redesign was to accelerate student advancement through the developmental mathematics requirement, possibly allowing students to complete all developmental mathematics courses in one year or less. Data collected over three years was used to explore the extent to which the course redesign met this goal. Information in Table 1 was gathered from 772 students enrolled in MATH 083 and MATH 084 beginning in fall 2014 through spring 2017. Overall, 65% of these students passed and 35% did not complete all the required eight modules in MATH 083 and MATH 084.

Ideally, a student should complete all eight modules in one semester. 76.5% (384 students) of the 502 passing students were able to do so. Of the original 772 students, 384 completed all eight modules in one semester, which constituted 49.7%. If a student completes less than eight modules, they will enroll in MATH 083 or MATH 084 the next semester and continue with the next module. 14.9% (75 students) of those 502 students who passed took two semesters to fulfill the developmental mathematics requirement. Occasionally, a student may need more than 2 semesters. 8.6% (43 students) of the 502 students took three or more semesters to complete MATH 083 or MATH 084. As indicated in Table 1, 270 students were unsuccessful in passing MATH 083 or MATH 084 with a "Satisfactory" grade because they did not complete all course modules (8 modules total). Of these 270 students, 62.6% of them (169 students) enrolled in MATH 083 or MATH 084 for one semester, 24.4% (66 students) enrolled for two semesters, and 13% (35 students) enrolled for three or more semesters.

Table 1. Overall pass rates of developmental mathematics (MATH 083 and MATH 084); Fall 2014 to Spring 2017.

Module Completion	Completed All Modules	Did Not Complete All Modules	Total
Students	502	270	772
Percentage	65%	35%	100%

Table 2. Success in college-level mathematics of students that completed MATH 083 and MATH 084; Fall 2014 to Spring 2017.

Success	Passed	Did Not Pass	Did Not Attempt	Total
Students	345	60	97	502
Percentage	68.7%	12.0%	19.3%	100%

3.2. Success in College-Level Mathematics

Increasing the passing rates in developmental mathematics from 43% (pre-redesign pass rate) to 65% (post-redesign pass rate) is a note-worthy achievement but can mean very little if these students are not successful in their college-level mathematics class (college algebra, mathematics for liberal arts, and introductory statistics). For those 502 students that successfully passed MATH 083 and MATH 084 during fall 2014 to spring 2017, 405 of them attempted a college-level mathematics course. Of the 405 students, 85.2% of them (345 students of the 405) or 68.7% (345 students of the 502) passed with a "C-" or better (70% or higher) (Table 2) and 12.0% of them (60 students of the 502) did not pass (received below "C-" or less than 70%). Of the 502 students, 19.3% (97 students) did not attempt a college-level mathematics course.

It is noted here that 956 students did not previously take MATH 083 or MATH 084 and had an overall pass rate of 81.5% in college-level mathematics courses during the fall 2014 to spring 2017 period. Of the 956 students, 81.5% (779 students) received a "C-" grade or better and 18.5% (177 students) received a grade below "C-". During this same period, 956 students were not required to take MATH 083 or MATH 084 and went directly to college-level mathematics courses, and 722 students were required to take and enrolled in MATH 083 or MATH 084, as indicated in Table 1. Some students skipped both the developmental mathematics (MATH 083 or MATH 084) and the college-level mathematics because they transferred the college-level mathematics requirement from previous schooling. These students were excluded from this study.

3.3. Retention Rates

Students who were successful in MATH 083 and MATH 084 after only one semester and were successful again in their college-level mathematics course were positioned to graduate on time. However, it is too soon to determine graduation rates. Of the 772 students who took MATH 083 or MATH 084 between fall 2014 and spring 2017, 31 of them were enrolled in spring 2017. Since following up on them would go beyond spring 2017, which is the final semester of this study, they were removed from the retention rate analysis. Of these 31 students, two students completed MATH 083 or MATH 084 and 29 students did not complete MATH 083 or MATH 084, which brought (in the retention rates calculation) the total number of students who completed all modules to 500 students. Those who did not complete all modules became 241 students ($270 - 29 = 241$ students) and the total amounted to

Table 3. Retention rates of students that completed/did not complete all modules in MATH 083 or MATH 084; Fall 2014 to Spring 2017.

Module Completion	Completed All Modules	Did Not Complete All Modules	Total
Students	500	241	741
Students Still Enrolled	346	128	474
Retention Percentage	69.2%	53.1%	64.0%

741 students (772 – 31 = 741 students). There was a major difference in the retention rates of students that completed MATH 083 or MATH 084 and those who did not complete it, as indicated in Table 3.

4. DISCUSSION

The developmental mathematics course redesign supported retention and student performance in developmental mathematics. Maintaining and facilitating improved student performance levels and retention in higher education are important goals for educators, students, and society to improve college graduation rates and to meet the needs of the workforce. Findings from the course outcomes analysis indicated that the developmental mathematics course redesign enhanced mastery of course content and created an opportunity for faster progress to college-level mathematics compared to the pre-redesign model. Although some may argue that the organization of content into smaller modules makes it difficult for students to make connections across topics and retain information, the organization of course content into smaller modules may have made it easier for students to learn the requisite concepts and skills and to focus more effectively on the content within the module. The course redesign is module-based with an emphasis on conceptual learning. Additional help to address student learning needs were made available through the Mathematics Learning Center and the university offered free tutoring through the Achievement and Learning Center. Professional development was provided to faculty teaching these developmental mathematics courses, MATH 083 and MATH 084. This was needed, particularly at the beginning, to make sure that the faculty were aware of the redesign structure and to answer any of their inquiries and concerns related to implementation. Several professional development sessions were needed in the first year and especially at the time of implementing the redesign. These sessions included course objectives, syllabus orientation, tutoring, organizing course content, designing appropriate learning activities, and learning services. Faculty resisted the redesign, but soon accepted its implementation after the first few professional development sessions, when the redesign structure became clear to them. In the year that preceded the redesign and before holding faculty professional development sessions, a retreat was held with university administrators, including the college dean and chairs of concerned divisions, to discuss the redesign proposal in supporting student success. The redesign proposal came from the mathematics program director as a result of assessment needs and it featured strong and

achievable learning objectives which was a key to the success and support of the proposal.

Some factors to keep in mind when considering a redesign is the weak prior content knowledge students may have in mathematics, poor time management skills, and negative perceptions of mathematics. Without strict deadlines, many students flounder and do not make substantial progress through the developmental mathematics course. This may be particularly applicable to students with limited time management skills or a weak academic background. Faculty professional development could address maintaining student content knowledge and engagement challenges. With this, faculty may find it challenging to have students make substantial progress throughout the course. However, a more balanced redesign that provides self-paced (personalized learning) and instructor-directed structure (traditional courses) is needed. Colleges may want to evaluate which structure is suitable for what students based on such factors.

Initially, the plan was for the developmental mathematics course redesign to be continued as a stand-alone prerequisite only option; however, implementing a corequisite model option, in addition to the prerequisite, was under discussion and consideration at the time of writing this manuscript (4th year of the redesign). Both options are needed depending on students' readiness level for college-level courses. The corequisite model is believed to accelerate students' progress in developmental mathematics and in attaining a degree. In the corequisite model, developmental mathematics is paired with college-level mathematics (e.g., college algebra, introductory statistics, mathematics for liberal arts) and both are completed in the same semester. Logue [19] stated that in corequisite mathematics remediation, students who have been assessed as not yet ready for college work receive extra help while taking a college-level course instead of taking a traditional prerequisite remedial (stand-alone developmental) course. However, similar to the prerequisite model in this study, some students do better in stand-alone courses. Thus, colleges need to evaluate what model structure is better for which students when an option is made available. In fact, determining the students that will benefit from what course structure may not be straightforward, especially when considering success rates (e.g., Are repeaters who failed more successful in stand-alone developmental mathematics or in a corequisite structure? Are students who fail modules and need additional support more likely to drop out of developmental mathematics?) Questions of this type could be useful and provide additional variables for analysis. Overall, many colleges and universities are currently offering both options, the stand-alone prerequisite developmental mathematics and the corequisite model. These colleges and universities use SAT and/or ACT scores, for example, to recommend placement in an appropriate credit-bearing mathematics course. Students who do not meet the SAT/ACT threshold must take an entry placement test. Those who test below the prescribed cutoff score on the entry level mathematics test (e.g., ALEKS PPL or ACCUPLACER) are required to enroll in either the stand-alone prerequisite developmental mathematics or the corequisite model. Students with low scores on the entry level mathematics test

and that have inadequate preparation in mathematics are determined as not ready to enroll in the corequisite model and are required to enroll in stand-alone prerequisite developmental mathematics before going to credit-bearing mathematics courses.

Previous research has indicated higher developmental course enrollment rates among African American and Hispanic students than their Asian American and White peers [27]. Bailey, Jeong, and Cho [3] found that males, adult learners, African American students, part-time students, and students in vocational programs are less likely to progress through their full developmental sequences. The fall 2015 diversity profile records of the participant university in this study involved 42% African American, < 1.0% American Indian or Alaskan Native, 4.6 % Asian, 4.7% Hispanic/Latino, < 1.0% Native Hawaiian or Pacific Islander, 40.8% White, 3.4% two or more races, and 4% who did not self-identify. The university's total enrollment was 6,002 students in the same fall semester. There is limited research completed in the areas of socioeconomic status and enrollment in college or university developmental mathematics. There is a need for additional research to expand on variables that may influence success rates in developmental mathematics, such as faculty professional development opportunities, placement tests used, and motivation and learning strategies in developmental mathematics. Future research is needed on how to best ensure student success.

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BIOGRAPHICAL SKETCH

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MHEC Report on Assessment 2021 submission
University of Maryland, Baltimore County (UMBC)

Reading Placement

As of fall 2019, there is no Reading Placement Test at UMBC. Participation was non-mandatory and few placed in the remedial courses (LRC 100 or EDUC 114).

Writing Placement

English placement testing has evolved over time and these changes were informed through iterations of assessment. A summary is below beginning with our current practice.

For fall 2021, the English Department changed its placement structure for English composition courses for summer and fall 2021 to directed self-placement since the university adopted a SAT/ACT optional admission policy for fall 2021. A student works with their advisor to determine which English composition course is the best fit for them [ENGL 100, 110[1] or English Language Institute (ELI) courses].[2] We will assess this as part of our test-optional evaluation.

For the two years prior (effective fall 2019), the English Department used SAT/ACT scores for placement because virtually all students placed into English 100 (the graduation requirement). A score of 550 or above on the SAT EBRW section or a combined score of 43 on the ACT Reading and Writing sections placed a student into ENGL 100. See exhibit A for an evaluation informing that decision.

Previously, the English Placement Test allowed for placement into one of the following courses:

- ENGL 100 (Composition)
- ENGL 100A (Composition for less-prepared student writers)
- ENGL 110 (Composition for speakers of English as a second language)
- ELI 041/042 (For students who speak English as a second language needing more support before taking ENGL 110.)

In spring 2013, the Department of English began teaching a redesigned version of ENGL 100, eliminating ENGL 100A. See Exhibit B for an evaluation informing that decision. This change meant that the English Placement Test served to place students into ENGL 100, ENGL 110 or ELI courses, essentially determining if the student was/was not an English as a Second Language Learner, a numerical minority of students taking the test. These three courses represent the courses students are currently placed into via self-directed placement and advising (as noted above).

Students are exempt from English placement testing who have been assessed as having college credit for English 100 using:

1. Advanced Placement (AP) exams with a score of four or higher: English Language and Composition or English Literature and Composition
2. College Level Examination Program (CLEP) exams that was graded by the English Department, specifically College Composition (score of 67 or higher). The following exams are also equivalent to ENGL100: English Comp with Essay, Freshman Comp with Essay, or College Comp Modular with essay.
3. Reviews of official transcripts with a passing grade (C or higher) in a course that transfers exactly as ENGL 100 or ENGL 110.

[1] ENGL 110 is for students whose first language is other than English or who speak a language other than English at home.
[2] ENGL 100, ENGL 100A (in past), and ENGL 110 all satisfy the general education requirement for graduation. ELI 041/042 do not.

Math Placement

The placement exam cut scores for each UMBC Math course depends upon a student's major. The math placement process is very important to STEM majors' course sequencing, as a math placement of a certain level is required for some science courses in addition to math courses. Details are here.

In conjunction with the Dean of Natural and Mathematical Sciences, the Department of Mathematics and Statistics oversees math placement related policies and procedures. In 2017, UMBC implemented the ALEKS Placement, Preparation, and Learning (ALEKS PPL) testing system to improve the efficiency of math placement testing and to adopt a computer-adaptive assessment system that aligned with placement testing best practices. That same year, UMBC began offering a new quantitative literacy course, MATH 104, which successfully diverted students who did not need calculus for their majors from the LRC 099-MATH 106 sequence. This greatly reduced the number of students taking LRC 099 (Dev Ed course) and MATH 106 (transition course to STEM major math requirements). Also, MATH 100 became MATH 120.

Two significant changes have occurred to the process and procedure regarding math placement. First, UMBC implemented a change to facilitate more accurate placement results. Prior to March 2019, students had 48 hours to complete the un-proctored ALEKS exam. After consultation with ALEKS staff and an assessment provided by them, the Math Department changed the amount of time a student is allowed to complete the test to 2.5 hours. See Exhibit C for an evaluation informing that decision. The Office of the Dean for Natural and Mathematical Sciences funded the creation of a video and student testimonials about the importance of not using outside resources on the placement exam for more accurate math course placement and success. Students who took the ALEKS placement test after March 2019 were provided with a link to the video and asked to check a box in Blackboard to indicate that they had viewed it before beginning the placement exam. See Exhibit D.

Second, in spring 2021 LRC 099, which prepares students for MATH 106, was no longer offered because very few students placed into it (10 students/semester) and it delayed STEM students' degree progress. As the LRC 099 placement milestone remains active in the Math Placement system, UMBC instituted a process to re-direct students scoring less than 30 on the ALEKS math placement test (as of fall 2020). These students are counseled to talk with their academic advisors about taking MATH 104 (if permitted), or to improve their placement score to qualify for MATH 106 by giving them resources to support their learning and re-assessment. An assessment is planned summer/fall 2021 on the impact of students who originally placed into LRC 099 and practiced and re-tested to place into MATH 106 during the spring 2021 pilot.

Finally, students are exempt from math placement testing who have been assessed as having earned college credit for the math course required for one's major using AP exams, International Baccalaureate (IB) exams, CLEP, or a review of official transcripts to transfer in a course.

University of Maryland, College Park

JCR Request response

Bill Schildknecht, Department of Math

September 1, 2021

Our developmental courses are MATH 003, 007, 013 and 015.

MATH 003 is computer assisted self-paced course with a goal of preparing students for either MATH 107, 113, 115 or STAT 100. It is considered a full semester course.

The Math 01x program is over 20 years old. Developed so that more new students can enter and complete their targeted 100 level, non-calculus math course in one semester, this program has been very successful.

MATH 007, 013, 015 are part of the hybrid combined courses, each meeting 5 days a week of algebra review for 5 weeks and then they become credit bearing courses MATH 107, 113 or 115 respectively, also meeting 5 days a week for the remaining 10 weeks of the semester.

The Math Placement Exam is administered at the end of the 5 weeks in these hybrid courses to determine students who can continue on to the credit bearing part and those who need more algebra review by joining a MATH 003 class instead. (The Math Placement Exam was developed from the Mathematical Association of America (MAA) placement exam and guidelines. They long ago discontinued this, so ours is an in-house exam consistent with the original, and has been modified somewhat over the years. It has four parts, arithmetic, algebra I, algebra II and trigonometry.)

For the students who become eligible for the credit-bearing course, their enrollment officially changes to the appropriate course. For the next nine weeks, these students follow the same syllabus and take the same final exam as those in the semester-long courses. On the final exam, the students in the hybrid

courses have consistently performed at least as well as the students in the semester-long courses.

While success rates passing the Math Placement Exam of the students in MATH 007, 013, and 015 at the 5-week point varies somewhat from semester to semester, it is generally above 90%. That has been consistent.

We consider the success rate for students who start with MATH 007, 013, and 015 and finish with MATH 107,113,115 with a letter grade of A, B, or C as an indirect measure of this program.

Process and Procedure to Select Assessment Tool

In conjunction with the Center for Access and Academic Success (CAAS), our mathematics department created an interdisciplinary committee that developed and agreed upon a placement procedure aligned with research conducted in our participation in the University System of Maryland Mathematics Affinity Group. In this affinity group, we assessed the placement process used at other institutions in the University System and across the country.

University of Maryland Eastern Shore (UMES) students are placed into our developmental course (Math 99) when they cannot enter into a higher-level mathematics course based on four different metrics. First, their high school GPA and high school math grades. Then, we evaluate their ACT Math or SAT Math scores. Lastly, we use our local and on-demand ALEKS Placement, Preparation, and Learning (PPL) assessment scores. This evaluation of various scores is our placement process for all incoming freshmen and transfer students who come to the University without transferable math credits. However, if a Non-STEM student major does not require an additional Statistics course, they are placed in our Topics of Mathematical Literacy course as a final mathematics core requirement.

UMES Math 099 Placement Policy and Guidelines

The Mathematics Placement Policy determines placement into Math courses at the University of Maryland Eastern Shore (UMES). At UMES, we place first-time first-year students into their first math course based on their High school math scores and high school GPA; their SAT Math or ACT Math score or ALEKS PPL assessment. Transfer students who do not have a transferrable math course must take the ALEKS PPL test for placement. Students who disagree with their math placement based upon their High School Math scores and High School GPA, or their SAT/ACT math score, may elect to take the ALEKS PPL assessment provided they have not previously enrolled in a mathematics course here at UMES.

Table 1. below shows how UMES staff or faculty place students into each of our lower-level mathematics courses. Students and their CAAS advisor use the criteria that place the student into their proper mathematics course. In addition, a student can register for our Topics in Mathematical Literacy course, regardless of their scores, if their major does not require College Algebra or an additional Statistics course beyond their gen ed requirement. All transfer students without transferrable math credits must take the ALEKS PPL placement assessment to be placed into their first mathematics course here at UMES. Suppose a student decides to switch from a major that requires our Topics in Mathematical Literacy course to a STEM major. In that case, we require them to take the ALEKS PPL placement assessment to place into their next mathematics course.

Table 1. The mathematics placement courses with various cut off scores

Mathematics Placement and Scores Guidelines

Course Placed	Course Title	H.S. Math Grades/GPA	SAT Math Score	ACT Math Score	ALEKS Score
MATH 99	Intermediate Algebra	GPA below 3.0 or grades below B in Algebra I & Algebra II	Below 500	18 or below	0-45
Math 102	Applications of College Mathematics	GPA of 3.0 or higher & B in Algebra I & Algebra II	500 or above	20 or above	40-60
Math 103	Topics in Mathematical Literacy	N/A	N/A	N/A	N/A
Math 109	College Algebra	GPA of 3.0 or higher & B in Algebra I & Algebra II	530 or above	22 or above	46-60
Math 110	Trigonometry & Analytic Geometry	GPA of 3.25 or higher & B in Algebra I, Algebra II, and Pre-Calculus	580 or above	25 or above	61-75
Math 112	Calculus I	GPA 3.4 or higher & A in Algebra II, Pre-Calculus, & B in a higher-level high school math course	650 or above	28 or above	76-100

Assessment Survey Narrative Report

August 2021

Morgan State University selects developmental course placement tools through the University Placement Test Committee. This committee is comprised of staff from the Office of Student Success and Retention, the Office of Assessment, the Office of Institutional Research, and faculty from the Department of English, the Department of Mathematics, and the School of Engineering. This committee typically meets twice a semester or on an as needed basis. The University has two developmental courses, a mathematics course (MATH 106: Fundamentals of Mathematics), and an analytic and critical reading course (ALCR 101: Analytical and Critical Reading). Faculty members in the Department Mathematics and the Department of English map skills required for the developmental courses and subsequent courses to the placement assessments used and determine cut scores. Below is a brief description of the current placement tool or process used for the developmental mathematics course and the developmental reading course.

Developmental Mathematics Course Placement

Currently, Morgan State University uses the ALEKS (Assessment and Learning in Knowledge Spaces) mathematics placement platform. The ALEKS platform is the culmination of theoretical research in mathematics education and cognitive science. It was developed by Dr. Jean-Claude Falmagne at New York University and the University of California Irvine, and Dr. Jean-Paul Doignon at the Universite Libre De Bruxelles with funding from the National Science Foundation. The ALEKS assessment is an open response assessment that in 30 questions or less, determines students' knowledge across 314 topics and places them into courses from Basic Math to Calculus. ALEKS is an adaptive online assessment and adjusts the questions asked based on a student's response to the prior question. According to the ALEKS website the assessment system has been used by over 25 million students for Math, Chemistry, Statistics and Accounting. At Morgan State University, new freshmen are provided the opportunity to use the ALEKS platform prior to their arrival on campus. Students take the assessment and based on results then are provided with ALEKS tutorials to help students improve their knowledge of specific mathematics topics. The pre-COVID-19 protocol was students could take the assessment four times before taking a final assessment that was proctored by the University. The results of the final assessment were used to place students in developmental mathematics or the mathematics class appropriate for the student's major. Because of COVID-19, we changed the ALEKS testing protocol so that students no longer take (in-person) proctored assessments. Students have access to four ALEKS math placement assessments from home. Students are required to complete the learning modules after each assessment before advancing to the next ALEKS test. The most recent score is used to place the students in their math course. The 5th and final math placement test is reserved for the Math Department to use for a proficiency exam for students who wish to override their previous result(s) before the semester begins. Students who score high enough to place out of the entry

mathematics class required for their major, are placed into the subsequent course. Each year the University Placement Test Committee reviews the ALEKS placement results and works with the Department of Mathematics to make any adjustments in placement cut scores. Starting in the fall of 2020 all sections of MATH 106 incorporated ALEKS tutorial modules as part of a course redesign.

Developmental Reading Course Placement

Since fall 2020 the University has used high school Grade Point Average as the assessment used to place students in developmental reading. Students with a high school Grade Point Average of 3.0 or better were exempted from taking the developmental reading course. Students with a high school Grade Point Average below 3.0 or international students without a high school Grade Point Average were placed into the developmental reading course. Results of an analysis conducted by the Office of Institutional Research revealed for the fall 2020 students, there was not a statistically significant relationship between average high school English grades and final grades in developmental reading suggesting that students had been placed appropriately. Results of an additional analysis did indicate that there was a statistically significant relationship between developmental reading status and final grade in the freshman English course. The University will be looking into ways to reduce the gap. An initiative that has been suggested is to tie the content of the freshman English class to the developmental reading course and have the instructors for both courses collaborate on teaching, curriculum development and assessment. The developmental reading course underwent a course redesign in 2018. Analytical and Critical Reading 101 (ALCR) was introduced in 2018 as a replacement for Developmental Reading 101 (DVDR). ALCR is a more comprehensive course, consisting of three credit hours as opposed to DVDR's two hours, and it assists students in developing a broader array of literacies more suited to twenty-first century learning environments and workplaces.

Each semester, the Division of Enrollment Management and Student Success reviews grade distributions in classes which historically have had low student success. This review is a part of the University-wide 50 by 25 campaign to raise six-year graduation rates to 50% by 2025. Results of the grade distribution analysis is used to make curricular changes. Both the developmental mathematics class and the developmental reading class have been a part of this review.

Maryland Independent Colleges and Universities (MICUA)

Capitol Technology University Placement Test Selection and Implementation

Prior to December 2016 the university used Compass as the placement instrument. Compass was discontinued at the end of 2016 and the university sought other vendors. Options were limited and the university did not have the expertise or resources to develop and validate an in-house testing instrument. The university evaluated Accuplacer by College Board and began the process of implementing the instrument.

As part of the implementation the department chair for General Education reviewed the Accuplacer manual and aligned the university's learning objectives for the remedial and entry level writing and math courses with the skill insight which outline the skills and knowledge typically demonstrated within a score band for each component of the placement instrument. Placement scores for each course for which placement was available were determined.

Accuplacer is used to place students into one of three writing courses:

EN001 – Basic Writing Skills (remediation)

ENI101 – English Communications I – Intensive (3 credits)

EN101 – English Communications I (3 credits)

Accuplacer is used to place students into a math course appropriate to the degree program and the student's demonstrated understanding of math:

MA005 – Basic Mathematics (remediation)

MA110 – Business Management Math (3 credits)

MA112 – Intermediate Algebra (3 credits)

MA114 – Algebra and Trigonometry (4 credits)

MA261 – Calculus I (4 credits)

Only one course in the Mathematics series is true remediation (non-credit). However, by university policy students who place into a course which is a prerequisite for the entry mathematics course in their degree program must complete the prerequisite(s) either as remediation (does not apply toward degree requirements) or as an elective.

MHEC Assessment Survey Narrative
Hood College

English composition placement

Hood College's English composition program uses a 60-minute timed composition placement essay to determine student placement in our composition courses, ENGL 099 and 100. ENGL 099: Basic Writing Skills is a two-credit developmental course graded satisfactory/unsatisfactory and does not earn credit towards graduation; ENGL 100: Elements of Composition is the four-credit composition course required for core. We selected this method of determining placement level because of its advantages over methods, such as using standardized test essays or other writing produced by students for different purposes. The composition placement essay, which incoming students write in response to one of three prompts, is a more accurate reflection of writing ability, as it is written specifically for the purpose of composition placement and presents students with real-life (and imaginary) scenarios to which they must respond in a timed setting. Composition placement essays are read and graded by at least two English faculty members using a scoring rubric (see below). Students who place into the lower level (1.00) are assigned to take ENGL 099: Basic Writing Skills; those who place into the higher level (2.00) take ENGL 100: Elements of Composition. Depending on the quality of the response, students with English Language Learner markers may be scored 1.75 and enrolled in a specific section of ENGL 100 (ENGL 100E), or, may be scored 1.00 and enroll in ENGL 099.

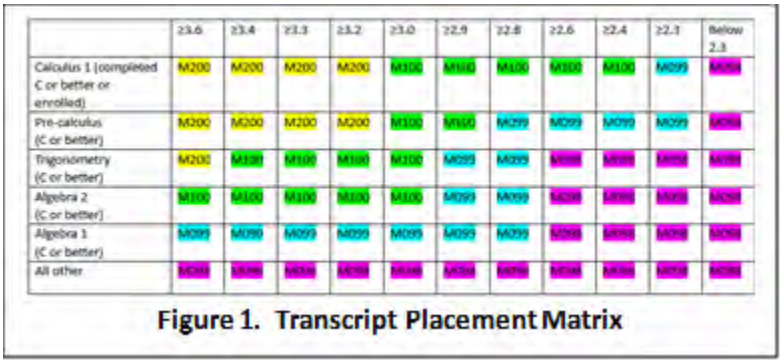
> *Composition Placement Test Scoring Rubric*
> 2.00 = These well-organized and well-written essays clearly and effectively respond to the prompt. In their responses, they are apt, specific, and thorough. Though not without flaws, these essays demonstrate consistent control over the virtues of effective composition, including grammar and mechanics.
>
> 1.00 = While these essays do respond to the prompt, the responses may be cursory or superficial, and the language used may be vague, awkward, or grammatically incorrect. Grammatical and mechanical issues may include spelling and punctuation errors, comma splices, run-on sentences, and sentence fragments. Some essays may not respond to the prompt at all.
>
> 1.75 = In responding to the prompt, these essays reveal markers that indicate the writer is an English language learner, including incorrect use of articles, prepositions, adjectives/adverbs, pronouns, and syntax.

Our composition placement process underwent an informal validity study in the spring of 2021, during which we revised our prompts and created a short introductory video for the purpose of improving the quality of composition placement essays and thus the validity of the composition placement process. Specifically, we created several new prompts that we hoped would generate more interest from students and provide us with even more accurate representations of their writing abilities. We also created an introductory video that students must watch before writing the essay, in which we emphasize the guidelines and the importance of taking the task seriously by responding thoroughly to one of the prompts in essay form. Finally, we created a scoring rubric for composition placement essays (see attached) to ensure consistency among readers. As a result of the changes implemented by our validity study in the spring, students' composition placement scores improved dramatically, with far more placing into ENGL 100 this year than in previous years.

Math placement

Hood College's mathematics placement system includes five placement levels: calculus, pre-calculus, pre-calculus with co-requisite support, statistics and/or (developmental) calculus-track algebra, and (developmental) algebra. Satisfactory completion of a developmental course raises a student's placement one level and does not award college credit.

To determine student placement, we use multiple measures. We analyze high-school transcripts, recording the last successfully completed (C or above) mathematics course and the unweighted GPA. We generate a first placement using this information by a system summarized in Figure 1.



	≥3.6	≥3.4	≥3.3	≥3.2	≥3.0	≥2.9	≥2.8	≥2.6	≥2.4	≥2.3	Below 2.3
Calculus 1 (completed C or better or enrolled)	M200	M200	M200	M200	M130	M160	M130	M130	M130	M099	M094
Pre-calculus (C or better)	M200	M200	M200	M200	M130	M160	M099	M099	M099	M099	M094
Trigonometry (C or better)	M200	M130	M130	M130	M130	M099	M099	M099	M099	M099	M094
Algebra 2 (C or better)	M130	M130	M130	M130	M130	M099	M099	M099	M099	M099	M094
Algebra 1 (C or better)	M099	M099	M099	M099	M099	M099	M099	M094	M094	M094	M094
All other	M094	M094	M094	M094	M094	M094	M094	M094	M094	M094	M094

Figure 1. Transcript Placement Matrix

Most students also take a placement exam ("MPTest") composed of tests from the Möbius MAA placement-test suite. Hood's placement exam consists of a sequence of three multiple-choice tests from this suite. Students may request an extra-time accommodation for the exam. Students may use calculators when completing the placement exam.

Students' test results change placement by transcript in only two cases. The first case is when a student's MPTest result indicates a higher placement than transcript evaluation. In this case, we place the students at the level indicated by the MPTest score. The second case is when the student fails the first part of the MPTest sequence and has placement by transcript at the pre-calculus or calculus level. In those situations, we decrease the transcript placement: students who placed at the calculus level by transcript are placed at the pre-calculus level, and students who placed at the pre-calculus level are placed at the statistics and/or (developmental) calculus-track algebra level.

When students report SAT scores or ACT scores, we may also increase placement levels if those scores are sufficiently high. For example, an SAT mathematics score of 530 or an ACT mathematics score of 21 guarantees placement at least at the "pre-calculus with co-requisite support" level. Students who earn Hood credit based on AP and IB tests or by transferring credit from other colleges receive placement based on the courses for which they have earned credit.

Process to select and develop transcript-based placement system

The process of selecting and developing the transcript-based placement system started in the 2016–17 academic year as the mathematics department became increasingly concerned with the large fraction of students placed at the developmental algebra level. In spring 2017, the chair of the department attended a webinar describing the Multiple Measures Assessment Project[1] (MMAP) for improving placement in English and mathematics at California community colleges. The MMAP research suggested that high-school GPA and coursework were stronger predictors of college success in mathematics than placement-test scores or standardized-test scores. The mathematics department investigated transcript-

based placement and conducted a formal review of mathematics placement in summer 2017. The department adapted the placement matrix from the MMAP (showing how to combine high-school GPA and last mathematics class completed to determine placement) to match Hood's placement levels and to match the high-school mathematics courses most often taken by the college's students. As part of the formal review, the mathematics department made a trial run (unimplemented) of the proposed new placement system for students entering Hood in fall 2017. The department used the formal review to determine cut-off scores for placement by standardized test and to ensure that the proposed transcript-based system would produce reasonable results at Hood.

Hood implemented the transcript-based placement system for students entering in fall 2018 and assessed its impact on students in the fall semester with a January 2019 review. Because of this review, we modified the placement procedure so that students failing the first part of the placement exam and placing by transcript at the calculus or pre-calculus level would receive lower-level placement as described above.

Process to select the Möbius MAA placement tests

Before Hood added the transcript-based component to our placement system, we used the Möbius MAA placement tests as our only system. Hood adopted this placement exam, which replaced an internally developed exam, for students entering in fall 2014. To choose cut-off scores for placement levels, the mathematics department had current students in various classes take several of the tests in the suite. The test-score standards for future students were based on the trial test performance of successful students already at Hood.

Current Practices – English: All first-year students will be given introductory instruction in writing through course work offered by the English Department. The English placement exam (created internally) is given online in Blackboard prior to the new student's arrival. The student is given a writing prompt and submits an essay for review. The essay is reviewed by the English department and the student can place into: ENG 1002 (Remedial, Pre-Req to 1101: 4 credits), ENG 1101 (4 credits) or participate in Directed Self Placement (DSP) in which the student is given a choice between ENG 1002 and ENG 1101 to best suit their identified needs.

Current Practices – Mathematics: This exam is *optional* for students, as we do not require mathematics for graduation. For those who do need placement due to major requirements, the placement exam is only available online for limited times in June and July, and in person in October and March. The exam is in four parts, although Part Four is optional.

- Part One--Arithmetic (32 questions; 75 minutes time limit)
- Part Two--Algebra 1 (25 questions; 60 minutes time limit)
- Part Three--Algebra 2 (10 questions; 30 minutes time limit)
- Part Four--Elementary Calculus (15 questions; 45 minutes time limit)

Test scores are not available to students. Their advisor will discuss placement results.

Please note:

We completed an external evaluation of our exam process in 2017, and did implement some changes recommended by the committee after that time. However, the majority of our process has remained unchanged, most notably mathematics. However, with that being said, we did implement a one-semester math class for credit which does cover all the material in the two zero-credit remedial classes. We have not yet assessed the data from this implementation, as it has only been in place during the advent of COVID and we want to look at data in a more normal classroom environment.

We are also aware we need to update our analysis data, since it has not been done since 2017. This is on the docket as a project for this fall. Again, the data will be somewhat skewed due to the COVID environment since Spring of 2020.

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Foundational Math Placement Background

Prior to 2019, Stevenson University had utilized the College Board's Accuplacer exams to determine math eligibility and placement for incoming students. However, Accuplacer informed users that they would be converting all of its exams to the *Next Generation*, which would require a comprehensive examination of all existing procedures, cut-scores, and rules. In addition, the College Board was unable to provide complete concordance tables for math due to the differences in the versions of the exam and the lack of sufficient data. Additionally, no guidance was provided from them regarding scores or placements. In an effort, to be proactive, The Placement Test Committee with representatives from the Office of Student Success (OSS), the Academic Link, and the Math department met in November 2018 to discuss current placement testing practices and results, and reviewed the upcoming changes to Accuplacer tests. In addition, Stevenson University had experienced the following problems with Accuplacer:

- Students did not always take the placement test seriously.
- They didn't know what to expect on the placement test and thus, were not prepared for the timing or rigor.
- Many students do not take math in their last year of high school. As a result, they often had forgotten mathematical concepts and ways to solve problems. This, in turn, often caused them to be place into foundational classes which did not align with their completed high school math coursework.
- Accuplacer required Stevenson to determine the cut scores to place students in courses.
- Accuplacer's tests were more specific to distinguishing between foundational math and Stevenson's SEE-courses (MATH 135/136/137) and did not always accurately place students into Pre-calculus and Calculus. In addition, the *Next-Gen* Accuplacer is focusing more heavily on quantitative reasoning and less on algebra skills and the calculus sequence.

Meanwhile, the Office of Student Success met with a representative of McGraw-Hill to discuss their ALEKS PPL program, to better understand how this program helps diagnose incoming students' math eligibility and determine placement. Members of OSS and the Math Department then attended a webinar on the system and further reviewed the product. Following discussions and analyses of data presented, the group unanimously decided to discontinue the use of the Accuplacer Exam and replace Accuplacer with ALEKS PPL for Math eligibility and placement. The group found that ALEKS PPL addresses some of the previous problems they were concerned about:

- ALEKS PPL gave students multiple attempts for the test. Students were able to take a practice test at home, which will help them understand the level of the exam and what to expect. Also, they see the results of their math placement test, so they realize they must take the placement test seriously.
- Once students completed their practice test, ALEKS PPL provided them with adaptive modules to practice their skills based on their abilities and also gave them a chance to improve their scores. By completing these modules, students practiced and refreshed their skills and therefore, were better equipped when they take the actual placement exam.
- ALEKS PPL allowed the university to send them syllabi with student learning outcomes and their experts determine unique cut scores for placement testing.

- ALEKS PPL placed students from Foundational Math through Calculus I.

Following the first cohort of incoming students to use ALEKS PPL for Math course placement, the Office of Student Success and members of the Math department reviewed both placement scores, grades in initial math courses, and grades in all subsequent math courses for students who continued on (i.e. grades for students placed into foundational math, and the grade in the college-level math taken in the subsequent semester) were analyzed. Based on the initial analysis of data, ALEKS predetermined cut-scores seemed to have placed students appropriately.

Foundational Reading Placement Background

**It is important to note that Stevenson does not currently place students into any foundational courses in English or Reading, please see below for context and rationale.*

Due to COVID-19, Stevenson University did not require students to submit standardized test scores as part of their application packages for the 2021-2022 school year. Previously, Stevenson University used students' SAT/ACT scores to determine their placement into the most appropriate English composition and reading course; therefore, a new process for determining first-year writing placement was implemented for the entering class of Fall 2021. Members of the Office of Student Success and the English department reviewed multiple options, including Accuplacer, Directed Self Placement (DSP) and high school GPA or English grades. It was decided to discontinue using the Accuplacer exam due to cost and concerns about the release of a new version of the exam without concordance tables or guidance about score relative to appropriate placement. Members of this team recommended the development and implementation of a Directed Self Placement (DSP) instrument for placement in to college-level writing coursework. A DSP instrument offered students information about the courses available to them and allowed them to engage in directed self-assessment and reflection to determine which course was the best fit for them. Implementing DSP at Stevenson allowed students to engage with the type of content they would encounter in their first-year composition class and make an informed decision about which class they would be most comfortable in, ENG 150 or ENG 151 (both of which are credit-bearing courses whose successful completion allows progress to ENG 152). The Placement Testing Committee intends to assess the implementation of the DSP model at both the conclusion of the Fall 2021 and Spring 2022 semesters. The following areas will be evaluated: Number of sections offered of ENG 150 and ENG 151 in Fall 2021 compared to Fall 2020, D/F/W rates in ENG 150 and ENG 151 in Fall 2021 compared to Fall 2020, D/F/W rates in ENG 152 for students in the 2021-2022 cohort compared to students in the 2020-2021 and 2019-2020 cohorts. Data from this assessment will be used to make future determinations regarding English placement should COVID-19 continue to impact academic operations, or the university continues to remain test optional after the 2020-2021 application cycle.

MHEC Report on Assessment Tools: Washington Adventist University

Brief Narrative 8/30/2021

In 2012, The university decided to introduce Accuplacer as a measure to place students in remedial or college-level English and Math, accordingly. It is unclear as to the decision making process in 2012, but the university did continue with the Next Generation Accuplacer beginning in 2019. No validation studies have been conducted to determine the efficacy of Accuplacer, it has merely been assumed that if students passed the courses they were placed in, then they were placed appropriately. No correlative study regarding cut-scores and course outcomes (e.g., grades) has been conducted.

However, the Dean for Student Success has recommended that the university consider a multiple-measures approach to placement, particularly using high school gpa as an initial placement measure. During the 2021-2022 academic year, the university will conduct a review of placement processes and procedures, including cut scores, student outcomes in remedial and college-level courses, among other relevant data points, as part of the consideration of improving placement at WAU. The dean has requested that English and Math faculty, along with the Retention and Progression, Curriculum, and Assessment committees contribute to this analysis.

Private Institutions

Lincoln College of Technology, Columbia, Maryland

There have been no formal or informal studies completed in the last 10 years.

Appendix B- Institutional Studies

Community Colleges

June 2021 Issue

Dear Faculty & Staff,

AACC is committed to data-informed decision making and innovation. The College has been systematically using data to improve our programs and revise academic policies to enhance student success. In this issue of the research brief, we would like to feature the Fall 2020 change in placement criteria and subsequent analysis of course outcome comparisons associated with the criteria change.

Background

In Fall 2019, AACC began using two new tools for student placement: Next Generation Accuplacer tests and high school transcript data, specifically unweighted GPA and select course grades. In February 2020, an analysis was conducted on the number of new students in Fall 2019 who placed and enrolled in various English and mathematics courses, as well as the relationships among placement, course outcomes, and retention of students in the following spring semester. Informed by this analysis, placement measures were refined for Fall 2020. A second analysis was then conducted in February 2021 to investigate the impact of the revised placement measures.

To gain an understanding of the decision-making process and the leadership's vision for future steps with student placement criteria, in Spring 2021 PRIA conducted an interview with Dr. Alicia Morse, Dean of the School of Liberal Arts. According to Dr. Morse, the initial establishment of placement rules for Fall 2019, "required input and collaboration from various experts across campus," including faculty and assistant deans in the Academic Literacies, English, and Mathematics Departments, as well as key personnel in Testing, Admissions, Advising, the Registrar's office, Information Services, PRIA, and Strategic Communications. "The data used to determine placement [score ranges] included high school GPA distribution data, peer reviewed research, College Board learning outcomes guidelines for establishing placement scores, and research from sister institutions across the country."

Methodology

The population used in the first study included 2,962 students whose first term at AACC was Fall 2019, while the population used in the second study included 2,696 students whose first term was Fall 2020. Data sources included official PRIA end-of-term enrollment files, placement measures and associated scores derived from Informer queries, and official PRIA enrollment and grade files for the Fall 2019 and Fall 2020 semesters.

Findings

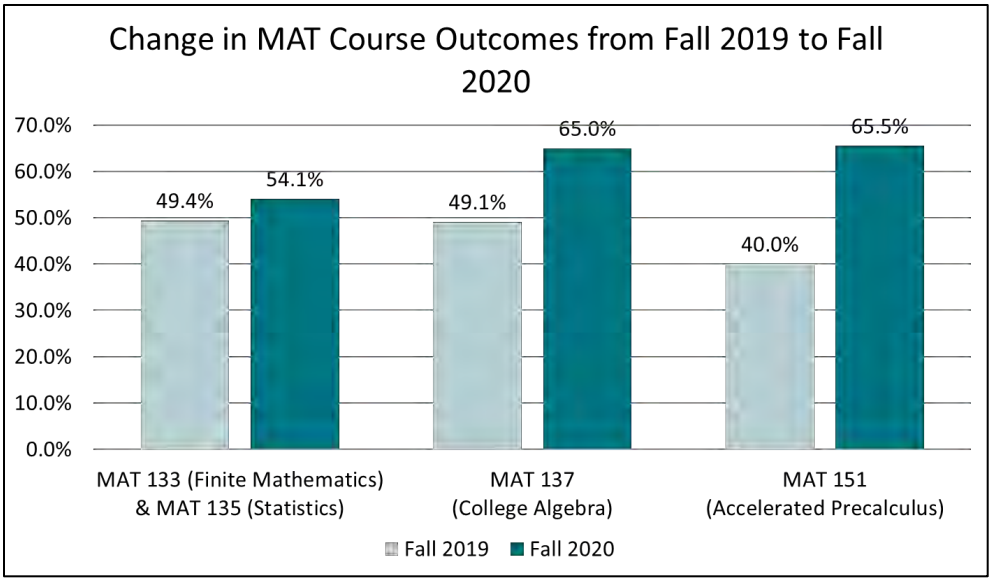
Three selected research questions from the reports are shared below.

Research Question 1: For students placed into credit-level English and mathematics courses, what were course outcomes in Fall 2020 in comparison to course outcomes in Fall 2019?

The analyses specifically looked into the success rates of selected English and mathematics courses, usually the first credit-bearing college-level course in a program of study, also referred to as gateway courses. These courses generally apply to the requirements for a degree program and may also be called introductory courses or prerequisites. Typically, every student majoring in a given discipline must pass through these gateway courses.

The analytical results suggest that the success rate in ENG 101 remained constant (67.8% in FA2019 vs 68.9% in FA2020) after the placement measures were revised, while the success rate in ENG 101A increased significantly (40.2% vs 59.6%).

In addition, after revising the placement criteria, success rates in credit mathematics courses increased between Fall 2019 and Fall 2020 for all courses analyzed, including MAT 133 and MAT 135 (combined), MAT 137, and MAT 151. See chart below for details.



Research Question 2: For each credit-level English and mathematics course, what was the relationship between scores on the placement measures and course outcomes?

In Fall 2019, students with a high school GPA between 1.90 and 2.59 were placed in ENG 101A; their success rate was less than 35%. In Fall 2020, students were no longer placed into ENG 101A based on GPA; instead, Next Generation Accuplacer scores were used to determine placement.

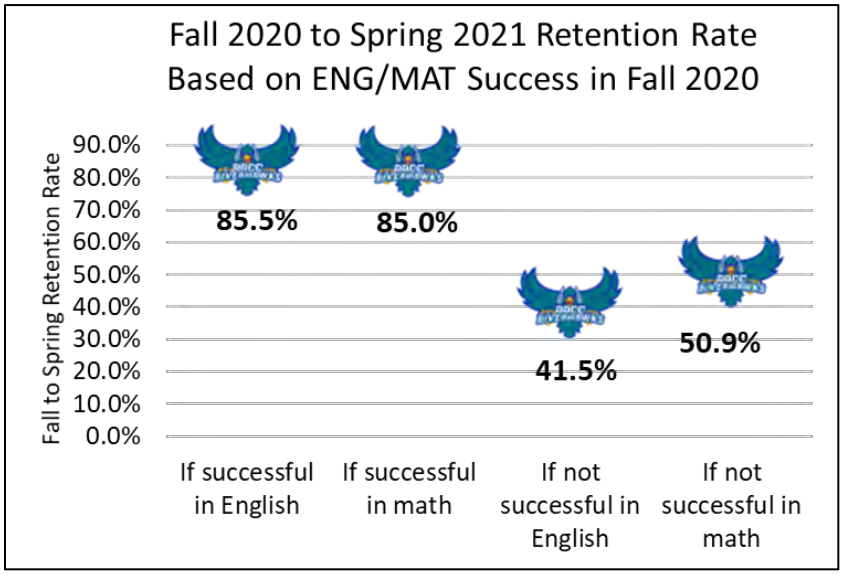
In Fall 2019, students with a high school GPA between 2.60 and 2.99 were permitted to enroll in ENG 101; their success rate was close to 45%. In Fall 2020, students were required to have a GPA of at least 3.0 to place into ENG 101.

Associated with the changes in placement criteria using high school GPA and high school mathematics coursework, success rates for students placing into credit mathematics courses improved between Fall 2019 and Fall 2020, as follows:

- MAT 135 (Statistics), from 46.6% to 77.0%
- MAT 137 (College Algebra), from 50.0% to 81.8%
- MAT 151 (Accelerated Precalculus), from 42.0% to 68.2%

Research Question 3: Looking at both credit and developmental courses, what number and percentage of students who registered for English and mathematics courses in Fall 2020 subsequently enrolled in Spring 2021?

The analytical results point out that the Fall-to-Spring retention was consistently much higher for students who were successful in their English or mathematics courses than for students who were not successful in those courses. The graphic below illustrates the comparative data.



At the same time, the retention rates decreased slightly for students in almost all courses examined between Fall 2019 and Fall 2020, independent of whether students were successful or not. The observed decrease in retention rates could relate to the COVID-19 pandemic, when all students faced a great level of uncertainty during the Spring 2020 term.

Conclusions

Dr. Morse plans to continue exploring ways in which students can be placed in courses where they will be successful: "We have begun discussions about the use of self-directed placement for adult students. We have begun to review some best practices and learn from other institutions and hope to begin pilots in the upcoming semesters."

The success of college gateway courses is critical for all college students. Gaining and maintaining momentum is key to student retention and completion (Community College Research Center, 2019). This research brief highlights an educational practice that turns access into success through collaborative efforts across campus. Kudos to all faculty and staff for what you do to help our students achieve academic success. PRIA will continue to provide you with analytical results and insights into student performance in the new academic year.

Thank you for reading the PRIA Research Briefs throughout the year. Have a great summer!

The PRIA Team

PLANNING, RESEARCH AND INSTITUTIONAL ASSESSMENT (PRIA) delivers accurate, accessible, reliable, timely and equity-minded research of facts, trends and issues affecting the college. PRIA leads collegewide assessment and analytic efforts to inform planning, decision-making, student retention and completion, and accreditation at a variety of organizational levels. The office serves as a major vehicle for gathering and disseminating evidence of institutional effectiveness and accountability while maintaining data integrity and reporting requirements from external organizations.

PRIA Office News

In this last edition of the Research Brief for the academic year 2021-22, we would like to highlight the professional achievements that our PRIA team members received this year:

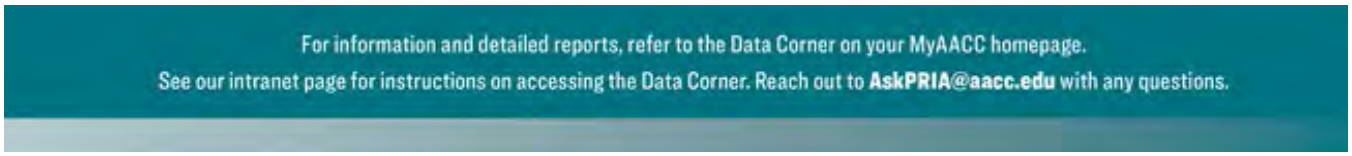
- Dr. Shuang Liu, Associate Vice President for Continuous Improvement and Innovation Analytics was named as a "Women to Watch" for 2021 by APG Media of Chesapeake.
- Dr. Audra Butler, Director of Assessment and Instructional Innovation earned her EdD in Community College Leadership from Morgan State University in May 2020. She participated in the commencement ceremony in Spring 2021.
- Liza Moore, Research Analyst earned a Master of Science in Higher Education Policy, Research, and Administration from Goucher College in May 2021.
- Karen Egypt, Assistant Director of Data Analytics led a panel presentation titled "DEI Dashboards and IR: Examples, Lessons Learned, and Questions Remaining" at the virtual annual forum for the Association for Institutional Research in May 2021.
- Cathy Hess, PRIA Faculty Analyst, presented a session titled "AACC Research and Outcomes Following Revisions to Student Placement in English and Mathematics" at the June 2021 meeting of the Maryland Community College Research Group.
- Heather Harrington, PRIA Coordinator and IRB Administrator received a Master of Business Administration with a concentration in Data Analytics from the Louisiana State University Shreveport in December 2020.

Upcoming Training and Workshops

If you need access to Tableau, there are ongoing workshops. See below for information to register via self-services:

Term	*STARS*	*Workshop Title*	*Workshop #*	*Start/End Dates*	*Location*	*Facilitator*
2021SPN	59247	Tableau: Get Started User	XPD-334-201	4/1/21-6/30/21	ONLN	Liza Moore
2021SUN	65286	Tableau: Get Started User	XPD-334-301	7/1/21-9/30/21	ONLN	Liza Moore

Additionally, Tableau training materials for those who already have access but would like a refresher can be found on PRIA's intranet site, here.



Anne Arundel Community College • 101 College Parkway • Arnold, MD 21012

MEMORANDUM
School of Liberal Arts
January 31, 2020

2020 – 2021 Mathematics, Academic Literacy, and Composition Placement Rules

Effective* April 14, 2020 for Fall 2020 Registration

*subject to change at any time

In January 2020, research was conducted by the Office of Planning, Research, and Institutional Assessment with the purpose of determining relationships between the revised placement rules for academic year 2019 – 2020 and success in mathematics, literacy, and composition coursework. Based on the results, recommendations came forth from the Mathematics Department and Academic Literacy and English Departments for the placement rules for the 2020 – 2021 academic year. A similar study will be conducted in January 2021 to continue to best ensure proper placement and student success.

Mathematics Placement

In general, the data reveal that high school performance and Next Generation Accuplacer can be used for placement in AACC college mathematics courses. The research revealed both strengths and weaknesses of the placement rules and identified the need to adjust some placement rules in order to maximize student success. Highlights of the changes are as follows:

- In general, a combination of unweighted high school GPA and completion of a specified high school mathematics course with a grade of A or B for the course (both semesters) will be used to place students into an "equivalent level" AACC mathematics courses.
- Students who do not meet the requirement above or do not have another placement measure will be required to take the Accuplacer mathematics assessment(s).
- In-progress high school mathematics coursework will not be used for placement.

Highlighted text represents a recommendation to change the current placement. Rules that are not highlighted are current rules with a recommendation to keep the rule as-is. If a current rule is not listed it is recommended for deletion.

Course	2020 - 2021 Placement Rules
Quantitative/Statistics Pathway	
MAT 034	200≤ QAS ≤ 249
MAT 035	250≤ QAS ≤ 262
MAT 100	GPA ≥ 2.6 and Grade of at least C in Algebra 2 or FOCA or Pre-calculus or AP Calculus AB or BC or AP Statistics or 250≤ QAS ≤ 300

	or 240 ≤ AAF ≤ 300 or 530 ≤ SAT-Math ≤ 800 or 21 ≤ ACT-Math ≤ 36
MAT 133	GPA ≥ 3.0 and Grade of at least B in Algebra 2 or FOCA or Pre-calculus or AP Calculus AB or BC or AP Statistics or 263≤ QAS ≤ 300 or 240 ≤ AAF ≤ 300 or 530 ≤ SAT-Math ≤ 800 or 21 ≤ ACT-Math ≤ 36
MAT 135	GPA ≥ 3.0 and Grade of at least B in Algebra 2 or FOCA or Pre-calculus or AP Calculus AB or BC or AP Statistics or 263≤ QAS ≤ 300 or 240 ≤ AAF ≤ 300 or 530 ≤ SAT-Math ≤ 800 or 21 ≤ ACT-Math ≤ 36
College Algebra/Elementary Education Mathematics Pathway	
MAT 036	200 ≤ QAS ≤ 229 or 200 ≤ AAF ≤ 236
MAT 037	GPA ≥ 3.0 and Grade of at least B in Algebra 2 or 237 ≤ AAF ≤ 249
MAT 137	GPA ≥ 3.0 and Grade of at least B in FOCA or Pre-calculus or AP Calculus AB or BC or 250 ≤ AAF ≤ 300 or 550 ≤ SAT-Math ≤ 800 or 23 ≤ ACT ≤ 36
MAT 221 and MAT 222	GPA ≥ 3.0 and Grade of at least C in FOCA or Pre-calculus or AP Calculus AB or BC or 263≤ QAS ≤ 300 or 240 ≤ AAF ≤ 300

	or 530 ≤ SAT-Math ≤ 800 or 21 ≤ ACT ≤ 36
MAT 230	GPA ≥ 3.0 and Grade of at least B in AP Calculus AB or BC or 265 ≤ AAF ≤ 300 or 620 ≤ SAT-Math ≤ 800 or 26 ≤ ACT-Math ≤ 36
Calculus Pathway	
MAT 044	200 ≤ QAS ≤ 229 or 200 ≤ AAF ≤ 249
MAT 045	GPA ≥ 3.0 and Grade of at least B in Algebra 2 or FOCA or 250 ≤ AAF ≤ 259
MAT 145	GPA ≥ 3.0 and Grade of at least B in Pre-Calculus or AP Calculus AB or BC or 260 ≤ AAF ≤ 276 or 570 ≤ SAT-Math ≤ 800 or 24 ≤ ACT-Math ≤ 36
MAT 151	GPA ≥ 3.4 and Grade of at least B in Pre-Calculus or AP Calculus AB or BC or 265 ≤ AAF ≤ 276 or 600 ≤ SAT-Math ≤ 800 or 25 ≤ ACT-Math ≤ 36
MAT 191	GPA ≥ 3.4 and Grade of at least B in AP Calculus (AB or BC) or 276 ≤ AAF ≤ 300 or 620 ≤ SAT-Math ≤ 800 or 26 ≤ ACT-Math ≤ 36

Key

GPA = End of 11th or 12th grade unweighted cumulative high school GPA
QAS = Accuplacer Next-Generation Quantitative Reasoning and Statistics Assessment
AAF = Accuplacer Next-Generation Advanced Algebra and Functions Assessment

Academic Literacy and Composition Pathway

The research study revealed strengths and weaknesses of Next Generation Accuplacer and high school GPA placement rules and identified the need to adjust some placement rules in order to maximize student success. Those changes are provided below. Note that Next Generation Reading and Writing assessments will be required for students with an unweighted high school GPA less than 3.0 when no other placement measure is available.

Highlighted text represents a recommendation to change the current placement. Rules that are not highlighted are current rules with a recommendation to keep the rule as-is. If a current rule is not listed it is recommended for deletion.

Course	2020 – 2021 Placement Rule
RDG 040	200 ≤ RDG ≤ 255 and 200 ≤ WTG ≤ 249 (GPA will not be used for placement in RDG 040)
ENG 099/101A	256 ≤ RDG ≤ 267 or 250 ≤ WTG ≤ 262 or 480 ≤ SAT-EBRW ≤ 549 or 18 ≤ ACT ≤ 20 (GPA will not be used for placement in ENG 099/101A)
ENG 101	GPA ≥ 3.0 or 268 ≤ RDG ≤ 300 or 263 ≤ WTG ≤ 300 or SAT-EBRW ≥ 550 or 21 ≤ ACT ≤ 36

Key

GPA = End of 11th or 12th grade unweighted cumulative high school GPA
RDG = Accuplacer Next-Generation Reading Assessment
WTG = Accuplacer Next-Generation Writing Assessment

Report on the New Placement Criteria Implemented Fall 2019

Prepared by Professors Catherine Hess and Kerry Taylor, PRIA Faculty Analysts
January 2020

Introduction

In spring 2019, Anne Arundel Community College introduced new criteria to place students in the English and mathematics course sequences. In addition to traditional measures such as SAT, ACT, and classic Accuplacer tests, the college began using high school GPA and NextGen Accuplacer tests to place students.

In November 2019, an initial report was prepared exploring the numbers of students who placed in various English and mathematics courses based on the new criteria, as well as the number of students who enrolled in various English and mathematics courses.

The purpose of this report is to update placement and enrollment data from the initial report and to examine any relationships between placement and course outcomes (i.e., grades) for the fall 2019 semester. The retention of these students in the spring 2020 semester is also examined.

Population and Data Sources

The population used in the study comprised the 2,962 students whose first term at AACC was fall 2019 and who were not identified as "transfer" students. This population is a subset of the official PRIA end-of-term file.

Data sources included official PRIA end-of-term files, placement measures and associated scores derived from an Informer query, and unofficial PRIA enrollment and grade files generated January 13, 2020.

Research Questions

1. What number and percent of students placed into selected English and mathematics courses?
2. What number and percent of students who placed into the English and mathematics courses registered for those courses in fall 2019?
3. For each English and mathematics course, what number and percent of students' placements were determined by each placement measure?
4. For each placement instrument, what number and percent of students were placed into each English and mathematics course?
5. For each English and mathematics course, what were the course outcomes?
6. For each English and mathematics course, what was the relationship between scores on the placement measures and course outcomes?

7. What number and percentage of students who registered for English and mathematics courses in fall 2019 subsequently enrolled in spring 2020?
8. For selected high-enrolled general education courses that have an English and/or mathematics eligibility requirement, how did fall 2019 course outcomes compare to course outcomes for the previous three fall semesters?

Parts I and II of this report answer the research questions for English and mathematics, respectively. Part III of this report addresses the last research question. In each part, the table numbering is consistent with the numbering of the research questions.

Part I: Placement in English Courses

Definitions and Background

There are three possible placements for students seeking to satisfy their college-level transfer English composition requirement:

RDG 040: Academic Literacies (5 credit-equivalent hours)

ENG 101A/ENG 099: Academic Writing and Research (3 credit hours) combined with Support for Academic Writing and Research (2 credit-equivalent hours)

ENG 101: Academic Writing and Research 1 (3 credit hours).

The prerequisite of eligibility for ENG 111 used for some general education courses, such as SOC 111, has been replaced by a prerequisite of eligibility for ENG 101A.

1. What number and percent of students placed into selected English courses?

Table 1 shows the highest placements of students for English, based on placement scores entered in Colleague as of November 10.

Among incoming students with placement information, 75.7% (n=1,948) placed into ENG 101, 19.6% (n=504) placed into ENG 101A, and 2.2% (n=58) placed into RDG 040.

Table 1: Highest Placement in English Courses

Course	N	% of total students	% of students with placement info
RDG 040	58	2.0%	2.2%
ENG 101A	504	17.0%	19.6%
ENG 101	1,948	65.8%	75.7%
English not needed	62	2.1%	2.4%
Students with placement	2,572	86.8%	100%
No placement info	390	13.2%	
Total	2,962	100%	

For 390 students (13.2% of the population) there were no measures available to determine placement in an English course; these students appear in Table 1 under the category “No placement info”. (Almost all of these students were non-degree-seeking and/or dually enrolled.) Sixty-two (62) students arrived at AACC with external/transfer credit for a credit-level English course, usually via an Advanced Placement or CLEP exam. These students appear in Table 1 under the category “English not needed.”

2. What number and percent of students who placed into English courses registered for those courses in fall 2019?

Table 2a provides data showing enrollment of students in the courses indicated by the placement criteria. Approximately half of the students who were placed (49.1%, n=1,232) enrolled in the English course identified as their highest placement.

Table 2a: Students Who Enrolled in English Course Indicated by Placement			
Course	**Placed**	**Enrolled**	**% Enrolled**
RDG 040	58	24	41.4%
ENG 101A	504	209	41.5%
ENG 101	1,948	999	51.3%
Total	2,510	1,232	49.1%

Table 2b includes students who enrolled in an English course other than the one indicated by the placement criteria. The total number of enrolled students shows a slight increase (50.5%, n=1,268), primarily due to 27 students placed into ENG 101 who elected to take ENG 101A.

Table 2b: Includes Students Who Enrolled In English Courses NOT Indicated by Placement					
	Highest Placement in English Courses			Total	
	RDG 040	ENG 101A	ENG 101	n	%
Enrolled in RDG 040	24	3	0	27	2.1%
Enrolled in ENG 101A	2	209	27	238	18.8%
Enrolled in ENG 101	0	4	999	1,003	79.1%
Total	26	216	1,026	1,268	100%

3. **For each English course, what number and percent of students' placements were determined by each placement measure?**

The purpose of Tables 3 is to focus on one placement measure at a time, and determine whether that particular placement measure is what determined a student's (highest) placement. Each row of the table represents a particular placement measure, such as high school GPA, NextGen Reading, and NextGen Writing.

Note that the categories in Table 3 are not mutually exclusive; students may have been placed in their highest course by more than one measure.

As indicated in Table 3:

- NexGen Accuplacer Reading indicated placement in RDG 040 for 51.7% (n=30) of the 58 students placed in that course.
- NexGen Accuplacer Reading indicated placement in ENG 101A for 49.0% (n=194) of the 504 students placed in that course, followed by high school GPA at 47.4% (n=247).

- High school GPA indicated placement in ENG 101 for 74.6% (n=1,454) of the 1,948 students placed in that course, followed by SAT at 20% (n=384).

Table 3: Highest Placement in English Courses by Each Placement Measure						
Placement Measure	**RDG 040**		**ENG 101A**		**ENG 101**	
	n	% of the 58 RDG 040 placements	N	% of the 504 ENG 101A placements	N	% of the 1,948 ENG 101 placements
High School GPA	17	29.3%	239	47.4%	1,454	74.6%
NextGen Reading	30	51.7%	247	49.0%	194	10.0%
NextGen Writing	31	53.4%	115	22.8%	152	7.8%
Classic RAT	20	34.4%	36	7.1%	78	4.0%
Classic EAT	20	36.4%	15	3.0%	105	5.4%
SAT	n/a	n/a	71	14.1%	387	20.0%
ACT	n/a	n/a	11	2.2%	140	7.2%
GED	n/a	n/a	0	0.0%	5	0.2%
PARCC	n/a	n/a	0	0.0%	1	0.1%
IB or DT Completion	n/a	n/a	0	0.0%	1	0.1%
Prior College Courses	n/a	n/a	0	0.0%	34	1.7%

One other possible placement instrument not included in this table is successful completion of ESL 399. Students may have been "new" in fall 2019, having completed only non-credit ESL courses. These students were eligible for ENG 101A. Although numbers were in the single digits when checked in October 2019, this instrument should be revisited in future.

4. For each placement instrument, what number and percent of students were placed into each English course?

Tables 4a through 4d focus on the placement measures, showing the placement within English courses indicated by each placement measure.

These tables differ from Table 3 because Table 3 focuses on the courses, indicating what measures placed the student in each course. In contrast, Tables 4a through 4d focus on the measures, indicating where each measure placed students, regardless of whether another measure placed them in the same course. For example, Table 4a shows that GPA indicated RDG 040 placement for 38 of the 1,857 students who submitted GPAs. However, Table 3 shows that of the 58 students whose (highest) placement was RDG 040, only 17 of students were placed in RDG 040 by their GPA, indicating that the other 21 students earned a higher placement by a different placement measure.

Students with no placement information (n = 390) were excluded from the following tables.

Table 4a: Eligibility for English Courses Based on GPA			
	N	% of total students	% of students with GPA
RDG 040	38	1.5	2.0
ENG 101A	310	12.1	16.7
ENG 101	1,509	58.7	81.3
Total	1,857	72.2	100.0
No GPA	715	27.8	
Total students	2,572	100.0%	

Table 4b: Eligibility for English Courses Based on NextGen Accuplacer Scores						
	NextGen Reading			**NextGen Writing**		
	N	% of total students	% of students with score	**N**	% of total students	% of students with score
RDG 040	70	2.7%	11.0%	257	10.0%	40.7%
ENG 101A	368	14.3%	58.0%	221	8.6%	35.0%
ENG 101	196	7.6%	30.9%	153	5.9%	24.2%
Total with scores	634	24.7%	100.0%	631	24.5%	100.0%
No scores	1,938	75.3%		1,941	75.5%	
Total students	2,572	100.0%		2,572	100.0%	

Table 4c: Eligibility for English Courses Based on Classic Accuplacer Scores						
	Classic Reading Comprehension			**Classic Sentence Skills**		
	N	% of total students	% of students with score	**N**	% of total students	% of students with score
RDG 040	133	5.2%	37.7%	163	6.3%	48.1%
ENG 101A	132	5.1%	38.0%	74	2.9%	20.5%
ENG 101	85	3.3%	24.3%	112	4.4%	31.4%
Total with scores	350	13.6%	100.0%	349	13.6%	100.0%
No scores	2,222	86.4%		2,223	86.4%	
Total students	2,572	100.0%		2,572	100.0%	

Table 4d: Eligibility for English Courses Based on SAT and ACT Scores						
	based on SAT Score			based on ACT Score		
	n	% of total students	% of students with score	N	% of total students	% of students with score
RDG 040	n/a	n/a	n/a	n/a	n/a	n/a
ENG 101A	176	6.8%	29.7%	52	2.0%	25.4%
ENG 101	416	16.2%	70.3%	153	5.9%	74.6%
Total with scores	592	23.0%	100.0%	205	8.0%	100.0%
No scores	1,917	77.0%		2,367	92.0%	
Total students	2,572	100.0%		2,572	100.0%	

Table 4d: Eligibility for English Courses Based on GED, PARCC, IB or DT Completion, and Prior College				
	GED	PARCC	IB or DT Completion	Prior College
	n	n	n	N
ENG 101	5	1	1	34

5. For each English course, what were the course outcomes?

Table 5 summarizes the course outcomes in RDG 040, ENG 099, ENG 101A, and ENG 101 for fall 2019. Only those students whose enrollment in the courses was consistent with the current placement criteria were included in this analysis; students who enrolled in courses other than that indicated by the placement criteria were excluded. It is also important to keep in mind that these success rates are for the study population only; i.e., those students whose first semester at AACC was fall 2020, and who were not identified as transfer students.

Course outcomes in RDG 040, ENG 101A, and ENG 101 follow the traditional letter grade scheme; grades of A, B, and C comprised the successful category. ENG 099 has possible outcomes of PA (pass) which were included in the successful category.

A few students in the population used in this study enrolled in the same course more than once in the semester. For example, a student may have enrolled in ENG 101, withdrawn after a few weeks, then re-enrolled in a late-start section of the same course. For these students, only the first attempt at the course was included.

As indicated in Table 5:

- Less than half of students enrolled in RDG 040 were successful (45.8%, n=11).
- Less than half of students enrolled in ENG 101A were successful (40.2%, n=84).
- Over one-fifth of students enrolled in ENG 101A withdrew (21.5%, n=45).
- A little over two-thirds of students enrolled in ENG 101 were successful (67.8%, n=677).

Table 5: English Course Outcomes										
Course	A/B/C/PA		D		F/FX		W/WF/WP		Excluded Grades (I/CO/NG)	
	N	%	n	%	N	%	n	%	n	%
RDG 040	11	45.8%	1	4.2%	11	45.8%	1	4.2%	0	0.0%
ENG 099	100	47.8%	0	0.0%	61	29.2%	45	21.5%	3	1.4%
ENG 101A	84	40.2%	17	8.1%	60	28.7%	45	21.5%	3	1.4%
ENG 101	677	67.8%	43	4.3%	124	12.4%	137	13.6%	20	2.0%

Cross tabulation of the above data for success rates in ENG 099 and ENG 101A showed the following (incompletes were not included):

- 40.3% (n= 83) were successful in both ENG 099 and ENG 101A.
- 8.3% (n=17) were successful in ENG 099 but not ENG 101A.
- 0.5% (n=1) were successful in ENG 101A but not ENG 099.
- 50.9% (n=105) were not successful in either course.

6. For each English course, what was the relationship between scores on the placement measures and course outcomes?

This section investigates relationships between the new placement criteria and course outcomes. In the tables below, success was defined as a grade of A, B, C, or PA; grades of D, F, and FX, as well as withdrawals, were categorized as unsuccessful. Incompletes, representing less than 1% of total grades, were also categorized as unsuccessful.

Tables 6a through 6d show the number and percentage of students who were successful in a particular English course based on the score ranges that are currently being used for placement. The score ranges were further broken down into intervals to allow more detailed examination of the data.

Note that an individual student might be represented in more than one line of a table if that student submitted more than one type of placement measure that placed them into that particular course. For example, a student might be represented in a row for high school GPA as well as in a row for one or more Accuplacer tests. (Scores on measures that would have placed a student in a lower-level course were not included.)

Data for the classic Accuplacer tests (English and Reading) have been omitted, since those tests are no longer administered to students.

As indicated in Table 6c and Table 6d:

- Of the 135 students in ENG 101A whose GPA placed them in that course, only 34.8% (n=47) were successful.

- Of the 814 students in ENG 101 whose GPA placed them in that course, 69.2% (n=563) were successful. Further examination of the data shows:
  - Of the 596 students whose GPA's were at or above 3.00, 78.5% (n=468) were successful.
  - Of the 218 students whose GPA's were below 3.00, only 43.6% (n=95) were successful. (Note: investigation into whether this group of students had other measures that placed them in ENG 101A or RDG 040 yielded too few results to be meaningful.)

Table 6a: Success in RDG 040 Based on Placement Score Ranges

Placement Measure	Number Enrolled	Number Successful	Percent Successful
High School GPA			
0.00 – 1.69	4	0	0.0%
1.70 – 1.89	6	3	50.0%
NextGen Accuplacer Reading			
200 – 229	8	5	62.5%
230 – 236	8	3	37.5%
NextGen Accuplacer Writing			
200 – 239	10	4	40.0%
240 – 249	7	4	57.1%
SAT			
200 – 479	2	1	50.0%
ACT			
1 – 17	0	n/a	n/a

Table 6b: Success in ENG 099 Based on Placement Score Ranges

Placement Measure	Number Enrolled	Number Successful	Percent Successful
High School GPA			
1.90 – 2.09	23	9	39.1%
2.10 – 2.39	57	22	38.6%
2.40 – 2.59	55	28	50.9%

NextGen Accuplacer Reading			
237 – 243	25	12	48.0%
244 – 255	70	37	52.9%
256 – 262	26	19	73.1%
NextGen Accuplacer Writing			
250 – 257	35	23	65.7%
258 – 262	17	11	64.7%
SAT			
500 – 529	9	5	55.6%
530 – 549	4	4	100.0%
ACT			
18	6	5	83.3%
19	1	0	0.0%
20	3	2	66.7%

Table 6c: Success in ENG 101A Based on Placement Score Ranges

Placement Measure	Number Enrolled	Number Successful	Percent Successful
High School GPA			
1.90 – 2.09	23	8	34.8%
2.10 – 2.39	57	17	29.8%
2.40 – 2.59	55	22	40.0%
NextGen Accuplacer Reading			
237 – 243	25	10	40.0%
244 – 255	70	30	42.9%
256 – 262	26	18	69.2%
NextGen Accuplacer Writing			
250 – 257	35	22	62.9%
258 – 262	17	11	64.7%
SAT			
500 – 529	9	4	44.4%
530 – 549	4	3	75.0%
ACT			
18	6	5	83.8%
19	1	0	0.0%
20	3	2	66.7%

Table 6d: Success in ENG 101 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA			
2.60 – 2.69	60	28	46.7%
2.70 – 2.79	59	28	47.5%
2.80 – 2.89	54	22	40.7%
2.90 – 2.99	45	17	37.8%
3.00 – 4.00	596	468	78.5%
NextGen Accuplacer Reading			
263 – 267	36	19	52.8%
268 – 271	27	18	66.7%
272 – 279	23	14	60.9%
280 – 300	17	12	70.6%
NextGen Accuplacer Writing			
263 – 269	47	28	59.6%
270 – 275	13	6	46.2%
276 – 300	23	18	78.3%
SAT			
550 – 569	32	21	65.6%
570 – 800	98	80	81.6%
ACT			
21	31	22	71.0%
22	14	10	71.4%
23 – 36	44	34	77.3%

Tables 6e and 6f examine how using GPA alone to determine placements as opposed to using GPA in concert with other measures to determine placements relates to student outcomes. This is done comparing success rates in ENG 101 and ENG 101A for the following:

- Students placed by GPA who did not have another placement measure.
- Students whose placement by GPA was consistent with another placement measure.
- Students whose placement by GPA was inconsistent with another placement measure.
- Students who did not submit GPA and were placed by another placement measure.

Table 6e: Success in ENG 101A Based on Which Measures Determined Placement			
Measures and Placement	**Number Enrolled**	**Number Successful**	**Percent Successful**
High school GPA was the only measure, and it placed the student in ENG 101A	61	19	31.1%
Both high school GPA and at least one other measure placed the student in ENG 101A	55	21	38.2%
High school GPA placed the student in ENG 101A, AND another measure placed the student below ENG 101A	15	5	33.3%
High school GPA placed the student below ENG 101A AND another measure placed the student in ENG 101A	9	2	22.2%
No high school GPA; at least one other measure placed the student in ENG 101A	69	37	53.6%
Total	209	84	40.2%

Table 6f: Success in ENG101 Based on Which Measures Determined Placement			
Measures and Placement	**Number Enrolled**	**Number Successful**	**Percent Successful**
High school GPA was the only measure, and it placed the student in ENG 101	470	314	66.8%
Both high school GPA and at least one other measure placed the student in ENG 101	388	271	69.8%
High school GPA placed the student in ENG 101, AND another measure placed the student below ENG 101	143	93	65.0%
High school GPA placed the student below ENG 101 AND another measure placed the student in ENG 101	0	n/a	n/a
No high school GPA; at least one other measure placed the student in ENG 101	0	n/a	n/a
Total	1,001	678	67.7%

7. What number and percentage of students who registered for English and mathematics courses in fall 2019 subsequently enrolled in spring 2020?

Table 7 provides the number and percentage of students who, as of January 13, 2020, had registered for at least one course in the spring 2020 semester. The data is broken down by whether or not students were successful in a particular English course.

The table indicates:

- Three-quarters (74.9%) of students who were successful in their English or reading course returned the subsequent term.
- Less than one-third (29.2%) of the students who were *not* successful in their English or reading course returned the subsequent term.

Table7: Fall-to-Spring Retention Based on English Course Enrollment and Success

	Successfully Completed, Fall 2019			**Did Not Successfully Complete, Fall 2019**			**Total Enrolled Fa19**		
Course	Enrolled Fall 2019	Returned Spring 2020		Enrolled Fall 2019	Returned Spring 2020		Enrolled Fall 2019	Returned Spring 2020	
	n	n	%	N	n	%	n	n	%
RDG 040	12	4	33.3%	15	1	6.7%	27	5	18.5%
ENG 101A	102	69	67.6%	140	39	27.9%	242	108	44.6%
ENG 101	684	525	76.8%	324	100	30.9%	1,008	625	62.0%
Total	798	598	74.9%	479	140	29.2%	1,277	738	57.8%

Part II: Placement in Mathematics Courses

Definitions and Background

There are officially three mathematics pathways at AACC: College Algebra Foundations, Quantitative Foundations, and Calculus Foundations. Each pathway consists of one or more developmental mathematics courses and at least one credit mathematics course. For this study, a fourth pathway was considered, that taken by Elementary Education and Early Childhood majors. Although these students take the same developmental mathematics courses as students in the College Algebra pathway, the minimum scores required on the SAT and ACT are different (i.e., lower) for placement in MAT 221 and MAT 137.

The sequence of courses in the four pathways are listed here. In general, the courses in each pathway are sequential, and students can place directly into any level within each of the courses listed here. Note, however, that the Quantitative Pathway is unusual, in that the courses in that pathway are not purely sequential. Students who place at the lowest level (MAT 034) and complete that course successfully are then eligible to take MAT 100, MAT 133, or MAT 135. Students who place slightly higher may take MAT 035, which can only be taken paired with MAT 135. For most of the measures used for placement, the cut-score used for minimum eligibility for MAT 100 is lower than the cut-score used for minimum eligibility for MAT 133 and MAT 135. Therefore, for this analysis, MAT 133 and MAT 135 were treated as "higher" than MAT 100, even though all three are first-level credit mathematics courses in the Quantitative pathway.

College Algebra Pathway:

MAT 036 (College Algebra Foundations)
MAT 037 (Introduction to College Algebra)
MAT 137 (College Algebra)
MAT 230 (Elementary Calculus)

Elementary Education Pathway:

MAT 036 (College Algebra Foundations)
MAT 037 (Introduction to College Algebra)
MAT 221 or 222 (Fundamental concepts of Mathematics 1 & 2)

Quantitative Pathway:

MAT 034 (Quantitative Foundations)
MAT 035 (Pre-Statistics)
MAT 100 (The Nature of Mathematics)
MAT 133 (Finite Mathematics) or MAT 135 (Elementary Statistics)

Calculus Pathway:

MAT 044 (Precalculus Foundations)

MAT 045 (Introduction to Precalculus)

MAT 145 (Precalculus 1)

MAT 151 (Accelerated Precalculus)

MAT 191 (Calculus and Analytic Geometry 1)

Some measures are used to determine eligibility within only some of the four mathematics pathways. For example, a GED score can place a student within the Quantitative pathway, but not within the other pathways.

Likewise, some measures can place students at only some of the levels within a pathway. For example, the NextGen Accuplacer Advanced Algebra and Functions test can place students into MAT 145, 151, or 191 of the Calculus Pathway, but it is not used to place students into MAT 044 or MAT 045 of that same pathway.

Within the Elementary Education pathway for students in the elementary education and early childhood programs, eligible students may take either MAT 221 or MAT 222; the eligibility requirements for these two courses are identical. However, none of the students in the population used in this study enrolled in MAT 222. For simplicity, only MAT 221 is listed in the following tables for the elementary education pathway, even though a more correct heading would be MAT 221/222.

The abbreviation FOCA stands for *Foundations of College Algebra*, a mathematics course offered in some Anne Arundel county public high schools. Prior to fall 2019, students who successfully completed these FOCA courses in high school were granted proficiency credit at AACC, which was then used to place students into appropriate mathematics courses at AACC. Beginning in fall 2019, FOCA students were actually enrolled in contract sections of AACC mathematics courses (specifically, MAT 036 and MAT 037). Prior to fall 2019, students might have used FOCA coursework as a placement measure; since fall 2019, however, FOCA students have been counted as AACC students and their FOCA coursework is no longer used as a placement measure.

1. What number and percent of students placed into selected mathematics courses?

As stated in the introductory section of this report, there were 2,962 students in the population defined for this study. About four-fifths (80.7%, n=2,391) of these students had at least one placement measure entered in Colleague by November 10 that determined their placement within at least one mathematics pathway. There were, however, 571 students (19.3% of the population) for whom no measure was available from which to determine eligibility within any mathematics pathway. (Over 90% of these exceptions were non-degree-seeking students and/or dually enrolled students.)

Tables 1a through 1d, below, show the highest placements within each of the four mathematics pathways. Students with no placement data are included in Tables 1a through 1d, but are omitted from later tables addressing other research questions.

Forty-three (43) students arrived at AACC with external/transfer credit for a credit-level mathematics course, usually via an Advanced Placement or CLEP exam. These students appear in Tables 1a through 1d under the category "Math not needed."

Table 1a: Highest Placement in College Algebra Pathway Courses

Course	n	% of total students	% of students with placement info
MAT 036	433[1]	14.6%	18.8%
MAT 037	345[2]	11.6%	15.0%
MAT 137	1,295	43.7%	56.2%
MAT 230	189	6.4%	8.2%
Math not needed	43	1.5%	1.9%
Students with placement	2,305	77.8%	100.0%
No placement information	657	22.2%	
Total	2,962	100.0%	

Table 1b: Highest Placement in Elementary Education Pathway Courses

Course	n	% of total students	% of students with placement info
MAT 036	425	14.3%	18.2%
MAT 037	309	10.4%	13.3%
MAT 221	1,555	52.5%	66.7%
Math not needed	43	1.5%	1.8%
Students with placement	2,332	78.7%	100.0%
No placement information	630	21.3%	
Total	2,962	100.0%	

[1] The difference in placement numbers in MAT 036 for the College Algebra and Elementary Education pathways is due to a small range of SAT scores that placed students into MAT 221 but not into the College Algebra pathway.
[2] The difference in placement numbers in MAT 037 for the College Algebra and Elementary Education pathways is due primarily to a range of scores of the NextGen Accuplacer Quantitative, Algebra & Statistics test that placed students into MAT 221 but not into MAT 137. The SAT also contributed to the difference.

Table 1c: Highest Placement in Quantitative Pathway Courses			
Course	**n**	**% of total students**	**% of students with placement info**
MAT 034	295	10.0%	12.4%
MAT 035	154	5.2%	6.5%
MAT 100	88	3.0%	3.7%
MAT 133/135[3]	1,804	60.9%	75.7%
Math not needed	43	1.5%	1.8%
Students with placement	2,384	80.5%	100.0%
No placement information	578	19.5%	
Total	2,962	100.0%	

Table 1d: Highest Placement in Calculus Pathway Courses			
Course	**n**	**% of total students**	**% of students with placement info**
MAT 044	641	21.6%	35.1%
MAT 045	78	2.6%	4.3%
MAT 145	148	5.0%	8.1%
MAT 151	748	25.3%	41.0%
MAT 191	168	5.7%	9.2%
Math not needed	43	1.5%	2.4%
Students with placement	1,826	61.6%	100.0%
No placement information	1,136	38.4%	
Total	2,962	100.0%	

2. What number and percent of students who placed into mathematics courses registered for those courses in fall 2019?

The enrollment numbers for mathematics courses, as presented in Tables 2a through 2d, seem quite small when compared to the number of students placed in those courses. This is due in large part to the fact that a student who submits, say, a high school GPA and mathematics coursework for placement purposes might be placed into all four mathematics pathways based on that GPA and coursework. However, if that student enrolls in a mathematics course, it will be in only one of the pathways. For example, suppose a student submitted a GPA score that made him or her eligible to take MAT 034, MAT 036, or MAT 044 (the lowest-level courses in each pathway). If the student enrolled in MAT 034, then that student would appear as an

[3] The students who were eligible for MAT 133 and MAT 135 as their first mathematics course were also eligible to take MAT 100. However, since the eligibility requirements for MAT 133 and MAT 135 are generally higher than for MAT 100, these were considered "higher" mathematics courses than MAT 100.

enrollment in Table 2c, representing the Quantitative Pathway, but would not appear as an enrollment in the other three pathway tables.

Mathematics courses that are offered in an accelerated format in which a student completes two courses in the same semester, known informally as “combo” courses, presented another challenge in developing and interpreting the data in these tables. In the enrollment tables presented here, students in combo courses were counted as having enrolled in the lower-level course only. For example, a student who took a MAT 035+135 combo appears in these tables as having enrolled in MAT 035, but not MAT 135. This avoided doubling of any headcounts, while maintaining a record of students’ “first” course in a particular pathway.

Table 2: Enrollments in Mathematics Courses Based on Eligibility			
Course	**Number Placed**	**Number Enrolled**	**% of Eligible Students Who Enrolled**
College Algebra Pathway			
MAT 036	433	147[4]	33.9%
MAT 037	345	43	12.5%
MAT 137	1,295	397	30.7%
MAT 230	189	2	1.1%
Total	2,262	589	26.0%
Elementary Education Pathway			
MAT 036	425	147	34.6%
MAT 037	309	38	12.3%
MAT 221	1,555	26	1.7%
Total	2,289	211	9.2%
Quantitative Pathway			
MAT 034	295	32	10.8%
MAT 035	154	12	7.8%
MAT 100	88	7	8.0%
MAT 133/135	1,804	160[5]	8.9%
Total	2,341	211	9.0%
Calculus Pathway			
MAT 044	641	29	4.4%
MAT 045	78	4	5.1%
MAT 145	148	17	11.5%
MAT 151	748	60[6]	8.0%
MAT 191	168	33	19.6%
Total	1,783	142	8.0%

[4] Thirty-eight (38) of the 147 students who placed into MAT 036 and who enrolled in that course were FOCA students. These current high school students are enrolled in MAT 036 through contract sections of that course. Course outcomes for these students will not be available until the end of January, when the AACPS semester ends.
[5] In addition to the 160 students who were eligible to take MAT 133 or MAT 135 and enrolled in one of these courses, another 10 students enrolled in MAT 100 instead. This raises the percent of MAT 133/135-eligible students who enrolled in MAT 100, 133, or 135 to 9.4%.
[6] There were an additional 60 students who were eligible for MAT 151 but who opted to take MAT 145. This raises the percentage of students who were eligible for MAT 151 who enrolled in either MAT 145 or MAT 151 to 16.0%

3. For each mathematics course, what number and percent of students' highest placements were determined by each placement measure?

The purpose of Tables 3a through 3d is to focus on one placement measure at a time, and determine whether that particular placement measure is what determined a student's (highest) placement within each of the four mathematics pathways. Each table contains data for one pathway; each row of a table represents a particular placement measure, such as the SAT, an Accuplacer test score, or high school GPA and mathematics coursework.

The categories given in the first column of these tables are not mutually exclusive, since students may have been placed in their highest course by more than one measure.

An entry of "n/a" in these tables indicates that that particular measure was not used to place students in that course. On the other hand, an entry of zero indicates that, although the measure *could have been* used to place students in that course, no students met that criterion.

Table 3a indicates, for example, that for all 433 students whose highest placement was MAT 036, 40.6% (n = 176) had a high school GPA and coursework that indicated the placement, 64.4% of them (n = 279) had a NextGen Accuplacer Quantitative, Algebra & Statistics (QAS) test score that indicated the placement, and 21.5% (n = 93) of them had a Classic Accuplacer Elementary Algebra test score that indicated the placement. The sum of these percentages is greater than 100% because some students submitted multiple placement measures, more than one of which placed those students in MAT 036.

Table 3a: Placement in College Algebra Pathway Courses by Placement Measure

Placement Instrument	MAT 036		MAT 037		MAT 137		MAT 230	
	n	% of 433 placed in MAT 036	n	% of 345 placed in MAT 037	n	% of 1,295 placed in MAT 137	n	% of 189 placed in MAT 230
High School GPA and Math Coursework	176	40.6%	267	77.4%	1,070	82.6%	n/a	n/a
NextGen Accuplacer QAS	279	64.4%	64	18.6%	15	1.2%	n/a	n/a
NextGen Accuplacer AAF	n/a	n/a	n/a	n/a	138	10.7%	36	19.0%
Classic Accuplacer Elementary Algebra	93	21.5%	15	4.3%	n/a	n/a	n/a	n/a
Classic Accuplacer College-Level Math	n/a	n/a	n/a	n/a	3	0.2%	0	0.0%
SAT	n/a	n/a	n/a	n/a	198	15.3%	128	67.7%
ACT	0	0.0%	1	0.2%	58	4.5%	30	15.9%
FOCA Proficiency	n/a	n/a	12	3.5%	43	3.3%	n/a	n/a
GED	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PARCC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Prior College Coursework	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 3b: Placement in Elementary Education Pathway Courses by Placement Measure						
Placement Instrument	**MAT 036**		**MAT 037**		**MAT 221**	
	n	% of 425 placed in MAT 036	n	% of 309 placed in MAT 037	n	% of 1,555 placed in MAT 221
High School GPA and Math Coursework	170	40.0%	250	80.9%	1,166	75.0%
NextGen Accuplacer QAS	276	64.9%	42	13.6%	127	8.2%
NextGen Accuplacer AAF	n/a	n/a	n/a	n/a	174	11.2%
Classic Accuplacer Elementary Algebra	93	21.9%	15	4.9%	n/a	n/a
Classic Accuplacer College-Level Math	n/a	n/a	n/a	n/a	6	0.4%
SAT	n/a	n/a	n/a	n/a	462	29.7%
ACT	0	0.0%	1	0.3%	95	6.1%
FOCA Proficiency	n/a	n/a	12	3.9%	44	2.8%
GED	n/a	n/a	n/a	n/a	n/a	n/a
PARCC	n/a	n/a	n/a	n/a	n/a	n/a
Prior College Coursework	n/a	n/a	n/a	n/a	n/a	n/a

Table 3c: Placement in Quantitative Pathway Courses by Placement Measure								
Placement Instrument	**MAT 034**		**MAT 035**		**MAT 100**		**MAT 133/135**	
	n	% of 295 placed in MAT 034	n	% of 154 placed in MAT 035	n	% of 88 placed in MAT 100	n	% of 1,804 placed in MAT 133/135
High School GPA and Math Coursework	89	30.2%	142	92.2%	n/a	n/a	1,428	79.2%
NextGen Accuplacer QAS	193	65.4%	n/a	n/a	88	100%	127	7.0%
NextGen Accuplacer AAF	n/a	n/a	n/a	n/a	n/a	n/a	174	9.6%
Classic Accuplacer Elementary Algebra	81	27.5%	11	7.1%	n/a	n/a	n/a	n/a
Classic Accuplacer College-Level Math	n/a	n/a	n/a	n/a	n/a	n/a	6	0.3%
SAT	n/a	n/a	n/a	n/a	n/a	n/a	462	25.6%
ACT	0	0.0%	1	0.6%	n/a	n/a	95	5.3%
FOCA Proficiency	8	2.7%	n/a	n/a	n/a	n/a	44	2.4%
GED	n/a	n/a	n/a	n/a	n/a	n/a	3	0.2%
PARCC	n/a	n/a	n/a	n/a	n/a	n/a	0	0.0%
Prior College Coursework	n/a	n/a	n/a	n/a	n/a	n/a	31	1.7%

Table 3d: Placement in Calculus Pathway Courses by Placement Measure										
Placement Instrument	**MAT 044**		**MAT 045**		**MAT 145**		**MAT 151**		**MAT 191**	
	n	% of 641 placed in MAT 044	n	% of 78 placed in MAT 045	n	% of 148 placed in MAT 145	n	% of 748 placed in MAT 151	n	% of 168 placed in MAT 191
High School GPA and Math Coursework	182	28.4%	12	15.4%	n/a	n/a	669	89.4%	n/a	n/a
NextGen Accuplacer QAS	432	67.4%	25	32.1%	n/a	n/a	n/a	n/a	n/a	n/a
NextGen Accuplacer AAF	n/a	n/a	n/a	n/a	96	64.9%	31	4.1%	14	8.3%
Classic Accuplacer Elementary Algebra	186	29.0%	12	15.4%	n/a	n/a	n/a	n/a	n/a	n/a
Classic Accuplacer College-Level Math	n/a	n/a	n/a	n/a	2	1.4%	0	0.0%	0	0.0%
SAT	n/a	n/a	n/a	n/a	52	35.1%	50	6.7%	128	76.2%
ACT	0	0.0%	1	1.3%	0	0.0%	54	7.2%	30	17.9%
FOCA Proficiency	n/a	n/a	29	37.2%	0	0.0%	n/a	n/a	n/a	n/a
GED	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PARCC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Prior College Coursework	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

4. For each placement instrument, what number and percent of students were placed into each mathematics course?

Tables 4a through 4e focus on the placement measures, showing the placement within mathematics courses indicated by each placement measure.

These tables differ from Table 3 because Table 3 focuses on the courses, indicating what measures placed the student in each course. In contrast, Tables 4a through 4e focus on the measures, indicating where each measure placed students, regardless of whether another measure placed them in the same course. For example, Table 4a shows that high school GPA and mathematics coursework indicated MAT 036 placement within the College Algebra pathway for 204 of the 1,710 students who submitted GPAs and coursework. However, Table 3a shows that of the 204 students whose (highest) placement was MAT 036, only 176 of students were placed in MAT 036 by their GPA and coursework, indicating that the other 28 students earned a higher placement in the College Algebra pathway by some other placement measure.

In the following tables, students from the population who had no mathematics placement information available within a particular pathway were excluded. An entry of "n/a" indicates that a particular measure was not used to place students in that course. An entry of zero indicates that, although the measure *could have been* used to place students in that course, no students met that criterion.

Table 4a: Eligibility for Mathematics Courses Based on High School GPA and High School Mathematics Coursework			
	n	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway			
MAT 036	204	8.9%	11.9%
MAT 037	308	13.4%	18.0%
MAT 137	1,198	52.0%	70.1%
MAT 230	n/a	n/a	n/a
Total placed with this measure	1,710	74.2%	100%
Not placed with this measure	595	25.8%	
Total placed in this pathway	2,305	100.0%	
Elementary Education Pathway			
MAT 036	204	8.7%	11.9%
MAT 037	308	13.2%	18.0%
MAT 221	1,198	51.4%	70.1%
Total placed with this measure	1,710	73.3%	100%
Not placed with this measure	622	26.7%	
Total placed in this pathway	2,332	100.0%	
Quantitative Pathway			
MAT 034	108	4.5%	6.1%
MAT 035	199	8.3%	11.2%
MAT 100	n/a	n/a	n/a
MAT 133/135	1,462	61.3%	82.6%
Total placed with this measure	1,769	74.2%	100.0%
Not placed with this measure	615	25.8%	
Total placed in this pathway	2,384	100.0%	
Calculus Pathway			
MAT 044	204	11.2%	20.3%
MAT 045	16	0.9%	1.6%
MAT 145	n/a	n/a	n/a
MAT 151	786	43.0%	78.1%
MAT 191	n/a	n/a	n/a
Total placed with this measure	1,006	55.1%	100.0%
Not placed with this measure	820	44.9%	
Total placed in this pathway	1,826	100.0%	

Table 4b: Eligibility for Mathematics Courses Based on NextGen Accuplacer Scores						
	Quantitative, Algebra & Statistics			Advanced Algebra & Functions		
	n	% of students placed in the pathway	% of students placed with this measure	n	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway						
MAT 036	461	20.0%	66.8%	n/a	n/a	n/a
MAT 037	187	8.1%	27.1%	n/a	n/a	n/a
MAT 137	42	1.8%	6.1%	139	6.0%	79.4%
MAT 230	n/a	n/a	n/a	36	1.6%	20.6%
Total placed with this measure	690	29.9%	100.0%	175	7.6%	100.0%
Not placed with this measure	1,615	70.1%		2130	92.4%	
Total placed in this pathway	2,305	100.0%		2,305	100.0%	
Elementary Education Pathway						
MAT 036	461	19.8%	66.8%	n/a	n/a	n/a
MAT 037	102	4.4%	14.8%	n/a	n/a	n/a
MAT 221	127	5.4%	18.4%	175	7.5%	100.0%
Total placed with this measure	690	29.6%	100.0%	175	7.5%	100.0%
Not placed with this measure	1,642	70.4%		2,157	92.5%	
Total placed in this pathway	2,332	100.0%		2,332	100.0%	
Quantitative Pathway						
MAT 034	355	14.9%	51.4%	n/a	n/a	n/a
MAT 035	n/a	n/a	n/a	n/a	n/a	n/a
MAT 100	208	8.7%	30.1%	n/a	n/a	n/a
MAT 133/135	127	5.3%	18.4%	175	7.3%	100.0%
Total placed with this measure	690	28.9%	100.0%	175	7.3%	100.0%
Not placed with this measure	1,694	71.1%		2,209	92.7%	
Total placed in this pathway	2,384	100.0%		2,384	100.0%	

	Quantitative, Algebra & Statistics			Advanced Algebra & Functions		
	n	% of students placed in the pathway	% of students placed with this measure	**n**	% of students placed in the pathway	% of students placed with this measure
Calculus Pathway						
MAT 044	563	30.8%	81.6%	n/a	n/a	n/a
MAT 045	127	7.0%	18.4%	n/a	n/a	n/a
MAT 145	n/a	n/a	n/a	129	7.1%	73.7%
MAT 151	n/a	n/a	n/a	32	1.8%	18.3%
MAT 191	n/a	n/a	n/a	14	0.8%	8.0%
Total placed with this measure	690	37.8%	100.0%	175	9.6%	100.0%
Not placed with this measure	1,136	62.2%		1,651	90.4%	
Total placed in this pathway	1,826	100.0%		1,826	100.0%	

Table 4c: Eligibility for Mathematics Courses Based on Classic Accuplacer Scores

	Elementary Algebra			College-Level Math		
	n	% of students placed in the pathway	% of students placed with this measure	**n**	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway						
MAT 036	232	10.1%	74.6%	n/a	n/a	n/a
MAT 037	79	3.4%	25.4%	n/a	n/a	n/a
MAT 137	n/a	n/a	n/a	7	0.3%	100.0%
MAT 230	n/a	n/a	n/a	0	0.0%	0.0%
Total placed with this measure	311	13.5%	100.0%	7	0.3%	100.0%
Not placed with this measure	1,994	86.5%		2,298	99.7%	
Total placed in this pathway	2,305	100.0%		2,305	100.0%	

	Elementary Algebra			College-Level Math		
	n	% of students placed in the pathway	% of students placed with this measure	**n**	% of students placed in the pathway	% of students placed with this measure
Elementary Education Pathway						
MAT 036	232	9.9%	74.6%	n/a	n/a	n/a
MAT 037	79	3.4%	25.4%	n/a	n/a	n/a
MAT 221	n/a	n/a	n/a	7	0.3%	100.0%
Total placed with this measure	311	13.3%	100.0%	7	99.7%	100.0%
Not placed with this measure	2,021	86.7%		2,325	99.7%	
Total placed in this pathway	2,332	100.0%		2,332	100.0%	
Quantitative Pathway						
MAT 034	232	9.7%	74.6%	n/a	n/a	n/a
MAT 035	79	3.3%	25.4%	n/a	n/a	n/a
MAT 100	n/a	n/a	n/a	n/a	n/a	n/a
MAT 133/135	n/a	n/a	n/a	7	0.3%	100.0%
Total placed with this measure	311	13.0%	100.0%	7	0.3%	100.0%
Not placed with this measure	2,073	87.0%		2,377	99.7%	
Total placed in this pathway	2,384	100.0%		2,384	100.0%	
Calculus Pathway						
MAT 044	267	14.6%	85.9%	n/a	n/a	n/a
MAT 045	44	2.4%	14.1%	n/a	n/a	n/a
MAT 145	n/a	n/a	n/a	6	0.3%	85.7%
MAT 151	n/a	n/a	n/a	1	0.1%	14.3%
MAT 191	n/a	n/a	n/a	0	0.0%	0.0%
Total placed with this measure	311	17.0%	100.0%	7	0.4%	100.0%
Not placed with this measure	1,515	83.0%		1,819	99.6%	
Total placed in this pathway	1,826	100.0%		1,826	100.0%	

Table 4d: Eligibility for Mathematics Courses Based on SAT and ACT Scores						
	SAT Score			ACT Score		
	n	% of students placed in the pathway	% of students placed with this measure	n	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway						
MAT 036	n/a	n/a	n/a	0	0.0%	0.0%
MAT 037	n/a	n/a	n/a	1	0.0%	1.0%
MAT 137	207	9.0%	59.1%	68	3.0%	64.8%
MAT 230	143	6.2%	40.9%	36	1.6%	34.3%
Total placed with this measure	350	15.2%	100.0%	105	4.6%	100.0%
Not placed with this measure	1,955	84.8%		2,200	95.4%	
Total placed in this pathway	2,305	100.0%		2,305	100.0%	
Elementary Education Pathway						
MAT 036	n/a	n/a	n/a	0	0.0%	%
MAT 037	n/a	n/a	n/a	1	0.0%	%
MAT 221	481	20.6%	100.0%	106	4.5%	100.0%
Total placed with this measure	481	20.6%	100.0%	107	4.6%	100.0%
Not placed with this measure	1,851	79.4%		2,154	95.4%	
Total placed in this pathway	2,332	100.0%		2,332	100.0%	
Quantitative Pathway						
MAT 034	n/a	n/a	n/a	0	0.0%	%
MAT 035	n/a	n/a	n/a	1	0.0%	0.9%
MAT 100	n/a	n/a	n/a	n/a	n/a	n/a
MAT 133/135	481	20.2%	100.0%	106	4.4%	99.1%
Total placed with this measure	481	20.2%	100.0%	107	4.5%	100.0%
Not placed with this measure	1,903	79.8%		2,277	95.5%	
Total placed in this pathway	2,384	100.0%		2,384	100.0%	

	SAT Score			ACT Score		
	n	% of students placed in the pathway	% of students placed with this measure	**n**	% of students placed in the pathway	% of students placed with this measure
Calculus Pathway						
MAT 044	n/a	n/a	n/a	0	0.0%	0.0%
MAT 045	n/a	n/a	n/a	1	0.1%	1.0%
MAT 145	101	5.5%	34.1%	4	0.2%	3.9%
MAT 151	52	2.8%	17.6%	62	3.4%	60.2%
MAT 191	143	7.8%	48.3%	36	2.0%	35.0%
Total placed with this measure	296	16.2%	100.0%	103	5.6%	100.0%
Not placed with this measure	1,530	93.8%		1,723	94.4%	
Total placed in this pathway	1,826	100.0%		1,826	100.0%	

Table 4e: Eligibility for Mathematics Courses Based on GED, PARCC, and Prior College Coursework

Only placement using these criteria	**GED**	**PARCC**	**Prior College**
	n	**n**	**n**
MAT 133/135	3	0	32

Table 4f: Eligibility for Mathematics Courses Based on High School FOCA Coursework			
	n	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway			
MAT 036	n/a	n/a	n/a
MAT 037	22	1.0%	33.3%
MAT 137	44	1.9%	66.7%
MAT 230	n/a	n/a	n/a
Total placed with this measure	66	2.9%	100.0%
Not placed with this measure	2,241	97.1%	
Total placed in this pathway	2,305	100.0%	
Elementary Education Pathway			
MAT 036	n/a	n/a	n/a
MAT 037	22	0.9%	33.3%
MAT 221	44	1.9%	66.7%
Total placed with this measure	66	2.8%	100.0%
Not placed with this measure	2,266	97.2%	
Total placed in this pathway	2,332	100.0%	
Quantitative Pathway			
MAT 034	22	0.9%	33.3%
MAT 035	n/a	n/a	n/a
MAT 100	n/a	n/a	n/a
MAT 133/135	44	1.8%	66.7%
Total placed with this measure	66	2.8%	100.0%
Not placed with this measure	2,318	97.2%	
Total placed in this pathway	2,384	100.0%	
Calculus Pathway			
MAT 044	n/a	n/a	n/a
MAT 045	44	2.4%	100.0%
MAT 145	n/a	n/a	n/a
MAT 151	n/a	n/a	n/a
MAT 191	n/a	n/a	n/a
Total placed with this measure	44	2.4%	100.0%
Not placed with this measure	1,782	97.6%	
Total placed in this pathway	1,826	100.0%	

5. For each mathematics course, what were the course outcomes?

Table 5 summarizes the course outcomes in all courses in the various mathematics pathways in the fall 2019 semester. Only those students whose enrollment in the courses is consistent with the current placement criteria are included in this analysis; students who enrolled in courses other than that indicated by the placement criteria were excluded. It is also important to keep in mind that these success rates are for the study population only, those students whose first semester at AACC was fall 2020, and who were not identified as transfer students.

Grades of A, B, and C are comprised the successful category, while grades of D, F, FX, and withdrawals comprised the unsuccessful category.

A few students in the population used in this study enrolled in the same course more than once in the semester. For example, a student may have enrolled in MAT 037, withdrawn after a few weeks, then re-enrolled in a late-start section of the same course. For these students, only the first attempt at the course was included in the table here.

As indicated in Table 5:

- At most 51.2% of students enrolled in a course in the College Algebra pathway were successful.
- At most 57.1% of students enrolled in a course in the Quantitative pathway were successful.
- At most 58.8% of students were successful in a course in the Calculus pathway, with the exception of MAT045 (which had a small sample size, n = 17).

Table 5: Mathematics Course Outcomes										
Course	**A/B/C**		**D**		**F/FX**		**W/WF/WP**		**Excluded Grades (I/CO/NG)**	
	n	%	n	%	n	%	n	%	n	%
College Algebra Pathway										
MAT 036	53	48.6%	0	0.0%	44	40.4%	11	10.1%	1	0.9%
MAT 037	22	51.2%	0	0.0%	16	37.2%	5	11.6%	0	0.0%
MAT 137	195	49.1%	30	7.6%	49	12.3%	121	30.5%	2	0.5%
MAT 230	0	0.0%	0	0.0%	0	0.0%	2	100%	0	0.0%
Elementary Education Pathway										
MAT 036	53	48.6%	0	0.0%	44	40.4%	11	10.1%	1	0.9%
MAT 037	22	51.2%	0	0.0%	16	37.2%	5	11.6%	0	0.0%
MAT 221	21	80.8%	2	7.7%	1	3.8%	2	7.7%	0	0.0%
Quantitative Pathway										
MAT 034	11	34.4%	0	0.0%	10	31.3%	11	34.4%	0	0.0%
MAT 035	6	50.0%	0	0.0%	2	16.7%	4	33.3%	0	0.0%
MAT 100	4	57.1%	1	14.3%	1	14.3%	1	14.3%	0	0.0%
MAT 133/135	79	49.4%	19	11.9%	28	17.5%	32	20.0%	2	1.3%
Calculus Pathway										
MAT 044	11	37.9%	0	0.0%	13	44.8%	5	17.2%	0	0.0%
MAT 045	3	75.0%	0	0.0%	1	25.0%	0	0.0%	0	0.0%
MAT 145	7	41.2%	4	23.5%	1	5.9%	5	29.4%	0	0.0%
MAT 151	24	40.0%	6	10.0%	10	16.7%	20	33.3%	0	0.0%
MAT 191	20	58.8%	2	5.9%	2	5.9%	10	29.4%	0	0.0%

6. For each mathematics course, what was the relationship between scores on the placement measures and course outcomes?

This section investigates relationships between the new placement criteria implemented in fall 2019 and course outcomes. For this report, success was defined as a grade of A, B, C, or PA; grades of D, F, and FX, as well as withdrawals, were considered unsuccessful. Incompletes, representing less than 0.5% of total grades, were also categorized as unsuccessful. Tables 6a through 6l show the number and percentage of students who were successful in a particular mathematics course based on their placement measure scores. Only those score ranges that are currently being used to place students within a particular course are presented. These score ranges were further broken into intervals to allow more detailed exploration of outcomes.

Note that an individual student might be represented in more than one line of a table if that student submitted more than one type of placement measure that placed them into that

particular course. For example, a student might be represented in a row for high school GPA as well as in a row for one or more Accuplacer tests. (Scores on measures that would have placed a student in a lower-level course were not included.)

Data for the classic Accuplacer tests (Elementary Algebra and College-Level Mathematics) were omitted, since those tests are no longer administered to students. Data for MAT 045, MAT 133, and MAT 230 were omitted because fewer than ten students from the population used in this study enrolled in these courses.

A limitation in the data presented for this research question is that changes in cut scores that might have impacted placements were not captured; for example, cut scores for NextGen Accuplacer Quantitative, Algebra & Statistics (QAS) and the SAT. Although these changes in cut scores have been accounted for in earlier research questions, only the current cut scores were utilized in this section, irrespective of the date on which a test was taken. The impact of ignoring the changes in cut scores was small; the most significant impact appears to be the omission of 8 students from Table 6b, due to an increase in QAS minimum score for placement in MAT 037.

Table 6a: Success in MAT 036 Based on Placement Score Ranges

Placement Measure	Number Enrolled	Number Successful	Percent Successful
High School GPA and Math Coursework			
0.00 – 2.29 and no coursework	22	5	22.7%
2.30 – 2.59 and no coursework	22	10	45.5%
Total GPA and coursework	44	15	34.1%
NextGen Accuplacer QAS			
200 – 229	26	8	30.8%
230 – 249	48	28	58.3%
250 – 262	19	13	68.4%
Total QAS	93	49	52.7%

Table 6b: Success in MAT 037 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA and Math Coursework			
2.30 – 2.59 and Alg 2 in progress	1	1	100%
2.30 – 2.59 and FOCA in progress	3	2	66.7%
2.30 – 2.59 and Precalc in progress	0	n/a	n/a
2.60 – 2.99 and no coursework	12	5	41.7%
3.00 – 3.39 and no coursework	15	7	46.7%
Total GPA and coursework	31	15	48.4%
NextGen Accuplacer QAS			
263 – 271	3	1	33.3%

Table 6c: Success in MAT 137 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA and Math Coursework			
2.60 – 2.99 and Alg 2 C or better	42	9	21.4%
2.60 – 2.99 and FOCA C or better	17	1	5.9%
2.60 – 2.99 and Precalc C or better	14	7	50.0%
2.60 – 2.99 and Calc in progress	0	n/a	n/a
3.00 – 3.39 and Alg 2 C or better	67	25	37.3%
3.00 – 3.39 and FOCA C or better	28	8	28.6%
3.00 – 3.39 and Precalc C or better	22	17	77.3%
3.00 – 3.39 and Calc in progress	0	n/a	n/a
3.40 – 4.00 and no coursework	37	21	56.8%
3.40 – 4.00 and Alg 2 in progress	1	1	100%
3.40 – 4.00 and Alg 2 C or better	38	21	55.3%
3.40 – 4.00 and FOCA in progress	6	5	83.3%
3.40 – 4.00 and FOCA C or better	19	16	84.2%
3.40 – 4.00 and Precalc in progress	4	4	100%
3.40 – 4.00 and Precalc C or better	43	34	79.1%
3.40 – 4.00 and Calc in progress	2	1	50.0%
Total GPA and coursework	340	170	50.0%

NextGen Accuplacer QAS			
272 – 300	4	2	50.0%
NextGen Accuplacer AAF			
240 – 249	22	9	40.9%
250 – 300	23	15	65.2%
Total AAF	45	24	53.3%
SAT			
550 – 569	12	8	66.7%
570 – 800	25	18	72.0%
Total SAT	37	26	70.3%
ACT			
23 – 36	14	10	71.4%

Table 6d: Success in MAT 221 Based on Placement Score Ranges

Placement Measure	Number Enrolled	Number Successful	Percent Successful
High School GPA and Math Coursework			
2.60 – 2.99 and Alg 2 C or better	1	1	100%
2.60 – 2.99 and FOCA C or better	0	n/a	n/a
2.60 – 2.99 and Precalc C or better	0	n/a	n/a
2.60 – 2.99 and Calc in progress	0	n/a	n/a
3.00 – 3.39 and Alg 2 C or better	5	1	20.0%
3.00 – 3.39 and FOCA C or better	1	1	100%
3.00 – 3.39 and Precalc C or better	2	2	100%
3.00 – 3.39 and Calc in progress	0	n/a	n/a
3.40 – 4.00 and no coursework	5	5	100%
3.40 – 4.00 and Alg 2 in progress	0	n/a	n/a
3.40 – 4.00 and Alg 2 C or better	2	2	100%
3.40 – 4.00 and FOCA in progress	0	n/a	n/a
3.40 – 4.00 and FOCA C or better	0	n/a	n/a
3.40 – 4.00 and Precalc in progress	1	1	100%
3.40 – 4.00 and Precalc C or better	4	4	100%
3.40 – 4.00 and Calc in progress	0	n/a	n/a
Total GPA and coursework	21	17	81.0%
NextGen Accuplacer QAS			
263 – 300	2	2	100%
NextGen Accuplacer AAF			
240 – 300	4	3	75.0%
SAT			
530 – 800	1	0	0.0%
ACT			

21 – 36	3	3	100%

Table 6e Success in MAT 034 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA and Math Coursework			
0.00 – 2.29 and no coursework	13	2	15.4%
2.30 – 2.59 and Alg 2 in progress	0	n/a	n/a
Total GPA and coursework	13	2	15.4%
NextGen Accuplacer QAS			
200 – 229	9	2	22.2%
230 – 249	19	9	47.4%
Total QAS	28	11	39.3%

Table 6f: Success in MAT 035 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA and Math Coursework			
2.30 – 2.59 and no coursework	10	7	70.0%
2.60 – 2.99 and no coursework	6	1	16.7%
Total GPA and coursework	16	8	50.0%
NextGen Accuplacer QAS			
250 – 262	9	7	77.8%

Table 6g: Success in MAT 100 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA and Math Coursework			
2.30 – 2.59 and Alg 2 C or better	0	n/a	n/a
2.30 – 2.59 and FOCA C or better	0	n/a	n/a
2.30 – 2.59 and Precalc C or better	0	n/a	n/a
2.60 – 2.99 and Alg 2 C or better	2	2	100%
2.60 – 2.99 and FOCA C or better	0	n/a	n/a
2.60 – 2.99 and Precalc C or better	1	1	100%
3.00 – 3.39 and no coursework	1	0	0.0%
3.00 – 3.39 and Alg 2 C or better	0	n/a	n/a
3.00 – 3.39 and FOCA C or better	1	1	100%
3.00 – 3.39 and Precalc C or better	0	n/a	n/a
3.40 – 4.00 and no coursework	2	1	50.0%
3.40 – 4.00 and Alg 2 in progress	0	n/a	n/a
3.40 – 4.00 and Alg 2 C or better	1	0	0.0%
3.40 – 4.00 and FOCA in progress	0	n/a	n/a
3.40 – 4.00 and FOCA C or better	0	n/a	n/a
3.40 – 4.00 and Precalc in progress	0	n/a	n/a
3.40 – 4.00 and Precalc C or better	0	n/a	n/a
3.40 – 4.00 and Calc in progress	0	n/a	n/a
Total GPA and coursework	8	5	62.5%
NextGen Accuplacer QAS			
250 – 262	7	4	57.1%
NextGen Accuplacer AAF			
240 – 300	1	1	100%
SAT			
530 – 800	1	1	100%
ACT			
21 – 36	0	n/a	n/a

Table 6h: Success in MAT 135 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA and Math Coursework			
2.30 – 2.59 and Alg 2 C or better	7	1	14.3%
2.30 – 2.59 and FOCA C or better	3	1	33.3%
2.30 – 2.59 and Precalc C or better	0	n/a	n/a
2.60 – 2.99 and Alg 2 C or better	15	5	33.3%
2.60 – 2.99 and FOCA C or better	8	1	12.5%
2.60 – 2.99 and Precalc C or better	4	0	0.0%
3.00 – 3.39 and no coursework	25	11	44.0%
3.00 – 3.39 and Alg 2 C or better	17	6	35.3%
3.00 – 3.39 and FOCA C or better	10	6	60.0%
3.00 – 3.39 and Precalc C or better	4	4	100%
3.40 – 4.00 and no coursework	8	5	62.5%
3.40 – 4.00 and Alg 2 in progress	2	2	100%
3.40 – 4.00 and Alg 2 C or better	10	4	40.0%
3.40 – 4.00 and FOCA in progress	1	1	100%
3.40 – 4.00 and FOCA C or better	7	6	85.7%
3.40 – 4.00 and Precalc in progress	0	n/a	n/a
3.40 – 4.00 and Precalc C or better	9	8	88.9%
3.40 – 4.00 and Calc in progress	1	0	0.0%
Total GPA and coursework	131	61	46.6%
NextGen Accuplacer QAS			
263 – 300	9	6	66.7%
NextGen Accuplacer AAF			
240 – 300	7	4	57.1%
SAT			
530 – 549	10	7	70.0%
550 – 800	14	12	85.7%
Total SAT	24	19	79.2%
ACT			
21 – 36	7	6	85.7%

Table 6i: Success in MAT 044 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA and Math Coursework			
0.00 – 2.29 and no coursework	3	1	33.3%
2.30 – 2.59 and no coursework	4	1	25.0%
Total GPA and coursework	7	2	28.6%
NextGen Accuplacer QAS			
200 – 249	11	4	36.4%
250 – 262	13	7	53.8%
Total QAS	24	11	45.8%

Table 6j: Success in MAT 145 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA and Math Coursework			
2.60 – 2.99 and Calc in progress	1	1	100%
3.00 – 3.39 and Precalc C or better	5	3	60.0%
3.00 – 3.39 and Calc in progress	0	n/a	n/a
3.40 – 4.00 and no coursework	12	2	16.7%
3.40 – 4.00 and Alg 2 in progress	0	n/a	n/a
3.40 – 4.00 and Alg 2 C or better	8	3	37.5%
3.40 – 4.00 and FOCA in progress	2	0	0.0%
3.40 – 4.00 and FOCA C or better	3	1	33.3%
3.40 – 4.00 and Precalc in progress	1	1	100%
3.40 – 4.00 and Precalc C or better	10	8	80.0%
3.40 – 4.00 and Calc in progress	0	n/a	n/a
Total GPA and coursework	42	19	45.2%
NextGen Accuplacer AAF			
240 – 249	9	3	33.3%
250 – 300	12	6	50.0%
Total AAF	21	9	42.9%
SAT			
570 – 800	12	8	66.7%
ACT			
24 – 36	5	3	60.0%

Table 6k: Success in MAT 151 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA and Math Coursework			
2.60 – 2.99 and Precalc C or better	7	0	0.0%
2.60 – 2.99 and Calc in progress	2	0	0.0%
3.00 – 3.39 and Precalc C or better	9	5	55.6%
3.00 – 3.39 and Calc in progress	0	n/a	n/a
3.40 – 4.00 and no coursework	9	6	66.7%
3.40 – 4.00 and Alg 2 in progress	0	n/a	n/a
3.40 – 4.00 and Alg 2 C or better	8	3	37.5%
3.40 – 4.00 and FOCA in progress	0	n/a	n/a
3.40 – 4.00 and FOCA C or better	0	n/a	n/a
3.40 – 4.00 and Precalc in progress	0	n/a	n/a
3.40 – 4.00 and Precalc C or better	15	7	46.7%
3.40 – 4.00 and Calc in progress	0	n/a	n/a
Total GPA and coursework	50	21	42.0%
NextGen Accuplacer AAF			
260 – 300	10	6	60.0%
SAT			
600 – 800	6	6	100%
ACT			
25 – 36	6	4	66.7%

Table 6l: Success in MAT 191 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer AAF			
276 – 300	9	8	88.9%
SAT			
620 – 800	19	9	47.4%
ACT			
26 – 36	7	3	42.9%

Table 6m aggregates data for the highest-level mathematics courses completed with a C or better in high school, independent of GPA, to provide a perspective on the relationship between high school mathematics courses completed with a C or better and AACC mathematics course success rates.

The table shows that success rates in selected AACC mathematics courses increased as the level of the mathematics course taken in high school increased:

- Success rates in selected AACC courses were at or below 50% for students who completed high school Algebra 2 or FOCA with a C or better.
- Success rates in selected AACC courses were at or above 68.2% for those students who completed Precalculus, the highest level high school mathematics course used for placement purposes, with a C or better.

Table 6m: Success in Select AACC Mathematics Courses Based on Highest-Level High School Mathematics Course Completed with a C or Better

	High School Mathematics Course					
AACC Course	**Algebra 2**		**FOCA**		**Precalculus**	
	# Enrolled	% Successful	# Enrolled	% Successful	# Enrolled	% Successful
MAT 135	53	35.8%	28	50.0%	17	70.6%
MAT 137	152	37.5%	67	38.8%	81	74.1%
MAT 145	17	47.1%	7	42.9%	22	68.2%

Tables 6n through 6q examine how using GPA alone as opposed to using GPA in concert with other measures to determine placements relates to student outcomes. This is done comparing success rates in select mathematics courses for the following:

- Students placed by GPA who did not have another placement measure.
- Students whose placement by GPA was consistent with another placement measure.
- Students whose placement by GPA was inconsistent with another placement measure.
- Students who did not submit GPA and were placed by another placement measure.

Only MAT 037, MAT 137, MAT 135, and MAT 151 were chosen for this part of the analysis, due to their high enrollments. Although highly enrolled, MAT 145, a course within the Calculus Foundations pathway, was excluded because high school GPA was not used to place students in that course—high school GPA was used only to distinguish between placement in MAT 045 and MAT 151.

The tables show that:

- For students with a GPA, success rates were highest when both high school GPA and another placement measure independently indicated the placement.
- For students whose only placement measure was high school GPA, success rates were lowest, with the exception of MAT 137.

Table 6n: Success in MAT 037 Based on Which Measures Determined Placement			
Measures and Placement	**Number Enrolled**	**Number Successful**	**Percent Successful**
High school GPA was the only measure, and it placed the student in MAT 037	20	8	40.0%
Both high school GPA and at least one other measure placed the student in MAT 037	3	2	66.7%
High school GPA placed the student in MAT 037, AND another measure placed the student below MAT 037	8	5	62.5%
High school GPA placed the student below MAT 037 AND another measure placed the student in MAT 037	0	n/a	n/a
No high school GPA; at least one other measure placed the student in MAT 037	17	12	70.6%
Total	48	27	56.3%

Table 6o: Success in MAT 137 Based on Which Measures Determined Placement			
Measures and Placement	**Number Enrolled**	**Number Successful**	**Percent Successful**
High school GPA was the only measure, and it placed the student in MAT 137	222	108	48.6%
Both high school GPA and at least one other measure placed the student in MAT 137	50	36	72.0%
High school GPA placed the student in MAT 137, AND another measure placed the student below MAT 137	80	29	36.3%
High school GPA placed the student below MAT 137 AND another measure placed the student in MAT 137	10	3	30.0%
No high school GPA; at least one other measure placed the student in MAT 137	0	n/a	n/a
Total	362	176	48.6%

Table 6p: Success in MAT 135 Based on Which Measures Determined Placement			
Measures and Placement	**Number Enrolled**	**Number Successful**	**Percent Successful**
High school GPA was the only measure, and it placed the student in MAT 135	71	25	35.2%
Both high school GPA and at least one other measure placed the student in MAT 135	35	25	71.4%
High school GPA placed the student in MAT 135, AND another measure placed the student below MAT 135	29	12	41.4%
High school GPA placed the student below MAT 135 AND another measure placed the student in MAT 135	7	5	71.4%
No high school GPA; at least one other measure placed the student in MAT 135	12	8	66.7%
Total	154	75	48.7%

Table 6q: Success in MAT 151[7] Based on Which Measures Determined Placement			
Measures and Placement	**Number Enrolled**	**Number Successful**	**Percent Successful**
High school GPA was the only measure, and it placed the student in MAT 151	28	8	28.6%
Both high school GPA and at least one other measure placed the student in MAT 151	8	4	50.0%
High school GPA placed the student in MAT 151, AND another measure placed the student below MAT 151	15	6	40.0%
High school GPA placed the student below MAT 151 AND another measure placed the student in MAT 151	0	n/a	n/a
No high school GPA; at least one other measure placed the student in MAT 151	9	6	66.7%
Total	60	24	40.0%

[7] Note that the table for MAT 151 does not include students who were eligible to take MAT 151 but opted to enroll in MAT 145 instead.

7. What number and percentage of students who registered for English and mathematics courses in fall 2019 subsequently enrolled in spring 2020?

Table 7 provides the number and percentage of students who, as of January 13, 2020, had registered for at least one course in the spring 2020 semester. The data is broken down by whether or not students were successful in a particular mathematics course.

The table indicates:

- Three-quarters (75.1%) of students who were successful in their mathematics course returned the subsequent term.
- Less than half (44.4%) of the students who were *not* successful in their mathematics course returned the subsequent term.

Table7: Fall-to-Spring Retention Based on Mathematics Course Enrollment and Success

	Successfully Completed, Fall 2019			Did Not Successfully Complete, Fall 2019			Total Enrolled Fa19		
Course	Enrolled Fall 2019	Returned Spring 2020		Enrolled Fall 2019	Returned Spring 2020		Enrolled Fall 2019	Returned Spring 2020	
	n	n	%	n	n	%	n	n	%
College Algebra Pathway									
MAT 036	69	44	63.8%	68	11	16.2%	137	55	40.1%
MAT 037	30	21	70.0%	29	7	24.1%	59	28	47.5%
MAT 137	208	163	78.4%	211	110	52.1%	419	273	65.2%
MAT 230	0	n/a	n/a	2	0	0.0%	2	0	0.0%
Elementary Education Pathway									
MAT 036	69	44	63.8%	68	11	16.2%	137	55	40.1%
MAT 037	30	21	70.0%	29	7	24.1%	59	28	47.5%
MAT 221	21	21	100%	5	3	60.0%	26	24	92.3%
Quantitative Pathway									
MAT 034	18	14	77.8%	26	9	34.6%	44	23	52.3%
MAT 035	16	8	50.0%	9	0	0.0%	25	8	32.0%
MAT 100	9	8	88.9%	8	5	62.5%	17	13	76.5%
MAT 133/135	79	56	70.9%	84	38	45.2%	163	94	57.7%
Calculus Pathway									
MAT 044	15	10	66.7%	22	8	36.4%	37	18	48.6%
MAT 045	5	2	40.0%	3	0	0.0%	8	2	25.0%
MAT 145	42	34	81.0%	42	19	45.2%	84	53	63.1%
MAT 151	34	29	85.3%	40	29	72.5%	74	58	78.4%
MAT 191	24	18	75.0%	21	14	66.7%	45	32	71.1%

Part III: Course Outcomes in High-Enrolled Courses with English and/or Mathematics Eligibility Prerequisites

8. For selected high-enrolled general education courses that have an English and/or mathematics eligibility requirement, how did fall 2019 course outcomes compare to course outcomes for the previous three fall semesters?

The new placement measures used at AACC have an impact not only on placement within English and mathematics courses, but also on eligibility for some other courses that have a prerequisite of eligibility for particular English and/or mathematics courses. Table 8 shows success rates for four sequential fall semesters in selected high-enrolled general education courses that have such a requirement. An increase or decrease in the success rates in fall 2019 could be indicative of an effect of the new placement measures.

Note that the population used to create Table 8 is different from the population used for all other parts of this report. Here, the population is all students in a given fall semester who enrolled in the given course. In other parts of this report, the population was restricted to students whose first semester at AACC was fall 2019 and who were not identified as transfer students.

Table 8 shows only small changes in success rates (2.4 percentage points or less) between fall 2018 and fall 2019 for all selected general education courses, with the following exceptions:

- Success rates in BIO111, which had been increasing from fall 2016 to fall 2018, decreased 7.9 percentage points between fall 2018 and fall 2019.
- Success rates in HIS 111, which had been increasing from fall 2016 to fall 2018, decreased 7.9 percentage points between fall 2018 and fall 2019.
- Success rates in SOC 111, which increased from fall 2016 to fall 2017 and saw a small decrease from fall 2017 to fall 2018, decreased 5.4 percentage points between fall 2018 and fall 2019.
- Success rates in CHE 111, which increased from fall 2016 to fall 2017 and saw a small decrease from fall 2017 to fall 2018, decreased 5.1 percentage points between fall 2018 and fall 2019.
- Success rates in PHL 111, which had decreased from 55.4% to 34.6% between fall 2017 and fall 2018, increased 37.1 percentage points between fall 2018 and fall 2019.

Table 8: Successful Outcomes across Four Fall Semester for Selected High-Enrolled Courses											
	Fall 2016		Fall 2017			Fall 2018			Fall 2019		
Course	n[8]	%	n	%	Diff from Fall 2016	n	%	Diff from Fall 2017	N	%	Diff from Fall 2018
BIO 101	367	63.3%	401	65.2%	1.9%	427	69.5%	4.3%	369	61.6%	-7.9%
CHE 111	217	56.2%	224	65.1%	8.9%	188	63.1%	-2.0%	202	58.0%	-5.1%
CTA 100	678	80.8%	699	80.3%	-0.6%	631	77.2%	-3.0%	622	79.6%	2.4%
CTP 103	n/a	n/a	297	72.6%	n/a	297	70.9%	-1.7%	184	69.2%	-1.7%
ECO 211	154	63.1%	141	67.5%	4.3%	127	67.6%	0.1%	137	66.2%	-1.4%
HIS 111	168	67.2%	174	70.7%	3.5%	194	80.8%	10.1%	145	72.9%	-7.9%
MDA 113	104	79.4%	123	82.6%	3.2%	109	85.2%	2.6%	109	82.6%	2.6%
PHL 111	54	41.9%	67	55.4%	13.5%	28	34.6%	-20.8%	76	71.7%	37.1%
PHS 100	200	77.2%	172	83.1%	5.9%	159	79.9%	-3.2%	149	81.4%	-1.5%
SOC 111	877	73.3%	930	80.2%	6.9%	895	79.6%	-0.6%	870	74.2%	-5.4%

[8] This is the number of successes (grades of A, B, C) in the given term.

Report on the Revised Placement Criteria Implemented Fall 2020

Prepared by Professors Catherine Hess and Kerry Taylor, PRIA Faculty Analysts
March 2021

Introduction

In spring 2019, Anne Arundel Community College introduced new criteria to place students in the English and mathematics course sequences. In addition to traditional measures such as SAT, ACT, and classic Accuplacer tests, the college began using high school GPA and NextGen Accuplacer tests to place students.

In February 2020, a report was prepared on the numbers of new students in fall 2019 who placed in various English and mathematics courses based on the new criteria, the number of students who enrolled in various English and mathematics courses, relationships between placement and course outcomes (i.e., grades), and retention of students in the following spring semester. As a result of that report, changes were made to placement measures, particularly high school GPA and Accuplacer Gen Next tests.

The purpose of this report is to present updated placement information for new students in Fall 2020, placed using the revised scores.

Population and Data Sources

The population used in the study comprised the 2,696 students whose first term at AACC was fall 2020 and who were not identified as "transfer" students. This population is a subset of the official PRIA end-of-term file.

Data sources included official PRIA end-of-term files, placement measures and associated scores derived from an Informer query, and official PRIA enrollment and grade files for the fall 2020 semester.

Research Questions

1. What number and percent of students placed into selected English and mathematics courses?
2. What number and percent of students who placed into the English and mathematics courses registered for those courses in fall 2020?
3. For each English and mathematics course, what number and percent of students' placements were determined by each placement measure?
4. For each placement instrument, what number and percent of students were placed into each English and mathematics course?
5. For each English and mathematics course, what were the course outcomes?
6. For each English and mathematics course, what was the relationship between scores on the placement measures and course outcomes?

7. What number and percentage of students who registered for English and mathematics courses in fall 2020 subsequently enrolled in spring 2021?

Parts I and II of this report answer the research questions for English and mathematics, respectively. In each part, the table numbering is consistent with the numbering of the research questions.

Part I: Placement in English Courses

Definitions and Background

There are three possible placements for students seeking to satisfy their college-level transfer English composition requirement:

ACL 040: Academic Literacies (5 credit-equivalent hours)

ENG 101A/ENG 099: Academic Writing and Research (3 credit hours) combined with Support for Academic Writing and Research (2 credit-equivalent hours)

ENG 101: Academic Writing and Research 1 (3 credit hours).

The prerequisite of eligibility for ENG 111 used in the past for some general education courses, such as SOC 111, has been replaced by a prerequisite of eligibility for ENG 101A.

1. What number and percent of students placed into selected English courses?

Table 1 shows the highest placements of students for English, based on placement scores entered in Colleague as of November 6, 2020.

Among incoming students with placement information, 83.4% (n=1,781) placed into ENG 101, 10.1% (n=216) placed into ENG 101A, and 3.4% (n=73) placed into ACL 040. Note: For a comparative perspective of placements before the new criteria were adopted for fall 2020, among incoming students with placement information in fall 2019, 75.7% (n=1,948) placed into ENG 101, 19.6% (n=504) placed into ENG 101A, and 2.2% (n=58) placed into RDG 040.

Table 1: Highest Placement in English Courses

Course	n	% of total students	% of students with placement info
ACL 040	73	2.7%	3.4%
ENG 101A	216	8.0%	10.1%
ENG 101	1,781	66.1%	83.4%
English not needed	66	2.4%	3.1%
Students with placement	2,136	79.2%	100%
No placement info	560	20.8%	---
Total	2,696	100.0%	---

For 560 students (20.8% of the population) there were no measures available to determine placement in an English course; these students appear in Table 1 under the category “No placement info”. (Almost all of these students were non-degree-seeking and/or dually enrolled.) Sixty-six (66) students arrived at AACC with external/transfer credit for a credit-level English course, usually via an Advanced Placement or CLEP exam. These students appear in Table 1 under the category “English not needed.”

2. What number and percent of students who placed into English courses registered for those courses in fall 2020?

Table 2a provides data showing enrollment of students in the courses indicated by the placement criteria. Less than half of the students who were placed (40.5%, n=839) enrolled in the English course identified as their highest placement. Compared to last year, the percent enrolling in ACL 040 and ENG 101A are only slightly higher (41.4% and 41.5%, respectively), while the percent enrolling in ENG 101 is much lower (last year it was roughly 50%).

Table 2a: Students Who Enrolled in English Course Indicated by Placement

Course	Placed	Enrolled	% Enrolled
ACL 040	73	33	45.2%
ENG 101A	216	99	45.8%
ENG 101	1,781	707	39.7%
Total	2,070	839	40.5%

Table 2b includes students who enrolled in an English course other than the one indicated by the placement criteria. The total number of enrolled students shows a slight increase (41.3%, n=856), primarily due to 14 students placed into ENG 101 who elected to take ENG 101A.

Table 2b: Includes Students Who Enrolled In English Courses NOT Indicated by Placement

	Highest Placement in English Courses			Total	
	ACL 040	ENG 101A	ENG 101	n	%
Enrolled in ACL 040	33	0	1	34	4.0%
Enrolled in ENG 101A	0	99	14	113	13.2%
Enrolled in ENG 101	1	1	707	709	82.8%
Total	34	100	722	856	100%

3. **For each English course, what number and percent of students' placements were determined by each placement measure?**

The purpose of Tables 3 is to focus on one placement measure at a time, and determine whether that particular placement measure is what determined a student's (highest) placement. Each row of the table represents a particular placement measure, such as high school GPA, NextGen Reading, and NextGen Writing.

Note that the categories in Table 3 are not mutually exclusive; students may have been placed in their highest course by more than one measure.

As indicated in Table 3:

- NexGen Accuplacer Reading indicated placement in ACL 040 for 84.9% (n=62) of the 73 students placed in that course.

- NexGen Accuplacer Reading indicated placement in ENG 101A for 44.0% (n=95) of the 216 students placed in that course.
- High school GPA indicated placement in ENG 101 for 89.0% (n=1,585) of the 1,781 students placed in that course, followed by SAT at 10.6% (n=189).

Table 3: Highest Placement in English Courses by Each Placement Measure

Placement Measure	ACL 040		ENG 101A		ENG 101	
	n	% of the 73 ACL 040 placements	n	% of the 216 ENG 101A placements	n	% of the 1,781 ENG 101 placements
High School GPA	12*	16.4%	65*	30.1%	1,585	89.0%
NextGen Reading	62	84.9%	95	44.0%	104	5.8%
NextGen Writing	62	84.9%	96	44.4%	116	6.5%
Classic RAT	9	12.3%	6	2.8%	14	0.8%
Classic EAT	9	12.3%	3	1.4%	18	1.0%
SAT	n/a	n/a	26	12.0%	189	10.6%
ACT	n/a	n/a	2	0.1%	23	1.3%
GED	n/a	n/a	n/a	n/a	2	0.1%
PARCC	n/a	n/a	n/a	n/a	1	0.1%
IB or DT Completion	n/a	n/a	n/a	n/a	0	0.0%
Prior College Courses	n/a	n/a	n/a	n/a	18	1.0%

* Note that students can no longer place into ENG 040 or ENG 101A based on GPA. However, these student placements were determined by GPAs that were submitted to AACC prior to the GPA cut score change, so students had already been placed.

One other possible placement instrument not included in this table is successful completion of ESL 399. Students may have been "new" in fall 2020, having completed only non-credit ESL courses. These students were eligible for ENG 101A.

4. For each placement instrument, what number and percent of students were placed into each English course?

Tables 4a through 4d focus on the placement measures, showing the placement within English courses indicated by each placement measure.

These tables differ from Table 3 because Table 3 focuses on the courses, indicating what measures placed the student in each course. In contrast, Tables 4a through 4d focus on the measures, indicating where each measure placed students, regardless of whether another measure placed them in the same course. For example, Table 4b shows that the Accuplacer Next Gen Reading placement test indicated ACL 040 placement for 183 of the 498 students who took that test. However, Table 3 shows that of the 73 students whose (highest) placement was ACL 040, only 62 were placed in ACL 040 by the Next Gen Reading test, indicating that the other 121 students earned a higher placement by a different placement measure.

Students with no placement information (n = 560) were excluded from the following tables.

Table 4a: Eligibility for English Courses Based on GPA			
	n	% of total students	% of students with GPA
ACL 040	18*	0.8%	1.0%
ENG 101A	83*	3.9%	4.8%
ENG 101	1,646	77.1%	94.2%
Total	1,747	81.8%	100%
No GPA	389	18.2%	---
Total students	2,136	100%	---

* Note that students can no longer place into ENG 040 or ENG 101A based on GPA. However, these student placements were determined by GPAs that were submitted to AACC prior to the GPA cut score change, so students had already been placed.

Table 4b: Eligibility for English Courses Based on NextGen Accuplacer Scores						
	NextGen Reading			**NextGen Writing**		
	n	% of total students	% of students with score	**n**	% of total students	% of students with score
ACL 040	183	8.6%	36.7%	208	9.7%	41.3%
ENG 101A	208	9.7%	41.8%	178	8.3%	35.3%
ENG 101	107	5.0%	21.5%	118	5.5%	23.4%
Total with scores	498	23.3%	100%	504	23.6%	100%
No scores	1,638	76.7%	---	1,632	76.4%	---
Total students	2,136	100%	---	2,136	100%	---

Table 4c: Eligibility for English Courses Based on Classic Accuplacer Scores						
	Classic Reading Comprehension			**Classic Sentence Skills**		
	n	% of total students	% of students with score	**n**	% of total students	% of students with score
ACL 040	63	2.9%	54.8%	63	2.9%	54.8%
ENG 101A	37	1.7%	32.2%	37	1.7%	32.2%
ENG 101	15	0.7%	13.0%	15	0.7%	13.0%
Total with scores	115	5.4%	100%	115	5.4%	100%
No scores	2,021	94.6%	---	2,021	94.6%	---
Total students	2,136	100%	---	2,136	100%	---

Table 4d: Eligibility for English Courses Based on SAT and ACT Scores						
	based on SAT Score			based on ACT Score		
	n	% of total students	% of students with score	n	% of total students	% of students with score
ACL 040	n/a	n/a	n/a	n/a	n/a	n/a
ENG 101A	119	5.6	36.1	5	0.2	15.2
ENG 101	211	9.9	63.9	28	1.3	84.8
Total with scores	330	15.4	100	33	1.5	100
No scores	1,806	84.6	---	2,103	98.5	---
Total students	2,136	100	---	2,136	100	---

Table 4d: Eligibility for English Courses Based on GED, PARCC, IB or DT Completion, and Prior College				
	GED	PARCC	IB or DT Completion	Prior College
	n	n	n	n
ENG 101	2	1	0	18

5. For each English course, what were the course outcomes?

Table 5 summarizes the course outcomes in ACL 040, ENG 099, ENG 101A, and ENG 101 for fall 2020. Only those students whose enrollment in the courses was consistent with the current placement criteria were included in this analysis; students who enrolled in courses other than that indicated by the placement criteria were excluded. It is also important to keep in mind that these success rates are for the study population only; i.e., those students whose first semester at AACC was fall 2020, and who were not identified as transfer students.

Course outcomes in ACL 040, ENG 101A, and ENG 101 follow the traditional letter grade scheme; grades of A, B, and C comprised the successful category. ENG 099 has possible outcomes of PA (pass), which were included in the successful category.

A few students in the population used in this study enrolled in the same course more than once in the semester. For example, a student may have enrolled in ENG 101, withdrawn after a few weeks, then re-enrolled in a late-start section of the same course. For these students, only the first attempt at the course was included.

As indicated in Table 5:

- Less than half of students enrolled in ACL 040 were successful (42.4%, n=14).
- More than half of students enrolled in ENG 101A were successful (59.6%, n=59).
- Over one-fifth of students enrolled in ENG 101A withdrew (20.2%, n=20).
- A little over two-thirds of students enrolled in ENG 101 were successful (68.9%, n=487).

Note: Between fall 2019 and fall 2020, success rates increased for the English courses but decreased for ACL 040 (from 45.8% to 42.4% for ACL 040, from 47.8% to 59.6% for ENG 099, from 40.2% to 58.6% for ENG 101A, and from 67.8% to 68.9% for ENG 101).

Table 5: English Course Outcomes										
Course	**A/B/C/PA**		**D**		**F/FX**		**W/WF/WP**		**Excluded Grades (I/CO/NG)**	
	n	%	n	%	n	%	n	%	n	%
ACL 040	14	42.4%	2	6.1%	14	42.4%	3	9.1%	0	0.0%
ENG 099	59	59.6%	0	0.0%	20	20.2%	20	20.2%	0	0.0%
ENG 101A	58	58.6%	1	1.0%	20	20.2%	20	20.2%	0	0.0%
ENG 101	487	68.9%	26	3.7%	123	17.4%	70	9.9%	1	0.1%

6. For each English course, what was the relationship between scores on the placement measures and course outcomes?

This section investigates relationships between the new placement criteria and course outcomes. In the tables below, success was defined as a grade of A, B, C, or PA; grades of D, F, and FX, as well as withdrawals, were categorized as unsuccessful. The single incomplete was also categorized as unsuccessful.

Tables 6a through 6d show the number and percentage of students who were successful in a particular English course based on the score ranges that are currently being used for placement. The score ranges were further broken down into intervals to allow more detailed examination of the data.

Note that an individual student might be represented in more than one line of a table if that student submitted more than one type of placement measure that placed them into that particular course. For example, a student might be represented in a row for high school GPA as well as in a row for one or more Accuplacer tests. (Scores on measures that would have placed a student in a lower-level course were not included.)

Data for the classic Accuplacer tests (English and Reading) have been omitted, since those tests are no longer administered to students.

As indicated in Table 6d, high school GPA correlates positively with success rates in ENG 101.

Table 6a: Success in ACL 040 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer Reading			
200 – 229	3	1	33.3%
230 – 236	7	6	85.7%
237 – 246	13	5	38.5%
247 – 255	9	3	33.3%
NextGen Accuplacer Writing			
200 – 239	12	8	66.7%
240 – 249	20	7	35.0%

Table 6b: Success in ENG 101A Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer Reading			
256 – 261	16	9	56.3%
262 – 267	14	12	85.7%
NextGen Accuplacer Writing			
250 – 257	39	24	61.5%
258 – 262	17	15	88.2%
SAT			
480 – 529	5	2	40.0%
530 – 549	5	4	80.0%
ACT			
18	1	0	0.0%
19	0	0	n/a
20	1	0	0.0%

Table 6c: Success in ENG 101 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
High School GPA			
3.00 – 3.19	142	88	62.0%
3.20 – 3.49	147	105	71.4%
3.50 – 4.00	268	212	79.1%
NextGen Accuplacer Reading			
268 – 271	14	11	78.6%
272 – 279	16	13	81.3%
280 – 300	16	11	68.8%
NextGen Accuplacer Writing			
263 – 269	37	28	75.7%
270 – 275	18	13	72.2%
276 – 300	11	10	90.9%
SAT			
550 – 569	27	18	66.7%
570 – 800	85	61	71.8%
ACT			
21	2	1	50.0%
22	2	1	50.0%
23 – 36	6	2	33.3%

Table 6e examines how using GPA alone to determine placements as opposed to using GPA in concert with other measures to determine placements relates to student outcomes. This is done comparing success rates in ENG 101 for the following groups:

- Students placed by GPA who did not have another placement measure.
- Students whose placement by GPA was consistent with another placement measure.
- Students whose placement by GPA was inconsistent with another placement measure.
- Students who did not submit GPA and were placed by another placement measure.

Table 6e: Success in ENG101 Based on Which Measures Determined Placement			
Measures and Placement	**Number Enrolled**	**Number Successful**	**Percent Successful**
High school GPA was the only measure, and it placed the student in ENG 101	384	260	67.7%
Both high school GPA and at least one other measure placed the student in ENG 101	118	82	69.5%
High school GPA placed the student in ENG 101, AND another measure placed the student below ENG 101	120	86	71.7%
High school GPA placed the student below ENG 101 AND another measure placed the student in ENG 101	8	4	50.0%
No high school GPA; at least one other measure placed the student in ENG 101	77	55	71.4%
Total	707	487	68.9%

7. What number and percentage of students who registered for English courses in fall 2020 subsequently enrolled in spring 2021?

Table 7 provides the number and percentage of students who, as of March 4, 2021, had registered for at least one course in the spring 2021 semester. The data is broken down by whether or not students were successful in a particular English course.

The table indicates:

- Most of the students (85.5%) who were successful in their English or academic literacies course returned the subsequent term.
- Less than half of the students (42.3%) who were *not* successful in their English or academic literacies course returned the subsequent term.

Table7: Fall-to-Spring Retention Based on English Course Enrollment and Success									
	Successfully Completed, Fall 2020			**Did Not Successfully Complete, Fall 2020**			**Total Enrolled Fall 2020**		
Course	Enrolled Fall 2020	Returned Spring 2021		Enrolled Fall 2020	Returned Spring 2021		Enrolled Fall 2020	Returned Spring 2021	
	n	n	%	n	n	%	n	n	%
ACL 040	15	10	66.7%	19	2	10.5%	34	12	35.3%
ENG 101A	71	65	91.5%	44	13	29.5%	115	78	67.8%
ENG 101	498	425	85.3%	224	104	46.4%	722	529	73.3%
Total	584	500	85.5%	287	119	41.5%	871	619	71.1%

Part II: Placement in Mathematics Courses

Definitions and Background

There are officially three mathematics pathways at AACC: College Algebra Foundations, Quantitative Foundations, and Calculus Foundations. Each pathway consists of one or more developmental mathematics courses and at least one credit mathematics course. For this study, a fourth pathway was considered, that taken by Elementary Education and Early Childhood majors. Although these students take the same developmental mathematics courses as students in the College Algebra pathway, the minimum scores required on the SAT and ACT are different (i.e., lower) for placement in MAT 221 and MAT 137.

The sequence of courses in the four pathways are listed here. In general, the courses in each pathway are sequential, and students can place directly into any level within each of the courses listed here. Note, however, that the Quantitative Pathway is unusual, in that the courses in that pathway are not purely sequential. Students who place at the lowest level (MAT 034) and complete that course successfully are then eligible to take MAT 100, MAT 133, or MAT 135. Students who place slightly higher may take MAT 035, which can only be taken paired with MAT 135. For most of the measures used for placement, the cut-score used for minimum eligibility for MAT 100 is lower than the cut-score used for minimum eligibility for MAT 133 and MAT 135. Therefore, for this analysis, MAT 133 and MAT 135 were treated as "higher" than MAT 100, even though all three are first-level credit mathematics courses in the Quantitative pathway.

College Algebra Pathway:

MAT 036 (College Algebra Foundations)
MAT 037 (Introduction to College Algebra)
MAT 137 (College Algebra)
MAT 230 (Elementary Calculus)

Elementary Education Pathway:

MAT 036 (College Algebra Foundations)
MAT 037 (Introduction to College Algebra)
MAT 221 or 222 (Fundamental concepts of Mathematics 1 & 2)

Quantitative Pathway:

MAT 034 (Quantitative Foundations)
MAT 035 (Pre-Statistics)
MAT 100 (The Nature of Mathematics)
MAT 133 (Finite Mathematics) or MAT 135 (Elementary Statistics)

Calculus Pathway:

MAT 044 (Precalculus Foundations)

MAT 045 (Introduction to Precalculus)

MAT 145 (Precalculus 1)

MAT 151 (Accelerated Precalculus)

MAT 191 (Calculus and Analytic Geometry 1)

Some measures are used to determine eligibility within only some of the four mathematics pathways. For example, a GED score can place a student within the Quantitative pathway, but not within the other pathways.

Likewise, some measures can place students at only some of the levels within a pathway. For example, the NextGen Accuplacer Advanced Algebra and Functions test can place students into MAT 145, 151, or 191 of the Calculus Pathway, but it is not used to place students into MAT 044 or MAT 045 of that same pathway.

Within the Elementary Education pathway for students in the elementary education and early childhood programs, eligible students may take either MAT 221 or MAT 222; the eligibility requirements for these two courses are identical. However, none of the students in the population used in this study enrolled in MAT 222. For simplicity, only MAT 221 is listed in the following tables for the elementary education pathway, even though a more correct heading would be MAT 221/222.

The abbreviation FOCA stands for *Foundations of College Algebra*, a mathematics course offered in some Anne Arundel county public high schools. Prior to fall 2019, students who successfully completed these FOCA courses in high school were granted proficiency credit at AACC, which was then used to place students into appropriate mathematics courses at AACC. Beginning in fall 2019, FOCA students were actually enrolled in contract sections of AACC mathematics courses (specifically, MAT 036 and MAT 037). Prior to fall 2019, students might have used FOCA coursework as a placement measure; since fall 2019, however, FOCA students have been counted as AACC students and their FOCA coursework is no longer used as a placement measure.

1. What number and percent of students placed into selected mathematics courses?

As stated in the introductory section of this report, there were 2,406 students in the population defined for this study. About two-thirds (67.5%, n=1,625) of these students had at least one placement measure entered in Colleague that determined their placement within at least one mathematics pathway. There were, however, 781 students (32.5% of the population) for whom no measure was available from which to determine eligibility within any mathematics pathway. (Over 75% of these exceptions were non-degree-seeking students and/or dually enrolled students.) Note: last year, over 80% of students had math placement.

Tables 1a through 1d, below, show the highest placements within each of the four mathematics pathways. Students with no placement data are included in Tables 1a through 1d, but are omitted from later tables addressing other research questions.

Twenty-nine (29) students arrived at AACC with external/transfer credit for a credit-level mathematics course, usually via an Advanced Placement or CLEP exam. These students appear in Tables 1a through 1d under the category "Math not needed."

Table 1a: Highest Placement in College Algebra Pathway Courses

Course	n	% of total students	% of students with placement info
MAT 036	297[1]	12.3%	20.2%
MAT 037	317[2]	13.2%	21.6%
MAT 137	688	28.6%	46.8%
MAT 230	138	5.7%	9.4%
Math not needed	29	1.2%	2.0%
Students with placement	1,469	61.1%	100.0%
No placement information	937	38.9%	--
Total	2,406	100.0%	--

Table 1b: Highest Placement in Elementary Education Pathway Courses

Course	n	% of total students	% of students with placement info
MAT 036	278[1]	11.6%	18.4%
MAT 037	238[2]	9.9%	15.7%
MAT 221	969	40.3%	64.0%
Math not needed	29	1.2%	1.9%
Students with placement	1,514	62.9%	100.0%
No placement information	892	37.1%	--
Total	2,406	100.0%	--

[1] The difference in placement numbers in MAT 036 for the College Algebra and Elementary Education pathways is due to a small range of SAT scores that placed students into MAT 221 but not into the College Algebra pathway.
[2] The difference in placement numbers in MAT 037 for the College Algebra and Elementary Education pathways is due primarily to a range of scores of the NextGen Accuplacer Quantitative, Algebra & Statistics test that placed students into MAT 221 but not into MAT 137. The SAT also contributed to the difference.

Table 1c: Highest Placement in Quantitative Pathway Courses			
Course	**n**	**% of total students**	**% of students with placement info**
MAT 034	188	7.8%	11.6%
MAT 035	39	1.6%	2.4%
MAT 100	212	8.8%	13.1%
MAT 133/135[3]	1,155	48.0%	71.2%
Math not needed	29	1.2%	1.8%
Students with placement	1,623	67.5%	100.0%
No placement information	783	32.5%	--
Total	2,406	100.0%	--

Table 1d: Highest Placement in Calculus Pathway Courses			
Course	**n**	**% of total students**	**% of students with placement info**
MAT 044	394	16.4%	29.0%
MAT 045	232	9.6%	17.1%
MAT 145	94	3.9%	6.9%
MAT 151	490	20.4%	36.1%
MAT 191	120	5.0%	8.8%
Math not needed	29	1.2%	2.1%
Students with placement	1,359	56.5%	100.0%
No placement information	1,047	43.5%	
Total	2,406	100.0%	

2. What number and percent of students who placed into mathematics courses registered for those courses in fall 2020?

The enrollment numbers for mathematics courses, as presented in Tables 2a through 2d, seem quite small when compared to the number of students placed in those courses. This is due in large part to the fact that a student who submits, say, a high school GPA and mathematics coursework for placement purposes might be placed into all four mathematics pathways based on that GPA and coursework. However, if that student enrolls in a mathematics course, that course will appear in only one of the pathways. For example, suppose a student submitted a GPA score that made him or her eligible to take MAT 034, MAT 036, or MAT 044 (the lowest-level courses in each pathway). If the student enrolled in MAT 034, then that student would

[3] The students who were eligible for MAT 133 and MAT 135 as their first mathematics course were also eligible to take MAT 100. However, since the eligibility requirements for MAT 133 and MAT 135 are generally higher than for MAT 100, these were considered "higher" mathematics courses than MAT 100.

appear as an enrollment in Table 2c, representing the Quantitative Pathway, but would not appear as an enrollment in the other three pathway tables.

Mathematics courses that are offered in an accelerated format in which a student completes two courses in the same semester, known informally as “combo” courses, presented another challenge in developing and interpreting the data in these tables. In the enrollment tables presented here, students in combo courses were counted as having enrolled in the lower-level course only. For example, a student who took a MAT 035+135 combo appears in these tables as having enrolled in MAT 035, but not MAT 135. This avoided doubling of any headcounts, while maintaining a record of students’ “first” course in a particular pathway.

Fall 2020 enrollments, as shown in Table 2, are approximately 40% lower than fall 2019 enrollments. Specifically, enrollments in the College Algebra Pathway courses decreased from 589 to 259; in the Quantitative Pathway, from 211 to 122; and in the Calculus Pathway, from 142 to 121. The decrease in enrollments is due to three factors: overall lower enrollment at AACC (including new and continuing students), a lower percentage of AACC students who were new, and a lower percentage of new students being assessed in mathematics.

Table 2: Enrollments in Mathematics Courses Based on Eligibility			
Course	**Number Placed**	**Number Enrolled**	**% of Eligible Students Who Enrolled**
College Algebra Pathway			
MAT 036	297	71	23.9%
MAT 037	317	47	14.8%
MAT 137	688	140	20.3%
MAT 230	138	1	0.7%
Total	1,440	259	18.0%
Elementary Education Pathway			
MAT 036	278	66	23.7%
MAT 037	238	31	13.0%
MAT 221	969	23	2.4%
Total	1,485	120	8.1%
Quantitative Pathway			
MAT 034	188	24	12.8%
MAT 035	39	1	2.6%
MAT 100	212	12	5.7%
MAT 133/135	1,155	85[4]	7.4%
Total	1,594	122	7.7%
Calculus Pathway			
MAT 044	394	25	6.3%
MAT 045	232	16	6.9%
MAT 145	94	12	12.8%
MAT 151	490	32[5]	6.5%
MAT 191	120	36	30.0%
Total	1,330	121	9.1%

3. For each mathematics course, what number and percent of students' highest placements were determined by each placement measure?

The purpose of Tables 3a through 3d is to focus on one placement measure at a time, and determine whether that particular placement measure is what determined a student's (highest) placement within each of the four mathematics pathways. Each table contains data for one

[4] In addition to the 85 students who were eligible to take MAT 133 or MAT 135 and enrolled in one of these courses, another 15 students enrolled in MAT 100 instead. This raises the percent of MAT 133/135-eligible students who enrolled in MAT 100, 133, or 135 to 8.6%.

[5] There were an additional 31 students who were eligible for MAT 151 but who opted to take MAT 145. This raises the percentage of students who were eligible for MAT 151 who enrolled in either MAT 145 or MAT 151 to 12.9%

pathway; each row of a table represents a particular placement measure, such as the SAT, an Accuplacer test score, or high school GPA and mathematics coursework.

The categories given in the first column of these tables are not mutually exclusive, since students may have been placed in their highest course by more than one measure.

An entry of "n/a" in these tables indicates that that particular measure was not used to place students in that course. On the other hand, an entry of zero indicates that, although the measure *could have been* used to place students in that course, no students met that criterion.

Table 3a indicates, for example, that for all 297 students whose highest placement was MAT 036, 14.8% (n = 47) had a high school GPA and coursework that indicated the placement, 43.1% of them (n = 128) had a NextGen Accuplacer Quantitative, Algebra & Statistics (QAS) test score that indicated the placement, 45.5% of them (n = 135) had a NextGen Advanced Algebra & functions (AAF) test score that indicated the placement, and 11.8% (n = 35) of them had a Classic Accuplacer Elementary Algebra test score that indicated the placement. The sum of these percentages is greater than 100% because some students submitted multiple placement measures, more than one of which placed those students in MAT 036.

Table 3a: Placement in College Algebra Pathway Courses by Placement Measure

Placement Instrument	MAT 036		MAT 037		MAT 137		MAT 230	
	n	% of 297 placed in MAT 036	n	% of 317 placed in MAT 037	n	% of 688 placed in MAT 137	n	% of 138 placed in MAT 230
High School GPA and Math Coursework	47	15.8%	260	82.0%	568	82.6%	41	29.7%
NextGen Accuplacer QAS	128	43.1%	18	5.7%	7	1.0%	n/a	n/a
NextGen Accuplacer AAF	135	45.5%	35	11.0%	88	13.0%	31	22.5%
Classic Accuplacer Elementary Algebra	35	11.8%	8	2.5%	n/a	n/a	n/a	n/a
Classic Accuplacer College-Level Math	n/a	n/a	n/a	n/a	0	0.0%	0	0.0%
SAT	n/a	n/a	n/a	n/a	99	14.4%	65	47.1%
ACT	0	0.0%	1	0.3%	9	1.3%	7	5.1%
FOCA Proficiency	n/a	n/a	3	0.9%	8	1.1%	n/a	n/a
GED	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PARCC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Prior College Coursework	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table 3b: Placement in Elementary Education Pathway Courses by Placement Measure						
Placement Instrument	**MAT 036**		**MAT 037**		**MAT 221**	
	n	% of 278 placed in MAT 036	n	% of 238 placed in MAT 037	n	% of 969 placed in MAT 221
High School GPA and Math Coursework	45	16.2%	217	91.2%	732	75.5%
NextGen Accuplacer QAS	127	45.7%	8	3.4%	117	12.1%
NextGen Accuplacer AAF	120	43.2%	4	1.7%	149	15.4%
Classic Accuplacer Elementary Algebra	31	11.2%	7	2.9%	n/a	n/a
Classic Accuplacer College-Level Math	n/a	n/a	n/a	n/a	0	0.0%
SAT	n/a	n/a	n/a	n/a	217	22.4%
ACT	0	0.0%	1	0.4%	21	2.2%
FOCA Proficiency	n/a	n/a	3	1.3%	8	0.8%
GED	n/a	n/a	n/a	n/a	n/a	n/a
PARCC	n/a	n/a	n/a	n/a	n/a	n/a
Prior College Coursework	n/a	n/a	n/a	n/a	n/a	n/a

Table 3c: Placement in Quantitative Pathway Courses by Placement Measure								
Placement Instrument	**MAT 034**		**MAT 035**		**MAT 100**		**MAT 133/135**	
	n	% of 188 placed in MAT 034	n	% of 39 placed in MAT 035	n	% of 212 placed in MAT 100	n	% of 1,155 placed in MAT 133/135
High School GPA and Math Coursework	34	18.1%	35	89.7%	159	75.0%	931	80.6%
NextGen Accuplacer QAS	162	86.2%	0	0.0%	68	32.1%	117	10.1%
NextGen Accuplacer AAF	n/a	n/a	n/a	n/a	n/a	n/a	149	12.9%
Classic Accuplacer Elementary Algebra	22	11.7%	3	7.7%	n/a	n/a	n/a	n/a
Classic Accuplacer College-Level Math	n/a	n/a	n/a	n/a	n/a	n/a	0	0.0%
SAT	n/a	n/a	n/a	n/a	n/a	n/a	217	18.8%
ACT	0	0.0%	1	0.3%	n/a	n/a	21	1.8%
FOCA Proficiency	2	1.1%	n/a	n/a	n/a	n/a	2	0.2%
GED	n/a	n/a	n/a	n/a	n/a	n/a	3	0.3%
PARCC	n/a	n/a	n/a	n/a	n/a	n/a	0	0.0%
Prior College Coursework	n/a	n/a	n/a	n/a	n/a	n/a	20	1.7%

Table 3d: Placement in Calculus Pathway Courses by Placement Measure										
Placement Instrument	**MAT 044**		**MAT 045**		**MAT 145**		**MAT 151**		**MAT 191**	
	n	% of 394 placed in MAT 044	n	% of 232 placed in MAT 045	n	% of 94 placed in MAT 145	n	% of 490 placed in MAT 151	n	% of 120 placed in MAT 191
High School GPA and Math Coursework	49	12.4%	193	83.2%	26	27.6%	461	94.1%	39	32.5%
NextGen Accuplacer QAS	170	43.1%	7	3.0%	n/a	n/a	n/a	n/a	n/a	n/a
NextGen Accuplacer AAF	185	47.0%	26	11.2%	39	41.5%	20	4.1%	13	10.8%
Classic Accuplacer Elementary Algebra	68	17.3%	4	1.7%	n/a	n/a	n/a	n/a	n/a	n/a
Classic Accuplacer College-Level Math	n/a	n/a	n/a	n/a	0	0.0%	0	0.0%	0	0.0%
SAT	n/a	n/a	n/a	n/a	36	38.3%	21	43.3%	65	54.2%
ACT	0	0.0%	1	0.4%	0	0.0%	6	1.2%	7	5.8%
FOCA Proficiency	n/a	n/a	5	2.2%	0	0.0%	n/a	n/a	n/a	n/a
GED	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PARCC	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Prior College Coursework	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

4. For each placement instrument, what number and percent of students were placed into each mathematics course?

Tables 4a through 4e focus on the placement measures, showing the placement within mathematics courses indicated by each placement measure.

These tables differ from Table 3 because Table 3 focuses on the courses, indicating what measures placed the student in each course. In contrast, Tables 4a through 4e focus on the measures, indicating where each measure placed students, regardless of whether another measure placed them in the same course. For example, Table 4a shows that high school GPA and mathematics coursework indicated MAT 036 placement within the College Algebra pathway for 55 of the 1,022 students who submitted GPAs and coursework. However, Table 3a shows that of the 55 students whose (highest) placement was MAT 036, only 47 of students were placed in MAT 036 by their GPA and coursework, indicating that the other 8 students earned a higher placement in the College Algebra pathway by some other placement measure.

In the following tables, students from the population who had no mathematics placement information available within a particular pathway were excluded. An entry of "n/a" indicates that a particular measure was not used to place students in that course. An entry of zero indicates that, although the measure *could have been* used to place students in that course, no students met that criterion.

Table 4a: Eligibility for Mathematics Courses Based on High School GPA and High School Mathematics Coursework			
	n	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway			
MAT 036	55	2.3%	5.4%
MAT 037	300	12.5%	29.4%
MAT 137	622	25.9%	60.9%
MAT 230	45	1.9%	4.4%
Total placed with this measure	1,022	42.5%	100.0%
Not placed with this measure	1,384	57.5%	--
Total placed in this pathway	2,406	100.0%	--
Elementary Education Pathway			
MAT 036	55	2.3%	5.2%
MAT 037	255	10.6%	24.0%
MAT 221	754	31.3%	70.9%
Total placed with this measure	1,064	44.2%	100.0%
Not placed with this measure	1,342	55.8%	--
Total placed in this pathway	2,406	100.0%	--
Quantitative Pathway			
MAT 034	42	1.7%	3.4%
MAT 035	46	1.9%	3.7%
MAT 100	186	7.7%	15.2%
MAT 133/135	953	39.6%	77.7%
Total placed with this measure	1,227	51.0%	100.0%
Not placed with this measure	1,179	49.0%	--
Total placed in this pathway	2,406	100.0%	--
Calculus Pathway			
MAT 044	55	2.3%	6.4%
MAT 045	216	9.0%	25.3%
MAT 145	33	1.4%	3.9%
MAT 151	507	21.1%	59.4%
MAT 191	43	1.8%	5.0%
Total placed with this measure	854	35.5%	100.0%
Not placed with this measure	1,552	64.5%	--
Total placed in this pathway	2,406	100.0%	--

Table 4b: Eligibility for Mathematics Courses Based on NextGen Accuplacer Scores						
	Quantitative, Algebra & Statistics			Advanced Algebra & Functions		
	n	% of students placed in the pathway	% of students placed with this measure	n	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway						
MAT 036	209	8.7%	73.9%	163	6.8%	50.0%
MAT 037	58	2.4%	20.5%	39	1.6%	12.0%
MAT 137	16	0.7%	5.7%	91	3.8%	27.9%
MAT 230	n/a	n/a	n/a	33	1.4%	10.1%
Total placed with this measure	283	11.8%	100.0%	326	13.5%	100.0%
Not placed with this measure	2,123	88.2%	--	2,080	86.5%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--
Elementary Education Pathway						
MAT 036	209	8.7%	58.9%	163	6.8%	50.0%
MAT 037	27	1.1%	7.6%	11	.5%	3.4%
MAT 221	119	4.9%	33.5%	152	6.3%	46.6%
Total placed with this measure	355	14.8%	100.0%	326	13.5%	100.0%
Not placed with this measure	2,051	85.2%	--	2,080	86.5%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--
Quantitative Pathway						
MAT 034	267	11.1%	49.9%	n/a	n/a	n/a
MAT 035	n/a	n/a	n/a	n/a	n/a	n/a
MAT 100	149	6.2%	27.9%	n/a	n/a	n/a
MAT 133/135	119	4.9%	22.2%	152	6.3%	100.0%
Total placed with this measure	535	22.2%	100.0%	152	6.3%	100.0%
Not placed with this measure	1,871	77.8%	--	2,254	93.7%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--

	Quantitative, Algebra & Statistics			Advanced Algebra & Functions		
	n	% of students placed in the pathway	% of students placed with this measure	**n**	% of students placed in the pathway	% of students placed with this measure
Calculus Pathway						
MAT 044	236	9.8%	83.4%	202	8.4%	62.0%
MAT 045	47	2.0%	16.6%	30	1.2%	9.2%
MAT 145	n/a	n/a	n/a	58	2.4%	17.8%
MAT 151	n/a	n/a	n/a	22	0.9%	6.7%
MAT 191	n/a	n/a	n/a	14	0.6%	4.3%
Total placed with this measure	283	11.8%	100.0%	326	13.5%	100.0%
Not placed with this measure	2,123	88.2%	--	2,080	86.5%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--

Table 4c: Eligibility for Mathematics Courses Based on Classic Accuplacer Scores

	Elementary Algebra			College-Level Math		
	n	% of students placed in the pathway	% of students placed with this measure	**n**	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway						
MAT 036	88	3.7%	81.5%	n/a	n/a	n/a
MAT 037	20	0.8%	18.5%	n/a	n/a	n/a
MAT 137	n/a	n/a	n/a	0	0.0%	n/a
MAT 230	n/a	n/a	n/a	0	0.0%	n/a
Total placed with this measure	108	4.5%	100.0%	0	0.0%	n/a
Not placed with this measure	2,298	95.5%	--	2,406	100.0%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--

	Elementary Algebra			College-Level Math		
	n	% of students placed in the pathway	% of students placed with this measure	**n**	% of students placed in the pathway	% of students placed with this measure
Elementary Education Pathway						
MAT 036	88	3.7%	81.5%	n/a	n/a	n/a
MAT 037	20	0.8%	18.5%	n/a	n/a	n/a
MAT 221	n/a	n/a	n/a	0	0.0%	n/a
Total placed with this measure	108	4.5%	100.0%	0	0.0%	n/a
Not placed with this measure	2,298	95.5%	--	2,406	100.0%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--
Quantitative Pathway						
MAT 034	88	3.7%	81.5%	n/a	n/a	n/a
MAT 035	20	0.8%	18.5%	n/a	n/a	n/a
MAT 100	n/a	n/a	n/a	n/a	n/a	n/a
MAT 133/135	n/a	n/a	n/a	0	0.0%	n/a
Total placed with this measure	108	4.5%	100.0%	0	0.0%	n/a
Not placed with this measure	2,298	95.5%	--	2,406	100.0%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--
Calculus Pathway						
MAT 044	97	4.0%	89.8%	n/a	n/a	n/a
MAT 045	11	0.5%	10.2%	n/a	n/a	n/a
MAT 145	n/a	n/a	n/a	0	0.0%	n/a
MAT 151	n/a	n/a	n/a	0	0.0%	n/a
MAT 191	n/a	n/a	n/a	0	0.0%	n/a
Total placed with this measure	108	4.5%	100.0%	0	0.0%	n/a
Not placed with this measure	2,298	95.5%	--	2,406	100.0%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--

Table 4d: Eligibility for Mathematics Courses Based on SAT and ACT Scores						
	SAT Score			ACT Score		
	n	% of students placed in the pathway	% of students placed with this measure	n	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway						
MAT 036	n/a	n/a	n/a	0	0.0%	0.0%
MAT 037	n/a	n/a	n/a	1	0.0%	5.3%
MAT 137	112	4.7%	61.5%	10	0.4%	52.6%
MAT 230	70	2.9%	38.5%	8	0.3%	42.1%
Total placed with this measure	182	7.6%	100.0%	19	0.8%	100.0%
Not placed with this measure	2,224	92.4%	--	2,387	99.2%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--
Elementary Education Pathway						
MAT 036	n/a	n/a	n/a	0	0.0%	0.0%
MAT 037	n/a	n/a	n/a	1	0.0%	4.3%
MAT 221	225	9.4%	100.0%	22	0.9%	95.7%
Total placed with this measure	225	9.4%	100.0%	23	1.0%	100.0%
Not placed with this measure	2,181	90.6%	--	2,383	99.0%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--
Quantitative Pathway						
MAT 034	n/a	n/a	n/a	0	0.0%	0.0%
MAT 035	n/a	n/a	n/a	1	0.0%	4.3%
MAT 100	n/a	n/a	n/a	n/a	n/a	n/a
MAT 133/135	225	9.4%	100.0%	22	0.9%	95.7%
Total placed with this measure	225	9.4%	100.0%	23	1.0%	100.0%
Not placed with this measure	2,181	90.6%	--	2,383	99.0%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--

	SAT Score			ACT Score		
	n	% of students placed in the pathway	% of students placed with this measure	**n**	% of students placed in the pathway	% of students placed with this measure
Calculus Pathway						
MAT 044	n/a	n/a	n/a	0	0.0%	0.0%
MAT 045	n/a	n/a	n/a	1	0.0%	5.6%
MAT 145	59	2.5%	38.3%	3	0.1%	16.7%
MAT 151	25	1.0%	16.2%	6	0.2%	33.3%
MAT 191	70	2.9%	45.5%	8	0.3%	44.4%
Total placed with this measure	154	6.4%	100.0%	18	0.7%	100.0%
Not placed with this measure	2,252	93.6%	--	2,388	99.3%	--
Total placed in this pathway	2,406	100.0%	--	2,406	100.0%	--

Table 4e: Eligibility for Mathematics Courses Based on GED, PARCC, and Prior College Coursework

Only placement using these criteria	**GED**	**PARCC**	**Prior College**
	n	**n**	**n**
MAT 133/135	2	0	20

Table 4f: Eligibility for Mathematics Courses Based on Proficiency Credit for High School FOCA Coursework			
	n	% of students placed in the pathway	% of students placed with this measure
College Algebra Pathway			
MAT 036	n/a	n/a	n/a
MAT 037	22	1.0%	33.3%
MAT 137	44	1.9%	66.7%
MAT 230	n/a	n/a	n/a
Total placed with this measure	66	2.9%	100.0%
Not placed with this measure	2,241	97.1%	
Total placed in this pathway	2,305	100.0%	
Elementary Education Pathway			
MAT 036	n/a	n/a	n/a
MAT 037	22	0.9%	33.3%
MAT 221	44	1.9%	66.7%
Total placed with this measure	66	2.8%	100.0%
Not placed with this measure	2,266	97.2%	
Total placed in this pathway	2,332	100.0%	
Quantitative Pathway			
MAT 034	22	0.9%	33.3%
MAT 035	n/a	n/a	n/a
MAT 100	n/a	n/a	n/a
MAT 133/135	44	1.8%	66.7%
Total placed with this measure	66	2.8%	100.0%
Not placed with this measure	2,318	97.2%	
Total placed in this pathway	2,384	100.0%	
Calculus Pathway			
MAT 044	n/a	n/a	n/a
MAT 045	44	2.4%	100.0%
MAT 145	n/a	n/a	n/a
MAT 151	n/a	n/a	n/a
MAT 191	n/a	n/a	n/a
Total placed with this measure	44	2.4%	100.0%
Not placed with this measure	1,782	97.6%	
Total placed in this pathway	1,826	100.0%	

5. For each mathematics course, what were the course outcomes?

Table 5 summarizes the course outcomes in all courses in the various mathematics pathways in the fall 2020 semester. Only those students whose enrollment in the courses is consistent with the current placement criteria are included in this analysis; students who enrolled in courses other than that indicated by the placement criteria were excluded. It is also important to keep in mind that these success rates are for the study population only, those students whose first semester at AACC was fall 2020, and who were not identified as transfer students.

Grades of A, B, and C are comprised the successful category, while grades of D, F, FX, and withdrawals comprised the unsuccessful category.

A few students in the population used in this study enrolled in the same course more than once in the semester. For example, a student may have enrolled in MAT 037, withdrawn after a few weeks, then re-enrolled in a late-start section of the same course. For these students, only the first attempt at the course was included in the table here.

Table 5: Mathematics Course Outcomes

Course	A/B/C		D		F/FX		W/WF/WP	
	n	%	n	%	n	%	n	%
College Algebra Pathway								
MAT 036	27	38.0%	0	0.0%	27	38.0%	17	23.9%
MAT 037	27	57.4%	2	4.3%	14	29.8%	4	8.5%
MAT 137	91	65.0%	7	5.0%	17	12.1%	25	17.9%
MAT 230	1	100%	0	0.0%	0	0.0%	0	0.0%
Elementary Education Pathway								
MAT 036	27	38.0%	0	0.0%	27	38.0%	17	23.9%
MAT 037	27	57.4%	2	4.3%	14	29.8%	4	8.5%
MAT 221	21	91.3%	0	0.0%	1	4.3%	1	4.3%
Quantitative Pathway								
MAT 034	8	33.3%	1	4.2%	10	41.7%	5	20.8%
MAT 035	1	100%	0	0.0%	0	0.0%	0	0.0%
MAT 100	10	83.3%	0	0.0%	2	16.7%	0	0.0%
MAT 133/135	46	54.1%	8	9.4%	13	15.3%	18	21.2%
Calculus Pathway								
MAT 044	6	24.0%	0	0.0%	11	44.0%	8	32.0%
MAT 045	12	75.0%	0	0.0%	2	12.5%	2	12.5%
MAT 145	8	66.7%	0	0.0%	2	16.7%	2	16.7%
MAT 151	21	65.6%	0	0.0%	3	9.4%	8	25.0%
MAT 191	17	47.2%	2	5.6%	4	11.1%	13	36.1%

Note: Between fall 2019 and fall 2020, success rates for most credit mathematics courses with at least ten students enrolled increased (from 49.1% to 65.0% for MAT 137, from 80.8% to 91.3% for MAT 221, from 49.4% to 54.1% for MAT 133/135, from 41.2% to 66.7% for MAT 145, and from 40.0% to 65.6% for MAT 151). However, the success rate for MAT 191 decreased (from 58.5% to 47.2%).

6. For each mathematics course, what was the relationship between scores on the placement measures and course outcomes?

This section investigates relationships between the new placement criteria implemented in fall 2020 and course outcomes. For this report, success was defined as a grade of A, B, C, or PA; grades of D, F, and FX, as well as withdrawals, were considered unsuccessful. Tables 6a through 6k show the number and percentage of students who were successful in a particular mathematics course based on their placement measure scores. Only those score ranges that are currently being used to place students within a particular course are presented. Because cut scores are now higher, in general, than a year ago, some students whose placement scores were at least one year old and do not fall with the current range are not represented in the following data.

Records for only those students who enrolled in the highest-level math course in each math pathway for which they were eligible are included. Also, data for the classic Accuplacer tests (Elementary Algebra and College-Level Mathematics) were omitted, since those tests are no longer administered to students. Furthermore, data for only those courses with at least twenty students enrolled from the population used in this study are presented here.

Note that an individual student might be represented in more than one line of a table if that student submitted more than one type of placement measure that placed them into that particular course. For example, a student might be represented in a row for high school GPA as well as in a row for one or more Accuplacer tests. (Scores on measures that would have placed a student in a lower-level course were not included.)

Table 6a: Success in MAT 036 Based on Placement Score Ranges

Placement Measure	Number Enrolled	Number Successful	Percent Successful
NextGen Accuplacer QAS 200 – 229	12	4	33.3%
NextGen Accuplacer AAF 200 – 236	48	22	22.2%

Table 6b: Success in MAT 037 Based on Placement Score Ranges

Placement Measure	Number Enrolled	Number Successful	Percent Successful
NextGen Accuplacer AAF 237 – 249	14	12	85.7%
GPA 3.00 – 4.00 and Alg2 A or B	9	7	77.8%

Table 6c: Success in MAT 137 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer AAF 250 – 264	16	14	87.5%
SAT 550 – 619	21	15	71.4%
ACT 23 – 25	1	1	100%
GPA 3.00 – 4.00 and FOCA A or B	11	8	72.7%
GPA 3.00 – 4.00 and Precalc A or B	44	37	84.1%

Table 6d: Success in MAT 221 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer QAS 263 – 300	1	1	100%
NextGen Accuplacer AAF 240 – 300	3	3	100%
SAT 530 – 800	4	3	75.0%
ACT 21 – 36	0	n/a	n/a
GPA 3.00 – 4.00 and FOCA A or B	6	5	83.3%
GPA 3.00 – 4.00 and Precalc A or B	3	3	100%
GPA 3.00 – 4.00 and Calculus A or B	1	1	100%

Table 6e: Success in MAT 034 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer QAS 200 – 249	23	7	30.4%

Table 6f: Success in MAT 135 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer QAS 263 – 300	4	4	100%
NextGen Accuplacer AAF 240 – 300	3	1	33.3%
SAT 530 – 800	14	9	64.3%
ACT 21 – 36	5	4	80.0%
GED 165 – 200	0	n/a	n/a
GPA 3.00 – 4.00 and Alg2 A or B	32	21	65.6%
GPA 3.00 – 4.00 and FOCA A or B	5	5	100%
GPA 3.00 – 4.00 and Precalc A or B	20	18	90.0%
GPA 3.00 – 4.00 and Calculus A or B	4	3	75.0%

Table 6g: Success in MAT 044 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer QAS 200 – 229	3	0	0.0%
NextGen Accuplacer AAF 200 – 249	17	4	23.5%

Table 6h: Success in MAT 045 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer AAF 250 – 259	0	n/a	n/a
GPA 3.00 – 4.00 and Alg2 A or B	9	7	77.8%

Table 6i: Success in MAT 145 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer AAF 260 – 264	2	2	100%
SAT 570 – 599	0	n/a	n/a
ACT 23 – 34	0	n/a	n/a
GPA 3.00 – 3.39 and Precalc A or B	3	3	100%
GPA 3.00 – 3.39 and Calculus A or B	0	n/a	n/a

Table 6j: Success in MAT 151 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer AAF 265 – 275	2	1	50.30%
SAT 600 – 619	0	n/a	n/a
ACT 25	2	1	50.0%
GPA 3.40 – 4.00 and FOCA A or B	3	2	66.7%
GPA 3.40 – 4.00 and Precalc A or B	19	13	68.4%

Table 6k: Success in MAT 191 Based on Placement Score Ranges			
Placement Measure	**Number Enrolled**	**Number Successful**	**Percent Successful**
NextGen Accuplacer AAF 276 – 300	4	2	50.0%
SAT 620 – 800	0	n/a	n/a
ACT 26 – 36	2	2	100%
GPA 3.40 – 4.00 and Calculus A or B	8	4	50.0%

7. What number and percentage of students who registered for mathematics courses in fall 2020 subsequently enrolled in spring 2021?

Table 7 provides the number and percentage of students who, as of March 4, 2020, had registered for at least one course in the spring 2021 semester. The data is broken down by whether or not students were successful in a particular mathematics course.

The table indicates:

- More than five-sixths (85.0%) of students who were successful in their mathematics course returned the subsequent term.
- About half (50.9%) of students who were *not* successful in their mathematics course returned the subsequent term.

Table7: Fall-to-Spring Retention Based on Mathematics Course Enrollment and Success

	Successfully Completed, Fall 2020			Did Not Successfully Complete, Fall 2020			Total Enrolled Fa20		
Course	Enrolled Fall 2020	Returned Spring 2021		Enrolled Fall 2020	Returned Spring 2021		Enrolled Fall 2020	Returned Spring 2021	
	n	n	%	n	n	%	n	n	%
College Algebra Pathway									
MAT 036	33	30	90.9%	59	27	45.8%	92	57	62.0%
MAT 037	44	31	70.5%	36	18	50.0%	80	49	61.3%
MAT 137	116	99	85.3%	58	31	53.4%	174	130	74.7%
MAT 230	2	1	50.0%	0	n/a	n/a	2	1	50.0%
Elementary Education Pathway									
MAT 036	33	30	90.9%	59	27	45.8%	92	57	62.0%
MAT 037	44	31	70.5%	36	18	50.0%	80	49	61.3%
MAT 221	21	20	95.2%	2	0	0.0%	23	20	87.0%
Quantitative Pathway									
MAT 034	10	9	90.0%	23	14	60.9%	33	23	69.7%
MAT 035	8	7	87.5%	1	0	0.0%	9	7	77.8%
MAT 100	21	17	81.0%	6	1	16.7%	27	18	66.7%
MAT 133/135	49	43	87.8%	40	19	47.5%	89	62	69.7%
Calculus Pathway									
MAT 044	8	7	87.5%	24	12	50.0%	32	19	59.4%
MAT 045	14	14	100.0%	9	7	77.8%	23	21	91.3%
MAT 145	30	26	86.7%	21	16	76.2%	51	42	82.4%
MAT 151	25	22	88.0%	14	5	35.7%	39	27	69.2%
MAT 191	22	21	95.5%	19	12	63.2%	41	33	80.5%
Total	480	408	85.0%	407	207	50.9%	887	615	69.3%

High School GPA Exemption Policy Outcomes – Through Fall 2020

This report summarizes an analysis of the policy that allows high school GPA as an exemption to placement testing to determine college readiness. It compares students' performance in gateway English and math courses based on the students' path of entry into those courses. The sample consists of students' first attempts in gateway courses occurring in a period from fall 2017 through fall 2020.

The results are shown for two groups, Dual Enrolled Students and High School Graduates, due to the different natures of these populations. (Note: Dual Enrolled students are required to have at least a 2.5 GPA to enroll.)

Dual Enrolled Students

Course	Path	Enrollments	Success (#)	Success Rate	Sig. Diff.*
ENG-101	College Ready	80	66	83%	No
	HS GPA Exemption	402	366	91%	
MAT-113	College Ready	19	12	63%	No
	HS GPA Exemption	133	100	75%	
MAT-204	College Ready	20	17	85%	No
	HS GPA Exemption	129	101	78%	

High School Graduates

Course	Path	Enrollments	Success (#)	Success Rate	Sig. Diff.**
ENG-101	College Ready	509	303	65%	Yes
	HS GPA Exemption	579	479	83%	
	Other Exemption	235	168	71%	
	Passed Developmental	525	330	63%	
MAT-113	College Ready	82	49	60%	No
	HS GPA Exemption	292	144	49%	
	Other Exemption	80	40	50%	
	Passed Developmental	294	165	56%	
MAT-204	College Ready	290	167	58%	No
	HS GPA Exemption	150	76	51%	
	Other Exemption	62	40	65%	
	Passed Developmental	106	47	44%	

*There is a significant difference between both groups (t-test).
**There is a significant difference across all groups (ANOVA).

Key Findings:

- Success rates have stabilized after six terms of data.
- High School GPA continues to be strong indicator of readiness for ENG-101, for both dual enrolled students and high school graduates. And high school graduates providing High School GPA perform significantly better in ENG-101 than those who take a placement test.
- High school graduates placed by a placement test have better success rates in gateway math courses than those placed by High School GPA (but this difference is not statistically significant.)

Explanatory Notes:

Success = earning a grade of A, B or C; nonsuccess = D or F; audits, incompletes and re-enrolls are excluded

All applicants planning to take credit courses must take the ACCUPLACER Placement Test unless they meet certain waiver or exemption requirements.

Piloted in spring 2017 and rolled out for full implementation in fall 2017, the developmental exemption based on high school achievement requires the following:

- Graduated from high school in the last five years with at least a 3.0 overall high school grade-point average, qualifying you for direct placement into English 101 and all college courses with a college-ready prerequisite in English. (High school seniors may be placed using their high school GPA current through the fall semester of their senior year.)
- Graduated from high school in the last three years with at least a 3.0 overall high school grade-point average, including successful ("C" or better) completion of Algebra II, qualifying you for direct placement into college-level math and all college courses with a college-ready math prerequisite. (High school seniors may be placed using their high school GPA current through the fall semester of their senior year.)
- Successfully completed a high school math transition course in the last three years, qualifying you for direct placement into college-level math and all college courses with a college-ready math prerequisite.

Other developmental exemptions potentially include:

- ACT score (21 or higher)
- Appeal Granted
- Advanced Placement test (3 or higher)
- Qualifying CLEP score
- GED Exemption
- Instructor Recommendation
- Qualifying PARCC score
- Previous Degree
- Previous English at Chesapeake
- SAT before 2016 (500 or higher)
- SAT after 2016
- Transition Course
- Transfer Courses
- Visiting Student

Only one exemption per student is considered in this analysis. A hierarchy of exemptions was used that ranks some exemptions in priority over others. For example, if a student submitted both SAT scores and HS GPA, the SAT scores are given priority since that policy was in place before HS GPA was an allowable exemption. This was done to account for the few cases where students received multiple exemptions. The intent is to only count HS GPA exemptions when other exemptions wouldn't have otherwise given the student access to credit courses.

Course Effectiveness Report
Developmental English, Math, and Reading Courses

Trending Fall 2012 to Spring 2019
Detailing Fall 2018 to Spring 2019

May 2020

Planning, Institutional Effectiveness, and Research Department

Chip Keech

College of Southern Maryland
Course Effectiveness Report

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College of Southern Maryland
Course Effectiveness Report

Introduction

The Course Effectiveness Report shows the successful performance of students enrolled in two successive and associated courses from the fall semester to the subsequent spring semester. The first course provides the foundation for the second [e.g., ENG-0900 (developmental) to ENG-1010 (first college-level)]. The courses included in the report are developmental English, reading, and mathematics courses as well as the college-level English course, Composition and Rhetoric (ENG 1010/ENG 1010T). "Successful" in this report is defined as having earned a course grade of A, B, C, or P. The "Effectiveness Rate" of the first course is the mathematical proportion of students that succeed in the subsequent course after having successfully completing the first course.

2012-2019 TRENDING DATA

Trends over time from the first report (Fall 2012 to Spring 2013) to the current report (Fall 2018 to Spring 2019) are presented. The trends are shown only for those course progressions that have been included in the three most current reports. Because CSM's math courses and pathways have undergone significant changes in the past 5 years, only one trend is shown for math courses at this time.

2018-2019 ONLY DATA

Included in this report are detailed tables and graphs associated with the most recent examination of developmental course effectiveness. This report shows the course effectiveness from fall 2018 to spring 2019 of the courses previously mentioned. "Successful" in this report is defined as having earned a course grade of A, B, C, or P. The "Effectiveness Rate" of the first course is the mathematical proportion of students that succeed in the subsequent course after having successfully completing the first course.

Data Dissemination

The report is shared with the Developmental Studies Committee and is produced annually but was not produced in 2019 as other priorities superseded the completion of the report at the time. This report is what would have been completed in 2019 (fall 2018 to spring 2019). Going forward, it is anticipated that this report will be completed as part of PIER's regular projects calendar in order for the data to be disseminated annually in a more consistent timeframe.

College of Southern Maryland
Course Effectiveness Report

Grading System[a]

Credit Courses

Grade	Evaluation	Grade Point Value
A	Excellent	4
B	Good	3
C	Average	2
D	Below Average	1
F	Failure	0
I	Incomplete	0
AU	Audit	NC[b]
WD	Withdrawn	0
P	Average or Above	NC[b]
NG	No grade given by instructor	NC[b]
FX	Failure, non-attendance	0
AWD	Administrative Withdrawal	NC[b]
NA	Never Attended	NC[b]

Developmental Courses

Grade	Evaluation	Grade Point Value
P	Passed	NC[b]
IP	In progress	0
F	Failure	0
I	Incomplete	0
AU	Audit	NC[b]
WD	Withdrawn	0
NG	No grade given by instructor	NC[b]
FX	Failure, non-attendance	0

[a]Source: CSM College Catalog

[b]Not calculated in GPA

College of Southern Maryland
Course Effectiveness Report

Course Titles[a]

English Courses

ENG 0800 - Basic Writing
ENG 0900 - Introduction to Composition
ENG 1010 / ENG 1010T - Composition and Rhetoric
ENG 1020 - Composition and Literature
ENG 2050 - Business and Technical Writing

Mathematics Courses

MTH 0940 - Mathematical Foundations
MTH 0950 - Fundamentals of Algebra
MTH 0970 - Intermediate Algebra and Introduction to Trigonometry
MTH 1010 - Quantitative Literacy and Reasoning
MTH 1115 - Applied College Algebra - Concepts and Models
MTH 1120 - College Algebra
MTH 1150 - Precalculus Algebra and Trigonometry
MTH 2300 - Introduction to Statistics

Reading Courses

RDG 0700 - Intermediate Reading Methods
RDG 0800 - Analytic Reading and Reasoning

Business and Technology Courses

ACC 2010 - Principles of Accounting I
BAD 1335 - Applied Business Communications
ECN 1015 - Introduction to Business in a Market Economy
ITS 1015 - The Information Age: Emerging Technologies

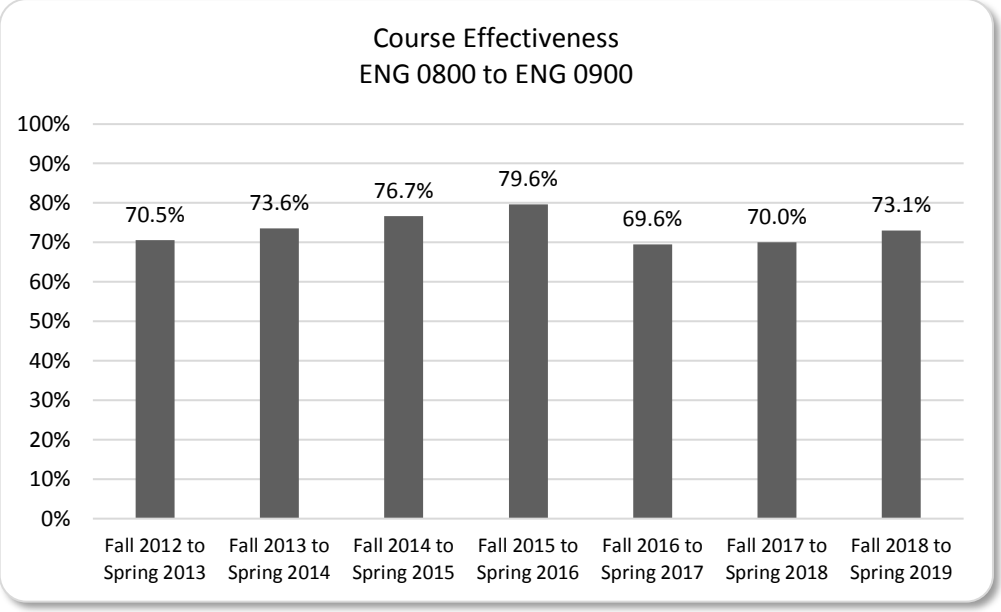
[a]Source: CSM College Catalog

Course Progressions Included in Course Effectiveness Reports - Fall 2012 to Spring 2013 Report through Fall 2018 to Spring 2019 Report

		FA18 to SP19	FA17 to SP18	FA16 to SP17	FA15 to SP16	FA14 to SP15	FA13 to SP14	FA12 to SP13
English	***ENG 0800 to ENG 0900***	✓	✓	✓	✓	✓	✓	✓
	ENG 0900 to ENG 1010 or ENG 1010T	✓	✓	✓	✓	✓	✓	✓
	ENG 0900 to BAD 1335	✓	✓	✓	✓	✓		
	ENG 0900 to ECN 1015	✓	✓	✓	✓	✓		
	ENG 1010 or ENG 1010T to ENG 1020	✓	✓	✓	✓	✓	✓	
	ENG 1010 or ENG 1010T to ENG 2050	✓	✓	✓	✓	✓	✓	
Math	MTH 0900 to MTH 1000 or MTH 1000T							✓
	MTH 1000T to MTH 1080, MTH 1100, MTH 1105, or MTH 2300					✓	✓	✓
	MTH 1000T to ACC 2010					✓		
	MTH 1000T to ECN 2020					✓		
	MTH 0900 to MTH 1000 or MTH 1105				✓			
	MTH 0900T to MTH 1080, MTH 1100, MTH 1105, or MTH 2300				✓			
	MTH 0900 or MTH 0900T to MTH 1000, MTH 1080, MTH 1100, MTH 1105, or MTH 2300				✓			
	MTH 0900 or MTH 0900T to ACC 2010				✓			
	MTH 0900 or MTH 0900T to ECN 1015				✓			
	MTH 0900T to ECN 2020		✓	✓	✓			
	MTH 0900 to MTH 0950 or MTH 1105			✓				
	MTH 0900T to MTH 0950 or MTH 1105			✓				
	MTH 0900T to Higher MTH Courses		✓					
	MTH 0940 to MTH 0950, MTH 1105, or MTH 2300			✓				
	MTH 0940 to Higher MTH Courses	✓	✓					
	MTH 0950 to MTH 0970			✓				
	MTH 0950 to Higher MTH Courses	✓	✓					
	MTH 0970 to Higher MTH Courses	✓	✓	✓				
	MTH 0900T to ACC 2010		✓	✓				
	MTH 0900T to ECN 2015		✓	✓				
Reading	***RDG 0700 to RDG 0800***	✓	✓	✓	✓		✓	✓
	RDG 0700 to IDS 1010T			✓	✓	✓		
	RDG 0700 to ENG 0900	✓	✓	✓	✓			
	RDG 0800 to ENG 0900	✓	✓	✓	✓			
	RDG 0800 to ENG 1010 or ENG 1010T	✓	✓	✓	✓		✓	✓
	RDG 0800 to ECN 1015	✓	✓	✓	✓			
	RDG 0800 to ITS 1015	✓	✓	✓	✓			
	IDS 1010T to ENG 1010 or ENG 1010T			✓	✓	✓		
	IDS 1010T to ECN 1015			✓	✓			
	IDS 1010T to ECN 2020					✓		
	IDS 1010T to ITS 1015			✓	✓	✓		

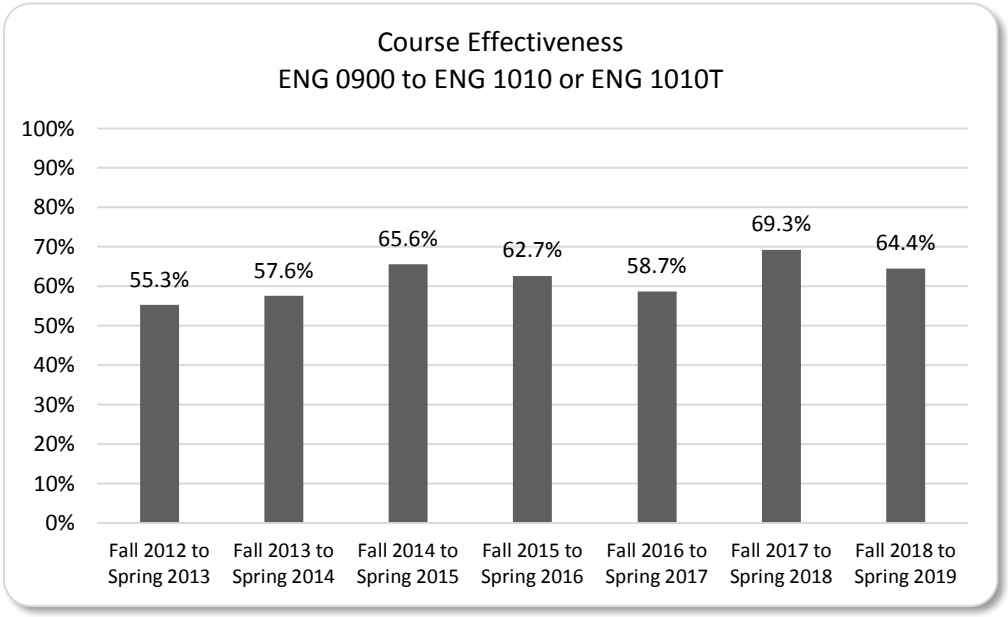
College of Southern Maryland
Course Effectiveness Report
ENG 0800 to ENG 0900
Trends

	Number of Students who Received P in ENG 0800 (Fall Term) & Enrolled in ENG 0900 (Spring Term)	Number of Students who Received P in ENG 0800 (Fall Term) & Received P in ENG 0900 (Spring Term)	Course Effectiveness
Fall 2012 to Spring 2013	95	67	70.5%
Fall 2013 to Spring 2014	53	39	73.6%
Fall 2014 to Spring 2015	60	46	76.7%
Fall 2015 to Spring 2016	49	39	79.6%
Fall 2016 to Spring 2017	46	32	69.6%
Fall 2017 to Spring 2018	40	28	70.0%
Fall 2018 to Spring 2019	52	38	73.1%



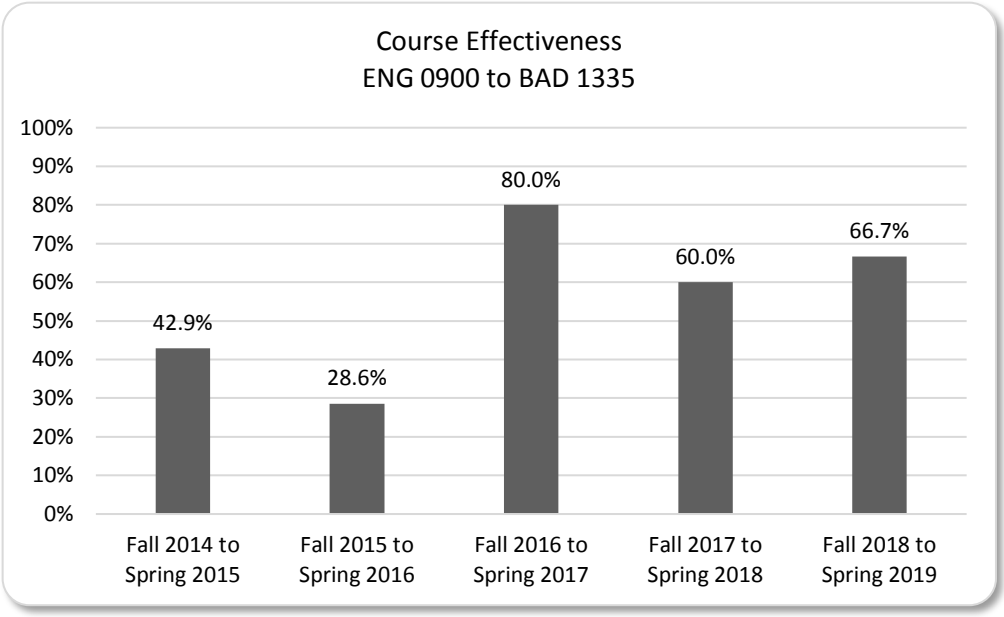
College of Southern Maryland
Course Effectiveness Report
ENG 0900 to ENG 1010 or ENG 1010T
Trends

	Number of Students who Received P in ENG 0900 (Fall Term) & Enrolled in ENG 1010 or ENG 1010T (Spring Term)	Number of Students who Received P in ENG 0900 (Fall Term) & Received A/B/C in ENG 1010 or ENG 1010T (Spring Term)	Course Effectiveness
Fall 2012 to Spring 2013	85	47	55.3%
Fall 2013 to Spring 2014	139	80	57.6%
Fall 2014 to Spring 2015	128	84	65.6%
Fall 2015 to Spring 2016	150	94	62.7%
Fall 2016 to Spring 2017	126	74	58.7%
Fall 2017 to Spring 2018	127	88	69.3%
Fall 2018 to Spring 2019	90	58	64.4%



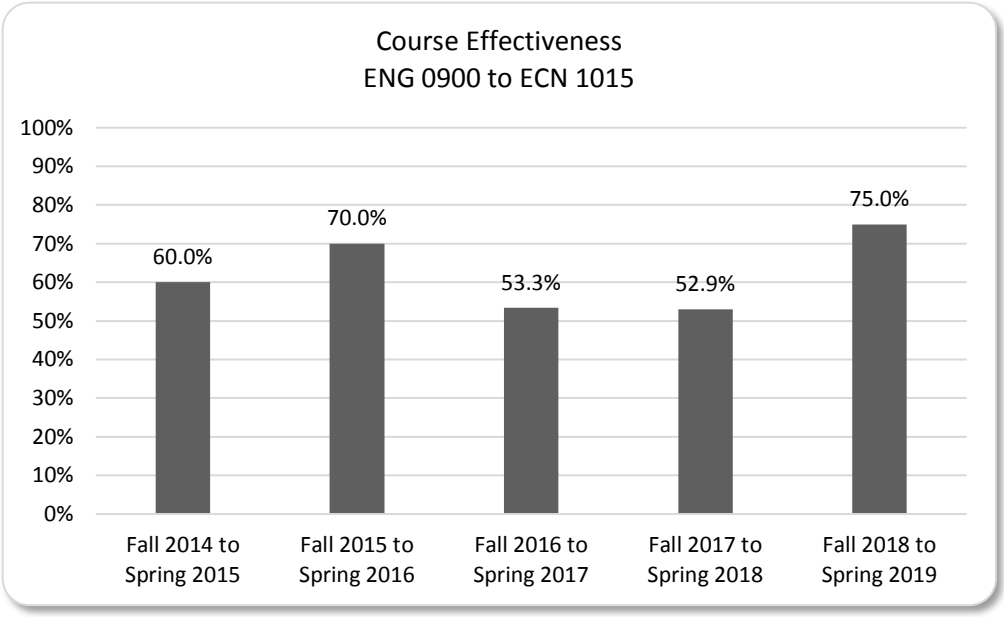
College of Southern Maryland
Course Effectiveness Report
ENG 0900 to BAD 1335
Trends

	Number of Students who Received P in ENG 0900 (Fall Term) & Enrolled in BAD 1335 (Spring Term)	Number of Students who Received P in ENG 0900 (Fall Term) & Received A/B/C in BAD 1335 (Spring Term)	Course Effectiveness
Fall 2014 to Spring 2015	7	3	42.9%
Fall 2015 to Spring 2016	7	2	28.6%
Fall 2016 to Spring 2017	5	4	80.0%
Fall 2017 to Spring 2018	5	3	60.0%
Fall 2018 to Spring 2019	3	2	66.7%



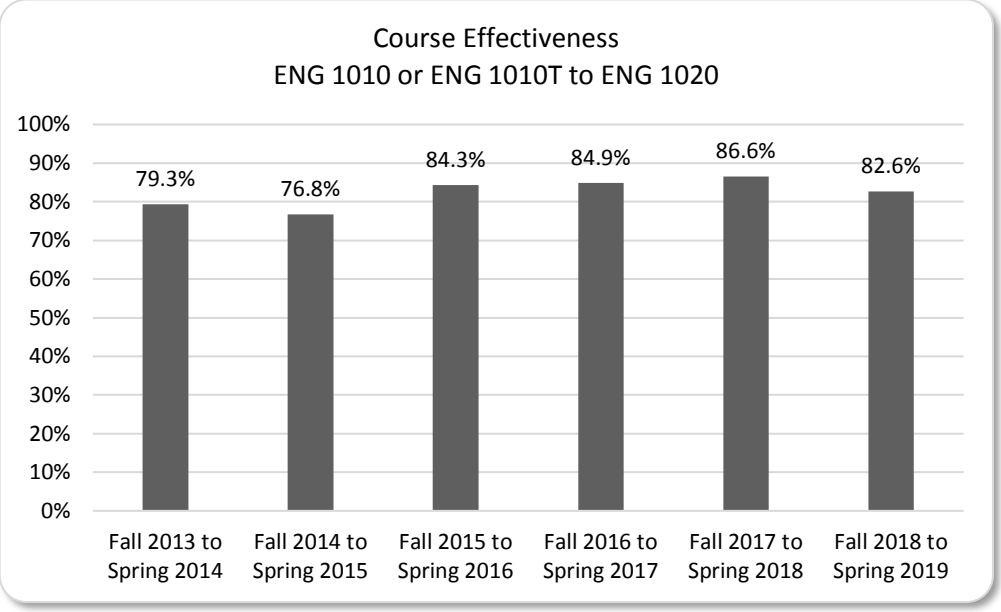
College of Southern Maryland
Course Effectiveness Report
ENG 0900 to ECN 1015
Trends

	Number of Students who Received P in ENG 0900 (Fall Term) & Enrolled in ECN 1015 (Spring Term)	Number of Students who Received P in ENG 0900 (Fall Term) & Received A/B/C in ECN 1015 (Spring Term)	Course Effectiveness
Fall 2014 to Spring 2015	20	12	60.0%
Fall 2015 to Spring 2016	20	14	70.0%
Fall 2016 to Spring 2017	15	8	53.3%
Fall 2017 to Spring 2018	17	9	52.9%
Fall 2018 to Spring 2019	8	6	75.0%



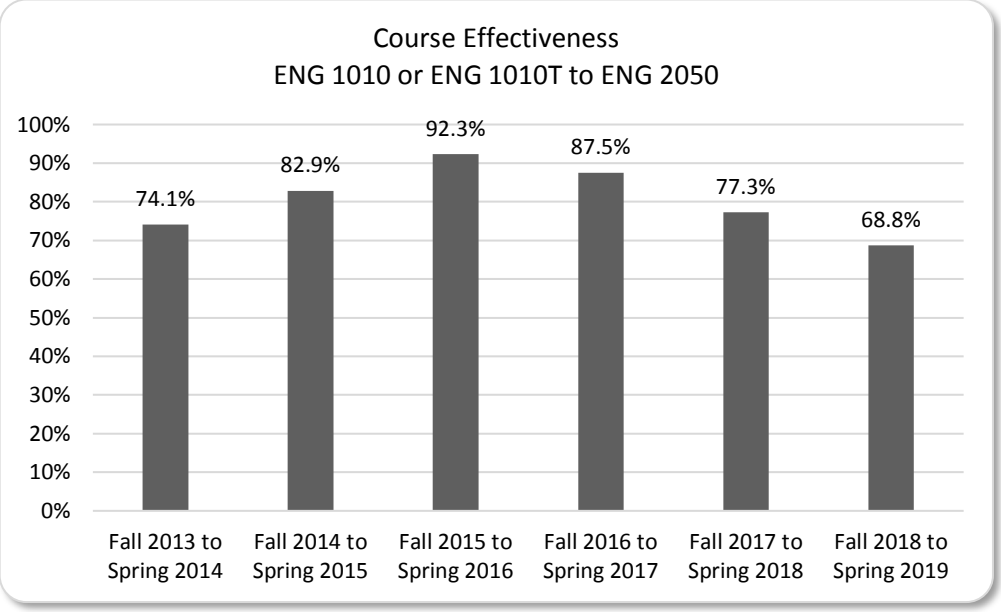
College of Southern Maryland
Course Effectiveness Report
ENG 1010 or ENG 1010T to ENG 1020
Trends

	Number of Students who Received A/B/C in ENG 1010 or ENG 1010T (Fall Term) & Enrolled in ENG 1020 (Spring Term)	Number of Students who Received A/B/C in ENG 1010 or ENG 1010T (Fall Term) & Received A/B/C in ENG 1020 (Spring Term)	Course Effectiveness
Fall 2013 to Spring 2014	561	445	79.3%
Fall 2014 to Spring 2015	538	413	76.8%
Fall 2015 to Spring 2016	510	430	84.3%
Fall 2016 to Spring 2017	529	449	84.9%
Fall 2017 to Spring 2018	470	407	86.6%
Fall 2018 to Spring 2019	426	352	82.6%



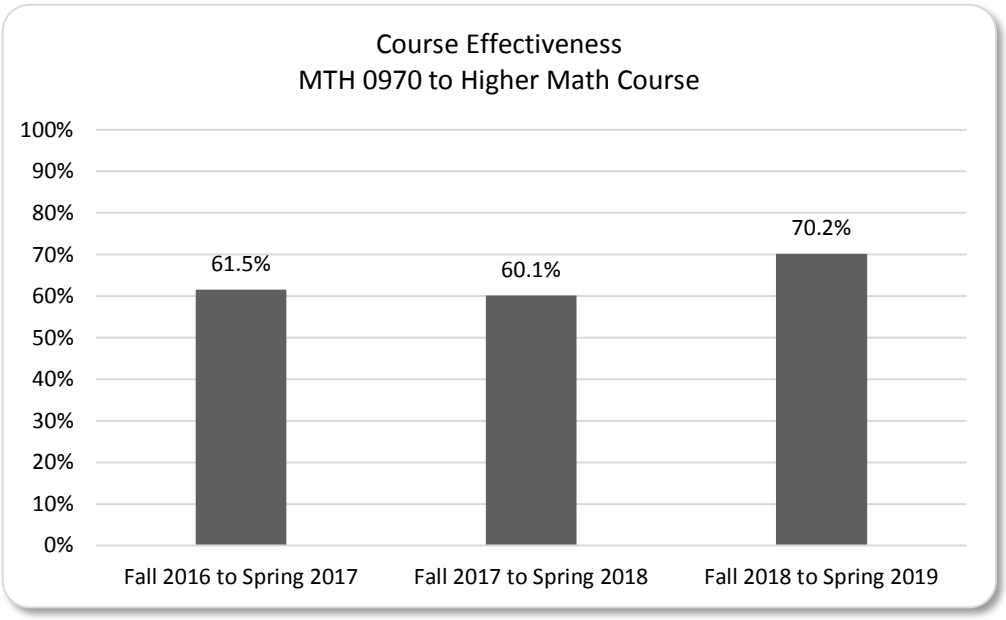
College of Southern Maryland
Course Effectiveness Report
ENG 1010 or ENG 1010T to ENG 2050
Trends

	Number of Students who Received A/B/C in ENG 1010 or ENG 1010T (Fall Term) & Enrolled in ENG 2050 (Spring Term)	Number of Students who Received A/B/C in ENG 1010 or ENG 1010T (Fall Term) & Received A/B/C in ENG 2050 (Spring Term)	Course Effectiveness
Fall 2013 to Spring 2014	27	20	74.1%
Fall 2014 to Spring 2015	35	29	82.9%
Fall 2015 to Spring 2016	26	24	92.3%
Fall 2016 to Spring 2017	24	21	87.5%
Fall 2017 to Spring 2018	22	17	77.3%
Fall 2018 to Spring 2019	32	22	68.8%



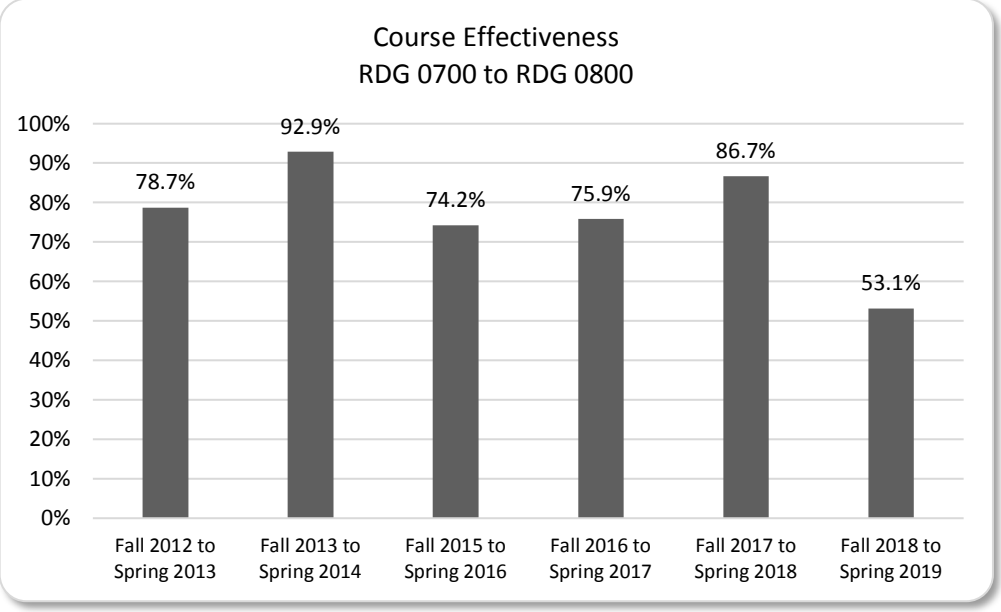
College of Southern Maryland
Course Effectiveness Report
MTH 0970 to Higher Math Courses
Trends

	Number of Students who Received P in MTH 0970 (Fall Term) & Enrolled in Higher Math in Spring Term	Number of Students who Received P in MTH 0970 (Fall Term) & Received A/B/C in Higher Math Course Spring Term	Course Effectiveness
Fall 2016 to Spring 2017	104	64	61.5%
Fall 2017 to Spring 2018	138	83	60.1%
Fall 2018 to Spring 2019	104	73	70.2%



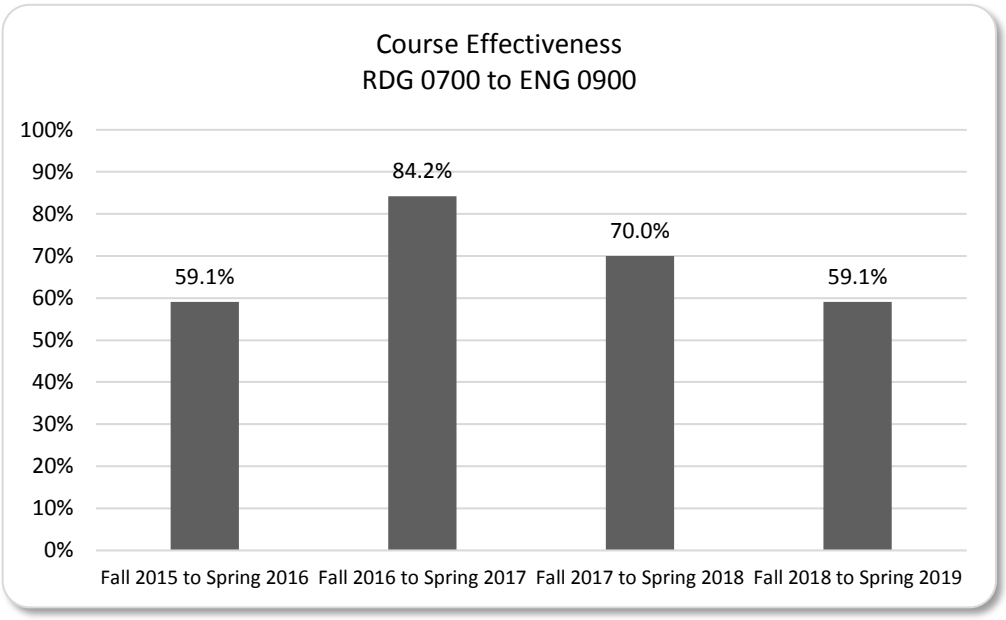
College of Southern Maryland
Course Effectiveness Report
RDG 0700 to RDG 0800
Trends

	Number of Students who Received P in RDG 0700 (Fall Term) & Enrolled in RDG 0800 (Spring Term)	Number of Students who Received P in RDG 0700 (Fall Term) & Received P in RDG 0800 (Spring Term)	Course Effectiveness
Fall 2012 to Spring 2013	47	37	78.7%
Fall 2013 to Spring 2014	28	26	92.9%
Fall 2015 to Spring 2016	31	23	74.2%
Fall 2016 to Spring 2017	29	22	75.9%
Fall 2017 to Spring 2018	30	26	86.7%
Fall 2018 to Spring 2019	32	17	53.1%



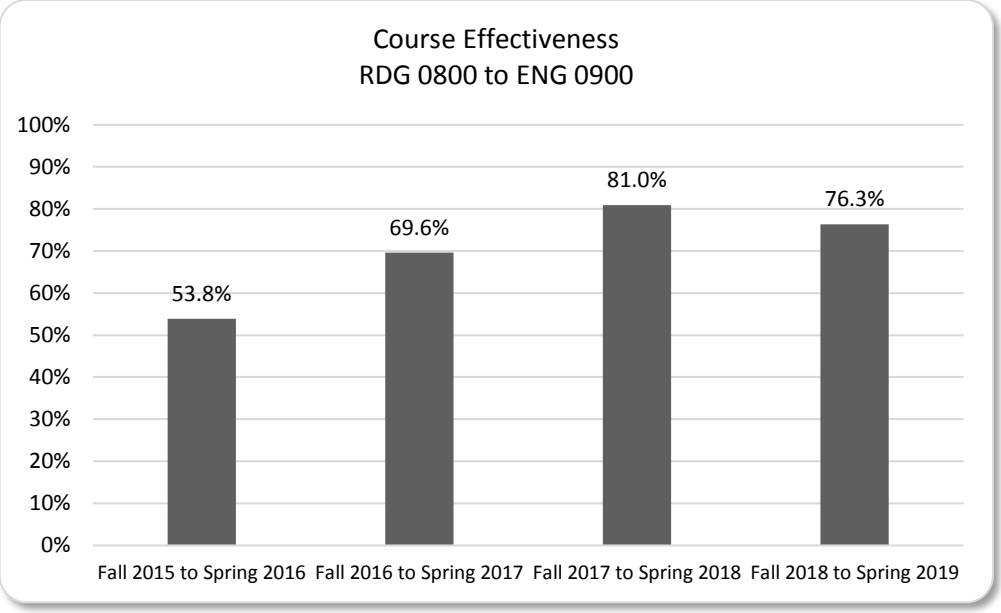
College of Southern Maryland
Course Effectiveness Report
RDG 0700 to ENG 0900
Trends

	Number of Students who Received P in RDG 0700 (Fall Term) & Enrolled in ENG 0900 (Spring Term)	Number of Students who Received P in RDG 0700 (Fall Term) & Received P in ENG 0900 (Spring Term)	Course Effectiveness
Fall 2015 to Spring 2016	22	13	59.1%
Fall 2016 to Spring 2017	19	16	84.2%
Fall 2017 to Spring 2018	10	7	70.0%
Fall 2018 to Spring 2019	22	13	59.1%



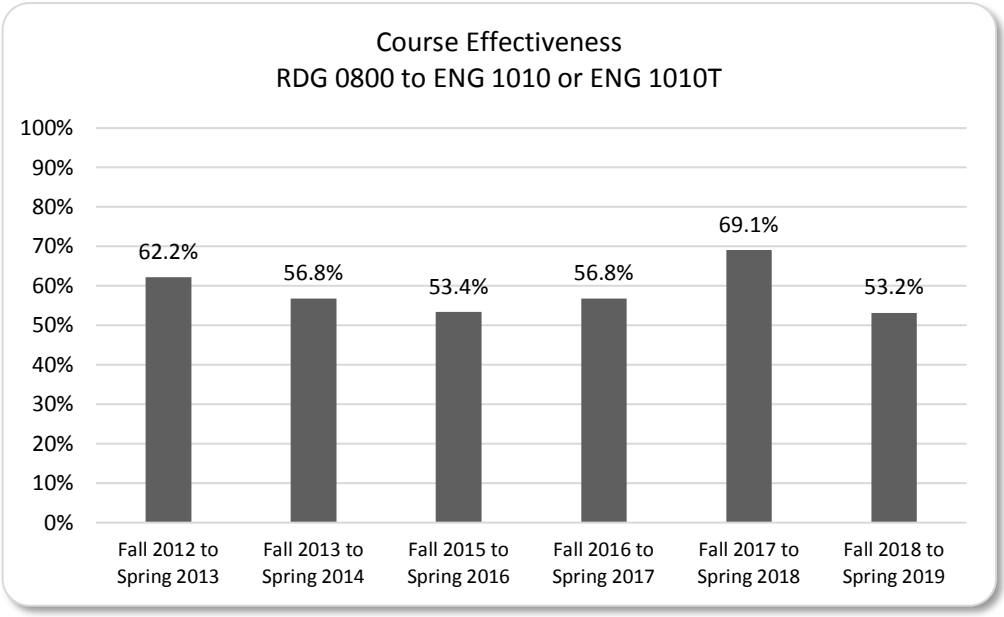
College of Southern Maryland
Course Effectiveness Report
RDG 0800 to ENG 0900
Trends

	Number of Students who Received P in RDG 0800 (Fall Term) & Enrolled in ENG 0900 (Spring Term)	Number of Students who Received P in RDG 0800 (Fall Term) & Received P in ENG 0900 (Spring Term)	Course Effectiveness
Fall 2015 to Spring 2016	26	14	53.8%
Fall 2016 to Spring 2017	23	16	69.6%
Fall 2017 to Spring 2018	21	17	81.0%
Fall 2018 to Spring 2019	38	29	76.3%



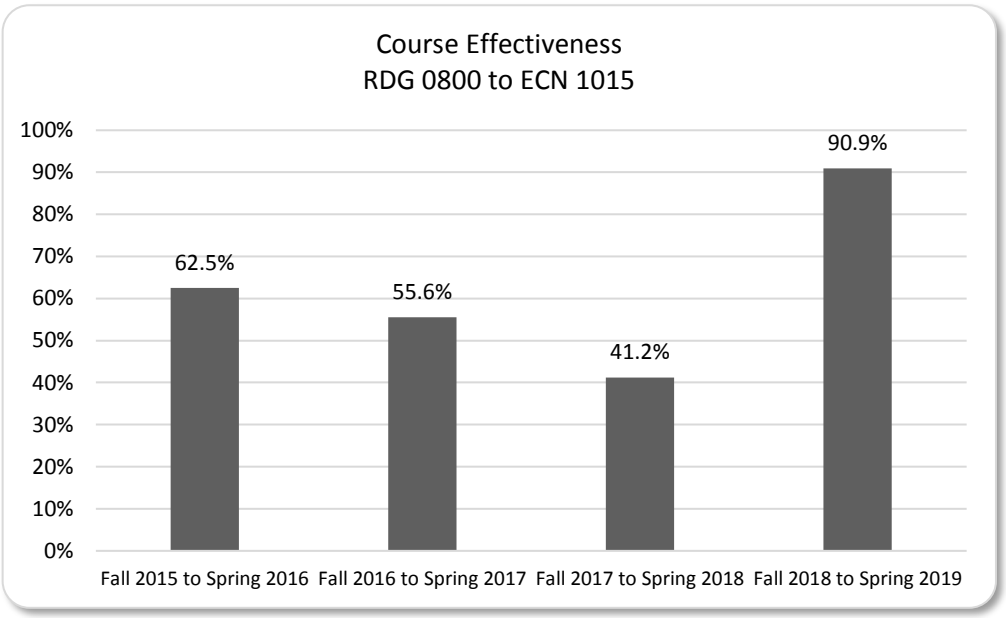
College of Southern Maryland
Course Effectiveness Report
RDG 0800 to ENG 1010 or ENG 1010T
Trends

	Number of Students who Received P in RDG 0800 (Fall Term) & Enrolled in ENG 1010 or ENG 1010T (Spring Term)	Number of Students who Received P in RDG 0800 (Fall Term) & Received A/B/C in ENG 1010 or ENG 1010T (Spring Term)	Course Effectiveness
Fall 2012 to Spring 2013	45	28	62.2%
Fall 2013 to Spring 2014	88	50	56.8%
Fall 2015 to Spring 2016	73	39	53.4%
Fall 2016 to Spring 2017	81	46	56.8%
Fall 2017 to Spring 2018	97	67	69.1%
Fall 2018 to Spring 2019	94	50	53.2%



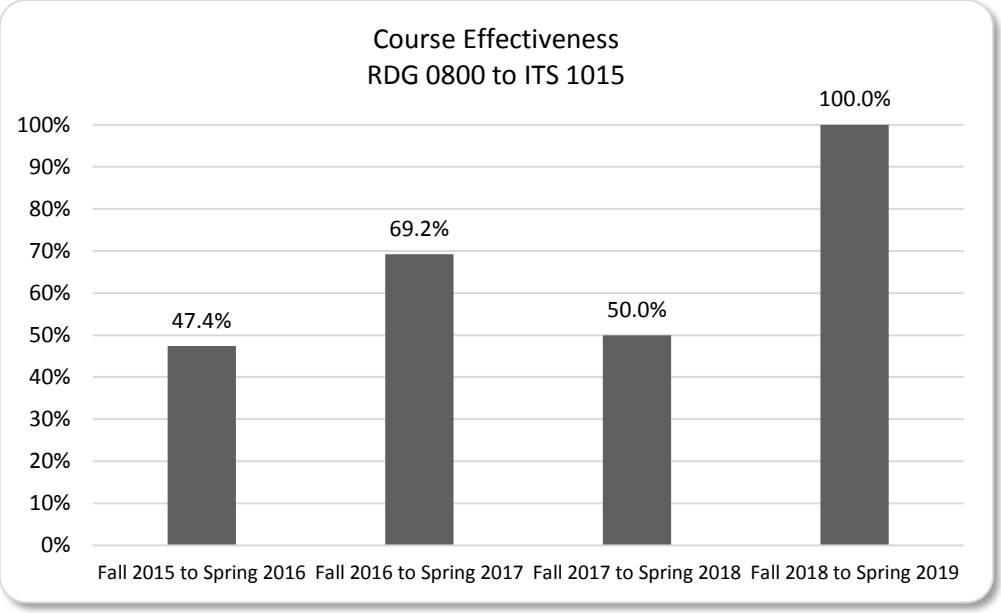
College of Southern Maryland
Course Effectiveness Report
RDG 0800 to ECN 1015
Trends

	Number of Students who Received P in RDG 0800 (Fall Term) & Enrolled in ECN 1015 (Spring Term)	Number of Students who Received P in RDG 0800 (Fall Term) & Received A/B/C in ECN 1015 (Spring Term)	Course Effectiveness
Fall 2015 to Spring 2016	8	5	62.5%
Fall 2016 to Spring 2017	9	5	55.6%
Fall 2017 to Spring 2018	17	7	41.2%
Fall 2018 to Spring 2019	11	10	90.9%



College of Southern Maryland
Course Effectiveness Report
RDG 0800 to ITS 1015
Trends

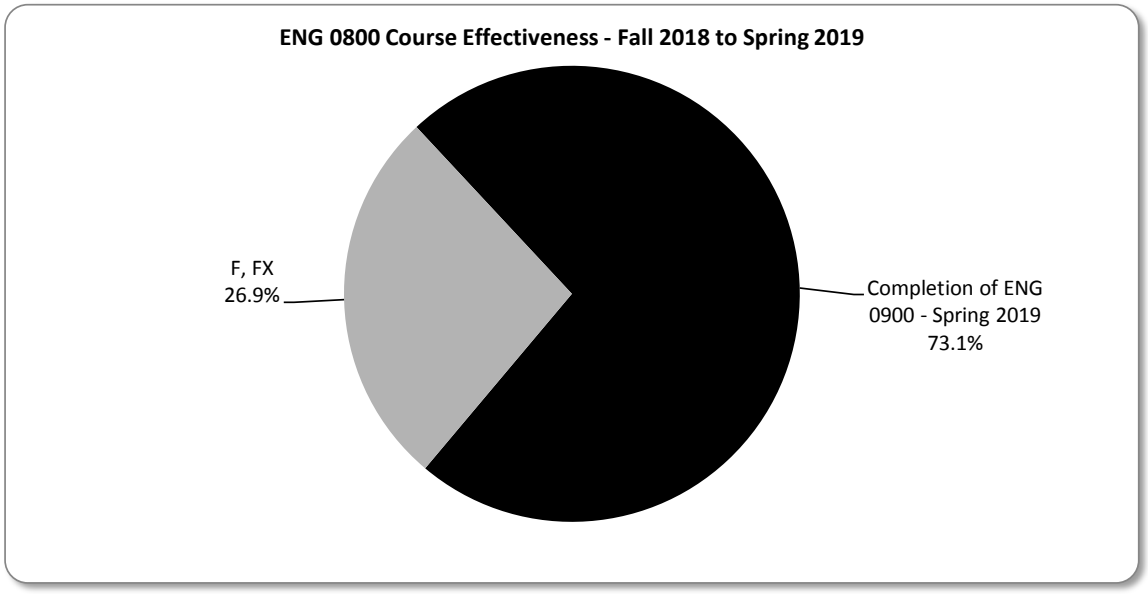
	Number of Students who Received P in RDG 0800 (Fall Term) & Enrolled in ECN 1015 (Spring Term)	Number of Students who Received P in RDG 0800 (Fall Term) & Received A/B/C in ITS 1015 (Spring Term)	Course Effectiveness
Fall 2015 to Spring 2016	19	9	47.4%
Fall 2016 to Spring 2017	26	18	69.2%
Fall 2017 to Spring 2018	16	8	50.0%
Fall 2018 to Spring 2019	6	6	100.0%



College of Southern Maryland
Course Effectiveness Report
ENG 0800 to ENG 0900
Fall 2018 to Spring 2019

Fall 2018 - ENG 0800			Enrolled in	Spring 2019 Grades in ENG 0900									
Grade	(N)	%	ENG 0900	P	%	F	%	FX	%	WD	%	IP	%
P	63	75.9%	52	38	73.1%	14	26.9%	0	0.0%	0	0.0%	0	0.0%
F	13	15.7%	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	1	1.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	6	7.2%	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	83	100.0%	54	40	74.1%	14	25.9%	0	0.0%	0	0.0%	0	0.0%

% Total P in ENG 0800	75.9%
% Total P in ENG 0800 who enrolled in ENG 0900	82.5%
Total P in ENG 0800 and enrolled ENG 0900	52
Total P in ENG 0900 in Spring 2019	38
Fall 2018 to Spring 2019 ENG 0800 Course Effectiveness	73.1%



College of Southern Maryland
Course Effectiveness Report
ENG 0900 to ENG 1010 or ENG 1010T
Fall 2018 to Spring 2019

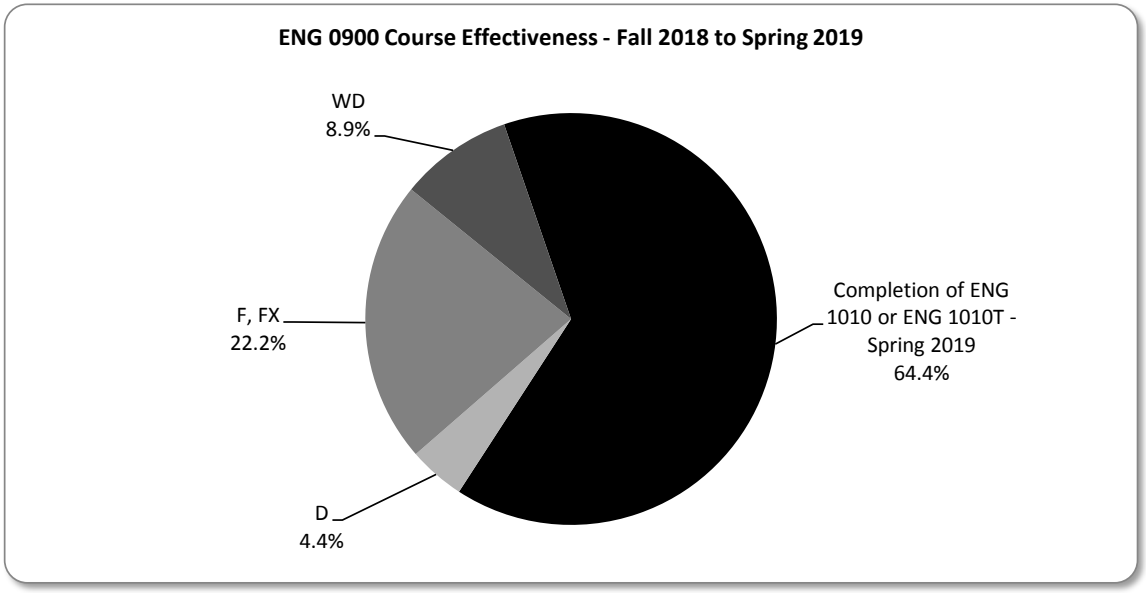
Fall 2018 - ENG 0900			Enrolled in	Spring 2019 Grades in ENG 1010													
Grade	(N)	%	ENG 1010	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	157	60.6%	87	11	12.6%	28	32.2%	17	19.5%	4	4.6%	18	20.7%	1	1.1%	8	9.2%
F	71	27.4%	4	0	0.0%	0	0.0%	1	25.0%	1	25.0%	1	25.0%	0	0.0%	1	25.0%
FX	8	3.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	19	7.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IP	4	1.5%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	259	100.0%	91	11	12.1%	28	30.8%	18	19.8%	5	5.5%	19	20.9%	1	1.1%	9	9.9%

Fall 2018 - ENG 0900			Enrolled in	Spring 2019 Grades in ENG 1010T													
Grade	(N)	%	ENG 1010T	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	157	60.6%	3	0	0.0%	1	33.3%	1	33.3%	0	0.0%	1	33.3%	0	0.0%	0	0.0%
F	71	27.4%	2	0	0.0%	0	0.0%	0	0.0%	1	50.0%	1	50.0%	0	0.0%	0	0.0%
FX	8	3.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	19	7.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IP	4	1.5%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	259	100.0%	5	0	0.0%	1	20.0%	1	20.0%	1	20.0%	2	40.0%	0	0.0%	0	0.0%

College of Southern Maryland
Course Effectiveness Report
ENG 0900 to ENG 1010 or ENG 1010T
Fall 2018 to Spring 2019

Fall 2018 - ENG 0900			Enrolled in ENG 1010 or ENG 1010T	Spring 2019 Grades in ENG 1010 or ENG 1010T													
Grade	(N)	%		A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	157	60.6%	90	11	12.2%	29	32.2%	18	20.0%	4	4.4%	19	21.1%	1	1.1%	8	8.9%
F	71	27.4%	6	0	0.0%	0	0.0%	1	16.7%	2	33.3%	2	33.3%	0	0.0%	1	16.7%
FX	8	3.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	19	7.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IP	4	1.5%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	259	100.0%	96	11	11.5%	29	30.2%	19	19.8%	6	6.3%	21	21.9%	1	1.0%	9	9.4%

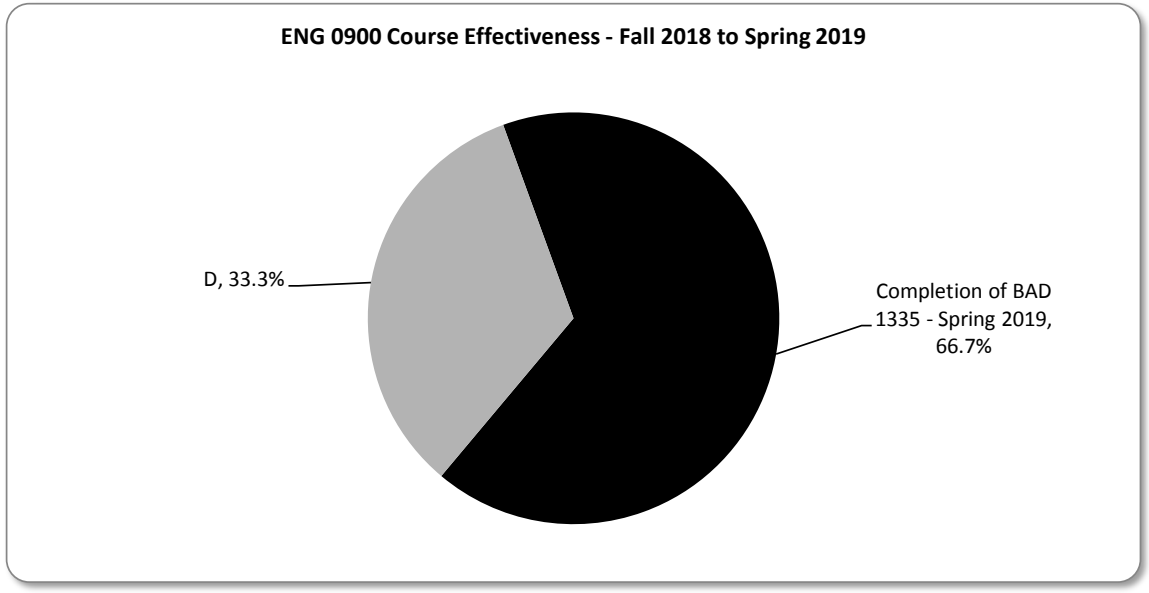
% Total P in ENG 0900	60.6%
% Total P in ENG 0900 who enrolled in ENG 1010/1010T	57.3%
Total P in ENG 0900 and enrolled ENG 1010/1010T	90
Total A/B/C in ENG 1010/1010T in Spring 2019	58
Fall 2018 to Spring 2019 ENG 0900 Course Effectiveness	64.4%



College of Southern Maryland
Course Effectiveness Report
ENG 0900 to BAD 1335
Fall 2018 to Spring 2019

Fall 2018 - ENG 0900			Enrolled in	Spring 2019 Grades in BAD 1335													
Grade	(N)	%	BAD 1335	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	157	60.6%	3	1	33.3%	1	33.3%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%
F	71	27.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	8	3.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	19	7.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IP	4	1.5%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	259	100.0%	3	1	33.3%	1	33.3%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%

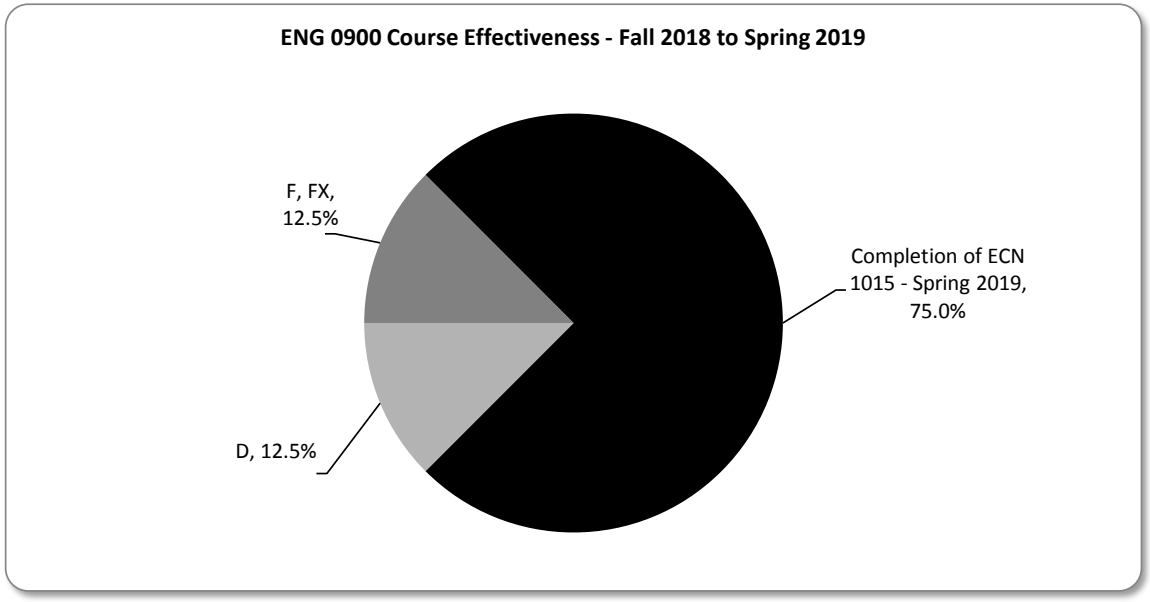
% Total P in ENG 0900	60.6%
% Total P in ENG 0900 who enrolled in BAD 1335	1.9%
Total P in ENG 0900 and enrolled in BAD 1335	3
Total A/B/C in BAD 1335 in Spring 2019	2
Fall 2018 to Spring 2019 ENG 0900 Course Effectiveness	66.7%



College of Southern Maryland
Course Effectiveness Report
ENG 0900 to ECN 1015
Fall 2018 to Spring 2019

Fall 2018 - ENG 0900			Enrolled in	Spring 2019 Grades in ECN 1015													
Grade	(N)	%	ECN 1015	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	157	60.6%	8	1	12.5%	3	37.5%	2	25.0%	1	12.5%	0	0.0%	1	12.5%	0	0.0%
F	71	27.4%	3	0	0.0%	1	33.3%	2	66.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	8	3.1%	1	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	19	7.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
IP	4	1.5%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	259	100.0%	12	1	8.3%	4	33.3%	5	41.7%	1	8.3%	0	0.0%	1	8.3%	0	0.0%

% Total P in ENG 0900	60.6%
% Total P in ENG 0900 who enrolled in ECN 1015	5.1%
Total P in ENG 0900 and enrolled in ECN 1015	8
Total A/B/C in ECN 1015 in Spring 2019	6
Fall 2018 to Spring 2019 ENG 0900 Course Effectiveness	75.0%



College of Southern Maryland
Course Effectiveness Report
ENG 1010 or ENG 1010T to ENG 1020
Fall 2018 to Spring 2019

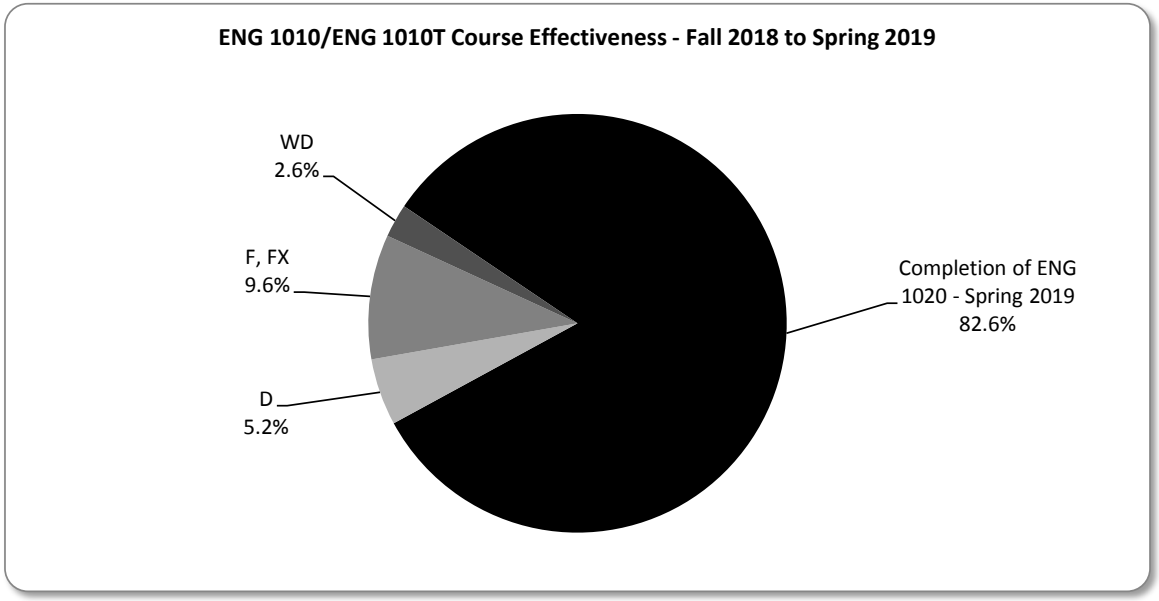
Fall 2018 - ENG 1010			Enrolled in	Spring 2019 Grades in ENG 1020													
Grade	(N)	%	ENG 1020	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
A	213	21.0%	120	67	55.8%	34	28.3%	13	10.8%	2	1.7%	4	3.3%	0	0.0%	0	0.0%
B	294	29.0%	167	47	28.1%	65	38.9%	30	18.0%	6	3.6%	12	7.2%	1	0.6%	6	3.6%
C	187	18.4%	72	6	8.3%	17	23.6%	23	31.9%	8	11.1%	15	20.8%	1	1.4%	2	2.8%
D	68	6.7%	14	2	14.3%	3	21.4%	6	42.9%	0	0.0%	2	14.3%	0	0.0%	1	7.1%
F	146	14.4%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
FX	18	1.8%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I	2	0.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	87	8.6%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	1,015	100.0%	374	122	32.6%	119	31.8%	72	19.3%	16	4.3%	34	9.1%	2	0.5%	9	2.4%

Fall 2018 - ENG 1010T			Enrolled in	Spring 2019 Grades in ENG 1020													
Grade	(N)	%	ENG 1020	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
A	40	15.0%	20	6	30.0%	6	30.0%	5	25.0%	1	5.0%	2	10.0%	0	0.0%	0	0.0%
B	57	21.3%	18	4	22.2%	5	27.8%	3	16.7%	2	11.1%	2	11.1%	1	5.6%	1	5.6%
C	65	24.3%	29	5	17.2%	7	24.1%	9	31.0%	3	10.3%	3	10.3%	0	0.0%	2	6.9%
D	14	5.2%	1	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F	60	22.5%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	2	0.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I	0	0.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	29	10.9%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	267	100.0%	68	15	22.1%	18	26.5%	18	26.5%	6	8.8%	7	10.3%	1	1.5%	3	4.4%

College of Southern Maryland
Course Effectiveness Report
ENG 1010 or ENG 1010T to ENG 1020
Fall 2018 to Spring 2019

Fall 2018 - ENG 1010 or ENG 1010T			Enrolled in ENG 1020	Spring 2019 Grades in ENG 1020													
Grade	(N)	%		A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
A	253	19.7%	140	73	52.1%	40	28.6%	18	12.9%	3	2.1%	6	4.3%	0	0.0%	0	0.0%
B	351	27.4%	185	51	27.6%	70	37.8%	33	17.8%	8	4.3%	14	7.6%	2	1.1%	7	3.8%
C	252	19.7%	101	11	10.9%	24	23.8%	32	31.7%	11	10.9%	18	17.8%	1	1.0%	4	4.0%
D	82	6.4%	15	2	13.3%	3	20.0%	7	46.7%	0	0.0%	2	13.3%	0	0.0%	1	6.7%
F	206	16.1%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
FX	20	1.6%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I	2	0.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	116	9.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	1,282	100.0%	442	137	31.0%	137	31.0%	90	20.4%	22	5.0%	41	9.3%	3	0.7%	12	2.7%

% Total A/B/C in ENG 1010 or ENG 1010T	66.8%
% Total A/B/C in ENG 1010 or ENG 1010T who enrolled ENG 1020	49.8%
Total A/B/C in ENG 1010 or ENG 1010T and enrolled in ENG 1020	426
Total A/B/C in ENG 1020 in Spring 2019	352
Fall 2018 to Spring 2019 ENG 1010 & ENG 1010T Course Effectiveness	82.6%



College of Southern Maryland
Course Effectiveness Report
ENG 1010 or ENG 1010T to ENG 2050
Fall 2018 to Spring 2019

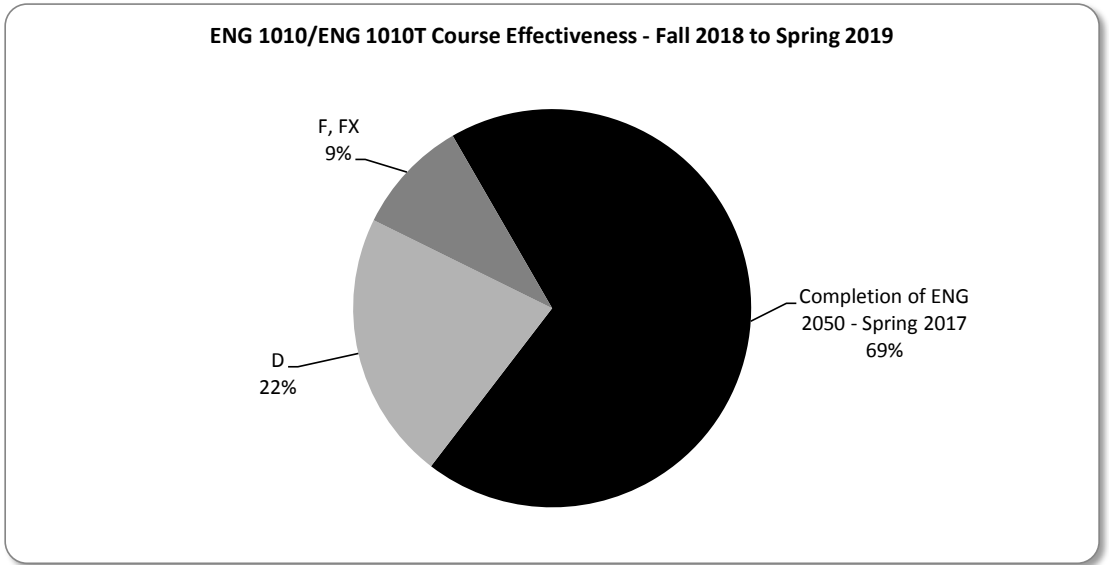
Fall 2018 - ENG 1010			Enrolled in	Spring 2019 Grades in ENG 2050											
Grade	(N)	%	ENG 2050	A	%	B	%	C	%	D	%	F	%	FX	%
A	213	21.0%	10	3	30.0%	5	50.0%	0	0.0%	1	10.0%	0	0.0%	1	10.0%
B	294	29.0%	7	1	14.3%	3	42.9%	1	14.3%	2	28.6%	0	0.0%	0	0.0%
C	187	18.4%	8	0	0.0%	2	25.0%	1	12.5%	4	50.0%	1	12.5%	0	0.0%
D	68	6.7%	2	0	0.0%	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%
F	146	14.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	18	1.8%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I	2	0.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	87	8.6%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	1,015	100.0%	27	4	14.8%	11	40.7%	2	7.4%	7	25.9%	2	7.4%	1	3.7%

Fall 2018 - ENG 1010T			Enrolled in	Spring 2019 Grades in ENG 2050											
Grade	(N)	%	ENG 2050	A	%	B	%	C	%	D	%	F	%	FX	%
A	40	15.0%	1	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
B	57	21.3%	6	1	16.7%	3	50.0%	1	16.7%	0	0.0%	1	16.7%	0	0.0%
C	65	24.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
D	14	5.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F	60	22.5%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	2	0.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I	0	0.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	29	10.9%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	267	100.0%	7	1	14.3%	3	42.9%	2	28.6%	0	0.0%	1	14.3%	0	0.0%

College of Southern Maryland
Course Effectiveness Report
ENG 1010 or ENG 1010T to ENG 2050
Fall 2018 to Spring 2019

Fall 2018 - ENG 1010 or ENG 1010T			Enrolled in ENG 2050	Spring 2019 Grades in ENG 2050											
Grade	(N)	%		A	%	B	%	C	%	D	%	F	%	FX	%
A	253	19.7%	11	3	27.3%	5	45.5%	1	9.1%	1	9.1%	0	0.0%	1	9.1%
B	351	27.4%	13	2	15.4%	6	46.2%	2	15.4%	2	15.4%	1	7.7%	0	0.0%
C	252	19.7%	8	0	0.0%	2	25.0%	1	12.5%	4	50.0%	1	12.5%	0	0.0%
D	82	6.4%	2	0	0.0%	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%
F	206	16.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	20	1.6%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
I	2	0.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	116	9.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	1,282	100.0%	34	5	14.7%	14	41.2%	4	11.8%	7	20.6%	3	8.8%	1	2.9%

% Total A/B/C in ENG 1010 or ENG 1010T	66.8%
% Total A/B/C in ENG 1010 or ENG 1010T who enrolled ENG 2050	3.7%
Total A/B/C in ENG 1010 or ENG 1010T and enrolled in ENG 2050	32
Total A/B/C in ENG 2050 in Spring 2019	22
Fall 2018 to Spring 2019 ENG 1010 & ENG 1010T Course Effectiveness	68.8%



College of Southern Maryland
Course Effectiveness Report
MTH 0940 to Higher Math Courses
Fall 2018 to Spring 2019

Fall 2018 - MTH 0940			Enrolled in	Spring 2019 Grades in MTH 0950																	
Grade	(N)	%	MTH 0950	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	NA	%	WD	%
P	277	64.7%	41	0	0.0%	0	0.0%	0	0.0%	16	39.0%	0	0.0%	16	39.0%	0	0.0%	0	0.0%	9	22.0%
F	94	22.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	12	2.8%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	40	9.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	5	1.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	428	100.0%	41	0	0.0%	0	0.0%	0	0.0%	16	39.0%	0	0.0%	16	39.0%	0	0.0%	0	0.0%	9	22.0%

Fall 2018 - MTH 0940			Enrolled in	Spring 2019 Grades in MTH 0950T																	
Grade	(N)	%	MTH 0950T	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	NA	%	WD	%
P	277	64.7%	7	0	0.0%	0	0.0%	0	0.0%	2	28.6%	0	0.0%	4	57.1%	0	0.0%	0	0.0%	1	14.3%
F	94	22.0%	7	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	42.9%	1	14.3%	0	0.0%	3	42.9%
FX	12	2.8%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
WD	40	9.3%	3	0	0.0%	0	0.0%	0	0.0%	2	66.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	33.3%
AU	5	1.2%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
Total	428	100.0%	19	0	0.0%	0	0.0%	0	0.0%	4	21.1%	0	0.0%	8	42.1%	2	10.5%	0	0.0%	5	26.3%

Fall 2018 - MTH 0940			Enrolled in	Spring 2019 Grades in MTH 0970																	
Grade	(N)	%	MTH 0970	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	NA	%	WD	%
P	277	64.7%	9	0	0.0%	0	0.0%	0	0.0%	1	11.1%	0	0.0%	5	55.6%	0	0.0%	0	0.0%	3	33.3%
F	94	22.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	12	2.8%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	40	9.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	5	1.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	428	100.0%	9	0	0.0%	0	0.0%	0	0.0%	1	11.1%	0	0.0%	5	55.6%	0	0.0%	0	0.0%	3	33.3%

College of Southern Maryland
Course Effectiveness Report
MTH 0940 to Higher Math Courses
Fall 2018 to Spring 2019

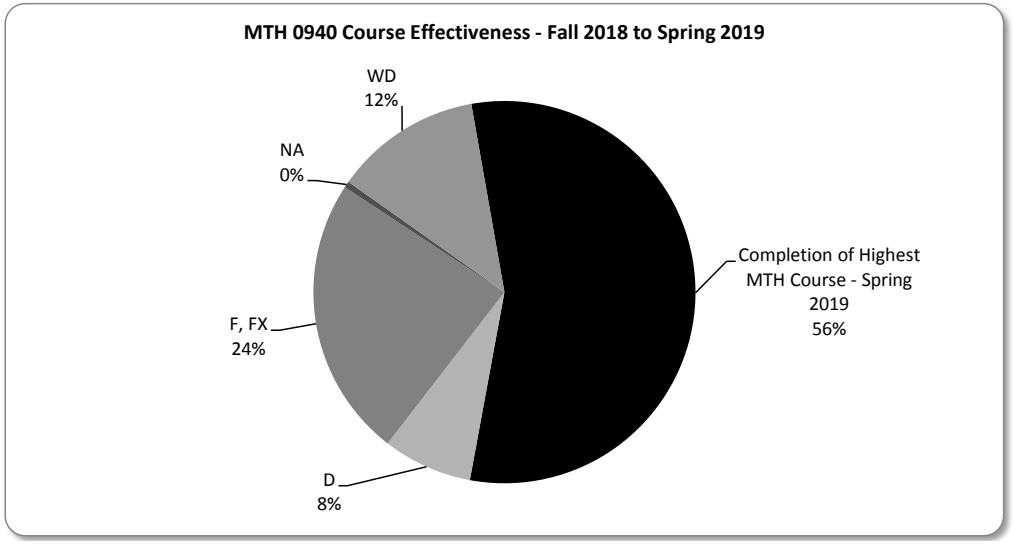
Fall 2018 - MTH 0940			Enrolled in	Spring 2019 Grades in MTH 1010																	
Grade	(N)	%	MTH 1010	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	NA	%	WD	%
P	277	64.7%	103	27	26.2%	24	23.3%	21	20.4%	0	0.0%	13	12.6%	11	10.7%	0	0.0%	0	0.0%	7	6.8%
F	94	22.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	12	2.8%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	40	9.3%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
AU	5	1.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	428	100.0%	104	27	26.0%	24	23.1%	21	20.2%	0	0.0%	13	12.5%	11	10.6%	1	1.0%	0	0.0%	7	6.7%

Fall 2018 - MTH 0940			Enrolled in	Spring 2019 Grades in MTH 2300																	
Grade	(N)	%	MTH 2300	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	NA	%	WD	%
P	277	64.7%	25	2	8.0%	4	16.0%	6	24.0%	0	0.0%	1	4.0%	7	28.0%	1	4.0%	1	4.0%	3	12.0%
F	94	22.0%	2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%
FX	12	2.8%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	40	9.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	5	1.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	428	100.0%	27	2	7.4%	4	14.8%	6	22.2%	0	0.0%	2	7.4%	7	25.9%	1	3.7%	2	7.4%	3	11.1%

Fall 2018 - MTH 0940			Enrolled in	Spring 2019 Grades in Highest MTH Course																	
Grade	(N)	%	Highest MTH	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	NA	%	WD	%
P	277	64.7%	185	29	15.7%	28	15.1%	27	14.6%	19	10.3%	14	7.6%	43	23.2%	1	0.5%	1	0.5%	23	12.4%
F	94	22.0%	9	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	11.1%	3	33.3%	1	11.1%	1	11.1%	3	33.3%
FX	12	2.8%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
WD	40	9.3%	4	0	0.0%	0	0.0%	0	0.0%	2	50.0%	0	0.0%	0	0.0%	1	25.0%	0	0.0%	1	25.0%
AU	5	1.2%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
Total	428	100.0%	200	29	14.5%	28	14.0%	27	13.5%	21	10.5%	15	7.5%	47	23.5%	4	2.0%	2	1.0%	27	13.5%

College of Southern Maryland
Course Effectiveness Report
MTH 0940 to Higher Math Courses
Fall 2018 to Spring 2019

% Total P in MTH 0940	64.7%
% Total P in MTH 0940 who enrolled in Highest MTH Course	66.8%
Total P in MTH 0940 and enrolled in Highest MTH Course	185
Total A/B/C/P in Highest MTH Course in Spring 2019	103
Fall 2018 to Spring 2019 MTH 0940 Course Effectiveness	55.7%



College of Southern Maryland
Course Effectiveness Report
MTH 0950 or MTH 0950T to Higher Math Courses
Fall 2018 to Spring 2019

Fall 2018 - MTH 0950			Enrolled in	Spring 2019 Grades in MTH 0970																	
Grade	(N)	%	MTH 0970	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	AU	%	WD	%
P	106	139.5%	67	0	0.0%	0	0.0%	0	0.0%	33	49.3%	0	0.0%	25	37.3%	0	0.0%	0	0.0%	9	13.4%
F	96	126.3%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
FX	4	5.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	32	42.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	1	1.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	239	314.5%	68	0	0.0%	0	0.0%	0	0.0%	33	48.5%	0	0.0%	25	36.8%	0	0.0%	0	0.0%	10	14.7%

Fall 2018 - MTH 0950T			Enrolled in	Spring 2019 Grades in MTH 0970																	
Grade	(N)	%	MTH 0970	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	AU	%	WD	%
P	28	36.8%	22	0	0.0%	0	0.0%	0	0.0%	12	54.5%	0	0.0%	8	36.4%	0	0.0%	1	4.5%	1	4.5%
F	37	48.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	0	0.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	10	13.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	1	1.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	76	100.0%	22	0	0.0%	0	0.0%	0	0.0%	12	54.5%	0	0.0%	8	36.4%	0	0.0%	1	4.5%	1	4.5%

Fall 2018 - MTH 0950			Enrolled in	Spring 2019 Grades in MTH 1010																	
Grade	(N)	%	MTH 1010	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	AU	%	WD	%
P	106	139.5%	1	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F	96	126.3%	3	0	0.0%	0	0.0%	1	33.3%	0	0.0%	1	33.3%	1	33.3%	0	0.0%	0	0.0%	0	0.0%
FX	4	5.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	32	42.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	1	1.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	239	314.5%	4	0	0.0%	1	25.0%	1	25.0%	0	0.0%	1	25.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%

Fall 2018 - MTH 0950T			Enrolled in	Spring 2019 Grades in MTH 1010																	
Grade	(N)	%	MTH 1010	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	AU	%	WD	%
P	28	36.8%	3	0	0.0%	1	33.3%	1	33.3%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F	37	48.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	0	0.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	10	13.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	1	1.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	76	100.0%	3	0	0.0%	1	33.3%	1	33.3%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

College of Southern Maryland
Course Effectiveness Report
MTH 0950 or MTH 0950T to Higher Math Courses
Fall 2018 to Spring 2019

Fall 2018 - MTH 0950			Enrolled in	Spring 2019 Grades in MTH 1115															
Grade	(N)	%	MTH 1115	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	AU	%	WD	%
P	106	44.4%	2	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F	96	40.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	4	1.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	32	13.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	1	0.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	239	100.0%	2	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Fall 2018 - MTH 0950			Enrolled in	Spring 2019 Grades in MTH 1120															
Grade	(N)	%	MTH 1120	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	AU	%	WD	%
P	106	44.4%	2	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%
F	96	40.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	4	1.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	32	13.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	1	0.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	239	100.0%	2	0	0.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	50.0%	0	0.0%

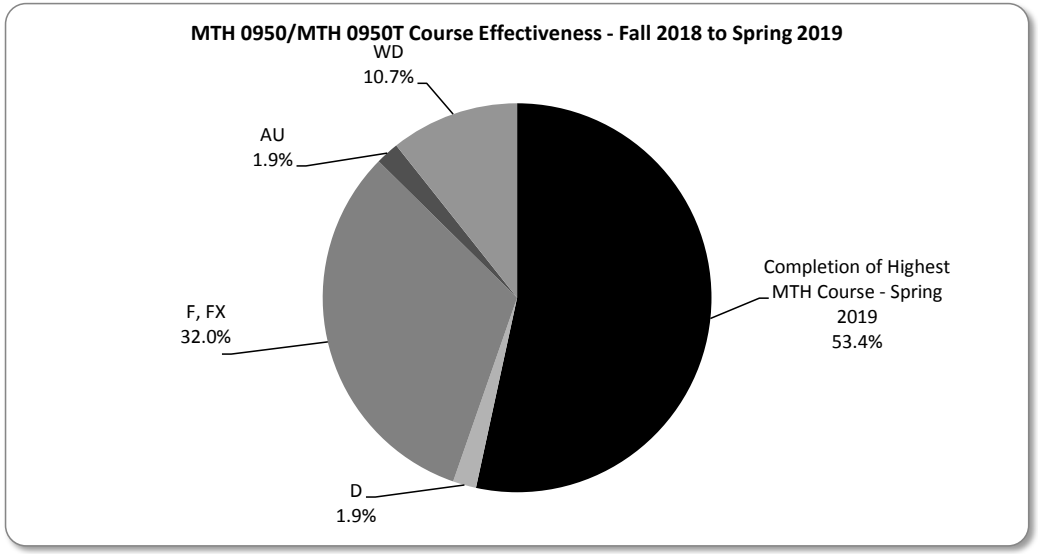
Fall 2018 - MTH 0950			Enrolled in	Spring 2019 Grades in MTH 2300															
Grade	(N)	%	MTH 2300	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	AU	%	WD	%
P	106	44.4%	6	0	0.0%	2	33.3%	2	33.3%	0	0.0%	1	16.7%	0	0.0%	0	0.0%	0	0.0%	1	16.7%
F	96	40.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	4	1.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	32	13.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	1	0.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	239	100.0%	6	0	0.0%	2	33.3%	2	33.3%	0	0.0%	1	16.7%	0	0.0%	0	0.0%	0	0.0%	1	16.7%

Fall 2018 - MTH 0950T			Enrolled in	Spring 2019 Grades in MTH 2300T															
Grade	(N)	%	MTH 2300	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	AU	%	WD	%
P	28	11.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F	37	15.5%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
FX	0	0.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	10	4.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	1	0.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	76	31.8%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%

College of Southern Maryland
Course Effectiveness Report
MTH 0950 or MTH 0950T to Higher Math Courses
Fall 2018 to Spring 2019

Fall 2018 - MTH 0950 or MTH 0950T			Enrolled in Highest MTH Course	Spring 2019 Grades in Highest MTH Course															
Grade	(N)	%		A	%	B	%	C	%	P	%	D	%	F	%	FX	%	AU	%	WD	%
P	134	42.5%	103	0	0.0%	6	5.8%	4	3.9%	45	43.7%	2	1.9%	33	32.0%	0	0.0%	2	1.9%	11	10.7%
F	133	42.2%	5	0	0.0%	0	0.0%	1	20.0%	0	0.0%	1	20.0%	1	20.0%	0	0.0%	0	0.0%	2	40.0%
FX	4	1.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	42	13.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	2	0.6%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	315	100.0%	108	0	0.0%	6	5.6%	5	4.6%	45	41.7%	3	2.8%	34	31.5%	0	0.0%	2	1.9%	13	12.0%

% Total P in MTH 0950 or 0950T	42.5%
% Total P in MTH 0950 who enrolled in Highest MTH Course	76.9%
Total P in MTH 0950 or 0950T and enrolled in Highest MTH Course	103
Total A/B/C/P in Highest MTH Course in Spring 2019	55
Fall 2018 to Spring 2019 MTH 0950 or MTH 0950T Course Effectiveness	53.4%



College of Southern Maryland
Course Effectiveness Report
MTH 0970 to Higher Math Courses
Fall 2018 to Spring 2019

Fall 2018 - MTH 0970			Enrolled in	Spring 2019 Grades in MTH 1010																	
Grade	(N)	%	MTH 1010	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	WD	%	AU	%
P	140	48.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F	82	28.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	4	1.4%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	57	19.7%	3	1	33.3%	1	33.3%	1	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	6	2.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	289	100.0%	4	1	25.0%	1	25.0%	1	25.0%	0	0.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Fall 2018 - MTH 0970			Enrolled in	Spring 2019 Grades in MTH 1115																	
Grade	(N)	%	MTH 1115	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	WD	%	AU	%
P	140	48.4%	20	3	15.0%	8	40.0%	2	10.0%	0	0.0%	2	10.0%	3	15.0%	0	0.0%	2	10.0%	0	0.0%
F	82	28.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	4	1.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	57	19.7%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
AU	6	2.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	289	100.0%	21	3	14.3%	8	38.1%	2	9.5%	0	0.0%	2	9.5%	4	19.0%	0	0.0%	2	9.5%	0	0.0%

Fall 2018 - MTH 0970			Enrolled in	Spring 2019 Grades in MTH 1120																	
Grade	(N)	%	MTH 1120	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	WD	%	AU	%
P	140	48.4%	56	15	26.8%	13	23.2%	13	23.2%	0	0.0%	2	3.6%	5	8.9%	0	0.0%	7	12.5%	1	1.8%
F	82	28.4%	2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%
FX	4	1.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	57	19.7%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%
AU	6	2.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	289	100.0%	59	15	25.4%	13	22.0%	13	22.0%	0	0.0%	2	3.4%	7	11.9%	0	0.0%	8	13.6%	1	1.7%

Fall 2018 - MTH 0970			Enrolled in	Spring 2019 Grades in MTH 1150																	
Grade	(N)	%	MTH 1150	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	WD	%	AU	%
P	140	48.4%	20	5	25.0%	1	5.0%	7	35.0%	0	0.0%	1	5.0%	2	10.0%	1	5.0%	3	15.0%	0	0.0%
F	82	28.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	4	1.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	57	19.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	6	2.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	289	100.0%	20	5	25.0%	1	5.0%	7	35.0%	0	0.0%	1	5.0%	2	10.0%	1	5.0%	3	15.0%	0	0.0%

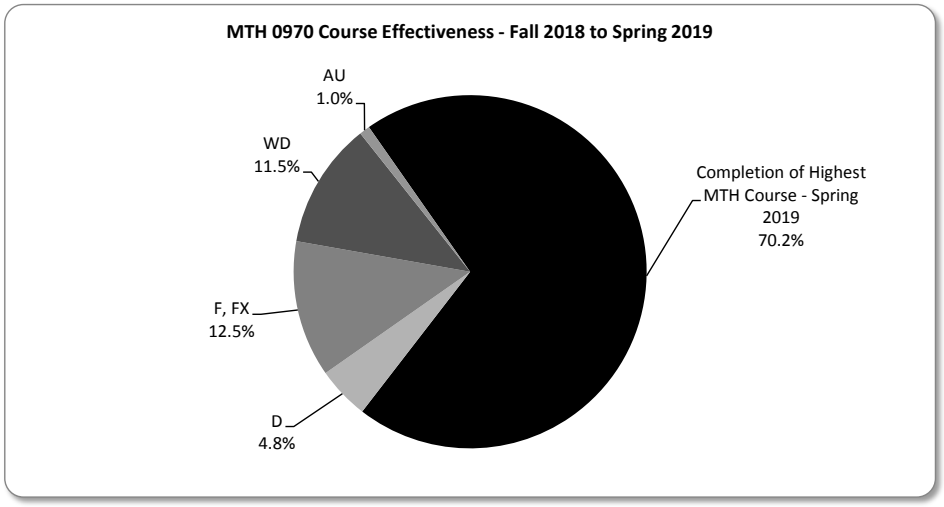
College of Southern Maryland
Course Effectiveness Report
MTH 0970 to Higher Math Courses
Fall 2018 to Spring 2019

Fall 2018 - MTH 0970			Enrolled in	Spring 2019 Grades in MTH 2300															
Grade	(N)	%	MTH 2300	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	WD	%	AU	%
P	140	48.4%	8	0	0.0%	4	50.0%	2	25.0%	0	0.0%	0	0.0%	2	25.0%	0	0.0%	0	0.0%	0	0.0%
F	82	28.4%	4	0	0.0%	1	25.0%	2	50.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	25.0%	0	0.0%
FX	4	1.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	57	19.7%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%
AU	6	2.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	289	100.0%	13	0	0.0%	5	38.5%	4	30.8%	0	0.0%	0	0.0%	3	23.1%	0	0.0%	1	7.7%	0	0.0%

Fall 2018 - MTH 0970			Enrolled in	Spring 2019 Grades in MTH 2300T															
Grade	(N)	%	MTH 2300T	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	WD	%	AU	%
P	140	48.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F	82	28.4%	2	0	0.0%	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	4	1.4%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	57	19.7%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	6	2.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	289	100.0%	2	0	0.0%	0	0.0%	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

Fall 2018 - MTH 0970			Enrolled in	Spring 2019 Grades in Highest MTH Course															
Grade	(N)	%	Highest MTH	A	%	B	%	C	%	P	%	D	%	F	%	FX	%	WD	%	AU	%
P	140	48.4%	104	23	22.1%	26	25.0%	24	23.1%	0	0.0%	5	4.8%	12	11.5%	1	1.0%	12	11.5%	1	1.0%
F	82	28.4%	8	0	0.0%	1	12.5%	4	50.0%	0	0.0%	0	0.0%	2	25.0%	0	0.0%	1	12.5%	0	0.0%
FX	4	1.4%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	57	19.7%	6	1	16.7%	1	16.7%	1	16.7%	0	0.0%	0	0.0%	2	33.3%	0	0.0%	1	16.7%	0	0.0%
AU	6	2.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	289	100.0%	119	24	20.2%	28	23.5%	29	24.4%	0	0.0%	6	5.0%	16	13.4%	1	0.8%	14	11.8%	1	0.8%

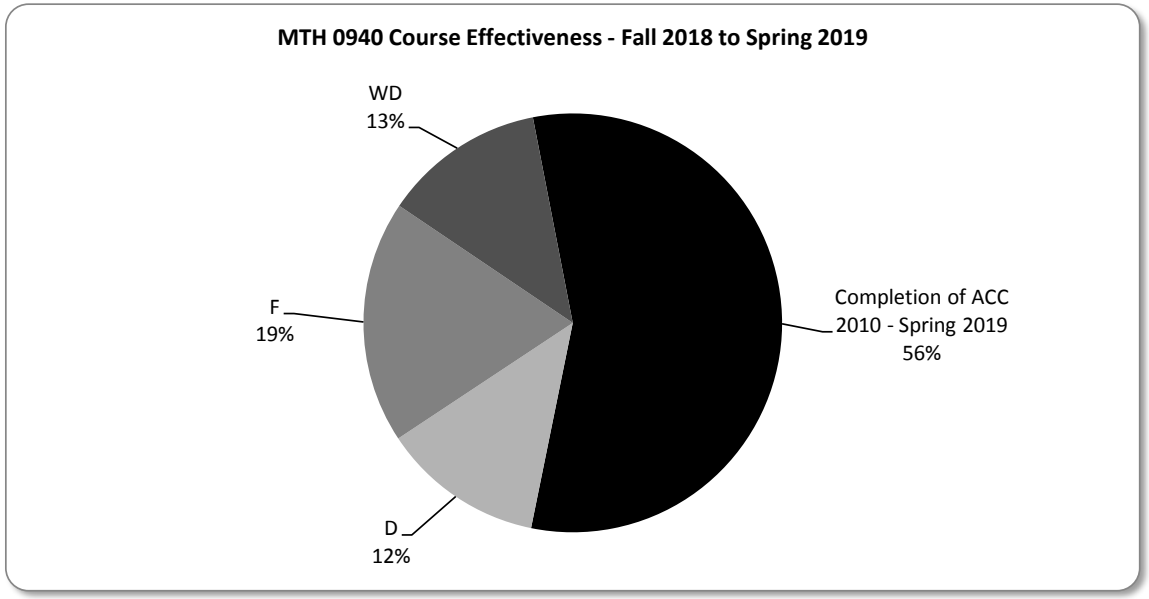
% Total P in MTH 0970	48.4%
% Total P in MTH 0970 who enrolled in Highest MTH Course	74.3%
Total P in MTH 0970 and enrolled in Highest MTH Course	104
Total A/B/C in Highest MTH Course in Spring 2019	73
Fall 2018 to Spring 2019 MTH 0970 Course Effectiveness	70.2%



College of Southern Maryland
Course Effectiveness Report
MTH 0940 to ACC 2010
Fall 2018 to Spring 2019

Fall 2018 - MTH 0940			Enrolled in ACC	Spring 2019 Grades in ACC 2010											
Grade	(N)	%	2010	A	%	B	%	C	%	D	%	F	%	WD	%
P	277	64.7%	16	2	12.5%	4	25.0%	3	18.8%	2	12.5%	3	18.8%	2	12.5%
F	94	22.0%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	12	2.8%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	40	9.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
AU	5	1.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	428	100.0%	16	2	12.5%	4	25.0%	3	18.8%	2	12.5%	3	18.8%	2	12.5%

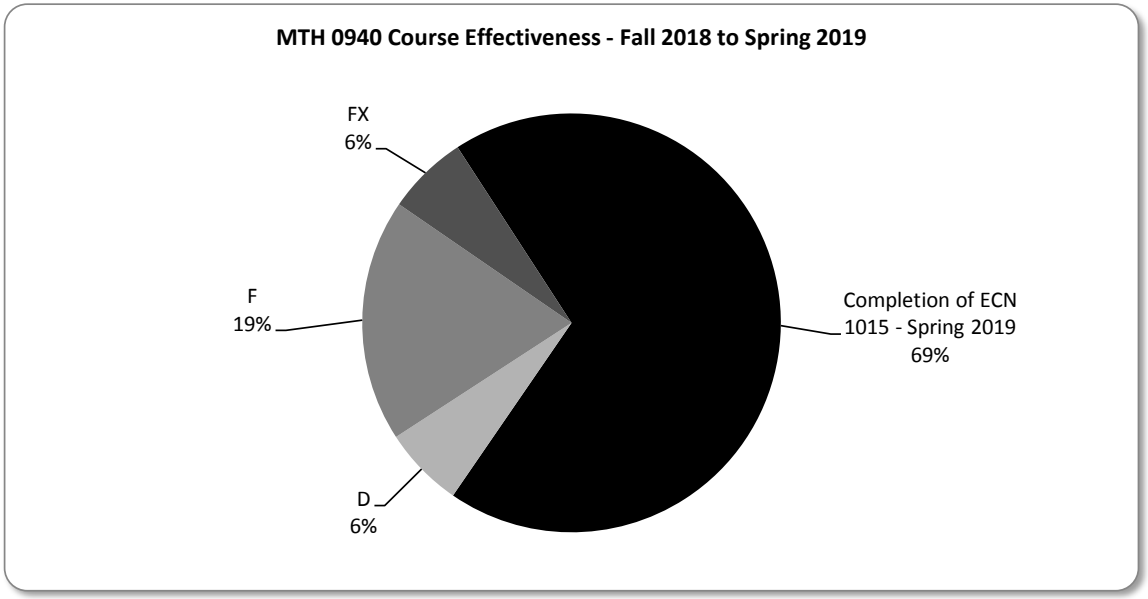
% Total P in MTH 0940	64.7%
% Total P in MTH 0940 who enrolled in ACC 2010	5.8%
Total P in MTH 0940 and enrolled in ACC 2010	16
Total A/B/C in ACC 2010 in Spring 2019	9
Fall 2018 to Spring 2019 MTH 0940 Course Effectiveness	56.3%



College of Southern Maryland
Course Effectiveness Report
MTH 0940 to ECN 1015
Fall 2018 to Spring 2019

Fall 2018 - MTH 0940			Enrolled in ECN	Spring 2019 Grades in ECN 1015											
Grade	(N)	%	1015	A	%	B	%	C	%	D	%	F	%	FX	%
P	277	64.7%	16	4	25.0%	4	25.0%	3	18.8%	1	6.3%	3	18.8%	1	6.3%
F	94	22.0%	3	0	0.0%	0	0.0%	2	66.7%	0	0.0%	0	0.0%	1	33.3%
FX	12	2.8%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	40	9.3%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%
AU	5	1.2%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	428	100.0%	20	4	20.0%	4	20.0%	5	25.0%	1	5.0%	3	15.0%	3	15.0%

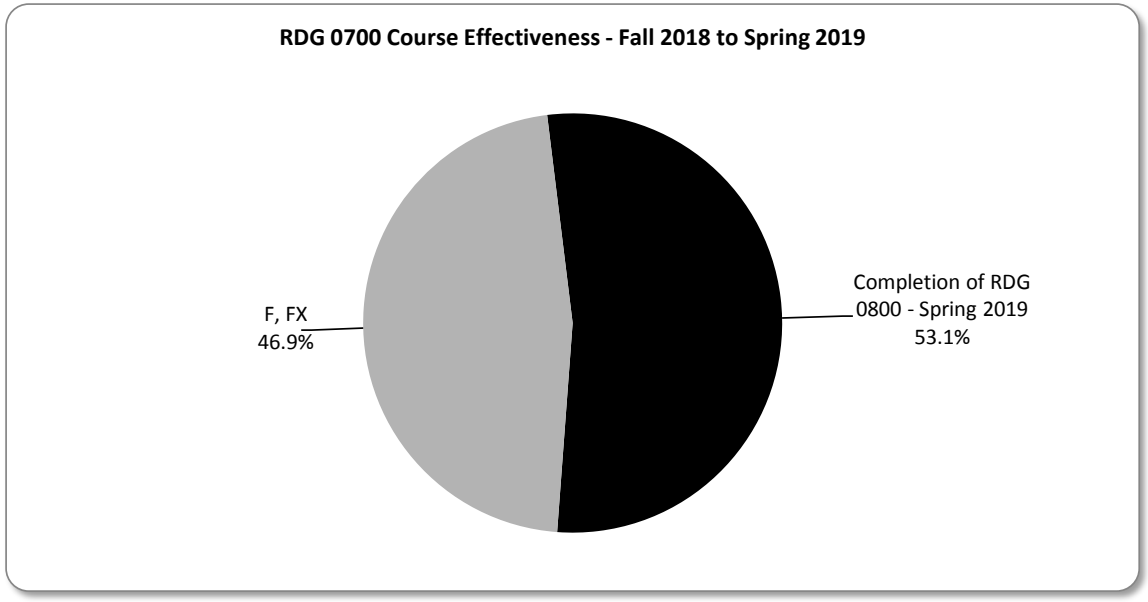
% Total P in MTH 0940	64.7%
% Total P in MTH 0940 who enrolled in ECN 1015	5.8%
Total P in MTH 0940 and enrolled in ECN 1015	16
Total A/B/C in ECN 1015 in Spring 2019	11
Fall 2018 to Spring 2019 MTH 0940 Course Effectiveness	68.8%



College of Southern Maryland
Course Effectiveness Report
RDG 0700 to RDG 0800
Fall 2018 to Spring 2019

Fall 2018 - RDG 0700			Enrolled in RDG	Spring 2019 Grades in RDG 0800									
Grade	(N)	%	0800	P	%	F	%	FX	%	WD	%	IP	%
P	42	60.0%	32	17	53.1%	13	40.6%	2	6.3%	0	0.0%	0	0.0%
F	22	31.4%	2	1	50.0%	1	50.0%	0	0.0%	0	0.0%	0	0.0%
FX	3	4.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	3	4.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	70	100.0%	34	18	52.9%	14	41.2%	2	5.9%	0	0.0%	0	0.0%

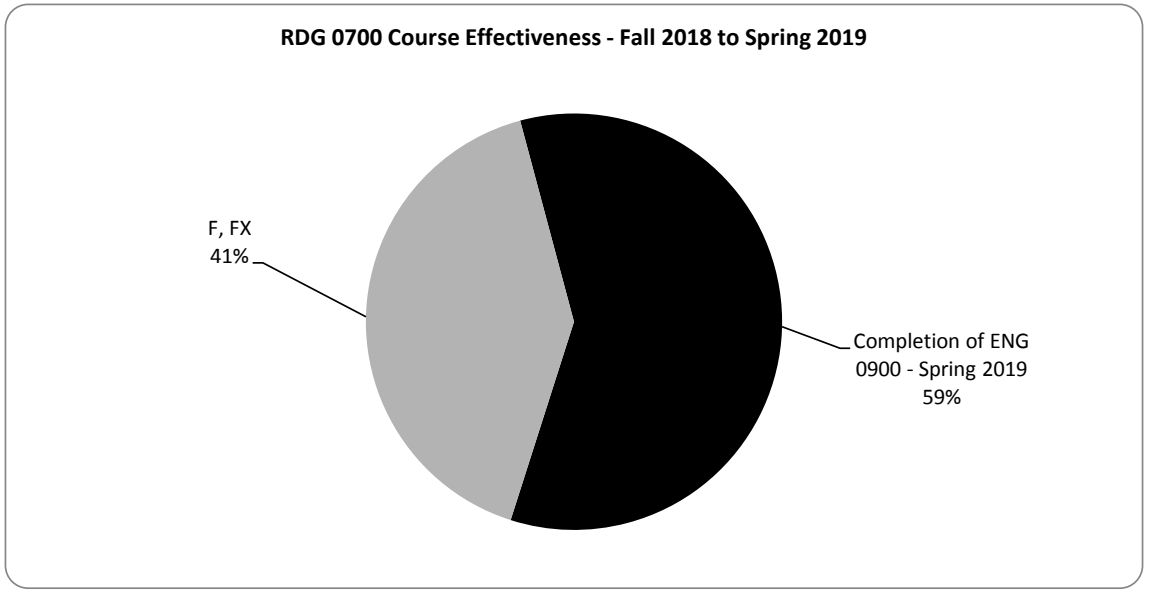
% Total P in RDG 0700	60.0%
% Total P in RDG 0700 who enrolled in RDG 0800	76.2%
Total P in RDG 0700 and enrolled RDG 0800	32
Total P in RDG 0800 in Spring 2019	17
Fall 2018 to Spring 2019 RDG 0700 Course Effectiveness	53.1%



College of Southern Maryland
Course Effectiveness Report
RDG 0700 to ENG 0900
Fall 2018 to Spring 2019

Fall 2018 - RDG 0700			Enrolled in ENG	Spring 2019 Grades in ENG 0900									
Grade	(N)	%	0900	P	%	F	%	FX	%	WD	%	IP	%
P	42	60.0%	22	13	59.1%	9	40.9%	0	0.0%	0	0.0%	0	0.0%
F	22	31.4%	4	2	50.0%	1	25.0%	1	25.0%	0	0.0%	0	0.0%
FX	3	4.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	3	4.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	70	100.0%	26	15	57.7%	10	38.5%	1	3.8%	0	0.0%	0	0.0%

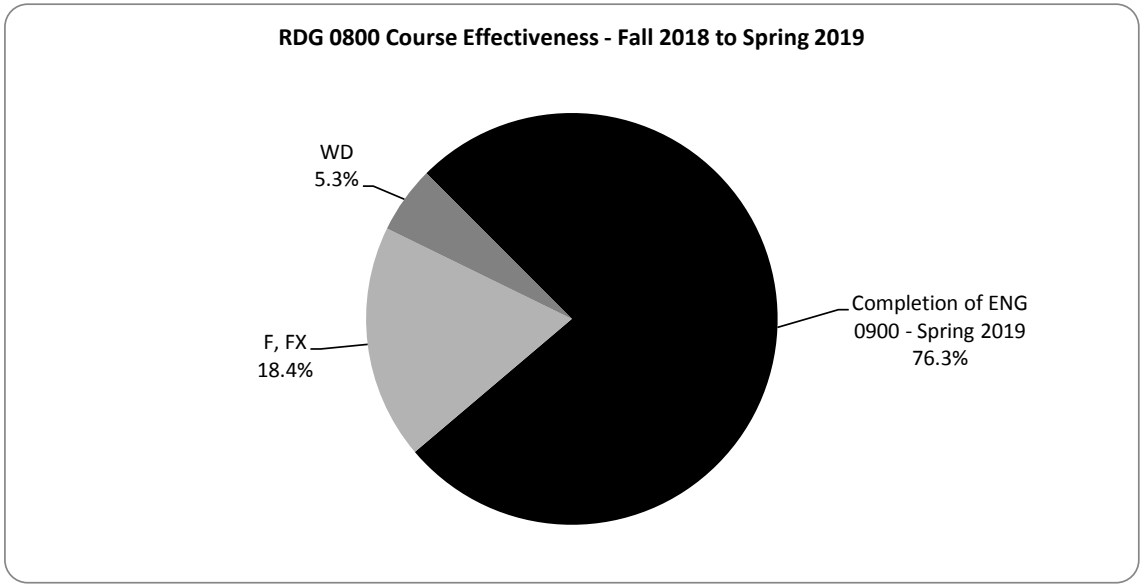
% Total P in RDG 0700	60.0%
% Total P in RDG 0700 who enrolled in ENG 0900	52.4%
Total P in RDG 0700 and enrolled ENG 0900	22
Total A/B/C/ in ENG 0900 in Spring 2019	13
Fall 2018 to Spring 2019 RDG 0700 Course Effectiveness	59.1%



College of Southern Maryland
Course Effectiveness Report
RDG 0800 to ENG 0900
Fall 2018 to Spring 2019

Fall 2018 - RDG 0800			Enrolled in	Spring 2019 Grades in ENG 0900									
Grade	(N)	%	ENG 0900	P	%	F	%	FX	%	WD	%	IP	%
P	186	72.7%	38	29	76.3%	7	18.4%	0	0.0%	2	5.3%	0	0.0%
F	51	19.9%	8	3	37.5%	4	50.0%	1	12.5%	0	0.0%	0	0.0%
FX	6	2.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	13	5.1%	2	1	50.0%	0	0.0%	1	50.0%	0	0.0%	0	0.0%
Total	256	100.0%	48	33	68.8%	11	22.9%	2	4.2%	2	4.2%	0	0.0%

% Total P in RDG 0800	72.7%
% Total P in RDG 0800 who enrolled in ENG 0900	20.4%
Total P in RDG 0800 and enrolled ENG 0900	38
Total A/B/C/ in ENG 0900 in Spring 2019	29
Fall 2018 to Spring 2019 RDG 0800 Course Effectiveness	76.3%



College of Southern Maryland
Course Effectiveness Report
RDG 0800 to ENG 1010 or ENG 1010T
Fall 2018 to Spring 2019

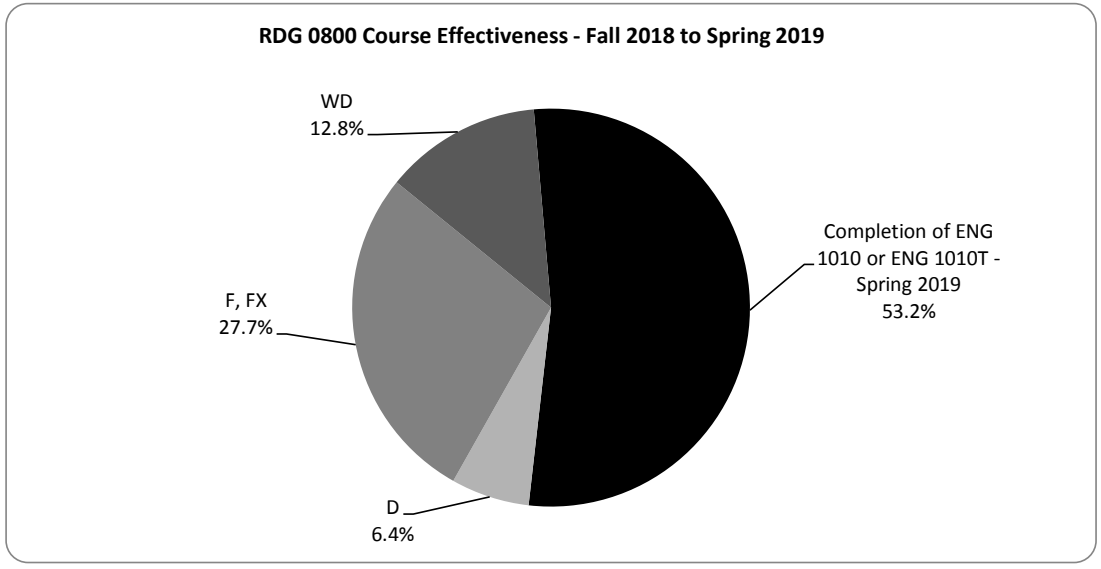
Fall 2018 - RDG 0800			Enrolled in	Spring 2019 Grades in ENG 1010													
Grade	(N)	%	ENG 1010	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	186	72.7%	68	6	8.8%	21	30.9%	13	19.1%	5	7.4%	13	19.1%	1	1.5%	9	13.2%
F	51	19.9%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	6	2.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	13	5.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	256	100.0%	68	6	8.8%	21	30.9%	13	19.1%	5	7.4%	13	19.1%	1	1.5%	9	13.2%

Fall 2018 - RDG 0800			Enrolled in	Spring 2019 Grades in ENG 1010T													
Grade	(N)	%	ENG 1010T	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	186	72.7%	26	1	3.8%	2	7.7%	7	26.9%	1	3.8%	12	46.2%	0	0.0%	3	11.5%
F	51	19.9%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
FX	6	2.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	13	5.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	256	100.0%	27	1	3.7%	2	7.4%	7	25.9%	1	3.7%	13	48.1%	0	0.0%	3	11.1%

College of Southern Maryland
Course Effectiveness Report
RDG 0800 to ENG 1010 or ENG 1010T
Fall 2018 to Spring 2019

Fall 2018 - RDG 0800			Enrolled in ENG 1010 or ENG 1010T	Spring 2019 Grades in ENG 1010 or ENG 1010T													
Grade	(N)	%		A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	186	72.7%	94	7	7.4%	23	24.5%	20	21.3%	6	6.4%	25	26.6%	1	1.1%	12	12.8%
F	51	19.9%	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%
FX	6	2.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	13	5.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	256	100.0%	95	7	7.4%	23	24.2%	20	21.1%	6	6.3%	26	27.4%	1	1.1%	12	12.6%

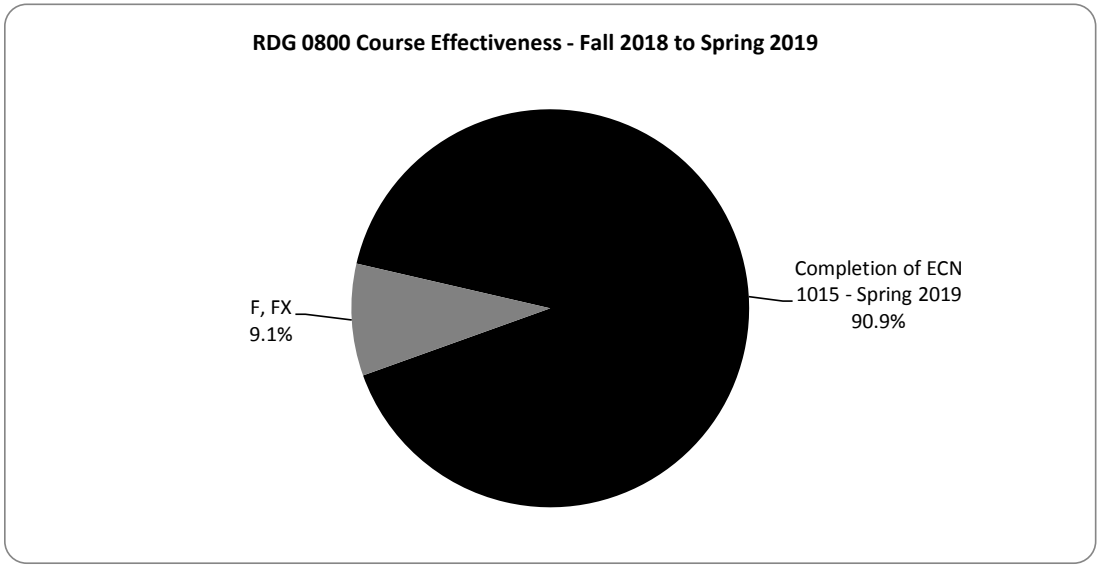
% Total P in RDG 0800	72.7%
% Total P in RDG 0800 who enrolled in ENG 1010/1010T	50.5%
Total P in RDG 0800 and enrolled ENG 1010 /1010T	94
Total A/B/C/ in ENG 1010/1010T in Spring 2019	50
Fall 2018 to Spring 2019 RDG 0800 Course Effectiveness	53.2%



College of Southern Maryland
Course Effectiveness Report
RDG 0800 to ECN 1015
Fall 2018 to Spring 2019

Fall 2018 - RDG 0800			Enrolled in ECN	Spring 2019 Grades in ECN 1015													
Grade	(N)	%	1015	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	186	72.7%	11	1	9.1%	5	45.5%	4	36.4%	0	0.0%	1	9.1%	0	0.0%	0	0.0%
F	51	19.9%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	6	2.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	13	5.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	256	100.0%	11	1	9.1%	5	45.5%	4	36.4%	0	0.0%	1	9.1%	0	0.0%	0	0.0%

% Total P in RDG 0800	72.7%
% Total P in RDG 0800 who enrolled in ECN 1015	5.9%
Total P in RDG 0800 and enrolled ECN 1015	11
Total A/B/C/ in ECN 1015 in Spring 2019	10
Fall 2018 to Spring 2019 RDG 0800 Course Effectiveness	90.9%



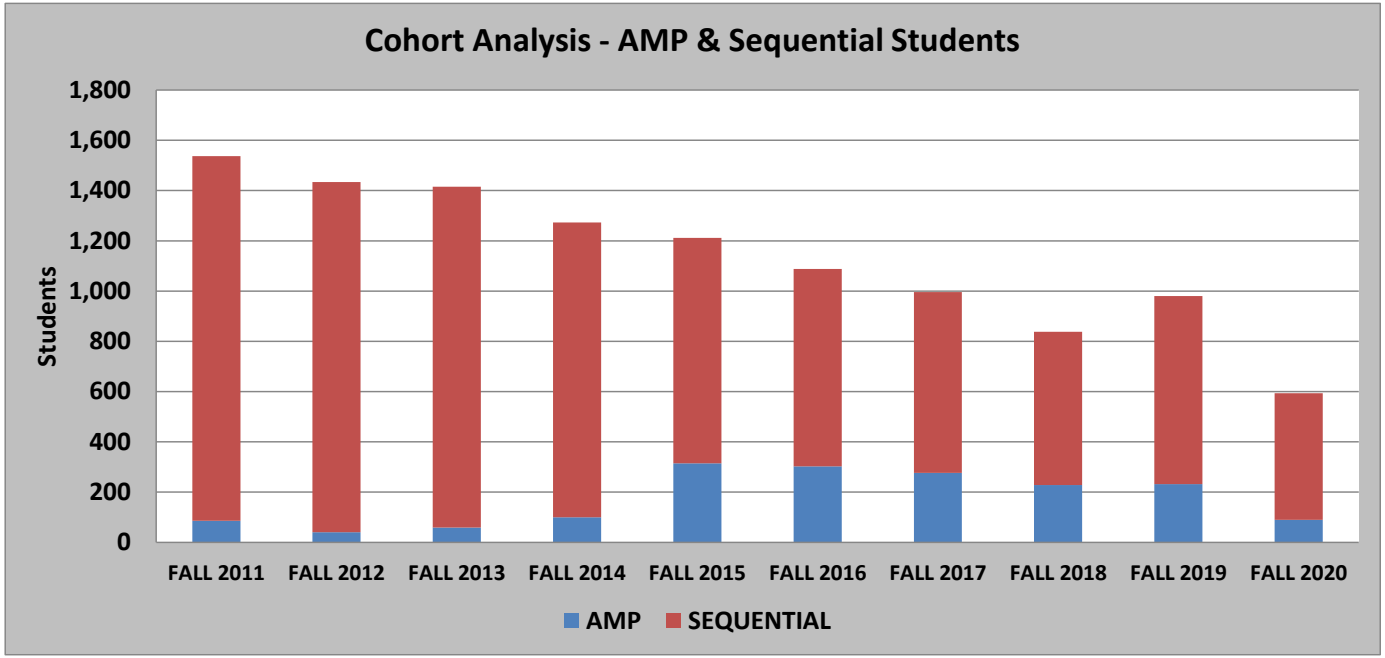
College of Southern Maryland
Course Effectiveness Report
RDG 0800 to ITS 1015
Fall 2018 to Spring 2019

Fall 2018 - RDG 0800			Enrolled in ITS	Spring 2019 Grades in ITS 1015													
Grade	(N)	%	1015	A	%	B	%	C	%	D	%	F	%	FX	%	WD	%
P	186	72.7%	6	1	16.7%	3	50.0%	2	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
F	51	19.9%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
FX	6	2.3%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
WD	13	5.1%	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	256	100.0%	6	1	16.7%	3	50.0%	2	33.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%

% Total P in RDG 0800	72.7%
% Total P in RDG 0800 who enrolled in ITS 1015	3.2%
Total P in RDG 0800 and enrolled ITS 1015	6
Total A/B/C/ in ITS 1015 in Spring 2019	6
Fall 2018 to Spring 2019 RDG 0800 Course Effectiveness	100.0%

No graph presented as all Fall 2018 RDG 0800 students who took ITS 1015 in the Spring 2019 semester received a passing grade in ITS 1015.

Analysis of AMP Students - MATH081\MATH082
Cohort Analysis - AMP & Sequential Students



	MATH081 STUDENTS					
	AMP		SEQUENTIAL		TOTAL	
TERM	COHORT	% TOTAL	COHORT	% TOTAL	COHORT	% ALP
FALL 2011	86	6%	1,451	94%	1,537	6%
FALL 2012	41	3%	1,393	97%	1,434	3%
FALL 2013	59	4%	1,356	96%	1,415	4%
FALL 2014	100	8%	1,173	92%	1,273	8%
FALL 2015	315	26%	897	74%	1,212	26%
FALL 2016	303	28%	785	72%	1,088	28%
FALL 2017	277	28%	719	72%	996	28%
FALL 2018	228	27%	610	73%	838	27%
FALL 2019	232	24%	748	76%	980	24%
FALL 2020	90	15%	504	85%	594	15%

Notes

AMP Students are students who took MATH081 and MATH082 in the same term.
Sequential students are students who took only MATH081 in the term shown.
Data as of 4/16/2021.

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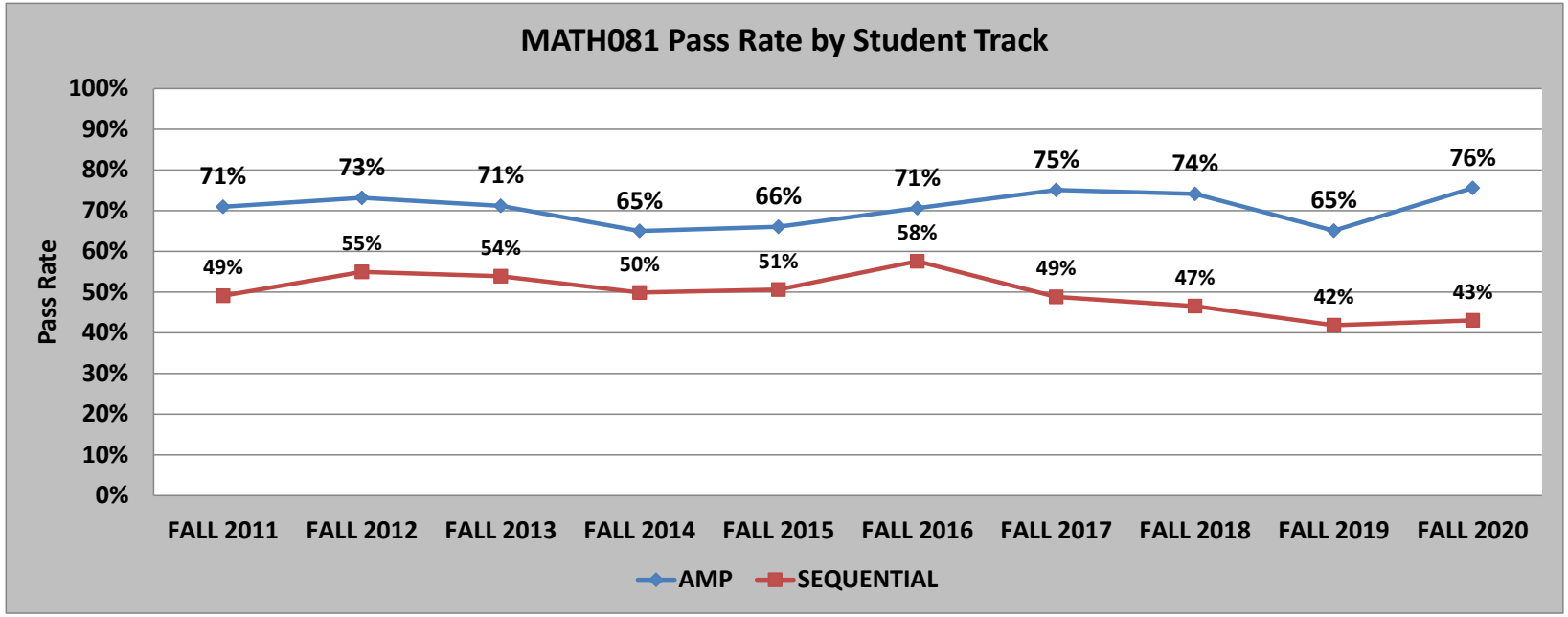
P Kelleher

Analysis of AMP Students - MATH081\MATH082
MATH081 Pass Rate by Student Track

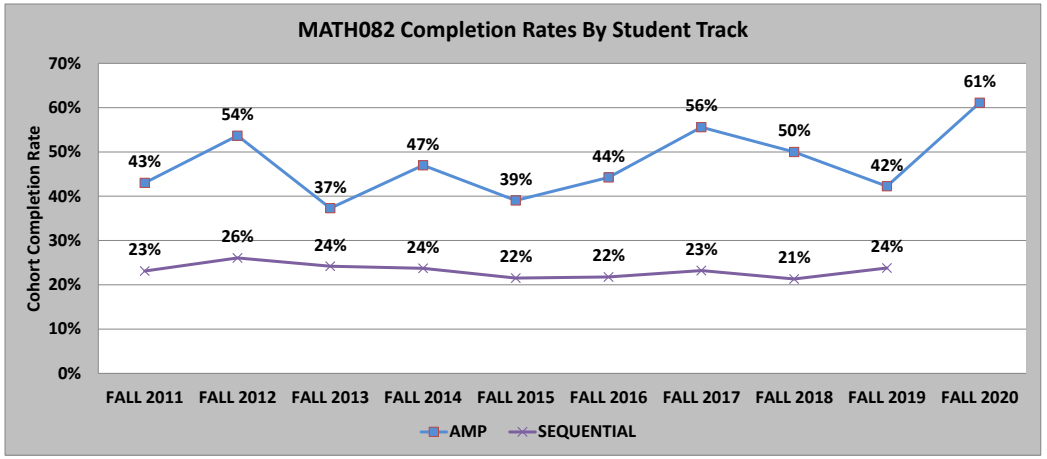


	MATH081 PASS RATES BY STUDENT TYPE								
	AMP			SEQUENTIAL			TOTAL		
TERM	COHORT	PASS	PASS RATE	COHORT	PASS	PASS RATE	COHORT	PASS	PASS RATE
FALL 2011	86	61	71%	1,451	712	49%	1,537	773	50%
FALL 2012	41	30	73%	1,393	766	55%	1,434	796	56%
FALL 2013	59	42	71%	1,356	731	54%	1,415	773	55%
FALL 2014	100	65	65%	1,173	585	50%	1,273	650	51%
FALL 2015	315	208	66%	897	454	51%	1,212	662	55%
FALL 2016	303	214	71%	785	452	58%	1,088	666	61%
FALL 2017	277	208	75%	719	351	49%	996	559	56%
FALL 2018	228	169	74%	610	284	47%	838	453	54%
FALL 2019	232	151	65%	748	313	42%	980	464	47%
FALL 2020	90	68	76%	504	217	43%	594	285	48%

Notes

Passing grades are A,B or C.
"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.
Data as of 4/16/2021.

Analysis of AMP Students - MATH081\MATH082
MATH082 Completion Rates By Student Track



	AMP STUDENTS					
TERM	COHORT	ATTEMPTED MATH082	% COHORT ATTEMPTING	PASS MATH082	% ATTEMPTING WHO PASS MATH082	% COHORT COMPLETING MATH082
FALL 2011	86	86	100%	37	43%	43%
FALL 2012	41	41	100%	22	54%	54%
FALL 2013	59	59	100%	22	37%	37%
FALL 2014	100	100	100%	47	47%	47%
FALL 2015	315	315	100%	123	39%	39%
FALL 2016	303	303	100%	134	44%	44%
FALL 2017	277	277	100%	154	56%	56%
FALL 2018	228	228	100%	114	50%	50%
FALL 2019	232	232	100%	98	42%	42%
FALL 2020	90	90	100%	55	61%	61%

	SEQUENTIAL STUDENTS					
TERM	COHORT	ATTEMPTED MATH082	% COHORT ATTEMPTING	PASS MATH082	% ATTEMPTING WHO PASS MATH082	% COHORT COMPLETING MATH082
FALL 2011	1,451	599	41%	335	56%	23%
FALL 2012	1,393	637	46%	363	57%	26%
FALL 2013	1,356	593	44%	328	55%	24%
FALL 2014	1,173	482	41%	278	58%	24%
FALL 2015	897	381	42%	193	51%	22%
FALL 2016	785	347	44%	171	49%	22%
FALL 2017	719	278	39%	167	60%	23%
FALL 2018	610	226	37%	130	58%	21%
FALL 2019	748	271	36%	178	66%	24%
FALL 2020	504	19	4%	8	42%	2%

Notes

For Sequential students, they must attempt MATH082 within 1 year of the cohort term to be considered as attempting.

For Sequential students, the highest grade achieved in MATH082 is analyzed.

AMP students are, by definition taking MATH081 and MATH082. The attempted rate is always 100%.

A,B,C are considered passing grades.

"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.

MATH082 results only include students in the 081 cohort. It is not the results for all students who take MATH082.

Data as of 4/16/2021.

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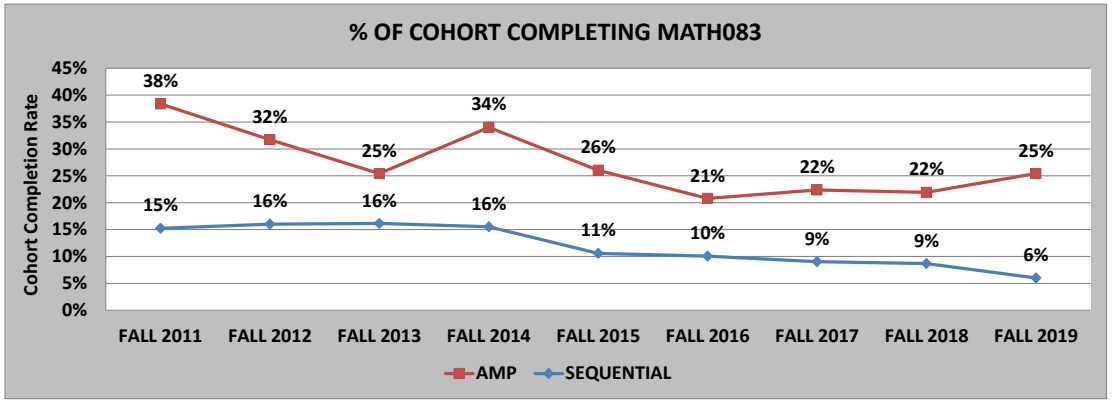
P Kelleher

Analysis of AMP Students - MATH081\MATH082
MATH083 Completion Rates By Student Track



	AMP STUDENTS					
TERM	COHORT	ATTEMPTED MATH 083	% COHORT ATTEMPTING	PASS MATH083	% ATTEMPTING WHO PASS	% COHORT COMPLETING MATH083
FALL 2011	86	47	55%	33	70%	38%
FALL 2012	41	18	44%	13	72%	32%
FALL 2013	59	20	34%	15	75%	25%
FALL 2014	100	49	49%	34	69%	34%
FALL 2015	315	117	37%	82	70%	26%
FALL 2016	303	106	35%	63	59%	21%
FALL 2017	277	95	34%	62	65%	22%
FALL 2018	228	71	31%	50	70%	22%
FALL 2019	232	76	33%	59	78%	25%
FALL 2020	90	5	6%	4	80%	4%

	SEQUENTIAL STUDENTS					
TERM	COHORT	ATTEMPTED MATH 083	% COHORT ATTEMPTING	PASS MATH083	% ATTEMPTING WHO PASS	% COHORT SUCCESSFULLY COMPLETING MATH083
FALL 2011	1,451	374	26%	221	59%	15%
FALL 2012	1,393	387	28%	223	58%	16%
FALL 2013	1,356	361	27%	219	61%	16%
FALL 2014	1,173	284	24%	182	64%	16%
FALL 2015	897	155	17%	95	61%	11%
FALL 2016	785	117	15%	79	68%	10%
FALL 2017	719	92	13%	65	71%	9%
FALL 2018	610	77	13%	53	69%	9%
FALL 2019	748	66	9%	45	68%	6%
FALL 2020	504	1	0%	1	100%	0%

Notes

Students must attempt MATH083 within 2 year of the cohort term to be included.

A,B,C are considered Passing grades.

"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.

MATH083 results only include students in the 081 cohort. It is not the results for all students who take MATH083.

Data as of 4/16/2021.

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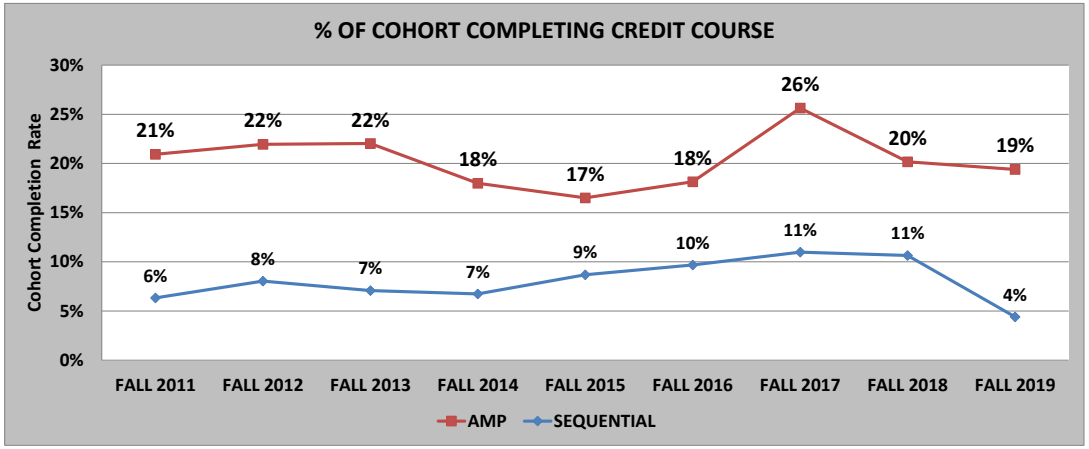
Analysis of AMP Students - MATH081\MATH082
Math Credit Course Completion Rates By Student Track



	AMP STUDENTS					
TERM	COHORT	ATTEMPTED CREDIT MATH	% ATTEMPTING	PASS CREDIT MATH	% ATTEMPTING WHO PASS	% COHORT COMPLETING CREDIT COURSE
FALL 2011	86	32	37%	18	56%	21%
FALL 2012	41	16	39%	9	56%	22%
FALL 2013	59	15	25%	13	87%	22%
FALL 2014	100	29	29%	18	62%	18%
FALL 2015	315	97	31%	52	54%	17%
FALL 2016	303	109	36%	55	50%	18%
FALL 2017	277	111	40%	71	64%	26%
FALL 2018	228	76	33%	46	61%	20%
FALL 2019	232	76	33%	45	59%	19%
FALL 2020	90	2	2%	1	50%	1%

	SEQUENTIAL					
TERM	COHORT	ATTEMPTED CREDIT MATH	% ATTEMPTING	PASS CREDIT MATH	% ATTEMPTING WHO PASS	% COHORT COMPLETING
FALL 2011	1,451	148	10%	92	62%	6%
FALL 2012	1,393	169	12%	112	66%	8%
FALL 2013	1,356	154	11%	96	62%	7%
FALL 2014	1,173	131	11%	79	60%	7%
FALL 2015	897	119	13%	78	66%	9%
FALL 2016	785	132	17%	76	58%	10%
FALL 2017	719	132	18%	79	60%	11%
FALL 2018	610	99	16%	65	66%	11%
FALL 2019	748	79	11%	33	42%	4%
FALL 2020	504	1	0%	0	0%	0%

Notes

Students must attempt any credit level MATH course within 2 year of the cohort term to be included.

A,B,C are considered Passing grades.

"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.

Data as of 4/16/2021.

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P Kelleher

Analysis of AMP Students - MATH081\MATH082
Path To MATH083 Completion Rates By Student Track

	AMP STUDENTS										
		MATH082					MATH083				
TERM	COHORT	ATTEMPTING	% COHORT ATTEMPTING	PASS	% ATTEMPTING WHO PASS	% COHORT SUCCESFULLY COMPLETING	ATTEMPTING	% COHORT ATTEMPTING	PASS	% ATTEMPTING WHO PASS	% COHORT SUCCESFULLY COMPLETING
FALL 2011	86	86	100%	37	43%	43%	47	55%	33	70%	38%
FALL 2012	41	41	100%	22	54%	54%	18	44%	13	72%	32%
FALL 2013	59	59	100%	22	37%	37%	20	34%	15	75%	25%
FALL 2014	100	100	100%	47	47%	47%	49	49%	34	69%	34%
FALL 2015	315	315	100%	123	39%	39%	117	37%	82	70%	26%
FALL 2016	303	303	100%	134	44%	44%	106	35%	63	59%	21%
FALL 2017	277	277	100%	154	56%	56%	95	34%	62	65%	22%
FALL 2018	228	228	100%	114	50%	50%	71	31%	50	70%	22%
FALL 2019	232	232	100%	98	42%	42%	76	33%	59	78%	25%
FALL 2020	90	90	100%	55	61%	61%	5	6%	4	80%	4%

	SEQUENTIAL STUDENTS										
		MATH082					MATH083				
TERM	COHORT	ATTEMPTING	% COHORT ATTEMPTING	PASS	% ATTEMPTING WHO PASS	% COHORT SUCCESFULLY COMPLETING	ATTEMPTING	% COHORT ATTEMPTING	PASS	% ATTEMPTING WHO PASS	% COHORT SUCCESFULLY COMPLETING
FALL 2011	1,451	599	41%	335	56%	23%	374	26%	221	59%	15%
FALL 2012	1,393	637	46%	363	57%	26%	387	28%	223	58%	16%
FALL 2013	1,356	593	44%	328	55%	24%	361	27%	219	61%	16%
FALL 2014	1,173	482	41%	278	58%	24%	284	24%	182	64%	16%
FALL 2015	897	381	42%	193	51%	22%	155	17%	95	61%	11%
FALL 2016	785	347	44%	171	49%	22%	117	15%	79	68%	10%
FALL 2017	719	278	39%	167	60%	23%	92	13%	65	71%	9%
FALL 2018	610	226	37%	130	58%	21%	77	13%	53	69%	9%
FALL 2019	748	271	36%	178	66%	24%	66	9%	45	68%	6%
FALL 2020	504	19	4%	8	42%	2%	1	0%	1	100%	0%

Notes

Students must attempt MATH083 within two years of the cohort term.

For sequential students, MATH082 must be attempted within 1 year of the cohort term.

A,B,C are considered Passing grades.

"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.

Data as of 4/16/2021.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP081_082\REPORTS\[AMP_ANALYSIS_081-082_F11-F20_042021.xlsx]SUMMARY_PATH

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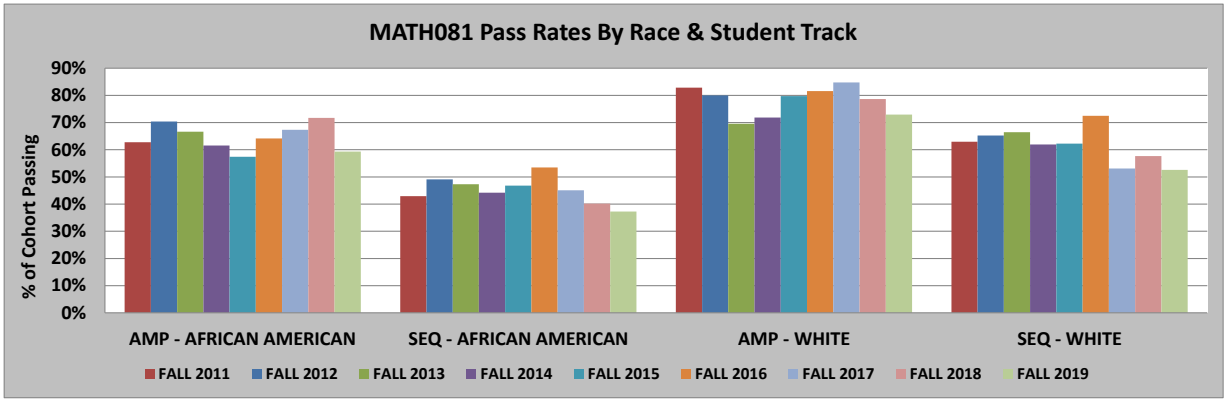
P Kelleher

Analysis of AMP Students - MATH081\MATH082
MATH081 Pass Rates By Race & Student Track



	AFRICAN -AMERICAN STUDENTS									
	AMP STUDENTS			SEQUENTIAL STUDENTS			TOTAL			
TERM	COHORT	PASS 081	% COHORT PASSING	COHORT	PASS 081	% COHORT PASSING	COHORT	PASS 081	% COHORT PASSING	% COHORT AMP
FALL 2011	43	27	63%	897	385	43%	940	412	44%	5%
FALL 2012	27	19	70%	847	416	49%	874	435	50%	3%
FALL 2013	24	16	67%	805	381	47%	829	397	48%	3%
FALL 2014	52	32	62%	724	320	44%	776	352	45%	7%
FALL 2015	188	108	57%	590	276	47%	778	384	49%	24%
FALL 2016	173	111	64%	501	268	53%	674	379	56%	26%
FALL 2017	144	97	67%	446	201	45%	590	298	51%	24%
FALL 2018	131	94	72%	403	162	40%	534	256	48%	25%
FALL 2019	145	86	59%	494	184	37%	639	270	42%	23%
FALL 2020	57	42	74%	321	121	38%	378	163	43%	15%

	WHITE STUDENTS									
	AMP STUDENTS			SEQUENTIAL STUDENTS			TOTAL			
TERM	COHORT	PASS 081	% COHORT PASSING	COHORT	PASS 081	% COHORT PASSING	COHORT	PASS 081	% COHORT PASSING	% COHORT AMP
FALL 2011	35	29	83%	437	275	63%	472	304	64%	7%
FALL 2012	10	8	80%	417	272	65%	427	280	66%	2%
FALL 2013	23	16	70%	408	271	66%	431	287	67%	5%
FALL 2014	32	23	72%	315	195	62%	347	218	63%	9%
FALL 2015	79	63	80%	188	117	62%	267	180	67%	30%
FALL 2016	87	71	82%	171	124	73%	258	195	76%	34%
FALL 2017	92	78	85%	162	86	53%	254	164	65%	36%
FALL 2018	61	48	79%	137	79	58%	198	127	64%	31%
FALL 2019	48	35	73%	135	71	53%	183	106	58%	26%
FALL 2020	13	10	77%	102	54	53%	115	64	56%	11%

Notes

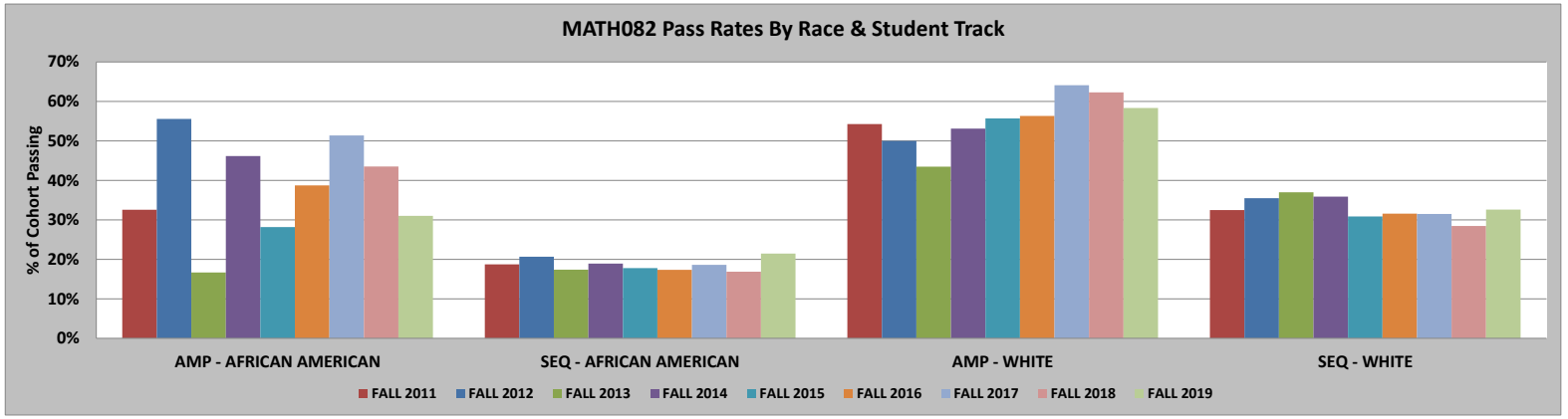
A,B,C are considered Passing grades.

"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.

Data as of 4/16/2021.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP081_082\REPORTS\[AMP_ANALYSIS_081-082_F11-F20_042021.xlsx]SUMMARY_MATH081_COMPLETION_RACE
4/20/2021 10:45
P Kelleher

Analysis of AMP Students - MATH081\MATH082
MATH082 Pass Rates By Race & Student Track



	AFRICAN -AMERICAN STUDENTS												
	AMP STUDENTS						SEQUENTIAL STUDENTS						
TERM	COHORT	ATTEMPTED 082	% COHORT ATTEMPTING	PASS 082	% ATTEMPTING WHO PASS	% COHORT WHO COMPLETE 082	COHORT	ATTEMPTED 082	% COHORT ATTEMPTING	PASS 082	% ATTEMPTING WHO PASS	% COHORT WHO COMPLETE 082	% COHORT AMP
FALL 2011	43	43	100%	14	33%	33%	897	338	37.68%	168	50%	19%	5%
FALL 2012	27	27	100%	15	56%	56%	847	336	39.67%	175	52%	21%	3%
FALL 2013	24	24	100%	4	17%	17%	805	307	38.14%	140	46%	17%	3%
FALL 2014	52	52	100%	24	46%	46%	724	267	36.88%	137	51%	19%	7%
FALL 2015	188	188	100%	53	28%	28%	590	239	40.51%	105	44%	18%	24%
FALL 2016	173	173	100%	67	39%	39%	501	207	41.32%	87	42%	17%	26%
FALL 2017	144	144	100%	74	51%	51%	446	154	34.53%	83	54%	19%	24%
FALL 2018	131	131	100%	57	44%	44%	403	124	30.77%	68	55%	17%	25%
FALL 2019	145	145	100%	45	31%	31%	494	172	34.82%	106	62%	21%	23%
FALL 2020	57	57	100%	33	58%	58%	321	8	2.49%	4	50%	1%	15%

	WHITE STUDENTS												
	AMP STUDENTS						SEQUENTIAL STUDENTS						
TERM	COHORT	ATTEMPTED 082	% COHORT ATTEMPTING	PASS 082	% ATTEMPTING WHO PASS	% COHORT WHO COMPLETE 082	COHORT	ATTEMPTED 082	% COHORT ATTEMPTING	PASS 082	% ATTEMPTING WHO PASS	% COHORT WHO COMPLETE	% COHORT AMP
FALL 2011	35	35	100%	19	54%	54%	437	221	51%	142	64%	32%	7%
FALL 2012	10	10	100%	5	50%	50%	417	233	56%	148	64%	35%	2%
FALL 2013	23	23	100%	10	43%	43%	408	225	55%	151	67%	37%	5%
FALL 2014	32	32	100%	17	53%	53%	315	157	50%	113	72%	36%	9%
FALL 2015	79	79	100%	44	56%	56%	188	90	48%	58	64%	31%	30%
FALL 2016	87	87	100%	49	56%	56%	171	90	53%	54	60%	32%	34%
FALL 2017	92	92	100%	59	64%	64%	162	72	44%	51	71%	31%	36%
FALL 2018	61	61	100%	38	62%	62%	137	68	50%	39	57%	28%	31%
FALL 2019	48	48	100%	28	58%	58%	135	56	41%	44	79%	33%	26%
FALL 2020	13	13	100%	9	69%	69%	102	5	5%	3	60%	3%	11%

Notes

For Sequential students, they must attempt MATH082 within 1 year of the cohort term to be considered as attempting.

AMP students are, by definition taking MATH081 and MATH082. The attempted rate is always 100%.

A,B,C are considered passing grades.

"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.

MATH082 results only include students in the 081 cohort. It is not the results for all students who take MATH082.

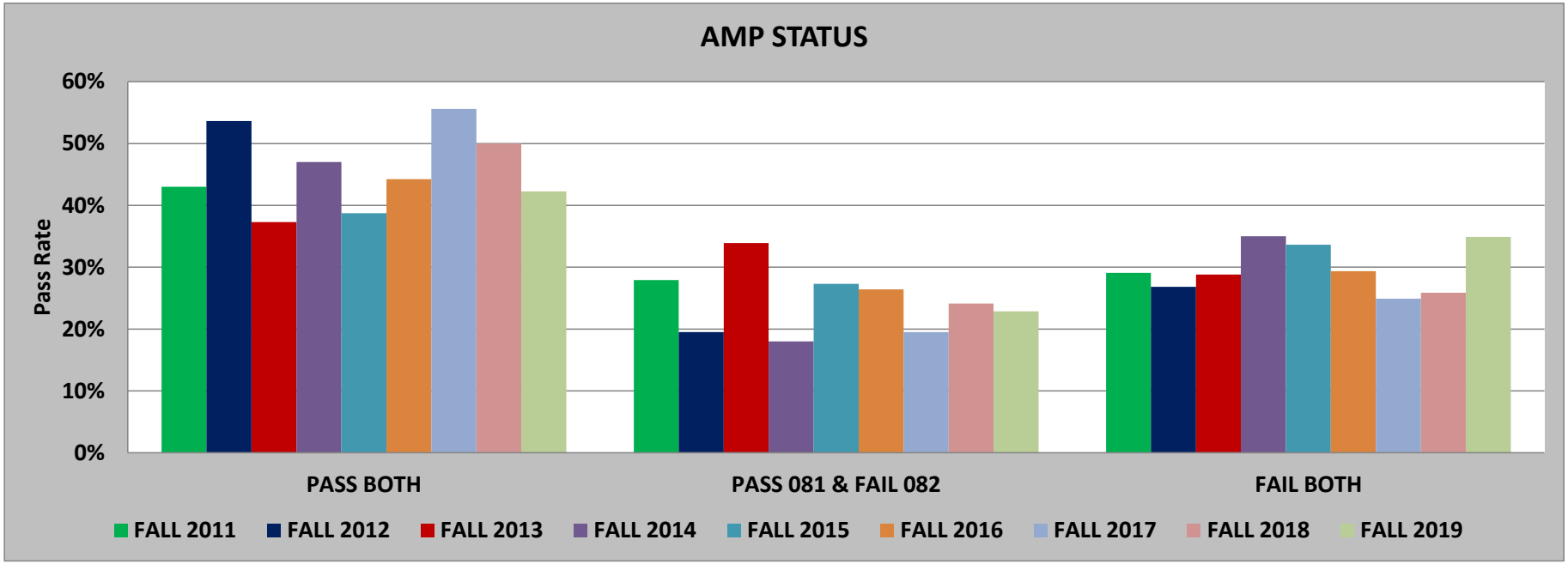
Data as of 4/16/2021.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP081_082\REPORTS\[AMP_ANALYSIS_081-082_F11-F20_042021.xlsx]SUMMARY_MATH082_RACE

4/20/2021 10:45

P Kelleher

Analysis of AMP Students - MATH081\MATH082
MATH081 & MATH082 Pass Rates - AMP Students Only



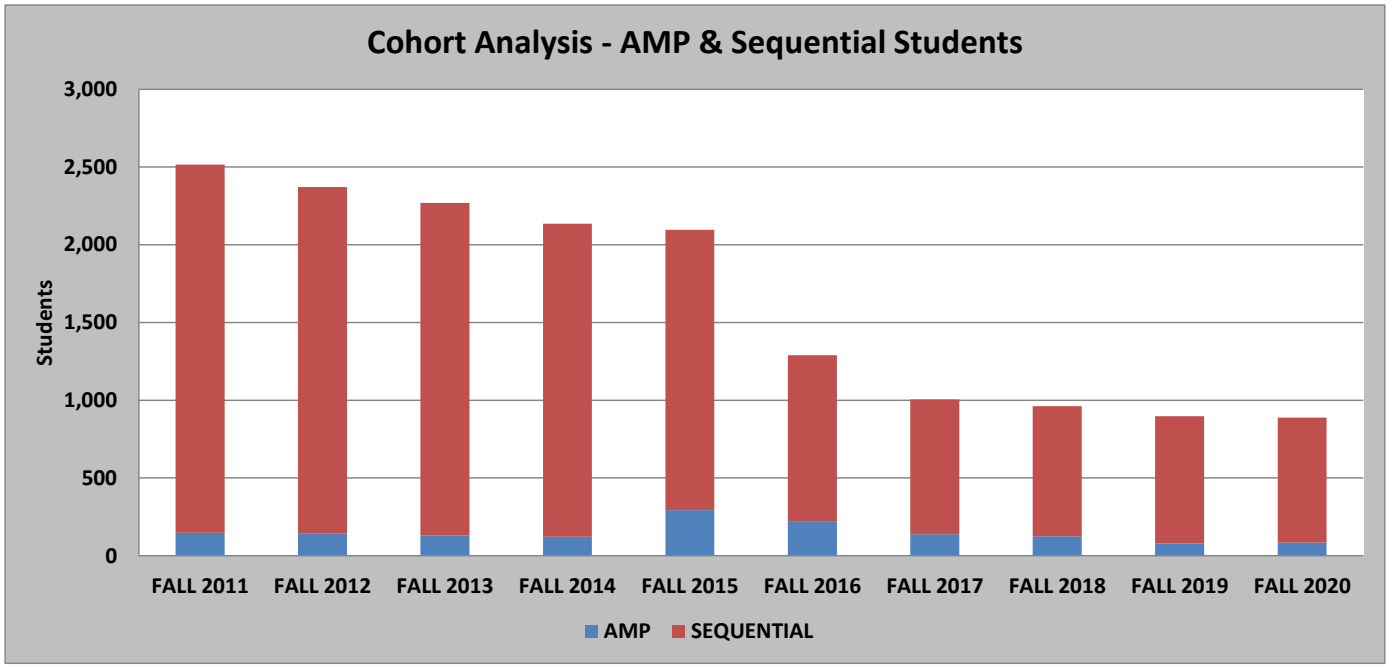
		PASS BOTH		PASS 081 & FAIL 082		FAIL 081 & PASS 082		FAIL BOTH	
TERM	COHORT	PASS	% COHORT	PASS	% COHORT	PASS	% COHORT	PASS	% COHORT
FALL 2011	86	37	43%	24	28%	0	0%	25	29%
FALL 2012	41	22	54%	8	20%	0	0%	11	27%
FALL 2013	59	22	37%	20	34%	0	0%	17	29%
FALL 2014	100	47	47%	18	18%	0	0%	35	35%
FALL 2015	315	122	39%	86	27%	1	0%	106	34%
FALL 2016	303	134	44%	80	26%	0	0%	89	29%
FALL 2017	277	154	56%	54	19%	0	0%	69	25%
FALL 2018	228	114	50%	55	24%	0	0%	59	26%
FALL 2019	232	98	42%	53	23%	0	0%	81	35%
FALL 2020	90	55	61%	13	14%	0	0%	22	24%

Notes

Passing grades are A,B or C.
"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.
Data as of 4/16/2021.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP081_082\REPORTS\[AMP_ANALYSIS_081-082_F11-F20_042021.xlsx]SUMMARY_AMP_STATUS
4/20/2021 10:45
P Kelleher

Analysis of AMP Students - MATH083\MATH163
Cohort Analysis - AMP & Sequential Students



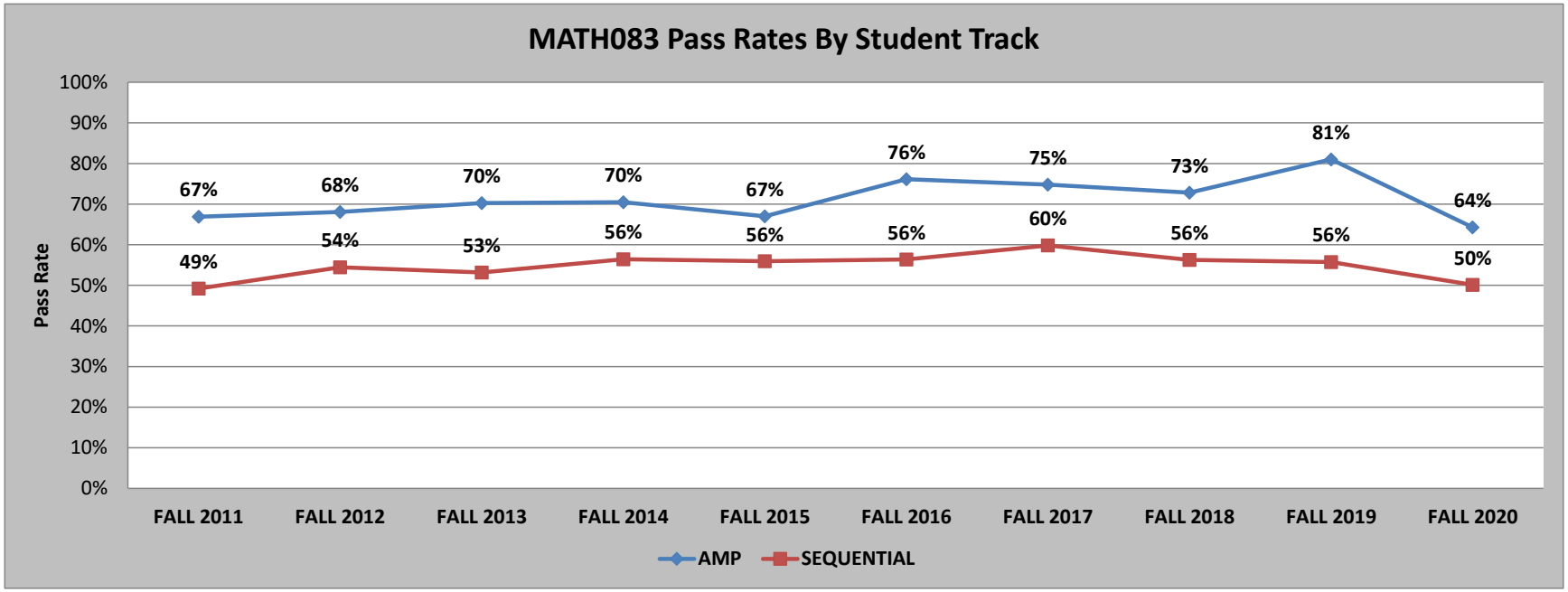
	MATH083 STUDENTS					
	AMP		SEQUENTIAL		TOTAL	
TERM	N	% Cohort	N	% Cohort	N	% Cohort
FALL 2011	148	6%	2,368	94%	2,516	100%
FALL 2012	141	6%	2,231	94%	2,372	100%
FALL 2013	131	6%	2,139	94%	2,270	100%
FALL 2014	122	6%	2,013	94%	2,135	100%
FALL 2015	294	14%	1,802	86%	2,096	100%
FALL 2016	218	17%	1,072	83%	1,290	100%
FALL 2017	139	14%	866	86%	1,005	100%
FALL 2018	125	13%	837	87%	962	100%
FALL 2019	79	9%	818	91%	897	100%
FALL 2020	84	9%	804	91%	888	100%

Notes

AMP Students are students who took MATH083 and MATH163 in the same term.
Sequential students are students who took only MATH083 in the term shown.
Data as of 4/20/2021.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP083_163\REPORTS\[AMP_ANALYSIS_083163_F11-F20_042021.xlsx]SUMMARY_COHORT
4/20/2021 10:12
P Kelleher

Analysis of AMP Students - MATH083\MATH163
MATH083 Pass Rates By Student Track

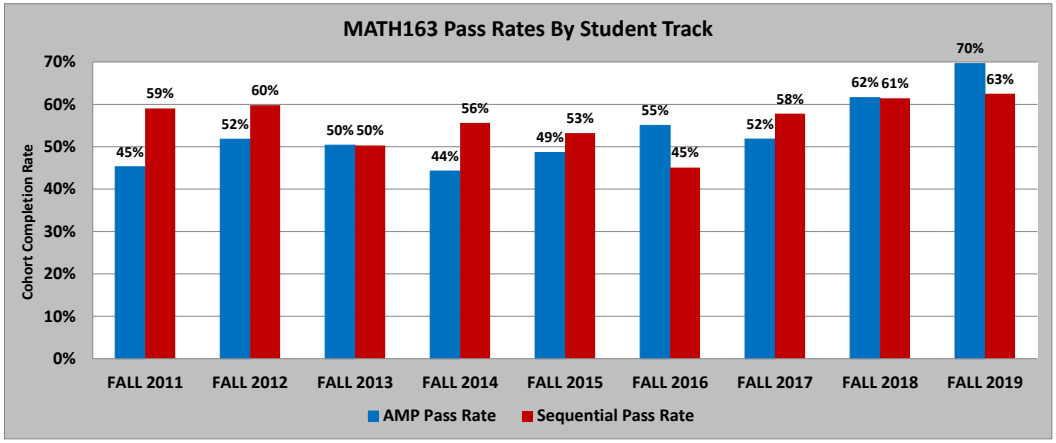


	MATH083 PASS RATES BY STUDENT TYPE									
	AMP			SEQUENTIAL			TOTAL			
TERM	COHORT	PASS	PASS RATE	COHORT	PASS	PASS RATE	COHORT	PASS	PASS RATE	% AMP
FALL 2011	148	99	67%	2,368	1,165	49%	2,516	1,264	50%	6%
FALL 2012	141	96	68%	2,231	1,215	54%	2,372	1,311	55%	6%
FALL 2013	131	92	70%	2,139	1,137	53%	2,270	1,229	54%	6%
FALL 2014	122	86	70%	2,013	1,136	56%	2,135	1,222	57%	6%
FALL 2015	294	197	67%	1,802	1,008	56%	2,096	1,205	57%	14%
FALL 2016	218	166	76%	1,072	604	56%	1,290	770	60%	17%
FALL 2017	139	104	75%	866	518	60%	1,005	622	62%	14%
FALL 2018	125	91	73%	837	471	56%	962	562	58%	13%
FALL 2019	79	64	81%	818	456	56%	897	520	58%	9%
FALL 2020	84	54	64%	804	403	50%	888	457	51%	9%

Notes

Passing grades are A,B or C.
"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.
Data as of 4/20/2021.

Analysis of AMP Students - MATH083\MATH163
MATH163 Pass Rates By Student Track



	AMP STUDENTS					
TERM	COHORT	ATTEMPTED MATH163	% COHORT ATTEMPTING	PASS MATH163	% ATTEMPTING WHO PASS MATH163	% COHORT SUCCESSFULLY COMPLETING MATH163
FALL 2011	148	148	100%	67	45%	45%
FALL 2012	141	141	100%	73	52%	52%
FALL 2013	131	131	100%	66	50%	50%
FALL 2014	122	122	100%	54	44%	44%
FALL 2015	294	294	100%	143	49%	49%
FALL 2016	218	218	100%	120	55%	55%
FALL 2017	139	139	100%	72	52%	52%
FALL 2018	125	125	100%	77	62%	62%
FALL 2019	79	79	100%	55	70%	70%
FALL 2020	84	84	100%	45	54%	54%

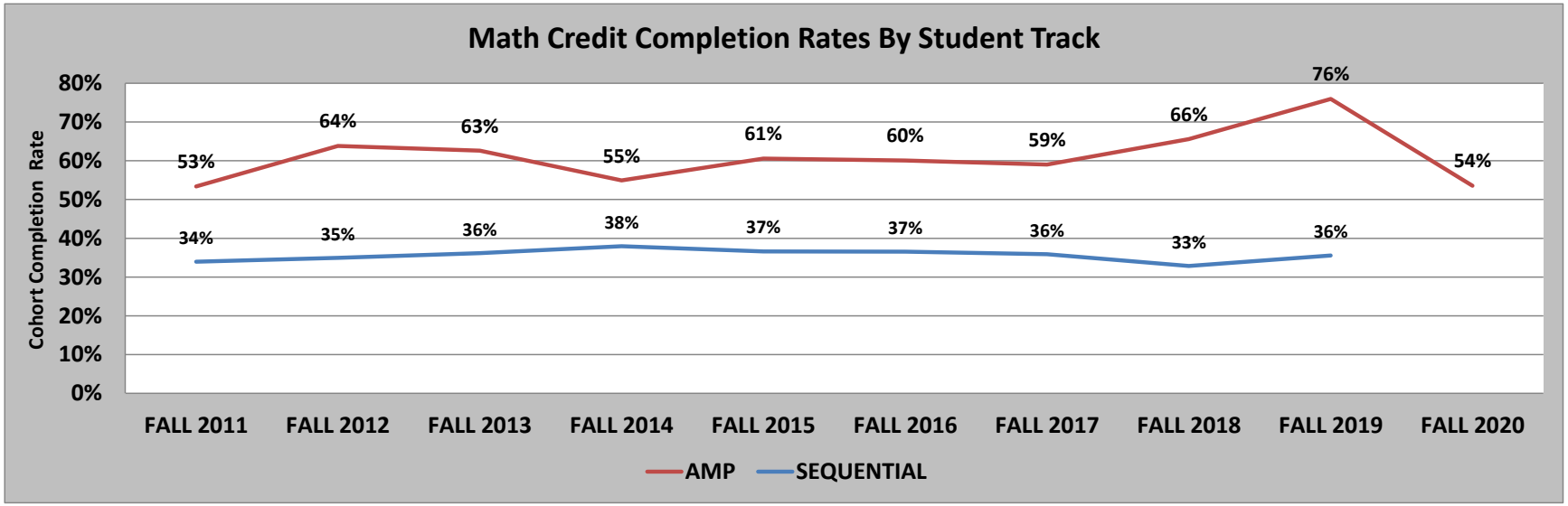
	SEQUENTIAL STUDENTS					
TERM	COHORT	ATTEMPTED MATH163	% COHORT ATTEMPTING	PASS MATH163	% ATTEMPTING WHO PASS MATH163	% COHORT SUCCESSFULLY COMPLETING MATH163
FALL 2011	2,368	471	20%	278	59%	
FALL 2012	2,231	311	14%	186	60%	
FALL 2013	2,139	322	15%	162	50%	
FALL 2014	2,013	338	17%	188	56%	
FALL 2015	1,802	325	18%	173	53%	
FALL 2016	1,072	193	18%	87	45%	
FALL 2017	866	128	15%	74	58%	
FALL 2018	837	153	18%	94	61%	
FALL 2019	818	104	13%	65	63%	
FALL 2020	804	7	1%	4	57%	

Notes

For Sequential students, they must attempt MATH163 within 1 year of the cohort term to be considered as attempting.
For Sequential students, the highest grade achieved in MATH163 is analyzed.
AMP students are, by definition taking MATH083 and MATH163. The attempted rate is always 100%.
A,B,C are considered passing grades.
"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.
MATH163 results only include students in the 083 cohort. It is not the results for all students who take MATH163.
Data as of 4/20/2021.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP083_163\REPORTS\[AMP_ANALYSIS_083163_F11-F20_042021.xlsx]SUMMARY_MATH163_COMPLETION
4/20/2021 10:12
P Kelleher

Analysis of AMP Students - MATH083\MATH163
Math Credit Completion Rates By Student Track



	AMP STUDENTS			SEQUENTIAL STUDENTS			TOTAL			
TERM	COHORT	PASS MATH CREDIT	% COHORT COMPLETING	COHORT	PASS MATH CREDIT	% COHORT COMPLETING	COHORT	PASS MATH CREDIT	% COHORT COMPLETING	% COHORT AMP
FALL 2011	148	79	53%	2,368	804	34%	2,516	883	35%	6%
FALL 2012	141	90	64%	2,231	780	35%	2,372	870	37%	6%
FALL 2013	131	82	63%	2,139	773	36%	2,270	855	38%	6%
FALL 2014	122	67	55%	2,013	764	38%	2,135	831	39%	6%
FALL 2015	294	178	61%	1,802	660	37%	2,096	838	40%	14%
FALL 2016	218	131	60%	1,072	392	37%	1,290	523	41%	17%
FALL 2017	139	82	59%	866	311	36%	1,005	393	39%	14%
FALL 2018	125	82	66%	837	275	33%	962	357	37%	13%
FALL 2019	79	60	76%	818	291	36%	897	351	39%	9%
FALL 2020	84	45	54%	804	19	2%	888	64	7%	9%

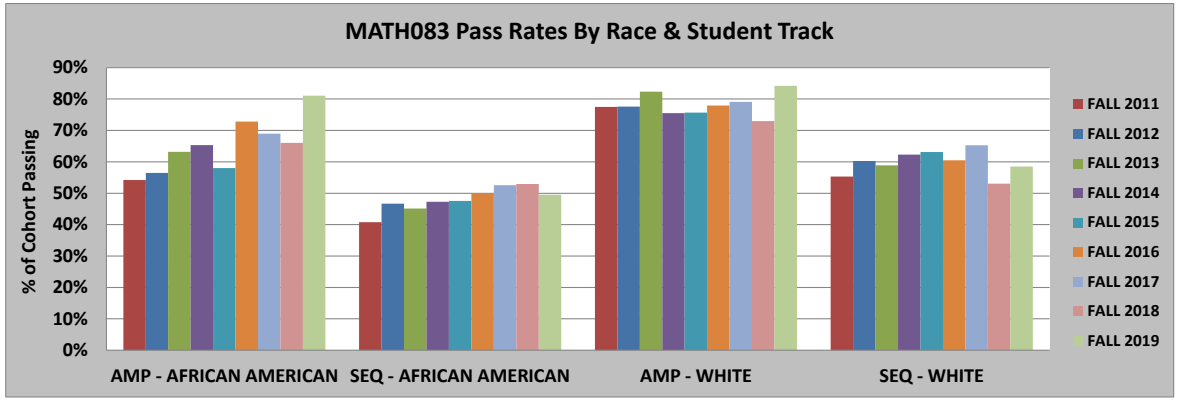
Notes

Students must attempt any credit level MATH course within 2 year of the cohort term to be included.
A,B,C are considered Passing grades.
"W" grades are given when students withdraw from a course. It is considered a failing grade for this analysis.

Data as of 4/20/2021.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP083_163\REPORTS\[AMP_ANALYSIS_083163_F11-F20_042021.xlsx]SUMMARY_CREDIT_COURSE
4/20/2021 10:12
P Kelleher

Analysis of AMP Students - MATH083\MATH163
MATH083 Pass Rates By Race & Student Track



	AFRICAN -AMERICAN STUDENTS									
	AMP STUDENTS			SEQUENTIAL STUDENTS			TOTAL			
TERM	COHORT	PASS 083	% COHORT PASSING	COHORT	PASS 083	% COHORT PASSING	COHORT	PASS 083	% COHORT PASSING	% COHORT AMP
FALL 2011	59	32	54%	934	381	41%	993	413	42%	6%
FALL 2012	62	35	56%	956	446	47%	1,018	481	47%	6%
FALL 2013	57	36	63%	877	396	45%	934	432	46%	6%
FALL 2014	49	32	65%	857	405	47%	906	437	48%	5%
FALL 2015	119	69	58%	822	391	48%	941	460	49%	13%
FALL 2016	81	59	73%	508	254	50%	589	313	53%	14%
FALL 2017	58	40	69%	430	226	53%	488	266	55%	12%
FALL 2018	53	35	66%	387	205	53%	440	240	55%	12%
FALL 2019	37	30	81%	339	168	50%	376	198	53%	10%
FALL 2020	36	21	58%	399	182	46%	435	203	47%	8%

	WHITE STUDENTS									
	AMP STUDENTS			SEQUENTIAL STUDENTS			TOTAL			
TERM	COHORT	PASS 083	% COHORT PASSING	COHORT	PASS 083	% COHORT PASSING	COHORT	PASS 083	% COHORT PASSING	% COHORT AMP
FALL 2011	71	55	77%	1,134	627	55%	1,205	682	57%	6%
FALL 2012	58	45	78%	1,004	605	60%	1,062	650	61%	5%
FALL 2013	51	42	82%	946	557	59%	997	599	60%	5%
FALL 2014	49	37	76%	833	519	62%	882	556	63%	6%
FALL 2015	115	87	76%	675	426	63%	790	513	65%	15%
FALL 2016	77	60	78%	382	231	60%	459	291	63%	17%
FALL 2017	43	34	79%	285	186	65%	328	220	67%	13%
FALL 2018	37	27	73%	264	140	53%	301	167	55%	12%
FALL 2019	19	16	84%	270	158	59%	289	174	60%	7%
FALL 2020	24	15	63%	229	122	53%	253	137	54%	9%

Notes

AMP Students are students who took MATH083 and MATH163 in the same term.

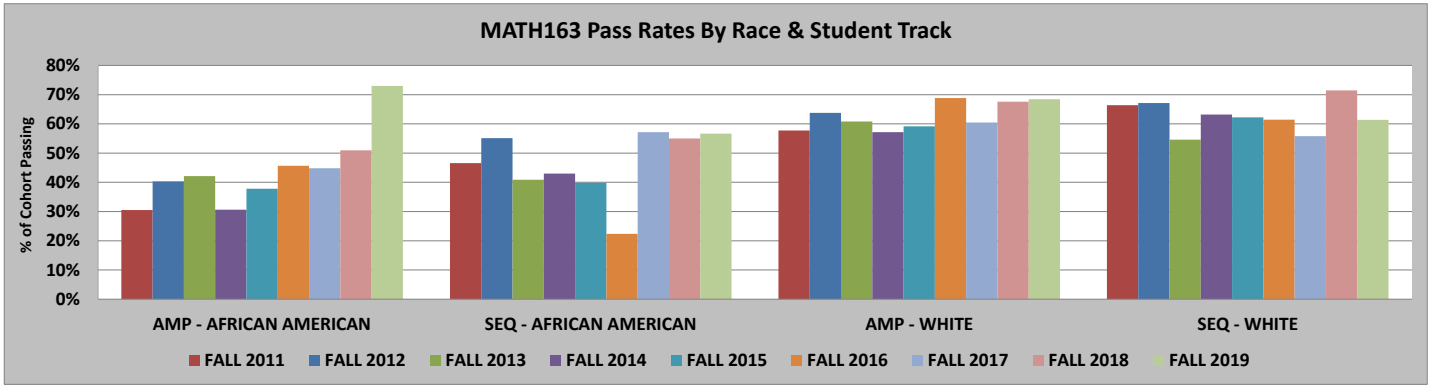
Sequential students are students who took only MATH083 in the term shown.

Passing grades are A,B or C.

Data as of 4/20/2021.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP083_163\REPORTS\[AMP_ANALYSIS_083163_F11-F20_042021.xlsx]SUMMARY_MATH083_COMPLETION_RACE
4/20/2021 10:12
P Kelleher

Analysis of AMP Students - MATH083\MATH163
MATH163 Pass Rates By Race & Student Track



	AFRICAN -AMERICAN STUDENTS											
	AMP STUDENTS						SEQUENTIAL STUDENTS					
TERM	COHORT	ATTEMPTED 163	% ATTEMPTING	PASS 163	PASS RATE	% COHORT COMPLETING 163	COHORT	ATTEMPTED 163	% ATTEMPTING	PASS 163	PASS RATE	% COHORT COMPLETING 163
FALL 2011	59	59	100%	18	31%	31%	934	174	19%	81	47%	
FALL 2012	62	62	100%	25	40%	40%	956	118	12%	65	55%	
FALL 2013	57	57	100%	24	42%	42%	877	115	13%	47	41%	
FALL 2014	49	49	100%	15	31%	31%	857	121	14%	52	43%	
FALL 2015	119	119	100%	45	38%	38%	822	113	14%	45	40%	
FALL 2016	81	81	100%	37	46%	46%	508	67	13%	15	22%	
FALL 2017	58	58	100%	26	45%	45%	430	49	11%	28	57%	
FALL 2018	53	53	100%	27	51%	51%	387	60	16%	33	55%	
FALL 2019	37	37	100%	27	73%	73%	339	30	9%	17	57%	
FALL 2020	36	36	100%	15	42%	42%	399	4	1%	1	25%	

	WHITE STUDENTS											
	AMP STUDENTS						SEQUENTIAL STUDENTS					
TERM	COHORT	ATTEMPTED 163	% ATTEMPTING	PASS 163	PASS RATE	% COHORT COMPLETING 163	COHORT	ATTEMPTED 163	% ATTEMPTING	PASS 163	PASS RATE	% COHORT COMPLETING 163
FALL 2011	71	71	100%	41	58%	58%	1,134	217	19%	144	66%	
FALL 2012	58	58	100%	37	64%	64%	1,004	140	14%	94	67%	
FALL 2013	51	51	100%	31	61%	61%	946	141	15%	77	55%	
FALL 2014	49	49	100%	28	57%	57%	833	155	19%	98	63%	
FALL 2015	115	115	100%	68	59%	59%	675	135	20%	84	62%	
FALL 2016	77	77	100%	53	69%	69%	382	83	22%	51	61%	
FALL 2017	43	43	100%	26	60%	60%	285	43	15%	24	56%	
FALL 2018	37	37	100%	25	68%	68%	264	42	16%	30	71%	
FALL 2019	19	19	100%	13	68%	68%	270	44	16%	27	61%	
FALL 2020	24	24	100%	14	58%	58%	229	3	1%	3	100%	

Notes

AMP Students are students who took MATH083 and MATH163 in the same term.

Sequential students are students who took only MATH083 in the term shown.

Sequential students must take MATH163 within 1 year to be analyzed.

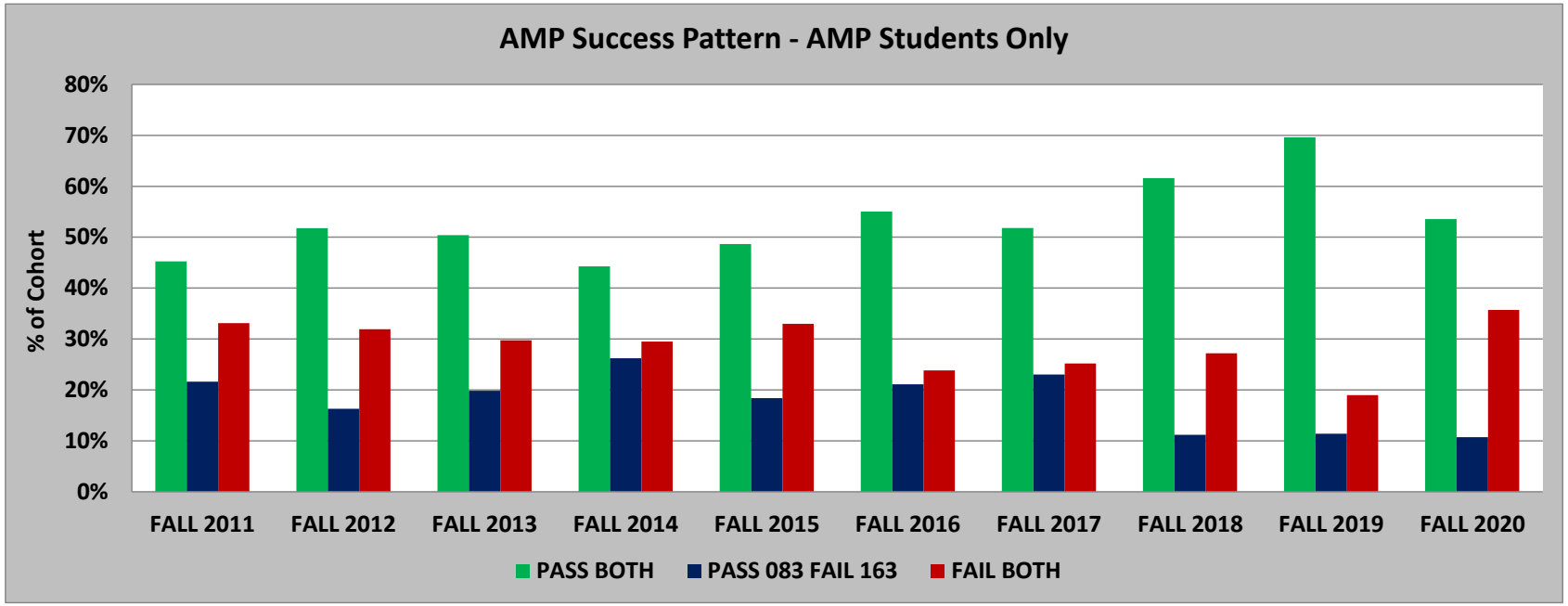
Sequential students are not required to take MATH163.

Passing grades are A,B or C.

Data as of 4/20/2021.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP083_163\REPORTS\[AMP_ANALYSIS_083163_F11-F20_042021.xlsx]SUMMARY_MATH163_RACE
4/20/2021 10:13
P Kelleher

Analysis of AMP Students - MATH083\MATH163
AMP Success Pattern - AMP Students Only



		MATH083 & MATH163 - AMP STUDENTS ONLY							
		PASS BOTH		PASS 083 FAIL 163		FAIL 083 PASS 163		FAIL BOTH	
TERM	COHORT	STUDENTS	% COHORT	STUDENTS	% COHORT	STUDENTS	% COHORT	STUDENTS	% COHORT
FALL 2011	148	67	45%	32	22%	0	0%	49	33%
FALL 2012	141	73	52%	23	16%	0	0%	45	32%
FALL 2013	131	66	50%	26	20%	0	0%	39	30%
FALL 2014	122	54	44%	32	26%	0	0%	36	30%
FALL 2015	294	143	49%	54	18%	0	0%	97	33%
FALL 2016	218	120	55%	46	21%	0	0%	52	24%
FALL 2017	139	72	52%	32	23%	0	0%	35	25%
FALL 2018	125	77	62%	14	11%	0	0%	34	27%
FALL 2019	79	55	70%	9	11%	0	0%	15	19%
FALL 2020	84	45	54%	9	11%	0	0%	30	36%

Notes

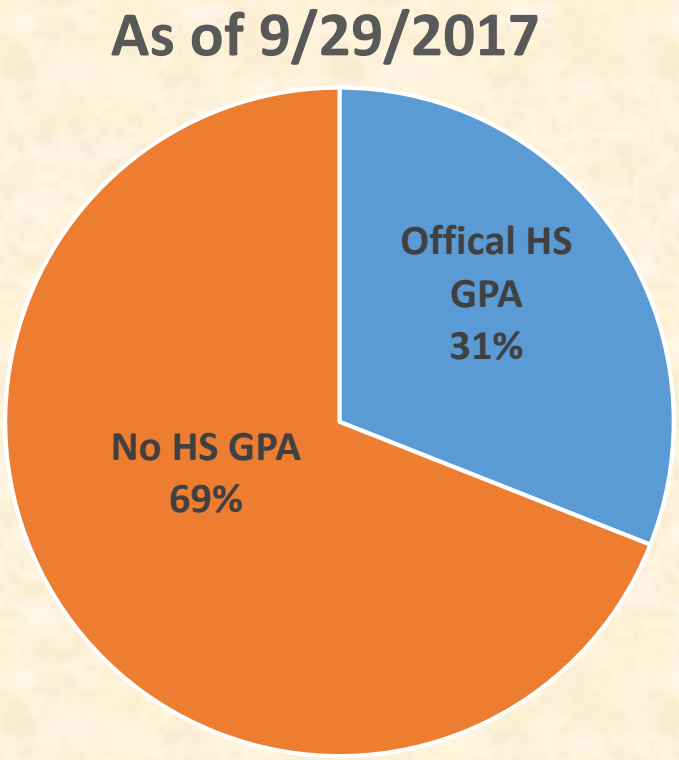
AMP Students are students who took MATH083 and MATH163 in the same term.
Sequential students are students who took only MATH083 in the term shown.
Data as of 4/20/2021.

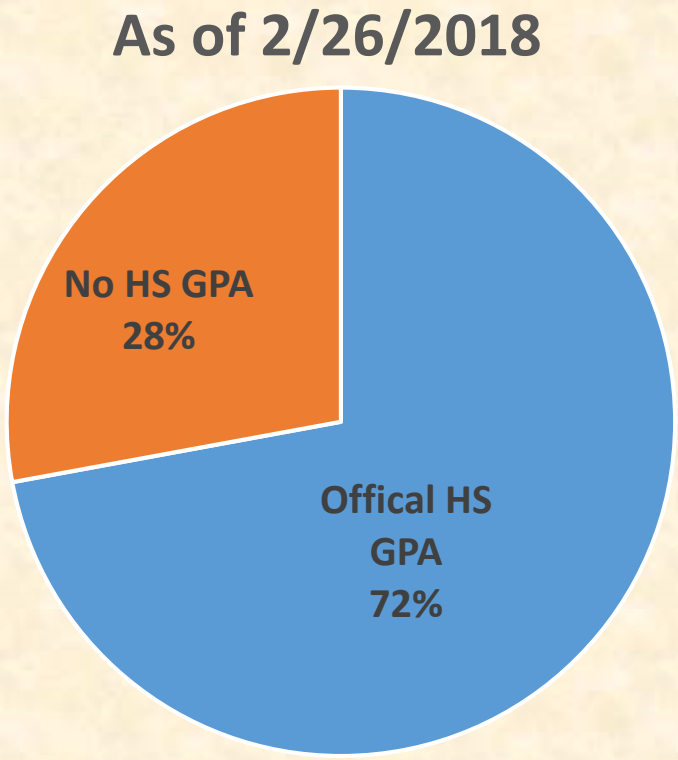
K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\AMP\AMP083_163\REPORTS\[AMP_ANALYSIS_083163_F11-F20_042021.xlsx]SUMMARY_AMP_STATUS
4/20/2021 10:13
P Kelleher

High School GPA Analysis Multiple Measures Project

Patrick Kelleher
Director of Planning
Planning, Research & Evaluation

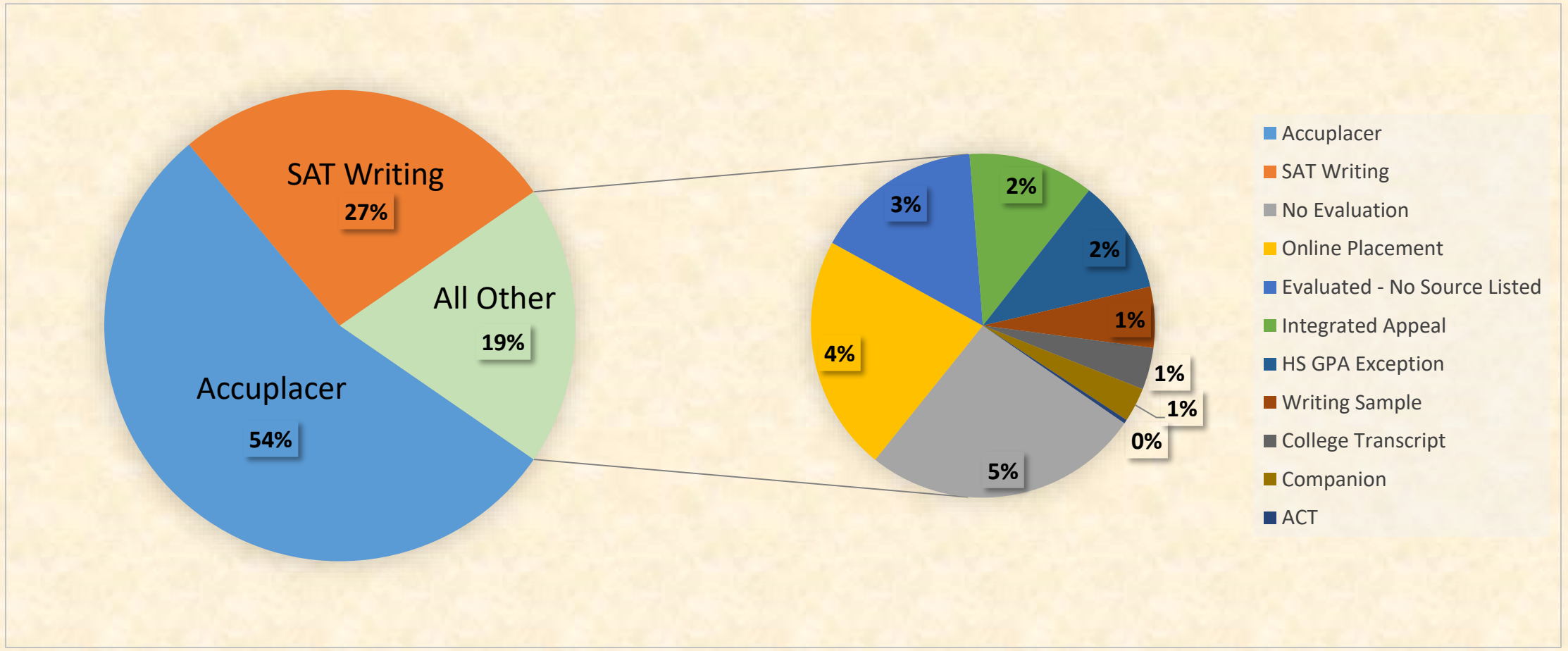
Fall 2017 Recent BCPS Graduates
1,452 students





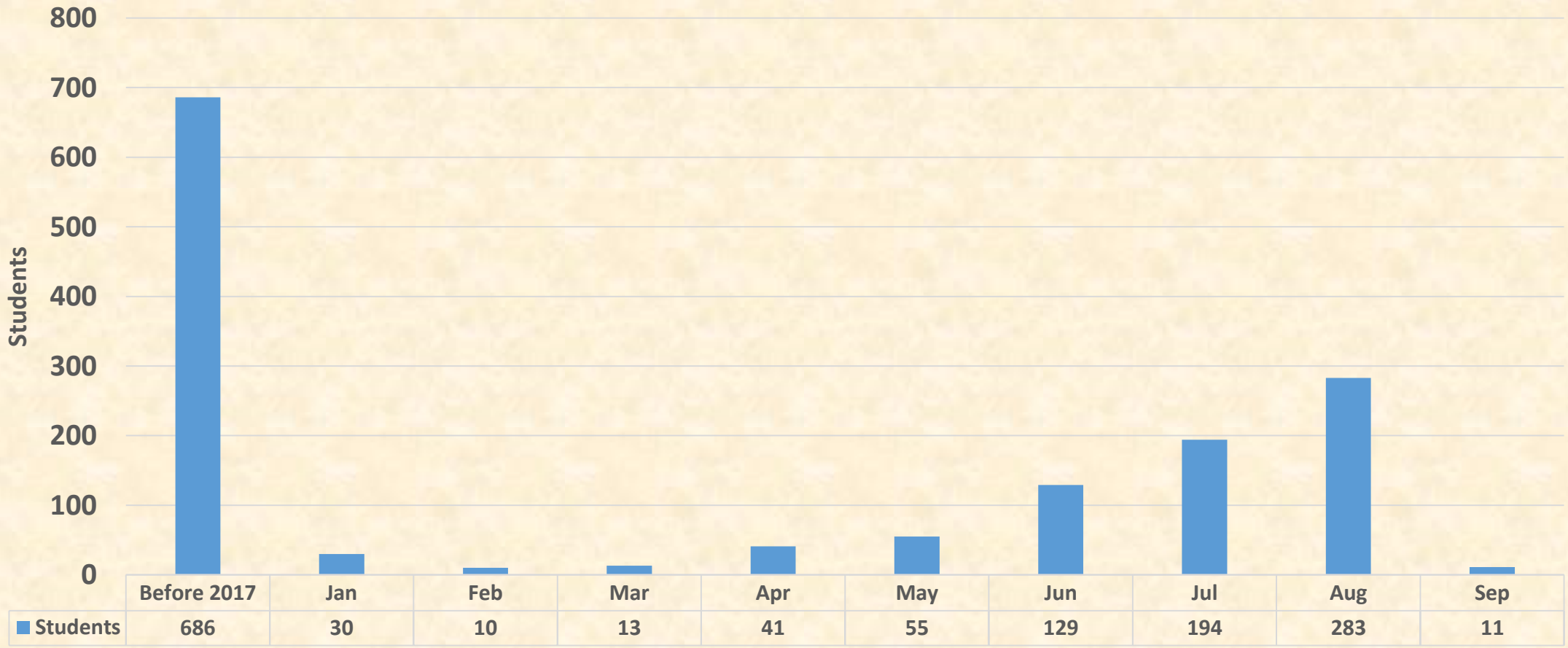
Students can enter their high school information on their application. But we require an official transcript to enter their GPA. On September 29, 2017, we had transcripts for only 31% of BCPS students. By February 26th, we had 72%.

Source of English Evaluation



Only 30 students were given the HS GPA Exception out of 1,452 entering BCPS students.

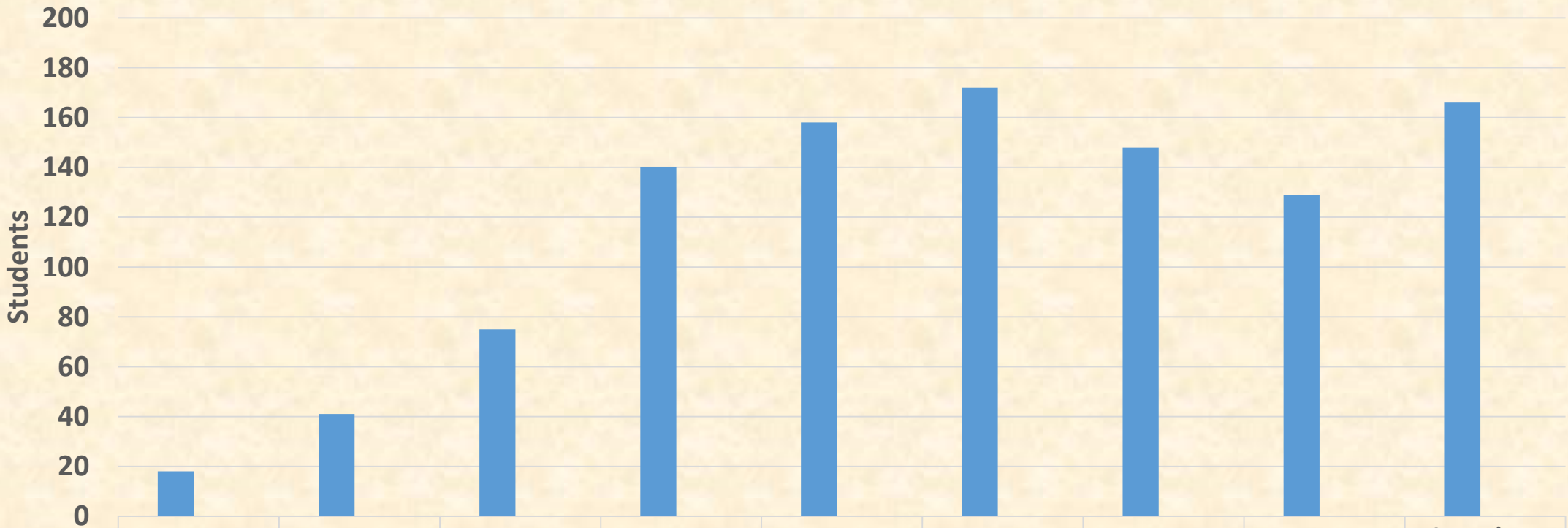
When were students assessed?



	Before 2017	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Students	686	30	10	13	41	55	129	194	283	11

58% of students had an English assessment before June 2017.

High School GPA



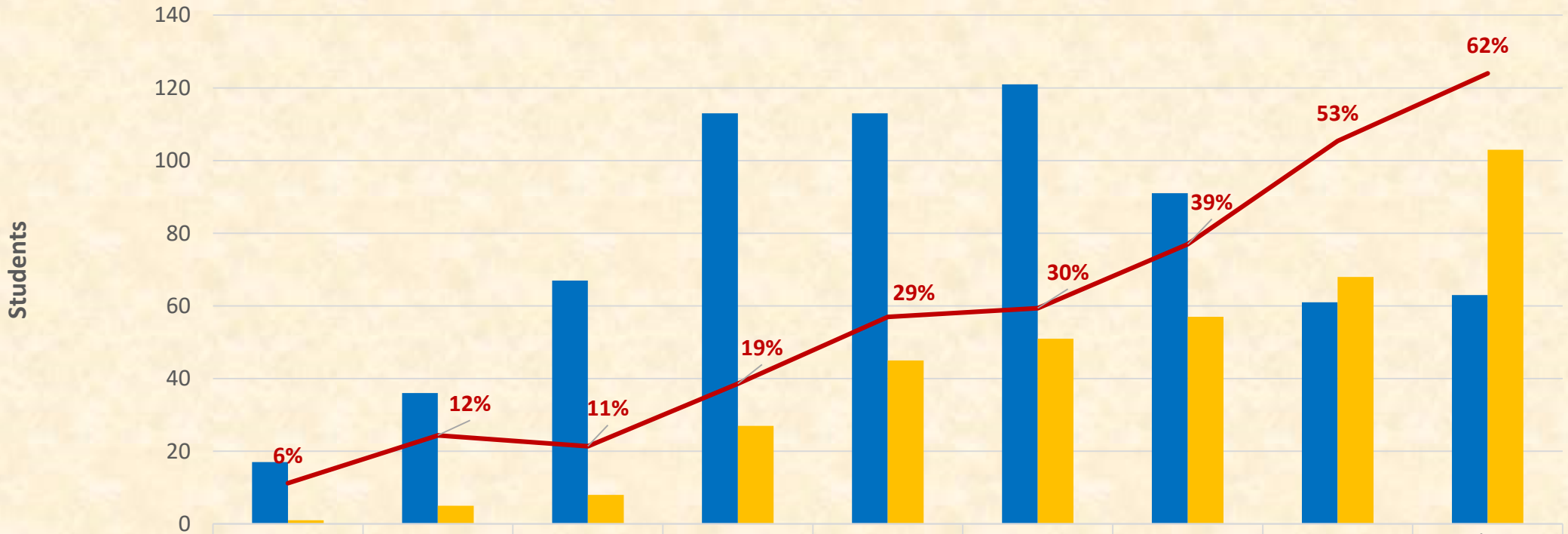
	4.00-3.75	3.74-3.5	3.49-3.25	3.24-3.0	2.99-2.75	2.74-2.5	2.49-2.25	2.24-2.0	Less than 2.0
Students	18	41	75	140	158	172	148	129	166
% Total	2%	4%	7%	13%	15%	16%	14%	12%	16%

43% of students are at or below a 2.5 HS GPA.
59% are at or below a 2.75.

English Analysis – Available Data

- Official HS Transcripts for 1,047 students
- 998 had an English Placement
- 761 Students Attempted ENGL101

HS GPA & English Developmental Status



	4.00-3.75	3.74-3.5	3.49-3.25	3.24-3.0	2.99-2.75	2.74-2.5	2.49-2.25	2.24-2.0	Less than 2.0
College Ready	17	36	67	113	113	121	91	61	63
Developmental	1	5	8	27	45	51	57	68	103
% Dev	6%	12%	11%	19%	29%	30%	39%	53%	62%

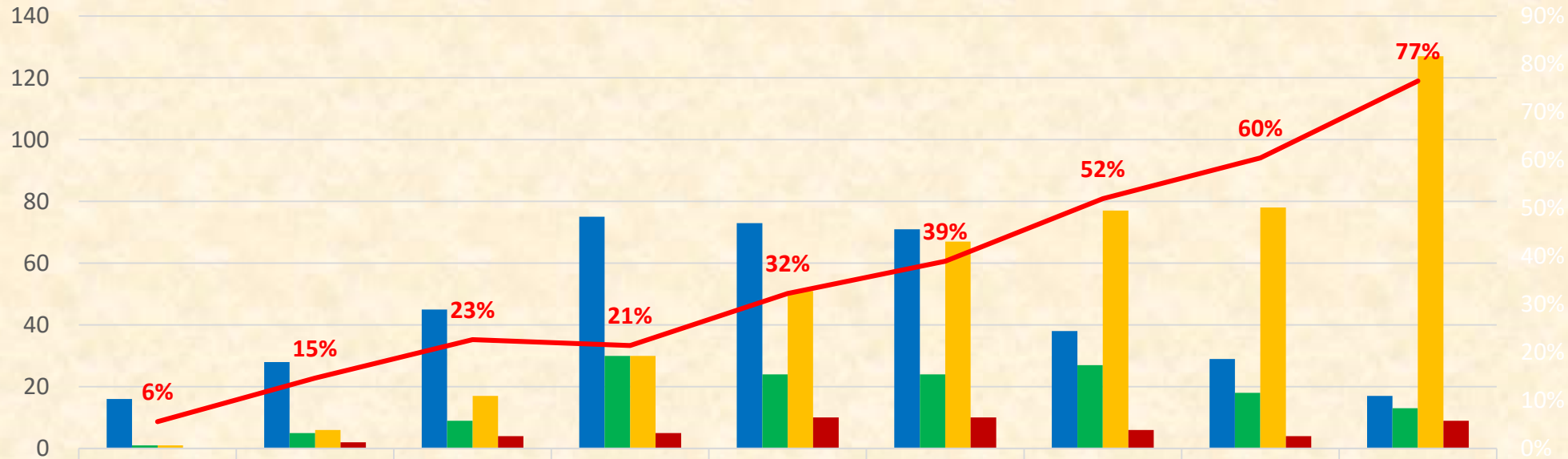
ENGL101 Pass Rate

	COLLEGE READY		DEVELOPMENTAL		ALL STUDENTS	
GPA	STUDENTS ATTEMPTING	PASS RATE	STUDENTS ATTEMPTING	PASS RATE	STUDENTS ATTEMPTING	PASS RATE
4.00 - 3.75	12	100%	1	100%	13	100%
3.74 - 3.50	27	100%	2	100%	29	100%
3.49 - 3.25	55	96%	6	100%	61	97%
3.24 - 3.00	101	90%	16	94%	117	91%
2.99 – 2.75	91	91%	32	94%	123	92%
2.74 – 2.50	**106**	**83%**	**31**	**97%**	**137**	**86%**
2.49 – 2.25	76	70%	30	77%	106	72%
2.24 – 2.00	51	75%	29	83%	80	78%
Less than 2.0	51	51%	44	64%	95	57%
Total	**570**	**83%**	**191**	**83%**	**761**	**83%**

Math Analysis – Available Data

- Official HS Transcripts for 1,047 students
- 997 Math Evaluations
- 671 Students Attempted a Developmental or Credit course.
  - But with so many course options, no particular course had enough students to be analyzed as we did with ENGL101.

HS GPA & Math Developmental Status



	4.00 - 3.75	3.74 - 3.5	3.49 - 3.25	3.24 - 3.0	2.99 - 2.75	2.74 - 2.5	2.49 - 2.25	2.24 - 2.0	LESS THAN 2.0
College Ready	16	28	45	75	73	71	38	29	17
MATH083\LVM2	1	5	9	30	24	24	27	18	13
Developmental	1	6	17	30	51	67	77	78	127
No Eval	0	2	4	5	10	10	6	4	9
Dev %	6%	15%	23%	21%	32%	39%	52%	60%	77%

Math Developmental includes students evaluated to Math for Success, MATH081 & MATH082.

Math Course Pass Rate

	Developmental Math Course		Credit Math Course	
GPA	STUDENTS ATTEMPTING	PASS RATE	STUDENTS ATTEMPTING	PASS RATE
4.00 - 3.75	1	100%	14	100%
3.74 - 3.50	8	88%	23	96%
3.49 - 3.25	18	89%	38	84%
3.24 - 3.00	44	89%	67	76%
2.99 – 2.75	48	88%	62	84%
2.74 – 2.50	**74**	**65%**	**58**	**77%**
2.49 – 2.25	66	61%	26	58%
2.24 – 2.00	44	60%	27	30%
Less than 2.0	73	40%	10	40%
Total	**376**	**66%**	**325**	**75%**

Conclusions & Next Steps

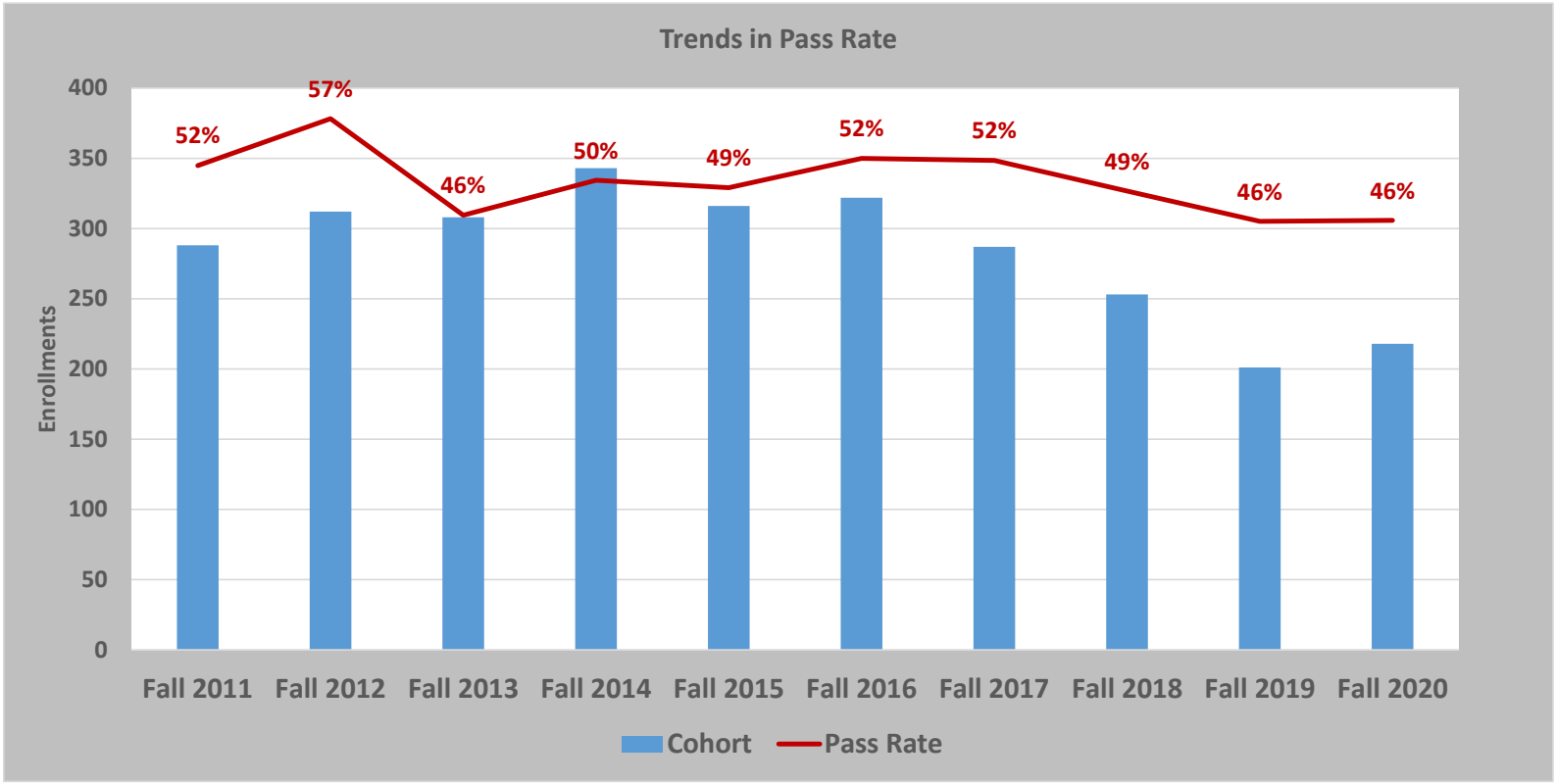
- 43% of BCPS students have a 2.5 HS GPA or less.
- BCPS students are 61% of our incoming ‘fresh from high school” population.

- Next Steps
  - Analyzing Spring 2018 course results.
  - Analyze Fall 2018 Mid-term results.
  - Further analysis on the relationship between HS GPA, other evaluation tools and course success.

Questions?

Patrick Kelleher
Director of Planning
Planning, Research & Evaluation

MATH165 Analysis
Trends in Pass Rate

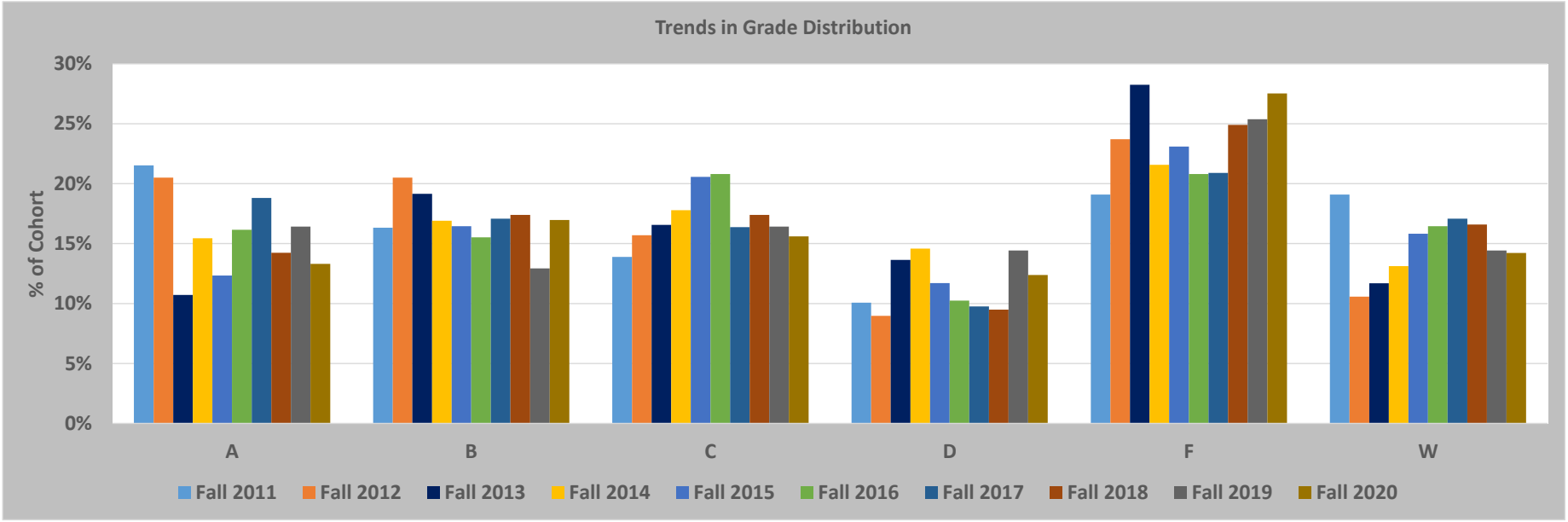


Term	Cohort	Pass	Pass Rate
Fall 2011	288	149	52%
Fall 2012	312	177	57%
Fall 2013	308	143	46%
Fall 2014	343	172	50%
Fall 2015	316	156	49%
Fall 2016	322	169	52%
Fall 2017	287	150	52%
Fall 2018	253	124	49%
Fall 2019	201	92	46%
Fall 2020	218	100	46%

Notes
Grades are from end of term frozen files.
Passing grades are A, B, or C.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\MATH165\REPORTS\[MATH165_ANALYSIS_F11-F20_060821.xlsx]TREND_PASS_RATE
6/8/21 9:55
P Kelleher

MATH165 Analysis
Trends in Grade Distribution



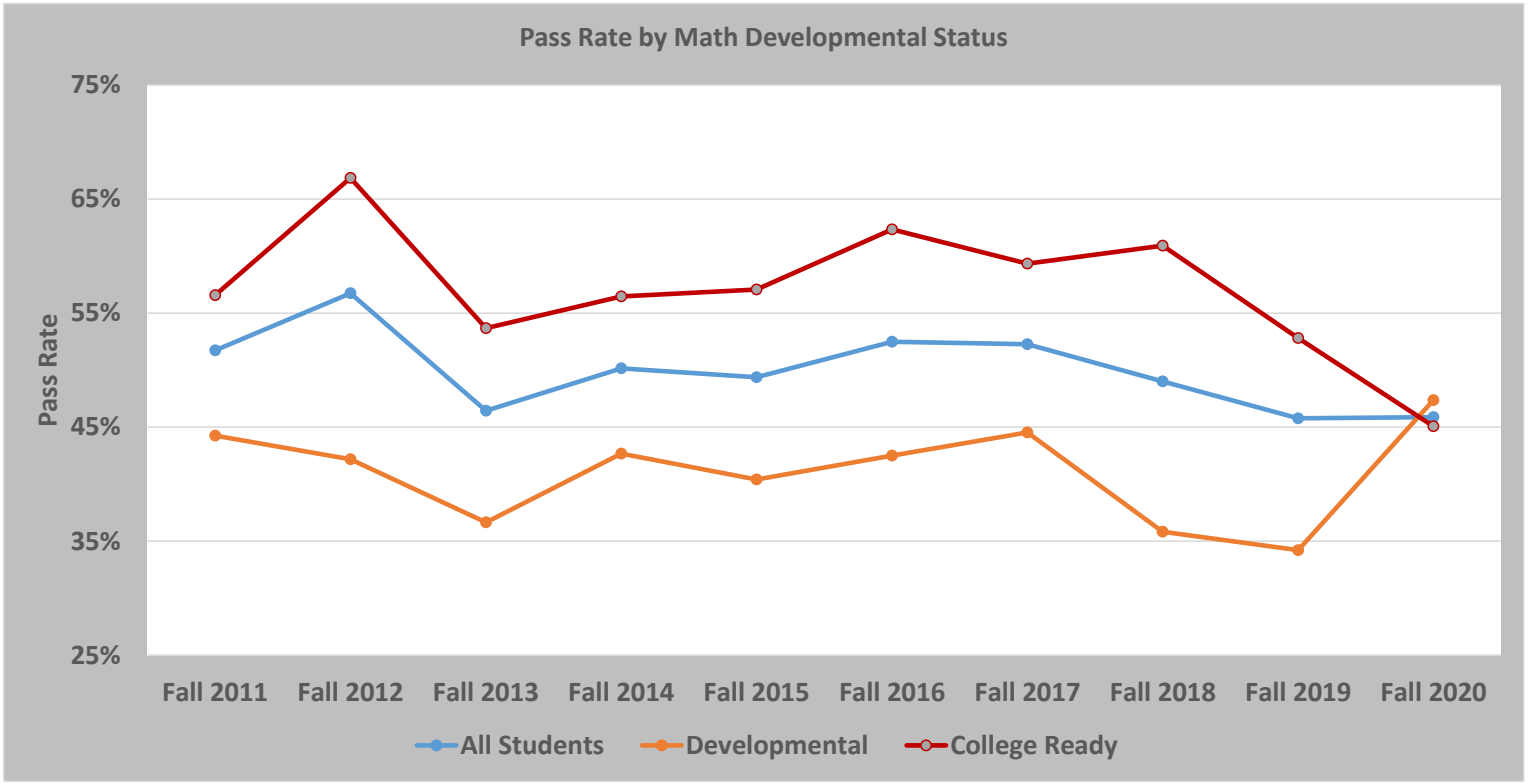
				Grade Distribution													
				A		B		C		D		F		I		W	
Term	Cohort	Pass	Pass Rate	Students	% Cohort	Students	% Cohort	Students	% Cohort	Students	% Cohort	Students	% Cohort	Students	% Cohort	Students	% Cohort
Fall 2011	288	149	52%	62	22%	47	16%	40	14%	29	10%	55	19%	0	0%	55	19%
Fall 2012	312	177	57%	64	21%	64	21%	49	16%	28	9%	74	24%	0	0%	33	11%
Fall 2013	308	143	46%	33	11%	59	19%	51	17%	42	14%	87	28%	0	0%	36	12%
Fall 2014	343	172	50%	53	15%	58	17%	61	18%	50	15%	74	22%	2	1%	45	13%
Fall 2015	316	156	49%	39	12%	52	16%	65	21%	37	12%	73	23%	0	0%	50	16%
Fall 2016	322	169	52%	52	16%	50	16%	67	21%	33	10%	67	21%	0	0%	53	16%
Fall 2017	287	150	52%	54	19%	49	17%	47	16%	28	10%	60	21%	0	0%	49	17%
Fall 2018	253	124	49%	36	14%	44	17%	44	17%	24	9%	63	25%	0	0%	42	17%
Fall 2019	201	92	46%	33	16%	26	13%	33	16%	29	14%	51	25%	0	0%	29	14%
Fall 2020	218	100	46%	29	13%	37	17%	34	16%	27	12%	60	28%	0	0%	31	14%

Notes

Grades are from end of term frozen files.
Passing grades are A, B, or C.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\MATH165\REPORTS\[MATH165_ANALYSIS_F11-F20_060821.xlsx]TREND_GRADE_DISTRIBUTION
6/8/21 9:55
P Kelleher

MATH165 Analysis
Pass Rate by Math Developmental Status

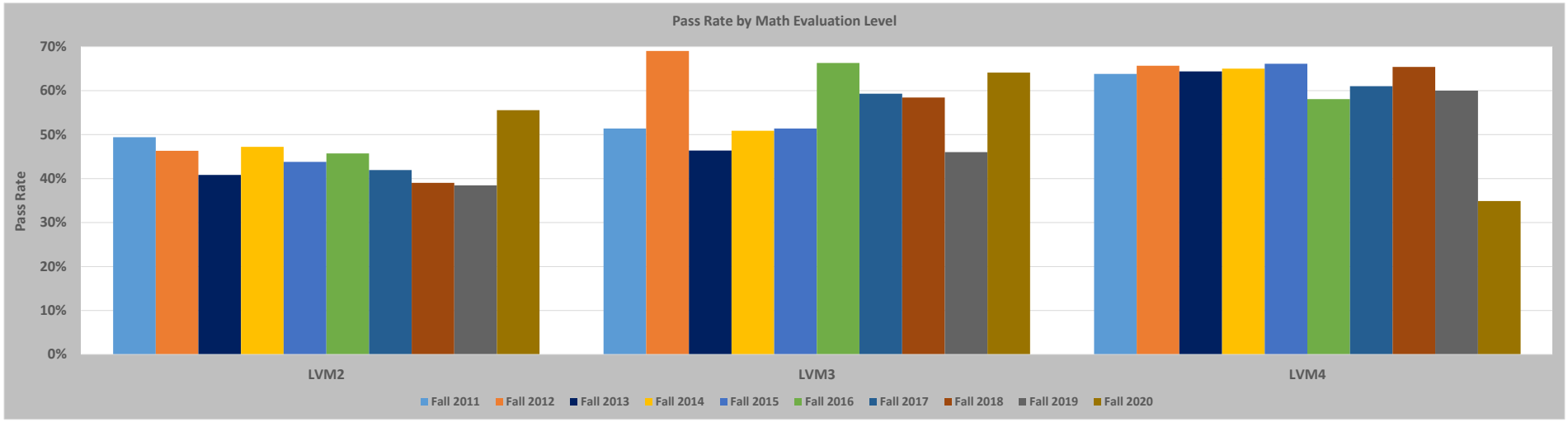


	All Students			Developmental				College Ready				
Term	Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate	% Developmental
Fall 2011	288	149	52%	113	39%	50	44%	175	61%	99	57%	39%
Fall 2012	312	177	57%	128	41%	54	42%	184	59%	123	67%	41%
Fall 2013	308	143	46%	131	43%	48	37%	177	57%	95	54%	43%
Fall 2014	343	172	50%	157	46%	67	43%	186	54%	105	56%	46%
Fall 2015	316	156	49%	146	46%	59	40%	170	54%	97	57%	46%
Fall 2016	322	169	52%	160	50%	68	43%	162	50%	101	62%	50%
Fall 2017	287	150	52%	137	48%	61	45%	150	52%	89	59%	48%
Fall 2018	253	124	49%	120	47%	43	36%	133	53%	81	61%	47%
Fall 2019	201	92	46%	76	38%	26	34%	125	62%	66	53%	38%
Fall 2020	218	100	46%	76	35%	36	47%	142	65%	64	45%	35%

Notes
Grades are from end of term "frozen files."
Passing grades are A, B, or C.
Developmental levels are from the start of the term shown.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\MATH165\REPORTS\[MATH165_ANALYSIS_F11-F20_060821.xlsx]TREND_DEVELOPMENTAL
6/8/21 9:56
P Kelleher

MATH165 Analysis
Pass Rate by Math Evaluation Level

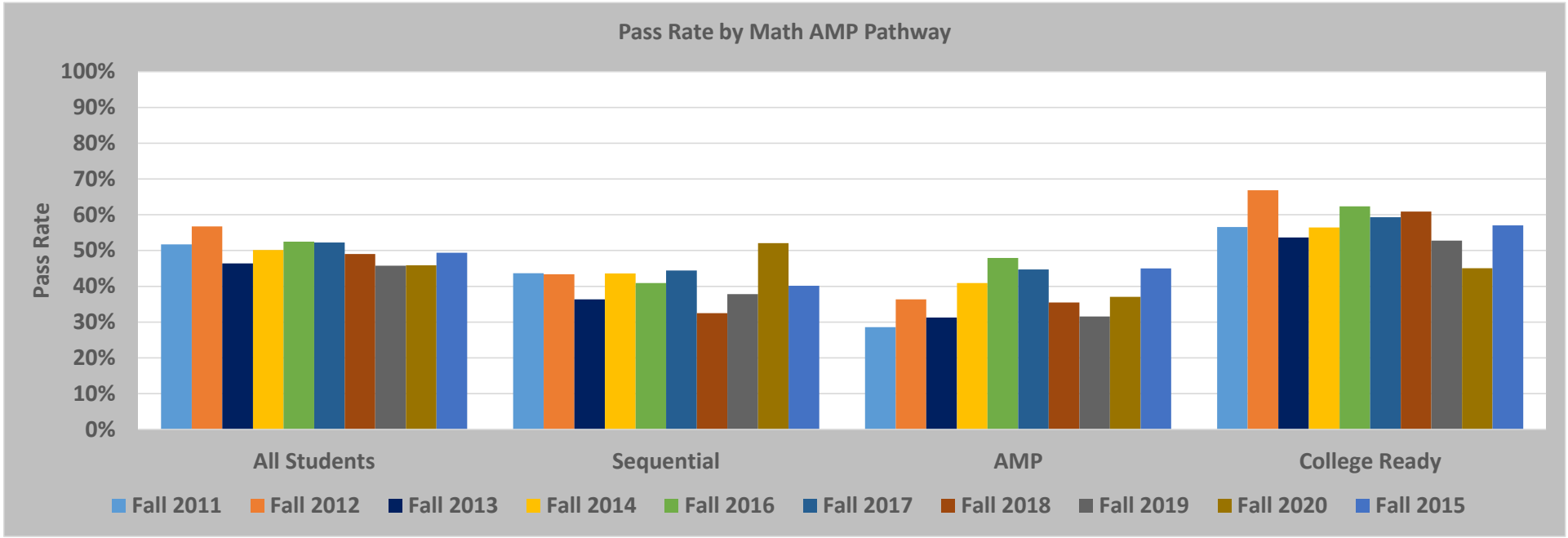


	All Students			LVM0				LVM1				LVM2				LVM3				LVM4				LVM5				No Evaluation			
Term	Cohort	Pass	Pass Rate	Students	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate
Fall 2011	288	149	52%	7	2%	1	14%	21	7%	7	33%	85	30%	42	49%	107	37%	55	51%	58	20%	37	64%	4	1%	4	100%	6	2%	3	50%
Fall 2012	312	177	57%	13	4%	4	31%	20	6%	6	30%	95	30%	44	46%	113	36%	78	69%	67	21%	44	66%	3	1%	1	33%	1	0%	0	0%
Fall 2013	308	143	46%	16	5%	5	31%	17	6%	3	18%	98	32%	40	41%	97	31%	45	46%	73	24%	47	64%	5	2%	2	40%	2	1%	1	50%
Fall 2014	343	172	50%	16	5%	6	38%	33	10%	10	30%	108	31%	51	47%	116	34%	59	51%	60	17%	39	65%	8	2%	6	75%	2	1%	1	50%
Fall 2015	316	156	49%	15	5%	5	33%	26	8%	8	31%	105	33%	46	44%	107	34%	55	51%	59	19%	39	66%	3	1%	3	100%	1	0%	0	0%
Fall 2016	322	169	52%	23	7%	9	39%	32	10%	11	34%	105	33%	48	46%	92	29%	61	66%	62	19%	36	58%	6	2%	3	50%	2	1%	1	50%
Fall 2017	287	150	52%	13	5%	6	46%	31	11%	16	52%	93	32%	39	42%	86	30%	51	59%	59	21%	36	61%	4	1%	1	25%	1	0%	1	100%
Fall 2018	253	124	49%	14	6%	2	14%	24	9%	9	38%	82	32%	32	39%	77	30%	45	58%	52	21%	34	65%	2	1%	1	50%	2	1%	1	50%
Fall 2019	201	92	46%	7	3%	4	57%	17	8%	2	12%	52	26%	20	38%	63	31%	29	46%	55	27%	33	60%	6	3%	4	67%	1	0%	0	0%
Fall 2020	218	100	46%	8	4%	1	13%	14	6%	5	36%	54	25%	30	56%	39	18%	25	64%	86	39%	30	35%	14	6%	7	50%	3	1%	2	67%

Notes
Grades are from end of term frozen files.
Passing grades are A, B, or C.
Developmental levels are from the start of the term shown.
Students with an LVM9 level are counted as LVM0 students.
No Evaluation are students who have no Math evaluation on file.

K:\IR\PRE Items\Pre Staff Folders\Pat\MATH_ANALYSIS\MATH165\REPORTS\[MATH165_ANALYSIS_F11-F20_060821.xlsx]TREND_LEVELS
6/8/21 9:56
P Kelleher

MATH165 Analysis
Pass Rate by Math AMP Pathway



	All Students			Sequential				AMP				Developmental - Unknown				College Ready			
Term	Cohort	Pass	Pass Rate	Students	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate	Cohort	% Cohort	Pass	Pass Rate
Fall 2011	288	149	52%	103	36%	45	44%	7	2%	2	29%	3	1%	3	100%	175	61%	99	57%
Fall 2012	312	177	57%	106	34%	46	43%	22	7%	8	36%	0	0%	0		184	59%	123	67%
Fall 2013	308	143	46%	110	36%	40	36%	16	5%	5	31%	5	2%	3	60%	177	57%	95	54%
Fall 2014	343	172	50%	133	39%	58	44%	22	6%	9	41%	2	1%	0	0%	186	54%	105	56%
Fall 2015	316	156	49%	122	39%	49	40%	20	6%	9	45%	4	1%	1	25%	170	54%	97	57%
Fall 2016	322	169	52%	110	34%	45	41%	48	15%	23	48%	2	1%	0	0%	162	50%	101	62%
Fall 2017	287	150	52%	99	34%	44	44%	38	13%	17	45%	0	0%	0		150	52%	89	59%
Fall 2018	253	124	49%	83	33%	27	33%	31	12%	11	35%	6	2%	5	83%	133	53%	81	61%
Fall 2019	201	92	46%	37	18%	14	38%	38	19%	12	32%	1	0%	0	0%	125	62%	66	53%
Fall 2020	218	100	46%	48	22%	25	52%	27	12%	10	37%	1	0%	1	100%	142	65%	64	45%

Notes

Grades are from end of term frozen files.
Passing grades are A, B, or C.
AMP students are developmental students who successfully completed MATH083 and MATH163 in the same term.
Sequential students are developmental students who successfully completed MATH083 as a standalone course.
Developmental - Unknown are developmental students who did not complete MATH083 as required, but were allowed to take MATH165.
College Ready are non-developmental students.

Self Directed Placement Final Grade Analysis Fall 2020 Term

Patrick Kelleher

Director of Planning

March 2021

Analysis Cohort

- All students who were evaluated in English from January 1st to October 31st 2020.
- Completed at least 1 course in Fall 2020 term.
- Includes high school concurrent students.

Self Directed Placements was the 2nd highest source

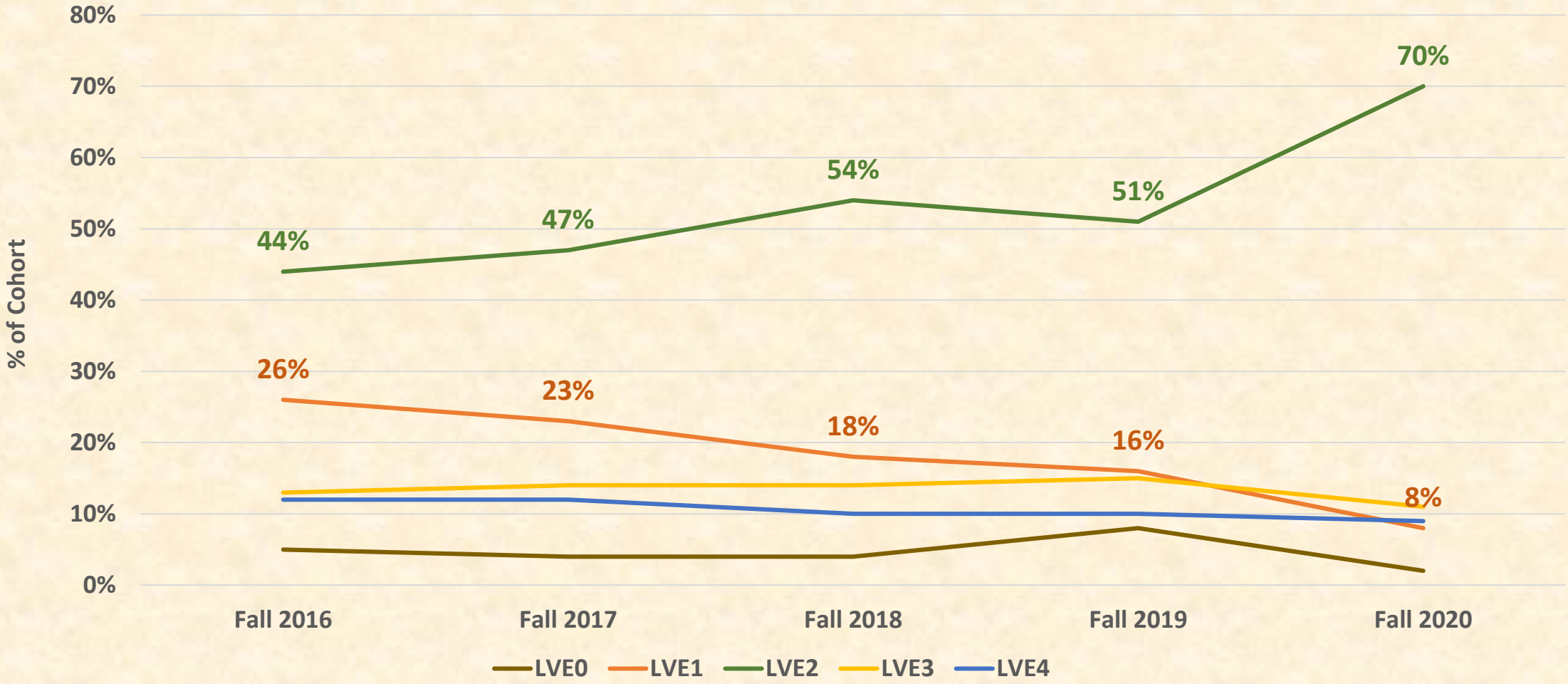
Rank	Source Code	Source Description	Count	% Total
1	GPA	**High School GPA**	2,055	38%
2	SDP	**Self Directed Placement**	1,336	25%
3	CTRA	**College Transcript**	1,149	21%
4	S11	**Evidence-based Read/Write Score**	341	6%
5		**All other sources**	509	10%
		Total	**5,361**	**100%**

Big changes over 5 years

	Fall 2016			Fall 2020	
Rank	**Source**	**% Total**		**Source**	**% Total**
1	**Accuplacer**	59%		**High School GPA**	38%
2	**High School GPA***	17%		**Self Directed Placement**	25%
3	**SAT**	8%		**College Transcript**	21%
4	**College Transcript**	7%		**Evidence-based Read/Write Score**	6%
5	**All other sources**	9%		**All other sources**	10%
	Total	**100%**		**Total**	**100%**

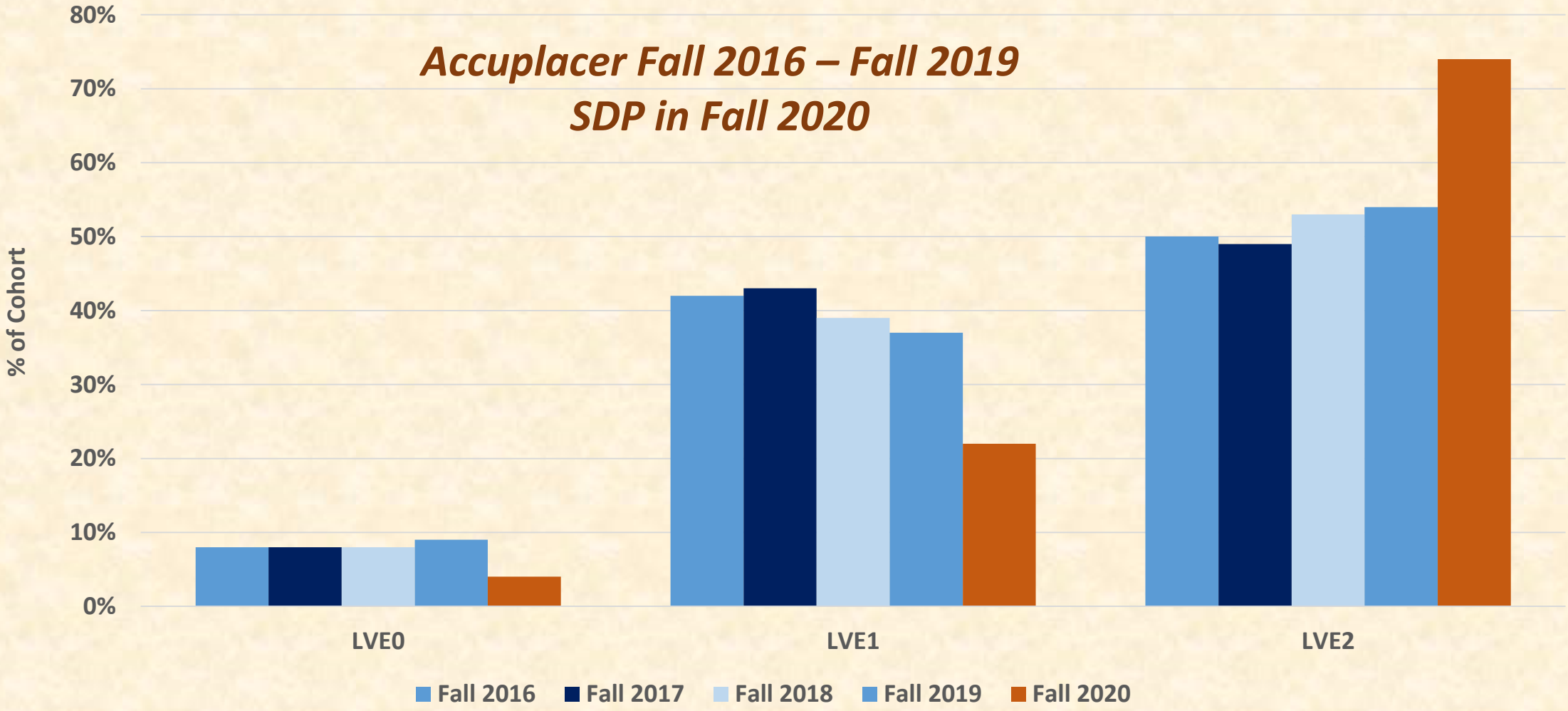
** Source data may include some non HS-GPA evaluations.*

More LVE2 students in Fall 2020



Includes all evaluation sources. LVE1 & LVE1 are developmental levels. All others are college ready.

Fall 2020 – SDP and an increase in LVE2



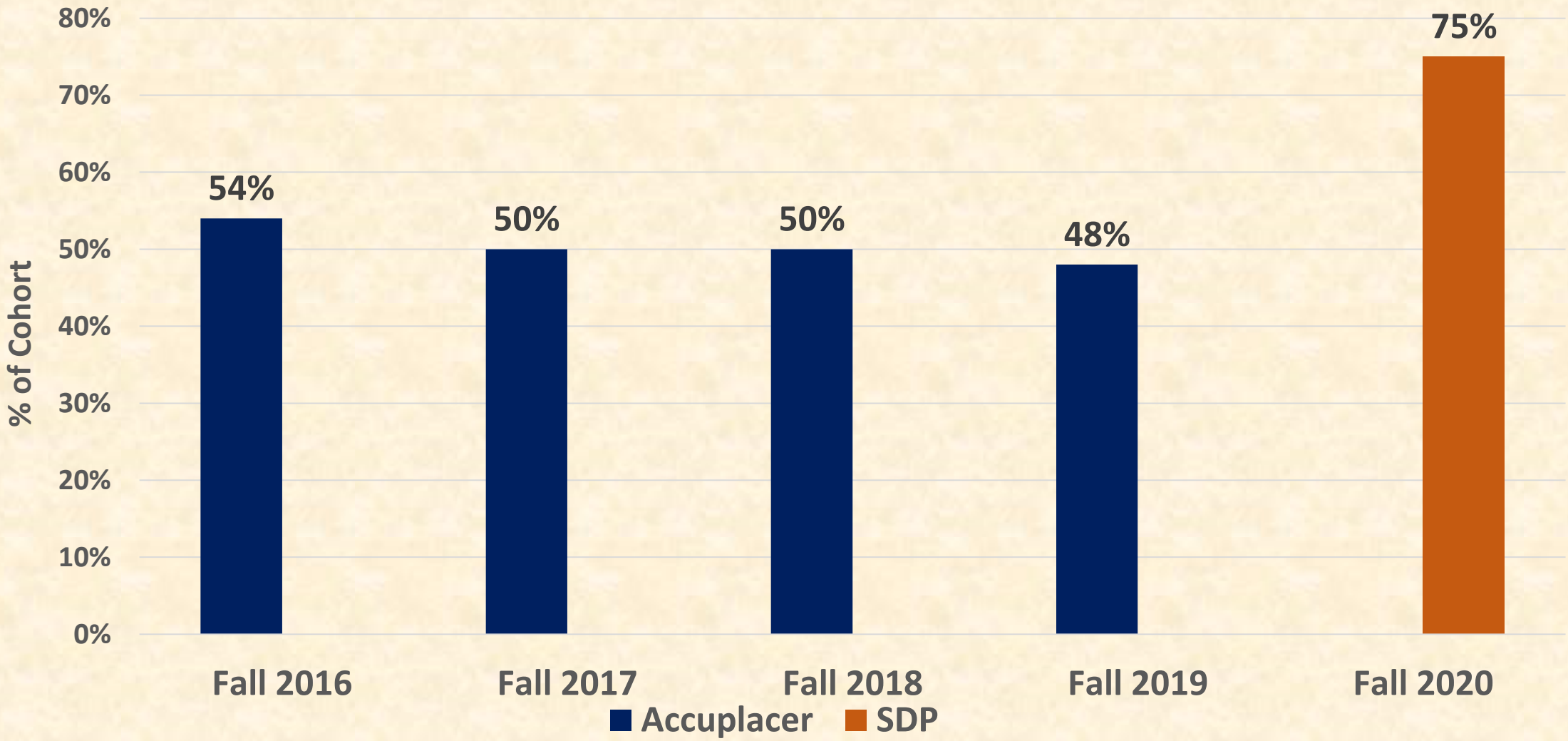
Accuplacer and SDP do not place students in LVE3 or LVE4.

The ALP Effect

- Increase in number of students attempting ENGL101
- Pass rate declined a few percentage points
- More students in the cohort successfully complete ENGL101

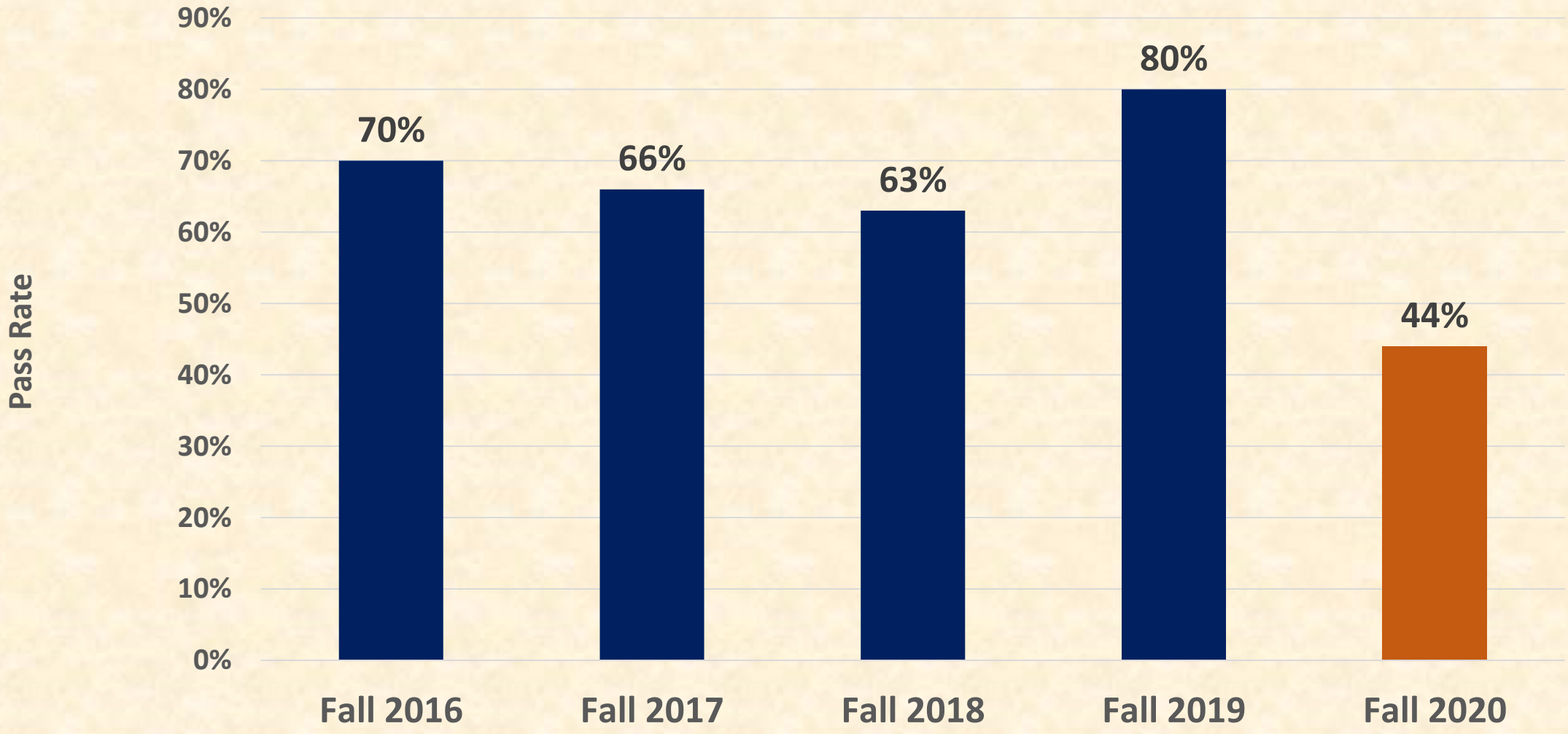
- Example – 200 student cohort
  - 50% attempt = 100 students. @ 70% pass rate, 70 completers
  - 75% attempt = 150 students. @ 65% pass rate, 98 completers

More SDP students attempted ENGL101



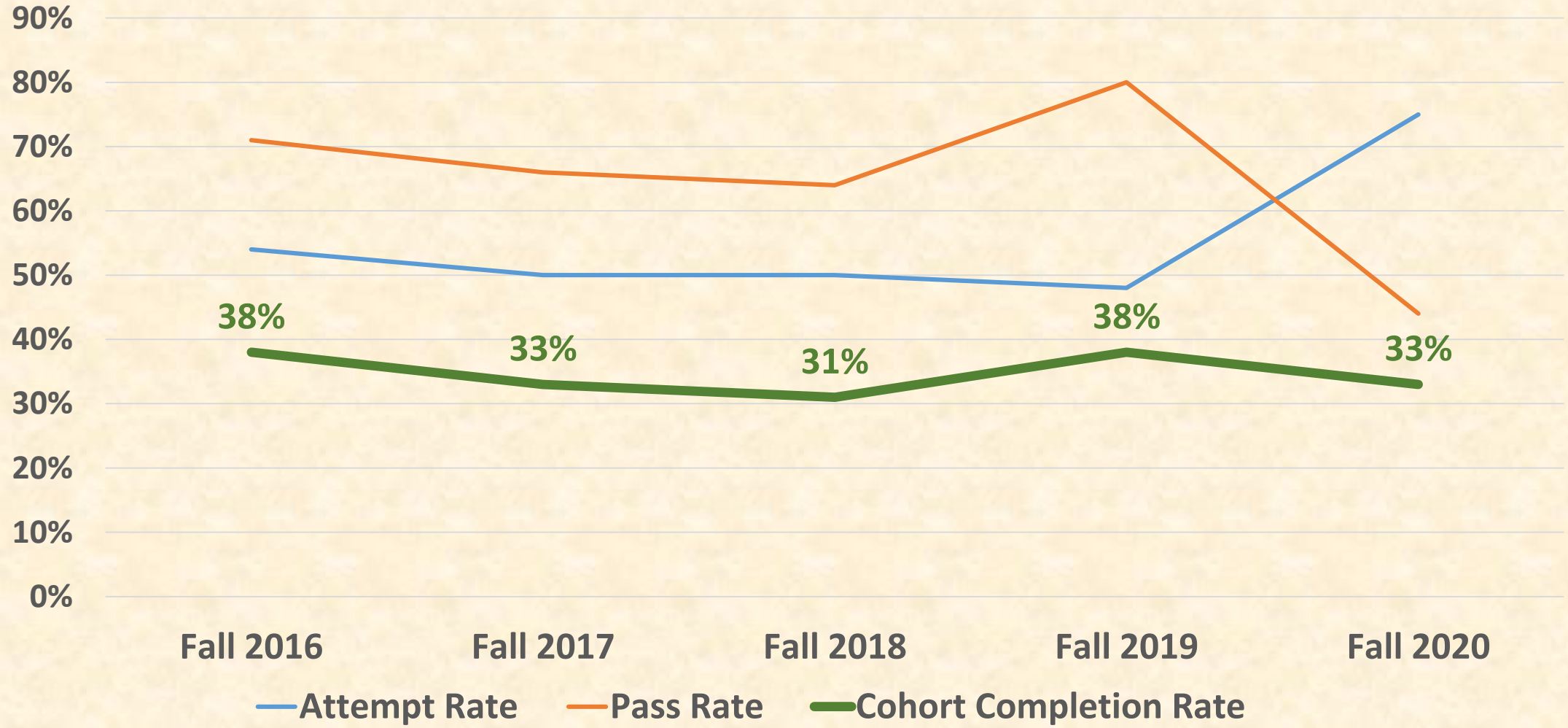
ENGL101 attempt includes both ALP and stand alone versions.

ENGL101 Pass Rate declined



If Next Gen is added to Accuplacer for Fall 2019 the pass rate is 69%.

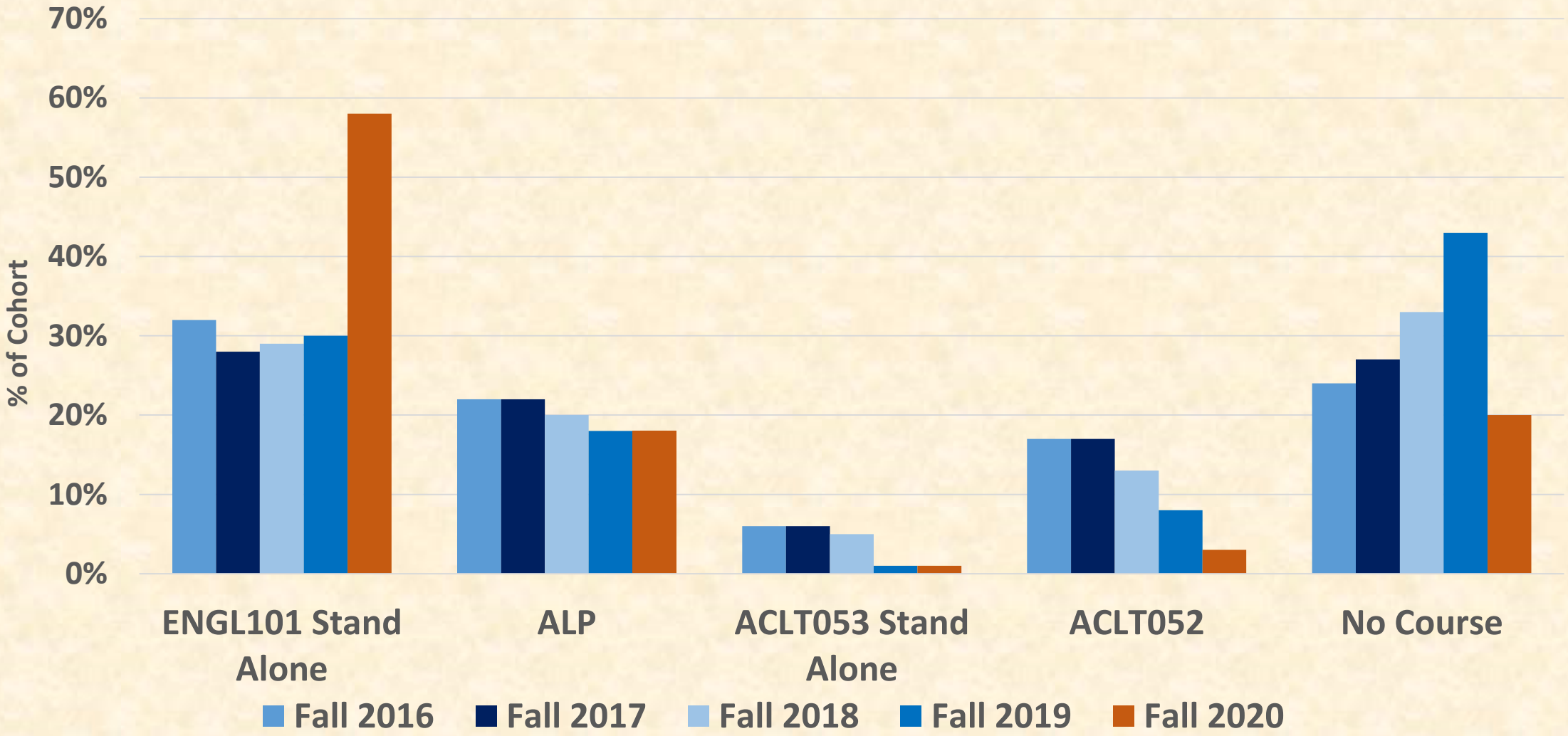
Cohort Completion Rate declined – No ALP Effect



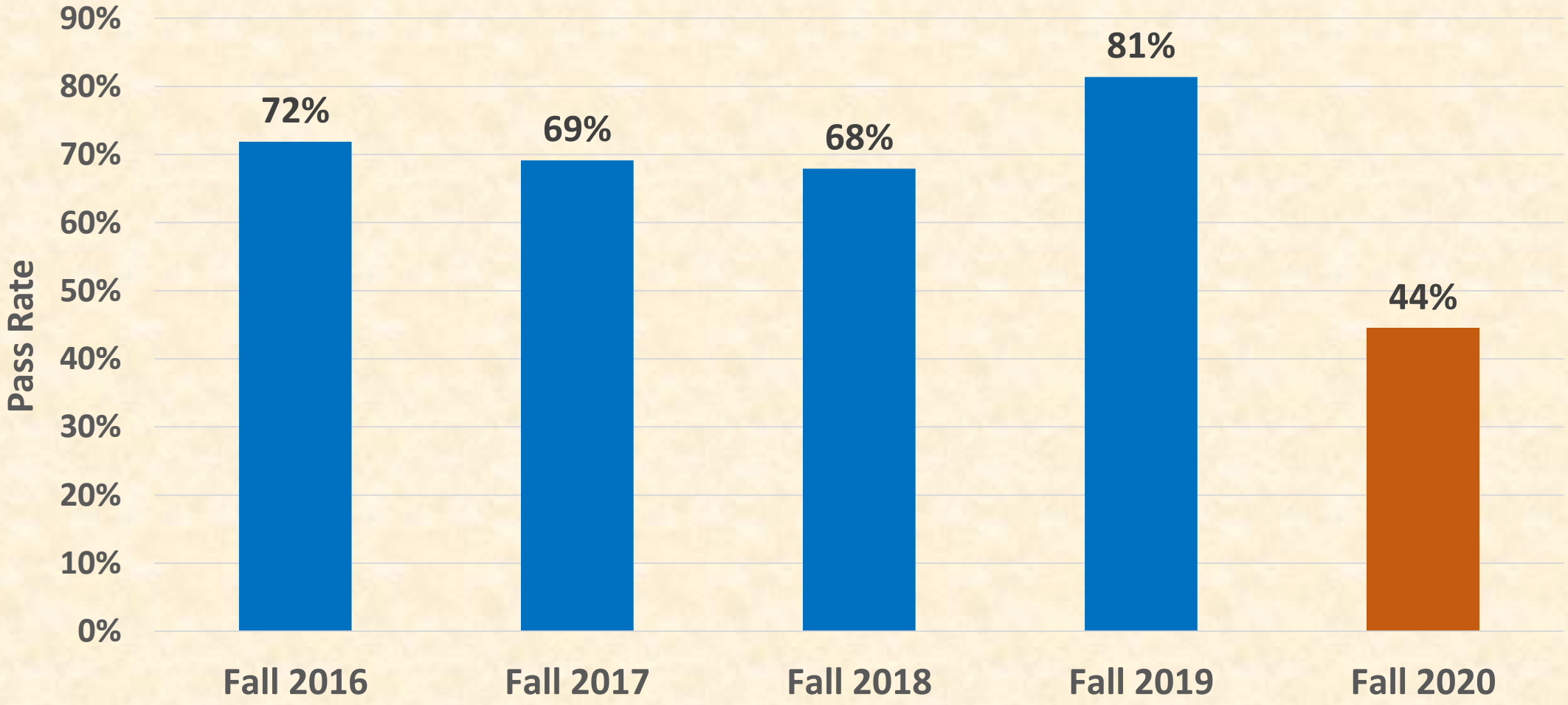
ENGL101 attempt includes both ALP and stand alone versions.

ENGL101
Stand Alone and ALP

More students selected ENGL101 Stand Alone

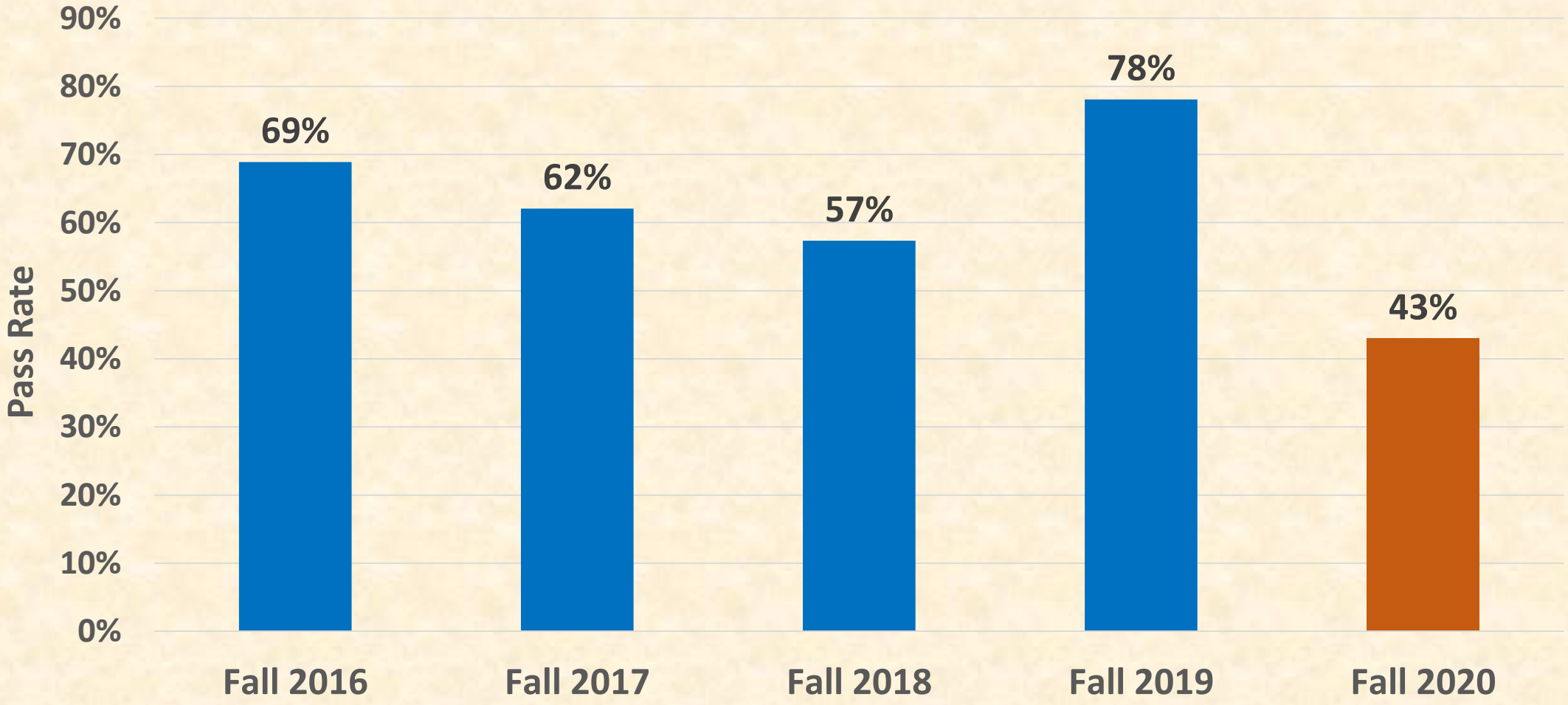


ENGL101 Stand Alone pass rates declined



If Next Gen is added to Accuplacer Classic for Fall 2019 the pass rate is 72%.

ALP pass rates also declined



Fall 2016 – Fall 2019 is Accuplacer. Fall 2020 is SDP.

High School GPA Comparison

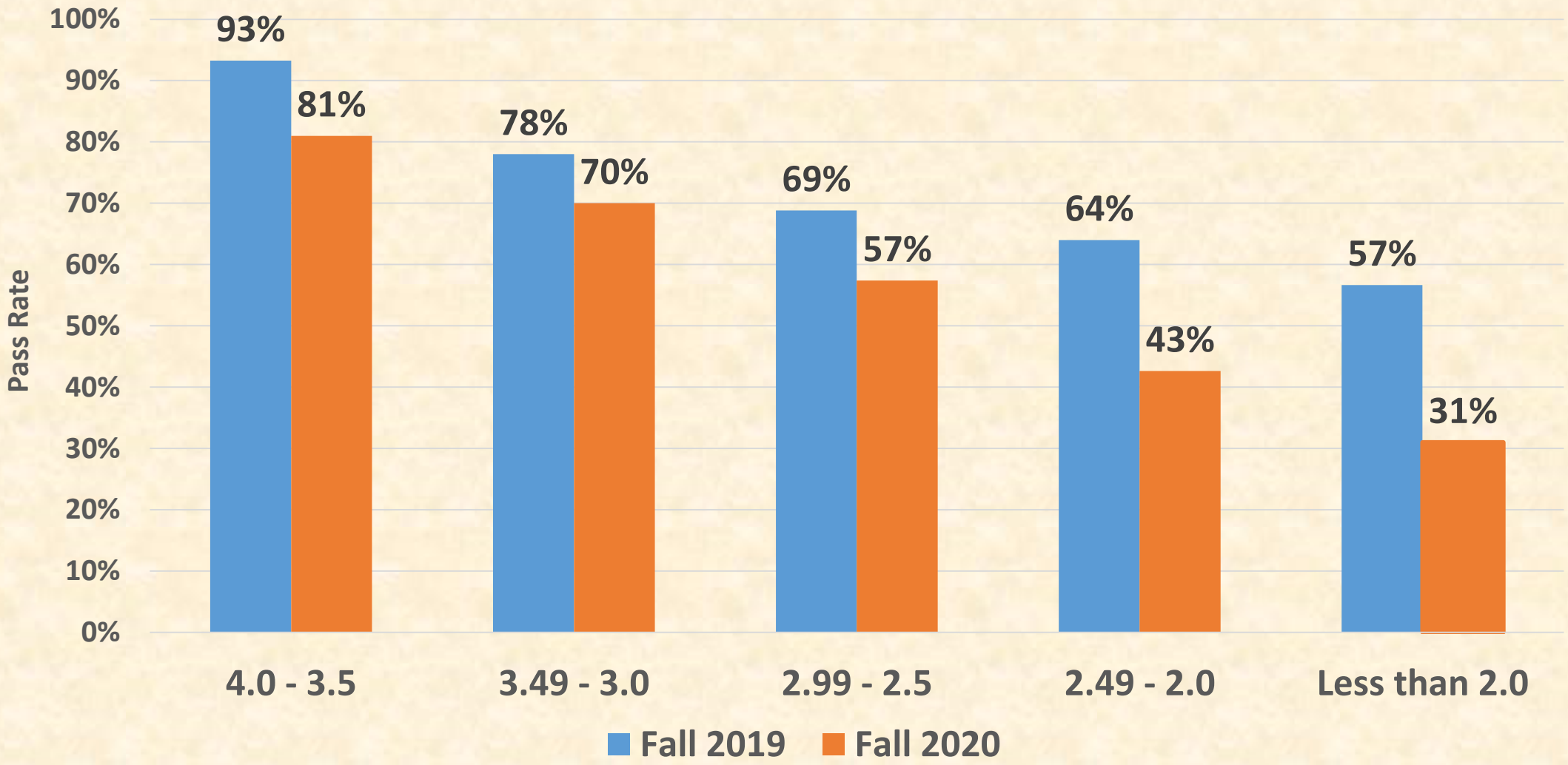
High School GPA Comparison

	Fall 2019		Fall 2020	
HS – GPA	Students	% Total	Students	% Total
3.5 – 4.0	202	4%	241	5%
3.0 – 3.49	473	9%	428	8%
2.5 – 2.99	617	12%	568	11%
2.0 – 2.49	520	10%	501	9%
Less Than 2.0	313	5%	338	6%
Unknown	3,245	60%	3,285	61%
Total	5,370	100%	5,361	100%

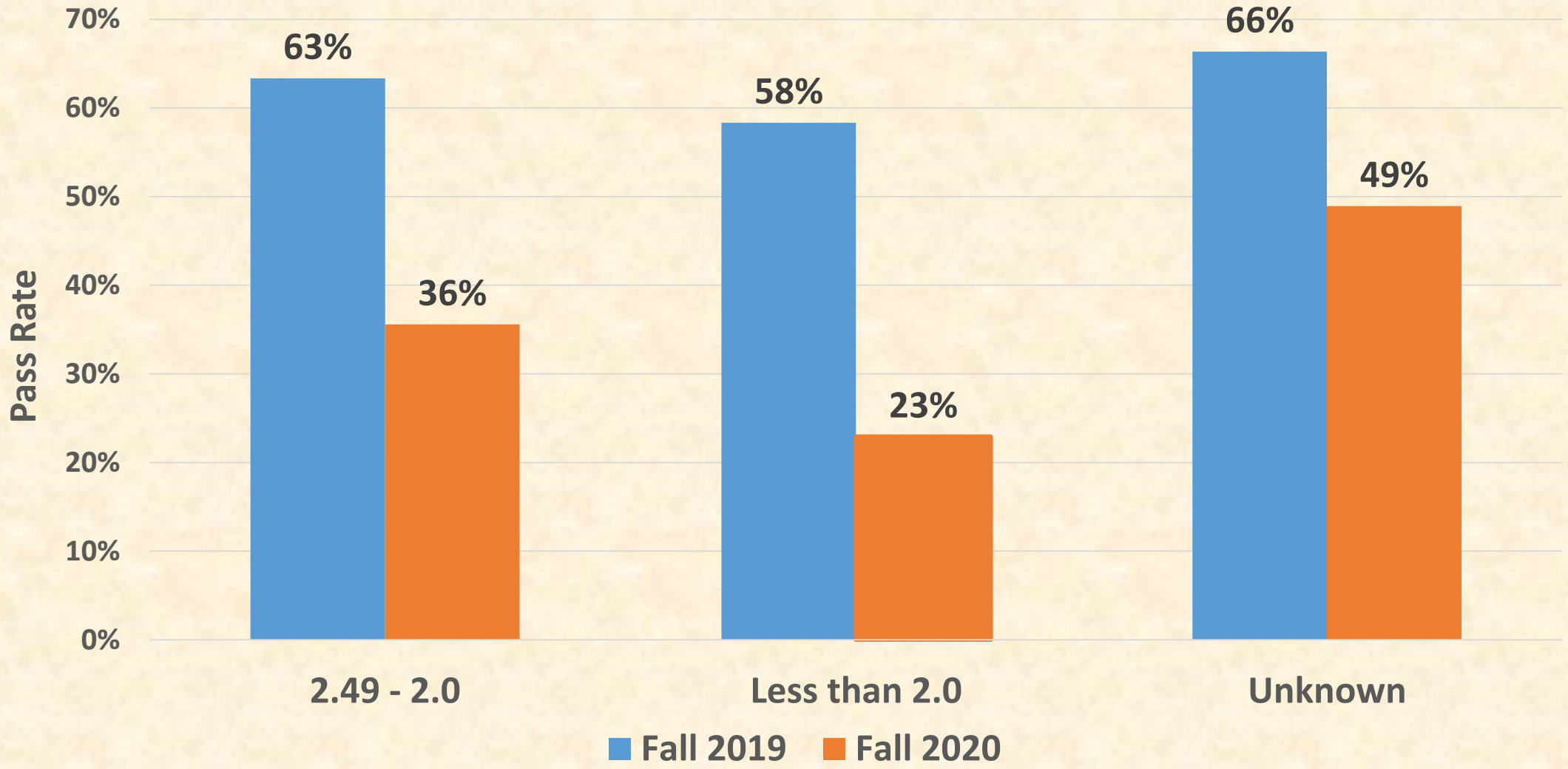
Lower GPA shifted to Stand Alone

	ENGL101 Stand Alone		ALP		ACLT052		No Courses	
HS GPA	Fall 2019	Fall 2020	Fall 2019	Fall 2020	Fall 2019	Fall 2020	Fall 2019	Fall 2020
3.5 – 4.0	54%	60%	0%	1%	0%	0%	45%	39%
3.0 – 3.49	65%	67%	0%	3%	0%	0%	34%	31%
2.5 – 2.99	67%	73%	2%	3%	1%	1%	30%	23%
2.0 – 2.49	**30%**	**54%**	**43%**	**22%**	**8%**	**1%**	16%	22%
Less than 2.0	**19%**	**59%**	**27%**	**15%**	**38%**	**9%**	13%	16%
Unknown	23%	33%	7%	5%	6%	1%	63%	61%
Total	34%	45%	10%	6%	7%	1%	48%	47%

ENGL101 Stand Alone Pass Rate

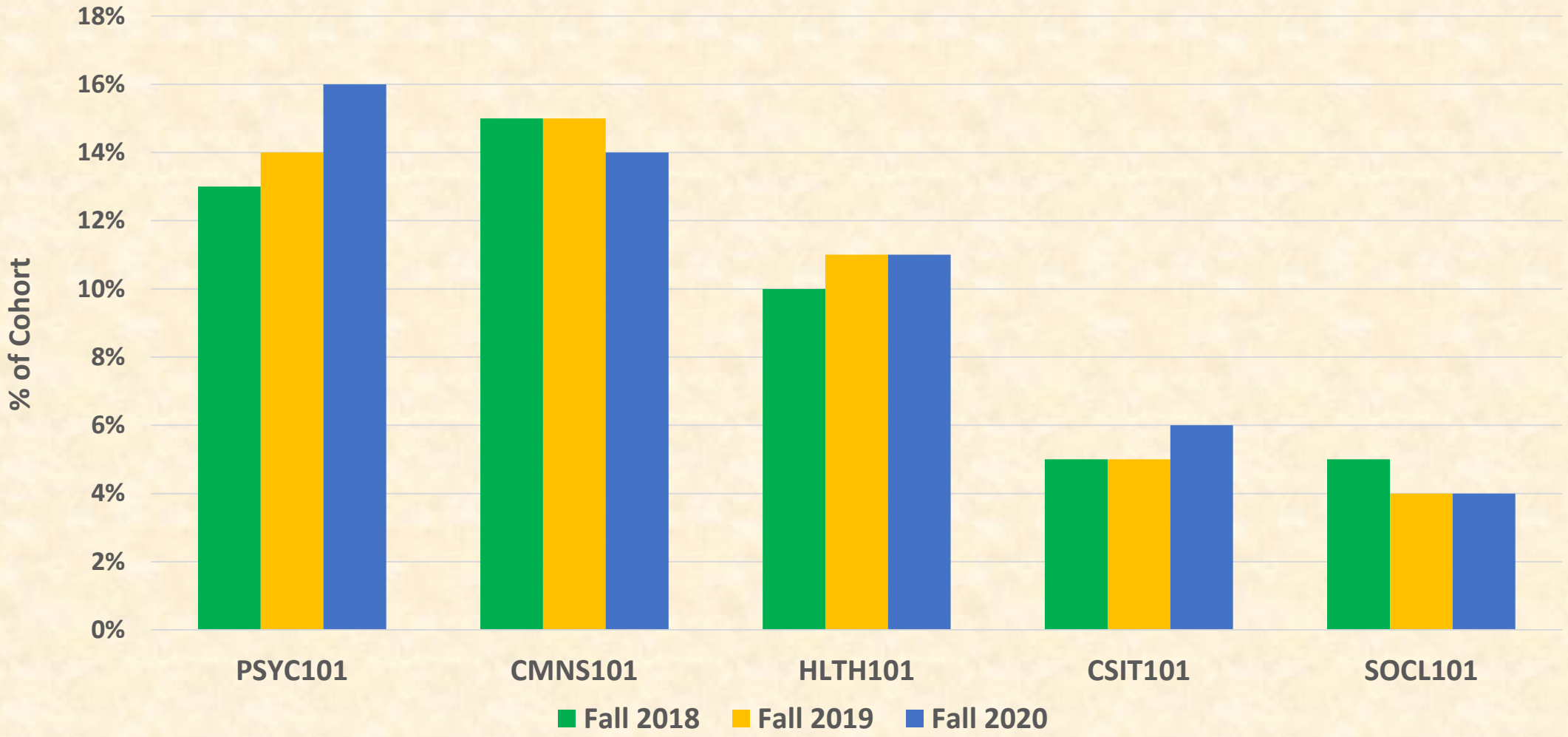


ENGL101 ALP Pass Rate

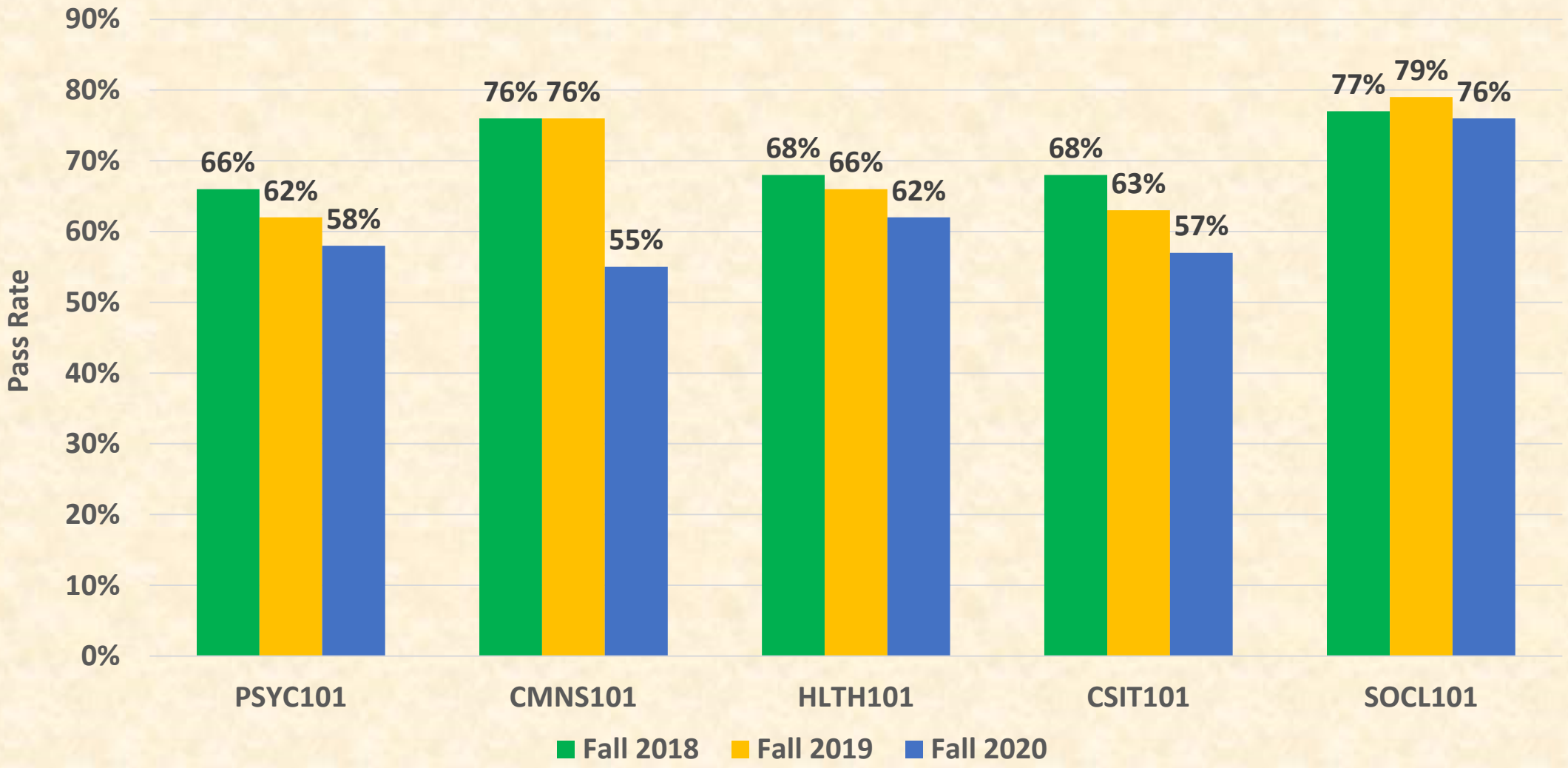


Top Courses

Attempts rates for top courses for LVE2 students



Pass rate for Top courses for LVE2 students



Points to Ponder

- Self-Directed Placement did lead to a shift of students up to the LVE2 evaluation level.
- The shift was particularly notable in students with a high school GPA lower than a 2.5.
- With more LVE2 students, more opted to take ENGL101 as a Stand Alone course.
- ENGL101 pass rates declined double digits for both Stand Alone and ALP.
  - COVID and SDP both played a role, but it's difficult to assign a weight to each for the decline.

Questions ?

Frederick Community College has assessed academic placement over the years using an ad hoc approach. Attached as appendices are some studies that have been completed at the institution. Generally, the institution regularly looks at course success in both credit and developmental courses to ensure students are successful based on their placement. Studies including placement and future course success are requested regularly by both the College mathematics and English departments. Furthermore, the institution has assessed its exemptions including the 3.0 state-wide GPA exemption for public high schools.

The placement process was also reviewed as part of the transition to the Next-Generation Accuplacer. The mathematics and English department reviewed the Accuplacer tools, cut scores, and other options including ALEKS as part of this process. The thorough review allowed the College to take an in-depth look at the tools used for placement and the validity of the cut scores.

Finally, the College is planning to partake in an Accuplacer Placement Validity Study through Admitted Class Evaluation Service (ACES). This is a free online service for higher education institutions that predicts how admitted students perform at your institution generally and how successful they can be in specific courses. Once set up, this tool will allow the college to design a study and prepare data for submission to regularly review our placement validity. The College plans to undertake the first study during this fiscal year, 2021-2022.

	Fall 2015*		Fall 2018*	Fall 2019	Fall 2020		% Change 15 to 20		% Change 19 to 20
Liberal Arts (includes on campus, online, High-School based Dual Enrollment, and Developmental									
Total number of sections	636		562	577	567		-11%		-2%
Average Class Size	15.3		15.7	15.8	14.8		-3%		-6%
Total seats available	13209		11760	12096	11632		-12%		-4%
Classes below 10	96		82	80	103		7%		29%
Classes 10-15	217		179	182	183		-16%		1%
Classes above 15	323		301	315	281		-13%		-11%
Online duplicated enrollment	976		1115	1107	2260		132%		104%
Enrollment in 13-week sessions	231		883	784	890		285%		14%
13- week average class size	15.4		18	17.4	16.5		7%		-5%
Enrollment in late-start sessions	865		1249	1131	1391		61%		23%
Sections cancelled after enrollment opened	65		51	46	71		9%		54%
Sections taught by part-time faculty	427		339	348	327		-23%		-6%
Workload credits taught by part-time faculty	1214		1051	1084	989		-19%		-9%
% of sections taught by part-time faculty	67%		60%	60%	58%		-14%		-4%
Student Credits	30526		27863	28838	25923		-15%		-10%
College-level Student Credits	24972		25381	26697	24411		-2%		-9%
Without High School Based Dual Enrollment									
Sections	598		502	499	485		-19%		-3%
Average Class Size	15.3		15.5	15.6	14.6		-5%		-6%
Seats available	12361		10558	10534	9990		-19%		-5%
Duplicated enrollment	9127		7763	7804	7088		-22%		-9%
Percentage of seats filled	74%		74%	74%	71%		-4%		-4%
Sections taught by part-time faculty	389		279	270	247		-37%		-9%
Percentage of sections taught by part-time faculty	65%		56%	54%	51%		-22%		-6%
Workload credits taught by part-time faculty	1100		867	849	746		-32%		-12%
Student credits	28777		24665	24975	22031		-23%		-12%
College-level Student Credits	23223		22183	22834	20519		-12%		-10%
Estimated Adjunct Cost ($793/credit)	$ 872,300		$ 687,531	$ 673,257	$ 591,578		$ (280,722)		$ (81,679)
High-School Based Dual Enrollment Only									
Sections	38		60	78	82		116%		5%
Average class size	15.3		17.3	16.5	15.8		3%		-4%
Seats available	848		1202	1562	1642		94%		5%
Duplicated enrollment	583		1038	1286	1293		122%		1%
Percentage of seats filled	69%		86%	82%	79%		15%		-4%
Student Credits	1749		3171	3863	3892		123%		1%
Developmental Student Credits									
English & ESOL	2213		1790	1394	938		-58%		-33%
Math	3341		692	747	574		-83%		-23%
Total	5554		2482	2141	1512		-73%		-29%

*does not include Science or Criminal Justice

Academic	Department	Fall 2018	Fall 2019	Fall 2020	r average		Spring 2019	ring 2020	ring 2021	r average		Overall Average
Developmental English	English	67%	66%	60%	65%		55%	55%	49%	53%		62%
English 100/101	English	54%	62%	59%	58%		55%	50%		56%		57%
English 101	English	69%	70%	62%	67%		64%	65%	61%	64%		66%
Post ENGLISH 101	English	81%	81%	**80%**	81%		86%	82%	77%	82%		81%
English total	English	68%	70%	66%	68%		68%	67%	66%	67%		68%
Developmental Math	Mathematics	57%	55%		56%		59%	56%		59%		57%
Intro Math (101, 120, 145, 165)	Mathematics	68%	67%		68%		64%	72%	72%	69%		69%
Advanced Math (and other lower levels)	Mathematics	73%	73%		75%		73%	84%	**80%**	79%		77%
Math (total)	Mathematics	65%	64%		65%		65%	70%		69%		67%

Spring 2016 MA 103A		
Grade	#	%
A	14	18%
AU	2	3%
B	24	30%
C	15	19%
D	2	3%
F	11	14%
W	12	15%
Grand Total	80	100%

*MA 103A is a co-listed credit and developmental course structure students test into

Spring 2016 MA 206A		
Grade	#	%
A	10	7%
AU	3	2%
B	24	16%
C	25	16%
D	7	5%
F	32	21%
W	22	14%
Grand Total	153	100%

*MA 206A is a co-listed credit and developmental course structure students test into

MA 206 Grades by Placement Score

Elementary Algebra	A	AU	B	C	D	F	W	Grand Total
0	198	4	150	142	51	89	76	710
21				5		2	2	9
22				2				2
23	1		2			1		4
24	1		4	3		1		9
25		1		2		1	1	5
26			1	1		2	1	5
27	1		2			2	1	6
28					1		2	3
29	2			2		4	1	9
30			5	4		3		12
31	1		3		2	5	1	12
32	1	1	6	1	2	8	4	23
33	1		4	3	1	17	1	27
34	3		4	1		4	5	17
35	5	1	11	3	3	4	1	28
36	3		6	2	2	4	6	23
37	4		6	8	4	5	1	28
38			2		5	12	4	23
39	2		4	4	4	8	1	23
40	1		2			2	2	7
41	5		2	2	5	4	3	21
42			3	3	5	3	3	17
43	3		3	4	1	2	1	14
44	4		9		2	1	1	17
45			2	6	4	3		15
46	4		8	3	1	8	1	25
47	2		2	4		1	1	10
48	2		6	3		5		16
49	1			5		7	1	14
50	2		6	4	1	3	4	20
51			4	4	1	1	1	11
52	1			1	2	2		6
53			6	2	1	3	6	18
54			3	7	1		1	12
55	1		4	6	3	7	2	23
56	3			4	1	7		15
57	4	1	2	2			5	14
58	1		5	6		3		15
59	1	1		4	1	2	2	11
60	5		1	5	1	2	1	15
61	1		3	3	1		3	11
62	4		3	3	5	1	1	17
63	1		5		1	4		11
64	4		2	1		2		9

65	5	4	5		1		15
66	1	2	2	3	1	3	12
67	4	2	2	2	5		15
68	1	1	1	2			5
69	1	1		1	4	2	9
70	2	2	2	4		1	11
71	2	1	2	1	2	1	9
72	1		3	2	2		8
73	2	4	4		6	3	19
74	4	2	2	1	3		12
75		3	1		2	1	7
76	3	4	1		2		10
77	1	3				3	7
78	1			1	3	2	7
79	2	1	1			3	7
80	2				2	2	6
81	5	1	1				7
82	1	1			3		5
83		2	2		1		5
84	3	2	2	1	1	1	10
85		2	2			3	7
86		1		2	1	1	5
87		2	1		2		5
88	4	3				1	8
89		1				1	2
90					1		1
91	1	2				1	4
92	2	1	1				4
93	4		3				7
94	2					1	3
95		2	1			1	4
96	1	3	1	1	2		8
97	1	1	1		1		4
98	2	2		2		1	7
99	2		3	2	1		8
100	1	1	2			1	5
101	1	1					2
102	1	3		1		2	7
103	4	2	2				8
104	3	3			1	1	8
105	4	2					6
106	1	4					5
107	1	4	2				7
108	2	2	1				5
109	1	2	1				4
110	3		1	1			5
111	3	2	1				6

112	1		2	1		1		5
113	4		1		1			6
114	5		4				1	10
115	1							1
116			2	3				5
117	1		2	1				4
118	5		1					6
119	1		1		1			3
120	3		1	1				5
-	92	4	76	51	28	57	44	352
Grand Total	471	13	463	376	169	350	228	2070

EN 70 Grade Distibtution		
	Number	%
A	4	7%
B	11	20%
C	13	24%
D	4	7%
F	18	33%
W	4	7%

EN 70 Success and Persistence by 2W vs. 4W				
	2W	%	4W	%
Success	10	71%	18	45%
Failure	4	29%	22	55%

EN 70 Grade Distribution by Section					
	1	2	3	4	Grand Total
A	1	2	1	0	4
B	4	2	5	0	11
C	4	4	4	1	13
D	0	4	0	0	4
F	4	4	3	7	18
W	1	0	1	2	4
	14	16	14	10	54

EN 70 Grade Distribution by 2W vs. 4W				
	2W	%	4W	%
A	1	7%	3	8%
B	5	36%	6	15%
C	4	29%	9	23%
D	0	0%	4	10%
F	3	21%	15	38%
W	1	7%	3	8%

Fall 2017 Grade Distribution Comparison by Session 1, 10A, and 10B						
	1		10A		10B	
	#	%	#	%	#	%
A	25	21%	34	18%	6	30%
B	39	33%	56	30%	4	20%
C	16	14%	44	24%	6	30%
D	1	1%	8	4%	0	0%
F	25	21%	34	18%	3	15%
I	1	1%	1	1%	0	0%
W	10	9%	7	4%	1	5%

EN 70 Success and Persistence by Session						
	1	%	10A	%	10B	%
Success	80	68%	134	73%	16	80%
Failure	37	32%	50	27%	4	20%

Fall 2017 Grade Distribution Comparison by Session 1, 10A, and 10B with CoReq Grade								
Session	Grade	A	AU	B	C	D	F	W
1	A	10	0	9	4	0	0	2
	B	8	0	13	8	3	5	2
	C	1	0	2	3	0	6	4
	D	1	0	0	0	0	0	0
	F	3	0	1	3	1	14	3
	I	0	0	1	0	0	0	0
	W	2	0	1	0	0	2	5
1 Total		25	0	27	18	4	27	16
10A	A	12	0	15	3	0	2	2
	B	7	0	23	18	1	4	3
	C	6	0	9	9	3	8	9
	D	1	0	0	2	1	3	1
	F	3	1	4	0	2	15	9
	I	0	0	0	1	0	0	0
	W	0	0	0	0	0	2	5
10A Total		29	1	51	33	7	34	29
10B	A	2	0	3	1	0	0	0
	B	0	0	2	1	1	0	0
	C	1	0	2	2	0	1	0
	F	1	0	0	1	0	1	0
	W	0	0	1	0	0	0	0
10B Total		4	0	8	5	1	2	0

EN 75 Student Success and Co-Req Success			
Session	EN 75 Succ	N	Y
1	N	68%	32%
	Y	28%	73%
1 Total		40%	60%
10A	N	78%	22%
	Y	24%	76%
10A Total		39%	61%
10B	N	25%	75%
	Y	13%	88%
10B Total		15%	85%

EN 51 Grade Success		
Grade	#	%
AU	1	1%
S	56	65%
U	6	7%
W	11	13%
Z	12	14%
Grand Total	86	100%

Placement Exemptions and ENGL 101 Grades		
Grade	#	%
A	11	28%
B	15	38%
C	8	20%
F	6	15%
Grand Total	40	100%

Tracking Developmental Completers		
Grade	Fall 2017	Spring 2018
A	7	5
B	10	16
C	12	13
D	6	7
F	8	30
W	7	9
Grand Total	50	80

All students	N	% of entering students					Number who successfully completed first required college level English course with a "C" or better	Number who successfully completed first required college level English course with a "D"
Number of students enrolled in first required college level English class at your institution for the fall semester.	**1310**	**100%**					**1057**	**63**
Number of students in first required college level English class at your institution who completed the developmental English and/or reading sequence	**89**	**7%**					**69**	**5**
Number of students taking a developmental English course and the first level credit English in the same semester	**1**	**0%**					**1**	**0**
Entering (first semester) students for fall semester	**N**	**% of entering students**	**N who placed college ready in English on 1st attempt**	**% who placed college ready in English on 1st attempt**	**Number who enrolled in first required college level English class on 1st attempt**	**% who enrolled in first required college level English class on 1st attempt**	**Number who successfully completed first required college level English course with a "C" or better**	**Number who successfully completed first required college level English course with a "D"**
Total number of students who took ACCUPLACER at your college	1021	78%	782	77%	803	79%	808	52
Students who **took ACCUPLACER at your college** prior to the start of the fall semester, after high school graduation.	31	2%	27	87%	29	94%	22	1
Students who received a score of **34 or less** on **ACCUPLACER Reading**	0	0%						
Students who received a score of **35 -52** on **ACCUPLACER Reading**	0	0%						
Students who **took ACCUPLACER at your college** during the first academic year at your college after high school graduation.	556	42%	472	85%	516	93%	409	26
Students who received a score of **34 or less** on **ACCUPLACER Reading**	40	3%						

Students who received a score of **35 -52** on **ACCUPLACER Reading**	15	1%						
Students who **took ACCUPLACER at your college** during the second academic year at your college after high school graduation.	22	2%	22	100%	22	100%	21	0
Students who received a score of **34 or less** on **ACCUPLACER Reading**	0	0%						
Students who received a score of **35 -52** on **ACCUPLACER Reading**	0	0%						
Students who **took ACCUPLACER at your college** more than two academic years following high school graduation.	2	0%	2	1	2	1	0	1
Students who received a score of **34 or less** on **ACCUPLACER Reading**	0	0%						
Students who received a score of **35 -52** on **ACCUPLACER Reading**	0	0%						
Students who **took ACCUPLACER in high school**, entered college in the fall after graduation, and were college ready in English.	449	34%	443	99%	448	100%	391	26
Students who graduated from high school in the spring prior to their enrollment **who submitted a SAT (old) English score.**	90	7%					85	1
Students who graduated from high school in the spring prior to their enrollment **who submitted a SAT (old) English score between 500 – 549**.	10	1%					10	0

Students who graduated from high school in the spring prior to their enrollment **who submitted a SAT (old) English score of 550 or more.**	80	6%					75	1
Students who graduated from high school one academic year before enrollment **who submitted SAT (old) English scores.**	96	7%					72	16
Students who graduated from high school one academic year before enrollment **who submitted a SAT (old) English score between 500 – 549**.	1	0%					1	0
Students who graduated from high school one academic year before enrollment **who submitted a SAT (old) English score of 550 or more.**	95	7%					71	6
Students who graduated from high school two or more academic years before enrollment **who submitted a SAT (old) English score.**	2	0%					1	0
Students who graduated from high school two or more academic years before enrollment **who submitted a SAT (old) English score between 500 – 549.**	1	0%					1	1
Students who graduated from high school two or more academic years before enrollment **who submitted a SAT (old) English score of 550 or more.**	0	0%					0	0
Students who graduated from high school in the spring prior to their enrollment **who submitted an ACT English score.**	27	2%					27	0

Students who graduated from high school in the spring prior to their enrollment **who submitted an ACT English score of 21 – 23.**	9	1%					9	0
Students who graduated from high school in the spring prior to their enrollment **who submitted an ACT English score of 24 or more.**	18	1%					18	0
Students who graduated from high school one academic year before enrollment **who submitted an ACT English score.**	9	1%					6	0
Students who graduated from high school one academic year before enrollment **who submitted an ACT English score of 21 – 23.**	4	0%					4	0
Students who graduated from high school one academic year before enrollment **who submitted an ACT English score of 24 or more.**	3	0%					2	0
Students who graduated from high school two or more academic years before enrollment **who submitted an ACT English score.**	0	0%					0	0
Students who graduated from high school two or more academic years before enrollment **who submitted an ACT English score of 21 - 23.**	0	0%					0	0
Students who graduated from high school two or more academic years before enrollment **who submitted an ACT English score of 24 or greater**.	0	0%					0	0

Students **who submitted AP Language and Composition score of 3**.	1	0%					1	0
Students **who submitted AP Language and Composition score of 4**.	0	0%					0	0

ASSESSMENT AND PLACEMENT OF ENTERING STUDENTS AND SUCCESS IN FIRST COLLEGE LEVEL MATH CLASS

Students enrolled for the Fall semester in: Group A: College Algebra Group B: Statistics Group C: Liberal Arts Math	**N**	**% of enrolled students**	**N who placed college ready in Math on 1st attempt**	**% who placed college ready in Math on 1st attempt**	**Number from column B who successfully completed first college level Math**	**Number from column B who successfully completed first college level Math**
Number of students enrolled in this course at your institution for the Fall semester	258	100%	33	13%	147	30
Students who had an ACCUPLACER score at your college placing them into this course	120	47%	12	10%	74	13
Students in Row 8 that are age 16 or younger on Septmber 1st of the semester being studied.	21	8%	0	0%	20	1
Students in Row 8 that are age 17 - 18 on Septmber 1st of the semester being studied.	41	16%	1	2%	26	3
Students in Row 8 that are age 19 - 20 on Septmber 1st of the semester being studied.	29	11%	6	21%	12	5
Students in Row 8 that are age 21 - 22 on Septmber 1st of the semester being studied.	10	4%	2	20%	3	3
Students who **submitted an SAT score between 500 and 549 that placed them into this class.**	0	0%			0	0
Students in Row 14 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 14 that are age 17 - 18 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 14 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 14 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0
Students who **submitted an SAT score 550 or more that placed them into this class.**	18	7%			13	2
Students in Row 19 that are age 16 or younger on Septmber 1st of the semester being studied.	3	1%			2	1
Students in Row 19 that are age 17 - 18 on Septmber 1st of the semester being studied.	10	167%			7	1
Students in Row 19 that are age 19 - 20 on Septmber 1st of the semester being studied.	3	1%			2	0

Students in Row 19 that are age 21 - 22 on Septmber 1st of the semester being studied.	1	0%			1	0
Students who submitted an ACT Math score of 21 - 23.	7	3%			4	0
Students in Row 25 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 25 that are age 17 - 18 on Septmber 1st of the semester being studied.	6	2%			3	0
Students in Row 25 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 25 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0
Students who submitted an ACT Math score of 24 or more.	3	1%			2	0
Students in Row 30 that are age 16 or younger on Septmber 1st of the semester being studied.	1	0%			1	0
Students in Row 30 that are age 17 - 18 on Septmber 1st of the semester being studied.	2	1%			1	0
Students in Row 30 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 30 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0
Students **who submitted AP (Statistics or Calculus) score of 3 or higher**.	1	0%			1	0
Students in Row 36 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 36 that are age 17 - 18 on Septmber 1st of the semester being studied.	1	0%			1	0
Students in Row 36 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 36 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0
Students who placed into developmental math and successfully completed that to enroll in the credit course.	70	27%			27	13

Students that are taking a developmental math course and the credit course within this one semester.	0	0%			0	0
Students in Row 44 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 44 that are age 17 - 18 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 44 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 44 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0

The items below are only for institutions that use the Arithmetic test for Accuplacer.	N = number of students	% of students taking the Arithmetic test	Number of students from column B that enrolled in any course at your institution.	Number of students in column B that enrolled in any math course at your institution.	Number of students that are eligible to take Intermediate Algebra (or higher) in Fall, 2016 semester.
Number of students taking the Arithmetic test at your institution from January 1, 2014 through December 31, 2014.		100%			
Students in row 52 that scored 20 - 24 on the Arithmetic test of Accuplacer.					
Students in row 52 that scored 25 - 29 on the Arithmetic test of Accuplacer.					
Students in row 52 that scored 30 - 34 on the Arithmetic test of Accuplacer.					
Students in row 52 that scored 35 - 39 on the Arithmetic test of Accuplacer					
Students in row 52 that are age 16 - 18 years on September 1, 2014.					

ASSESSMENT AND PLACEMENT OF ENTERING STUDENTS

Students enrolled for the Fall semester in: Group A: College Algebra Group B: Statistics Group C: Liberal Arts Math	N	% of enrolled students	N who placed college ready in Math on 1st attempt	% who placed college ready in Math on 1st attempt	Number from column B who successfully completed first college level Math course with C or better	Number from column B who successfully completed first college level Math course with a D
Number of students enrolled in this course at your institution for the Fall semester	344	100%	43	13%	244	22
Students who had an ACCUPLACER score at your college placing them into this course	118	34%	10	8%	77	8

Students in Row 8 that are age 16 or younger on Septmber 1st of the semester being studied.	5	1%	0	0%	3	1
Students in Row 8 that are age 17 - 18 on Septmber 1st of the semester being studied.	21	6%	2	10%	16	2
Students in Row 8 that are age 19 - 20 on Septmber 1st of the semester being studied.	37	11%	2	5%	18	2

Students in Row 8 that are age 21 - 22 on Septmber 1st of the semester being studied.	11	3%	3	27%	8	0
Students who **submitted an SAT score between 500 and 549 that placed them into this class.**	0	0%			0	0
Students in Row 14 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0

Students in Row 14 that are age 17 - 18 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 14 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 14 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0

Students who **submitted an SAT score 550 or more that placed them into this class.**	37	11%			32	2
Students in Row 19 that are age 16 or younger on Septmber 1st of the semester being studied.	3	1%			3	0
Students in Row 19 that are age 17 - 18 on Septmber 1st of the semester being studied.	25	7%			21	2

Students in Row 19 that are age 19 - 20 on Septmber 1st of the semester being studied.	6	2%			5	0
Students in Row 19 that are age 21 - 22 on Septmber 1st of the semester being studied.	1	0%			1	0
Students who submitted an ACT Math score of 21 - 23.	4	1%			3	0
Students in Row 25 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0

Students in Row 25 that are age 17 - 18 on Septmber 1st of the semester being studied.	3	1%			2	0
Students in Row 25 that are age 19 - 20 on Septmber 1st of the semester being studied.	1	0%			1	0
Students in Row 25 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0
Students who submitted an ACT Math score of 24 or more.	5	1%			5	0

Students in Row 30 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 30 that are age 17 - 18 on Septmber 1st of the semester being studied.	4	1%			0	0
Students in Row 30 that are age 19 - 20 on Septmber 1st of the semester being studied.	1	0%			1	0

Students in Row 30 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0
Students **who submitted AP (Statistics or Calculus) score of 3 or higher**.	6	2%			6	0
Students in Row 36 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0

Students in Row 36 that are age 17 - 18 on Septmber 1st of the semester being studied.	3	1%			3	0
Students in Row 36 that are age 19 - 20 on Septmber 1st of the semester being studied.	3	1%			3	0
Students in Row 36 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0

Students who placed into developmental math and successfully completed that to enroll in the credit course.	125	36%			76	9
Students that are taking a developmental math course and the credit course within this one semester.	0	0%			0	0
Students in Row 44 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0

Students in Row 44 that are age 17 - 18 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 44 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 44 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0

ASSESSMENT AND PLACEMENT OF ENTERING STUDENTS

Students enrolled for the Fall semester in: Group A: College Algebra Group B: Statistics Group C: Liberal Arts Math	N	% of enrolled students	N who placed college ready in Math on 1st attempt	% who placed college ready in Math on 1st attempt	Number from column B who successfully completed first college level Math course with C or better	Number from column B who successfully completed first college level Math course with a D
Number of students enrolled in this course at your institution for the Fall semester	180	100%	43	24%	116	11
Students who had an ACCUPLACER score at your college placing them into this course	104	58%	16	15%	63	9

Students in Row 8 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%	0	0%	0	0
Students in Row 8 that are age 17 - 18 on Septmber 1st of the semester being studied.	19	11%	2	11%	12	1
Students in Row 8 that are age 19 - 20 on Septmber 1st of the semester being studied.	37	21%	6	16%	19	4

Students in Row 8 that are age 21 - 22 on Septmber 1st of the semester being studied.	17	9%	5	29%	12	2
Students who **submitted an SAT score between 500 and 549 that placed them into this class.**	0	0%			0	0
Students in Row 14 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0

Students in Row 14 that are age 17 - 18 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 14 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 14 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0

Students who **submitted an SAT score 550 or more that placed them into this class.**	8	4%			6	2
Students in Row 19 that are age 16 or younger on Septmber 1st of the semester being studied.	1	1%			1	0
Students in Row 19 that are age 17 - 18 on Septmber 1st of the semester being studied.	2	1%			0	0

Students in Row 19 that are age 19 - 20 on Septmber 1st of the semester being studied.	3	2%			3	0
Students in Row 19 that are age 21 - 22 on Septmber 1st of the semester being studied.	1	1%			1	0
Students who submitted an ACT Math score of 21 - 23.	1	1%			1	0
Students in Row 25 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0

Students in Row 25 that are age 17 - 18 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 25 that are age 19 - 20 on Septmber 1st of the semester being studied.	1	1%			1	0
Students in Row 25 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0
Students who submitted an ACT Math score of 24 or more.	1	1%			1	0

Students in Row 30 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 30 that are age 17 - 18 on Septmber 1st of the semester being studied.	1	1%			1	0
Students in Row 30 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0

Students in Row 30 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0
Students **who submitted AP (Statistics or Calculus) score of 3 or higher**.	0	0%			0	0
Students in Row 36 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0

Students in Row 36 that are age 17 - 18 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 36 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 36 that are age 21 - 22 on Septmber 1st of the semester being studied.	0	0%			0	0

Students who placed into developmental math and successfully completed that to enroll in the credit course.	134	74%			86	9
Students that are taking a developmental math course and the credit course within this one semester.	3	2%			2	1
Students in Row 44 that are age 16 or younger on Septmber 1st of the semester being studied.	0	0%			0	0

Students in Row 44 that are age 17 - 18 on Septmber 1st of the semester being studied.	1	1%			1	0
Students in Row 44 that are age 19 - 20 on Septmber 1st of the semester being studied.	0	0%			0	0
Students in Row 44 that are age 21 - 22 on Septmber 1st of the semester being studied.	2	1%			1	1

Student ENTP Test Scores and MATH 101/101A Success				
Test Score	**Fall 2017**	**Fall 2018**	**Fall 2019**	**Grand Total**
0.00	**125**	**17**	**33**	**175**
Failure	57%	29%	15%	**46%**
Succes	43%	71%	85%	**54%**
5.00	-	-	**1**	**1**
Failure	0%	0%	100%	**100%**
8.00	**483**	**120**	**26**	**629**
Failure	26%	30%	12%	**26%**
Succes	74%	70%	88%	**74%**
9.00	**2**	**20**	**9**	**31**
Failure	100%	5%	0%	**10%**
Succes	0%	95%	100%	**90%**
10.00	**1**	**11**	**6**	**18**
Failure	100%	18%	33%	**28%**
Succes	0%	82%	67%	**72%**
20.00	**5**	**34**	**32**	**71**
Failure	100%	44%	31%	**42%**
Succes	0%	56%	69%	**58%**
30.00	**2**	**8**	**31**	**41**
Failure	50%	38%	19%	**24%**
Succes	50%	63%	81%	**76%**
40.00	**18**	**58**	**91**	**167**
Failure	50%	36%	25%	**32%**
Succes	50%	64%	75%	**68%**

Student ENTP Test Scores and MATH 101 Success				
Test Score	**Fall 2017**	**Fall 2018**	**Fall 2019**	**Grand Total**
0.00	**67**	**11**	**23**	**101**
Failure	49%	36%	9%	**39%**
Succes	51%	64%	91%	**61%**
5.00	-	-	**1**	**1**
Failure	0%	0%	100%	**100%**
8.00	**256**	**90**	**17**	**363**
Failure	22%	29%	12%	**23%**
Succes	78%	71%	88%	**77%**
9.00	**1**	**18**	**7**	**26**
Failure	100%	6%	0%	**8%**
Succes	0%	94%	100%	**92%**
10.00	-	**1**	-	**1**
Succes	0%	100%	0%	**100%**
20.00	**2**	**8**	**13**	**23**
Failure	100%	13%	15%	**22%**
Success		88%	85%	**78%**
30.00	**1**	**2**	**10**	**13**
Failure	100%	50%	20%	**31%**
Succes	0%	50%	80%	**69%**
40.00	**17**	**37**	**75**	**129**
Failure	47%	35%	20%	**29%**
Succes	53%	65%	79%	**71%**

Student ENTP Test Scores and MATH 101A Success				
Test Score	**Fall 2017**	**Fall 2018**	**Fall 2019**	**Grand Total**
0.00	**58**	**6**	**10**	**74**
Failure	66%	17%	30%	**57%**
Succes	34%	83%	70%	**43%**
8.00	**227**	**30**	**9**	**266**
Failure	30%	33%	11%	**29%**
Succes	70%	67%	89%	**71%**
9.00	**1**	**2**	**2**	**5**
Failure	50%	0%	0%	**20%**
Succes	0%	100%	100%	**80%**
10.00	**1**	**10**	**6**	**17**
Failure	100%	20%	33%	**29%**
Success		80%	67%	**71%**
20.00	**3**	**26**	**19**	**48**
Failure	100%	54%	42%	**52%**
Success		46%	58%	**48%**
30.00	**1**	**6**	**21**	**28**
Failure	0%	33%	19%	**21%**
Succes	100%	67%	81%	**79%**
40.00	**1**	**21**	**16**	**38**
Failure	100%	38%	44%	**42%**
Succes	0%	62%	56%	**58%**

ENGLISH COURSE PLACEMENT MATRIX

	CLASSIC		
	20-69	**70-89**	**90-120**
SENTENCE SKILLS	ENG071	ENG101/091L	ENG101
	NEXT GENERATION		
	200-249	**250-269**	**270-300**

*on par with state recommendation

READING COURSE PLACEMENT MATRIX

	CLASSIC		
	20-56	**57-79**	**80-120**
READING COMPREHENSION	RDG073	RDG075	NO READING
	NEXT GENERATION		
	200-236	**237-259**	**260-300**

*1 point higher than state recommendation

**Per the Assessment and Placement report, Recommendations from the MACC Assessment and Placement Study Group, May 12, 2017*

ENGLISH COURSE PLACEMENT MATRIX

	CLASSIC	20-69	70-89	90-120
SENTENCE SKILLS		ENG071	ENG101/091L	ENG101
	NEXT GENERATION	**200-249**	**250-269**	**270-300**

*on par with state recommendation

READING COURSE PLACEMENT MATRIX

	CLASSIC	20-56	57-79	80-120
READING COMPREHENSION		RDG073H	RDG073	NO READING
	NEXT GENERATION with concordance**	**200-237**	**238-252**	**253-300**
	NEXT GENERATION adjusting to 79 for college-ready	**200-237**	**238-251**	**252-300**

*1 point higher than state recommendation

**Per the Assessment and Placement report, Recommendations from the MACC Assessment and Placement Study Group, May 12, 2017*

***Using Classic Reading Comprehension to Next-Generation Reading Concordance, 2018*

COURSE PLACEMENT	CLASSIC SUITE SCORE RANGES	NEXT GENERATION SUITE SCORE RANGES	SAMPLE SCORES FROM OTHER COLLEGES						
		ENGLISH							
	SENTENCE SKILLS	*WRITING*				*clover park technical college*	*rose state college*		
ENG071	20-69	200-249	200-240	20-74	n/a		200-243		
ENG101/91L	70-89	250-269	241-265	75-95	n/a		244-249		
ENG101	90-120	270-300	266-300	96-120	n/a	277-300	250-300	263-300	
		READING							
	READING COMPREHENSION	*READING*							
RDG073	20-56	200-236	200-240	20-64	200-262		200-243	200-249	
RDG075	57-79	237-259	241-265	65-78			244-249	250-262	
NO READING	80-120	260-300	266-300	79-120	263-300	277-300	250-300	263-300	
		MATH							
	ARITHMETIC / ELEMENTARY ALGEBRA / COLLEGE LEVEL MATH	*ARITHMETIC / QUANTITATIVE REASONING, ALGEBRA, AND STATISTICS / ADVANCED ALGEBRA AND FUNCTIONS*							
MAT073	ELA 20-35 & ARI 20-90	QAS 200-215 & ARI 200-270							
	ELA 36-47	QAS 216-227							
MAT075	ELA 20-35 & ARI 91-120	QAS 200-215 & ARI 271-300							
	ELA 48-60	QAS 228-240							
	ELA 61-79 & CLM 20-30	QAS 241-259 & AAF 200-210							
	ELA 80-95 & CLM 20-25	QAS 260-275 & AAF 200-205							
MAT105/98L	ELA 61-79 & CLM 31-44	QAS 241-259 AAF 211-224							
	ELA 80-95 & CLM 26-44	QAS 260-275 AAF 206-224							
	ELA 96-120 & CLM 20-30	QAS 276-300 AAF 200-210							
	ELA 96-120 & CLM 31-44	QAS 276-300 AAF 211-224							
	ELA 95-120 OR CLM 31-44	QAS 275-300 OR AAF 211-224	* CIRCA 2013						
MAT105 & MAT210	ELA 61-120 & CLM 45-62	QAS 241-300 AAF 225-242	255+ QAS	60+ ELA		252-288 Q/ 265-300 or 250-275 Q/ 250-262 Q/ 263-300 QAS			
MAT110	CLM 63-82	AAF 243-262	245-275	45+		289-300 Q/ 265-300 Q/ 276-290 Q/ 263-300 Q/ 250-300 AAF			
MAT190	CLM 83-120	AAF 263-300	276+	103+		285-300 AAF			276-300 AAF

* SWITCHED FROM OR TO AND STATEMENTS IN 2015
* INTRODUCED MAT105/097L IN 2014
* CHANGED TO TESTING BEGINNING IN ELA (AS OPPOSED TO ARI) IN 2016
* ANYONE PLACING INTO MAT073 OR MAT075 IS ALSO ELIGIBLE FOR MAT096
*ANYONE PLACING INTO MAT105 IS ALSO ELIGIBLE FOR MAT210
* SHOULD THERE BE A MAT210 EQUIVALENT TO MAT105/L?

Reading	Writing	Math QAS
266	266	255
263	277	252
277	250	265
250	263	250
263		250
		263
264	264	256

PLACEMENT	CLASSIC RANGES	NEXT GENERATION RANGES
	ENGLISH	
	SENTENCE SKILLS	*WRITING*
ENG071	20-69	200-249
ENG101/91L	70-89	250-269
ENG101	90-120	270-300
	READING	
	READING COMPREHENSION	*READING %*
RDG073H	20-56	200-237
RDG073H	57-79	238-252
NO READING	80-120	253-300
	MATH	
	ARITHMETIC / ELEMENTARY ALGEBRA / COLLEGE LEVEL MATH	*ARITHMETIC / QUANTITATIVE REASONING, ALGEBRA, AND STATISTICS % / ADVANCED ALGEBRA AND FUNCTIONS*
MAT073	ELA 20-35 & ARI 20-90	QAS 200-236 & ARI 200-270
	ELA 36-47	QAS 237-241
MAT075	ELA 20-35 & ARI 91-120	QAS 200-236 & ARI 271-300
	ELA 48-60	QAS 242-247
	ELA 61-79 & CLM 20-30	QAS 248-255 & AAF 200-210
	ELA 80-95 & CLM 20-25	QAS 256-262 & AAF 200-205
MAT105/98L	ELA 61-79 & CLM 31-44	QAS 248-255 & AAF 211-224
	ELA 80-95 & CLM 26-44	QAS 256-262 & AAF 206-224
	ELA 96-120 & CLM 20-30	QAS 263-300 & AAF 200-210
	ELA 96-120 & CLM 31-44	QAS 263-300 & AAF 211-224
	ELA 95-120 OR CLM 31-44	QAS 263-300 OR AAF 211-224
MAT105 & MAT210	ELA 61-120 & CLM 45-62	QAS 248-300 & AAF 225-242
MAT110	CLM 63-82	AAF 243-262
MAT190	CLM 83-120	AAF 263-300

* SWITCHED FROM OR TO AND STATEMENTS IN 2015
* INTRODUCED MAT105/097L IN 2014
* CHANGED TO TESTING BEGINNING IN ELA (AS OPPOSED TO ARI) IN 2016
* ANYONE PLACING INTO MAT073 OR MAT075 IS ALSO ELIGIBLE FOR MAT096
*ANYONE PLACING INTO MAT105 IS ALSO ELIGIBLE FOR MAT210
* SHOULD THERE BE A MAT210 EQUIVALENT TO MAT105/L?

% CONCORDANCE APPLIED

PLACEMENT	CLASSIC RANGES	NEXT GENERATION RANGES	NG
	ENGLISH		
	SENTENCE SKILLS	*WRITING*	
ENG071	20-69	200-249	200-240
ENG101/91L	70-89	250-269	241-265
ENG101	90-120	270-300	266-300
	READING		
	READING COMPREHENSION	*READING %*	
RDG073H	20-56	200-237	**200-237**
RDG073H	57-79	238-252	**238-251**
NO READING	80-120	253-300	**252-300**
	MATH		
	ARITHMETIC / ELEMENTARY ALGEBRA / COLLEGE LEVEL MATH	*ARITHMETIC / QUANTITATIVE REASONING, ALGEBRA, AND STATISTICS % / ADVANCED ALGEBRA AND FUNCTIONS*	
MAT073	ELA 20-35 & ARI 20-90	QAS 200-236 & ARI 200-270	200-220
	ELA 36-47	QAS 237-241	
MAT075	ELA 20-35 & ARI 91-120	QAS 200-236 & ARI 271-300	220-239
	ELA 48-60	QAS 242-247	
	ELA 61-79 & CLM 20-30	QAS 248-255 & AAF 200-210	
	ELA 80-95 & CLM 20-25	QAS 256-262 & AAF 200-205	
MAT105/98L	ELA 61-79 & CLM 31-44	QAS 248-255 & AAF 211-224	240-259
	ELA 80-95 & CLM 26-44	QAS 256-262 & AAF 206-224	
	ELA 96-120 & CLM 20-30	QAS 263-300 & AAF 200-210	
	ELA 96-120 & CLM 31-44	QAS 263-300 & AAF 211-224	
	ELA 95-120 OR CLM 31-44	QAS 263-300 OR AAF 211-224	
MAT105 & MAT210	ELA 61-120 & CLM 45-62	QAS 248-300 & AAF 225-242	260-300
MAT110	CLM 63-82	AAF 243-262	
MAT190	CLM 83-120	AAF 263-300	

* SWITCHED FROM OR TO AND STATEMENTS IN 2015
* INTRODUCED MAT105/097L IN 2014
* CHANGED TO TESTING BEGINNING IN ELA (AS OPPOSED TO ARI) IN 2016
* ANYONE PLACING INTO MAT073 OR MAT075 IS ALSO ELIGIBLE FOR MAT096
*ANYONE PLACING INTO MAT105 IS ALSO ELIGIBLE FOR MAT210
* SHOULD THERE BE A MAT210 EQUIVALENT TO MAT105/L?

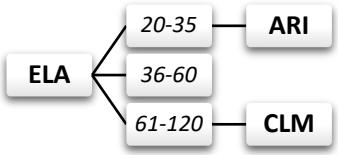
% CONCORDANCE APPLIED

MATH COURSE PLACEMENT MATRIX

		ARI		NO ARI / CLM	CLM				
		20-90	91-120		20-25	26-30	31-44	45-62	63-82	83-120
ELA	20-35	MAT073	MAT075							
	36-47			MAT073						
	48-60			MAT075						
	61-79				MAT075	MAT075	MAT105/098L	MAT105	MAT110	MAT190
	80-95				MAT075	MAT105/098L	MAT105/098L	MAT105	MAT110	MAT190
	96-120				MAT105/098L	MAT105/098L	MAT105/098L	MAT105	MAT110	MAT190
NO ELA								MAT105	MAT110	MAT190

Accuplacer utilizes three individual assessments for math course placement:

ARI - Arithmetic
ELA - Elementary Algebra
CLM - College Level Math

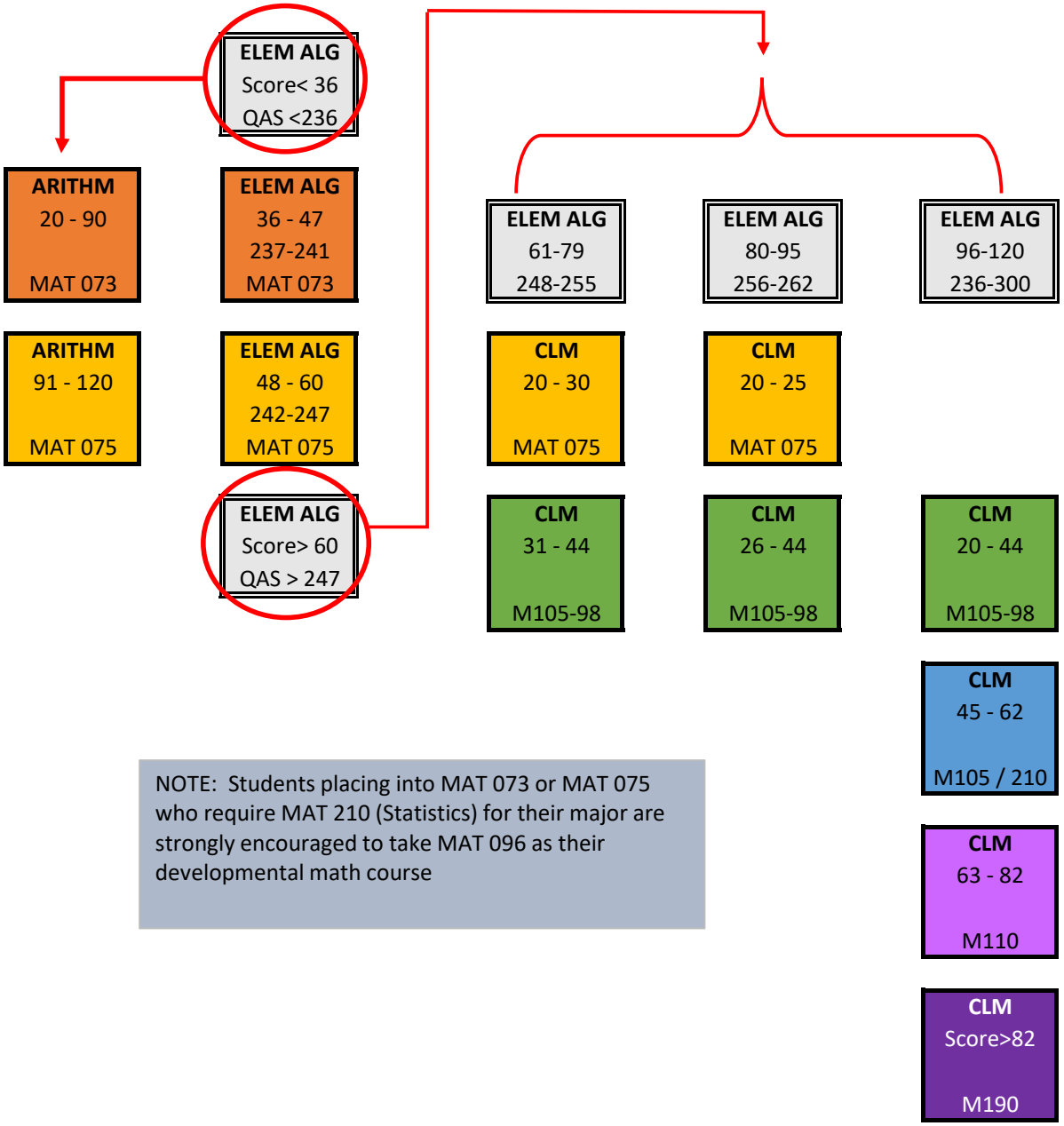


Every student requiring Math placement begins in **ELA - Elementary Algebra**. Based on their score in that test, they may be branched to **ARI - Arithmetic** (ELA<36) or **CLM - College Level Math** (ELA>60), or simply remain in ELA (ELA 36-60).

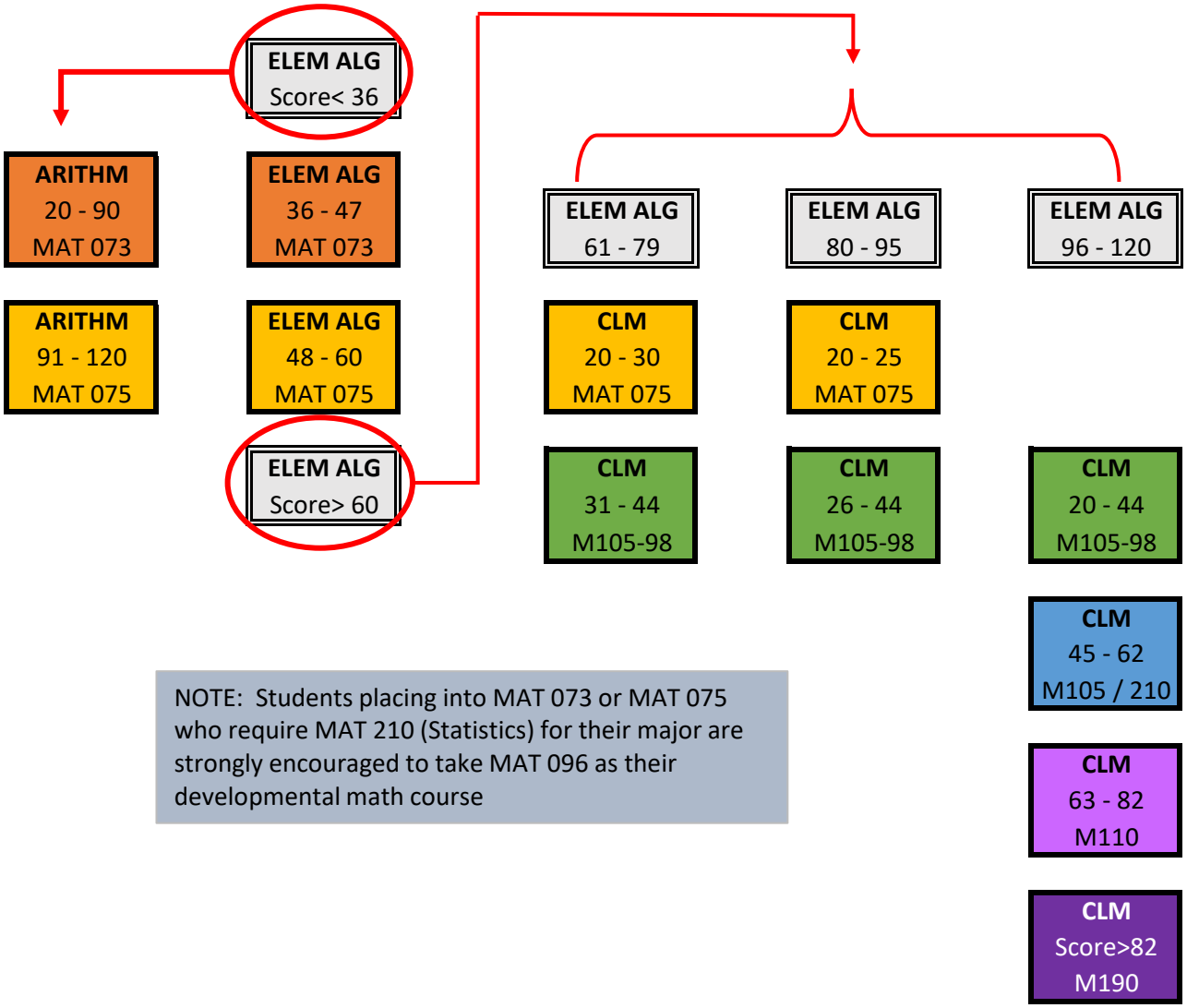
Students exempt from Math placement (SAT, ACT, high school GPA, etc.) may opt to take only the **CLM - College Level Math** test to determine placement college-level math courses beyond MAT105, the entry point for placement exemptions.

If student attempts placement multiple times, the higher of the scores determines placement. Scores are valid for two years. Students placing into MAT073 or MAT075 are also eligible for MAT096. Students placing into MAT105 are also eligible for MAT210.

A comparison with the Assessment and Placement report, Recommendations from the MACC Assessment and Placement Study Group, May 12, 2017, is not applicable. The report only looks at student scores for ARI and CLM; it does not consider ELA at all in its placement profiles.



NOTE: Students placing into MAT 073 or MAT 075 who require MAT 210 (Statistics) for their major are strongly encouraged to take MAT 096 as their developmental math course



NOTE: Students placing into MAT 073 or MAT 075 who require MAT 210 (Statistics) for their major are strongly encouraged to take MAT 096 as their developmental math course

LAST	FIRST	SUBJECT
Foster	Tim	Math
Griffith	Linda	Math
Rached	Paul	Math
Rawlings	Josiah	Math
Reitz	Jeff	Math
Yuan	Qing	Math
Deniker	Carolyn	Math
Dodge	Kevin	Reading
Kapoor	Pramod	Reading
Kasecamp	Terry	Reading
Lewis	Richard	Reading
Lieberman	Michelle	Reading
Logsdon	Michael	Reading
Miller	Stacy	Reading
Petereson	Therese	Reading
Bowser	Christa	Writing
DuBose	Jack	Writing
Erbe	David	Writing
James	Anna	Writing
Jenkins	Greg	Writing
Skidmore	Ron	Writing
Skylstad	Peter	Writing
Taylor	John	Writing

Reading

111222000	***NEXT GEN* Reading Only**		
111222001	*NEXT GEN* Reading Only	Reading One	3/2/2000
111222002	*NEXT GEN* Reading Only	Reading Two	3/2/2000
111222003	*NEXT GEN* Reading Only	Reading Three	3/2/2000
111222004	*NEXT GEN* Reading Only	Reading Four	3/2/2000
111222005	*NEXT GEN* Reading Only	Reading Five	3/2/2000
111222006	*NEXT GEN* Reading Only	Reading Six	3/2/2000
111222007	*NEXT GEN* Reading Only	Reading Seven	3/2/2000
111222008	*NEXT GEN* Reading Only	Reading Eight	3/2/2000
111222009	*NEXT GEN* Reading Only	Reading Nine	3/2/2000

Writing

222333000	***NEXT GEN* Writing Only**		
222333001	*NEXT GEN* Writing Only	Writing One	3/2/2000
222333002	*NEXT GEN* Writing Only	Writing Two	3/2/2000
222333003	*NEXT GEN* Writing Only	Writing Three	3/2/2000
222333004	*NEXT GEN* Writing Only	Writing Four	3/2/2000
222333005	*NEXT GEN* Writing Only	Writing Five	3/2/2000
222333006	*NEXT GEN* Writing Only	Writing Six	3/2/2000
222333007	*NEXT GEN* Writing Only	Writing Seven	3/2/2000
222333008	*NEXT GEN* Writing Only	Writing Eight	3/2/2000
222333009	*NEXT GEN* Writing Only	Writing Nine	3/2/2000

Math

333444000	***NEXT GEN* Math Only (start in QAS)**		
333444001	*NEXT GEN* Math Only (start in QAS)	Math One	3/2/2000
333444002	*NEXT GEN* Math Only (start in QAS)	Math Two	3/2/2000
333444003	*NEXT GEN* Math Only (start in QAS)	Math Three	3/2/2000
333444004	*NEXT GEN* Math Only (start in QAS)	Math Four	3/2/2000
333444005	*NEXT GEN* Math Only (start in QAS)	Math Five	3/2/2000
333444006	*NEXT GEN* Math Only (start in QAS)	Math Six	3/2/2000
333444007	*NEXT GEN* Math Only (start in QAS)	Math Seven	3/2/2000
333444008	*NEXT GEN* Math Only (start in QAS)	Math Eight	3/2/2000
333444009	*NEXT GEN* Math Only (start in QAS)	Math Nine	3/2/2000

111222001	*NEXT GEN* Reading Only	**Reading One**	**3/2/2000**
111222002	*NEXT GEN* Reading Only	**Reading Two**	**3/2/2000**
111222003	*NEXT GEN* Reading Only	**Reading Three**	**3/2/2000**
111222004	*NEXT GEN* Reading Only	**Reading Four**	**3/2/2000**
111222005	*NEXT GEN* Reading Only	**Reading Five**	**3/2/2000**
111222006	*NEXT GEN* Reading Only	**Reading Six**	**3/2/2000**
111222007	*NEXT GEN* Reading Only	**Reading Seven**	**3/2/2000**
111222008	*NEXT GEN* Reading Only	**Reading Eight**	**3/2/2000**
111222009	*NEXT GEN* Reading Only	**Reading Nine**	**3/2/2000**
222333001	*NEXT GEN* Writing Only	**Writing One**	**3/2/2000**
222333002	*NEXT GEN* Writing Only	**Writing Two**	**3/2/2000**
222333003	*NEXT GEN* Writing Only	**Writing Three**	**3/2/2000**
222333004	*NEXT GEN* Writing Only	**Writing Four**	**3/2/2000**
222333005	*NEXT GEN* Writing Only	**Writing Five**	**3/2/2000**

222333006	*NEXT GEN* Writing Only	**Writing Six**	**3/2/2000**
222333007	*NEXT GEN* Writing Only	**Writing Seven**	**3/2/2000**
222333008	*NEXT GEN* Writing Only	**Writing Eight**	**3/2/2000**
222333009	*NEXT GEN* Writing Only	**Writing Nine**	**3/2/2000**
333444001	*NEXT GEN* Math Only (start in QAS)	**Math One**	**3/2/2000**
333444002	*NEXT GEN* Math Only (start in QAS)	**Math Two**	**3/2/2000**
333444003	*NEXT GEN* Math Only (start in QAS)	**Math Three**	**3/2/2000**
333444004	*NEXT GEN* Math Only (start in QAS)	**Math Four**	**3/2/2000**
333444005	*NEXT GEN* Math Only (start in QAS)	**Math Five**	**3/2/2000**
333444006	*NEXT GEN* Math Only (start in QAS)	**Math Six**	**3/2/2000**
333444007	*NEXT GEN* Math Only (start in QAS)	**Math Seven**	**3/2/2000**
333444008	*NEXT GEN* Math Only (start in QAS)	**Math Eight**	**3/2/2000**
333444009	*NEXT GEN* Math Only (start in QAS)	**Math Nine**	**3/2/2000**

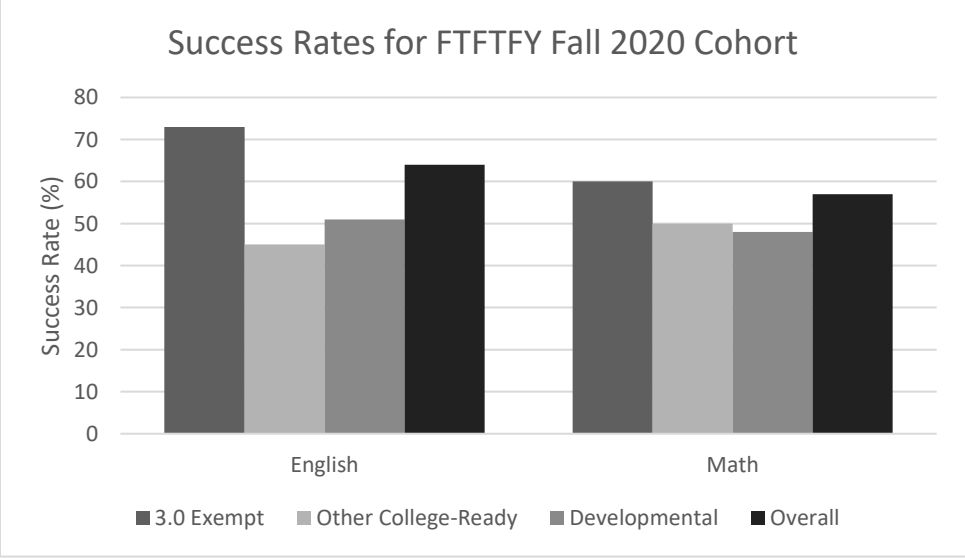
Does the High School GPA 3.0 Exemption correctly classify students as "college-ready"?

In Mathematics and English at HCC, students are automatically classified as "college-ready" and approved to enroll in a college-level gateway course (MAT 101, MAT 109, and ENG 101 are most common) without further placement testing. This exemption precedes all others, so that even if a student would also qualify as "college-ready" based on SAT scores, for example, that student is given the exempted status based on the 3.0 GPA. This exemption applies to a large group of students, with 346 out of 562 (62%) first-time full-time first-year (FTFTFY) students in Fall 2020 qualifying for the exemption. To determine whether this exemption is correctly classifying students as "college-ready", their success rates in their first college-level English and math courses (gateway courses) were considered and compared to other groups of students.

In math, 226 of the 3.0 exempt students attempted a college-level gateway math course and 136 of them successfully completed the course with a grade of A, B, or C for a success rate of 60%. In comparison, students who were considered "college-ready" based on the Accuplacer, PARCC, SAT/ACT or other exemption had a success rate of 50% (17 successful completions out of 34 course attempts). Students who were placed on the developmental level according to the Accuplacer had a success rate of 48% (23 successful completions out of 48 course attempts), and the overall success rate for the cohort was 57%.

In English, 277 of the 3.0 exempt students attempted a college-level gateway English course and 203 of them successfully completed the course with a grade of A, B, or C for a success rate of 73%. In comparison, students who were considered "college-ready" based on the Accuplacer, PARCC, SAT/ACT or other exemption had a success rate of 45% (39 successful completions out of 87 course attempts). Students who were placed on the developmental level according to the Accuplacer had a success rate of 51% (40 successful completions out of 79 course attempts), and the overall success rate for the cohort was 64%.

Using success rates as a measure of correct classification, the answer to the question is yes, the 3.0 exemption correctly classifies students as "college-ready" and for the FTFTFY fall 2020 cohort this placement is performing better than the other placements/exemptions because the success rates for that group are comparatively higher. The other exemptions and placement tests may need to be examined in further detail as the success rates are relatively low for students who are considered "college-ready".



Gateway Coursetaking: English

2020-2021

Office of Planning & Institutional Effectiveness

August 26, 2021

Gateway Coursetaking

A "gateway course" is defined in this report as the first college-level course for credit toward degree in the given subject that students take as a first-time full-time first-year student (FTFTFY). This course fulfills general education program requirements and may be a prerequisite for other courses. Students may only take gateway courses if they are deemed "college ready" in the subject area, either through score on a placement test or through another exemption, such as a 3.0 or greater high school GPA. Students who do not meet minimum score requirements on a standardized placement test to be deemed "college ready" and who do not receive another exemption are required to take a developmental course prior to or in conjunction with a gateway course. This report examines the FTFTFY Fall 2020 cohort over three terms: Summer 2020 (for June 2020 high school graduates only), Fall 2020, and Spring 2021. Each student's first attempt at a gateway course that resulted in a verified grade/withdrawal for those terms was included.

For English, the placement matrix identifies the following options for course placement dependent upon assessment scores for 2020-2021:

College-Level General Education English (Gateway) Courses:

ENG 101- English Composition
ENG 101E- English Composition for English Language Learners
ENG 112- Technical Writing I

Developmental English Courses

*RDG 095- Reading Strategies for College Success
*ENG 095- Writing Strategies for College Success
†ENG 096- Writing Strategies for College Success
**Can be taken as corequisites with or prerequisites for ENG 101*
†Prerequisite only for ENG 101

Per the guidelines on the HCC website, you are exempt from the English placement assessment if you:

- have a cumulative high school GPA of 3.0
- already have a college degree,
- have earned a SAT Evidence Based Reading and Writing score of 480* or higher,
- have earned an ACT English score of 21* or higher,
- have a high school sophomore or junior year MCAP (*Previously PARCC)* English Language Arts/Literacy score of 4 or 5 (750 or higher on the scale score),
- have a GED Reasoning Through Language Arts score of 165 or higher,
- have successfully completed a college-level English course

English Coursetaking in Academic Year 2020-2021

In Fall 2020, there were 562 first-time full-time first-year (FTFTFY) students. Of those students, 444 attempted a gateway English course in Summer 2020 (June 2020 high school graduates only), Fall 2020, or Spring 2021. Out of the 444 attempts, 283 students (63.7%) successfully completed that course with a final grade of A, B, or C. The vast majority of students selected ENG 101 as their first college-level English course. The complete breakdown of attempts and successes by course is in Table 1.

Table 1. English Attempts and Successful Completions by Course

Course	Attempts	Successful Completions	Success Rate
ENG 101	437	278	63.6%
ENG 112	7	5	71.4%
Total	444	283	63.7%

Placements

Success rates also varied considerably by placement. Students were either considered "college ready" and registered directly for a gateway course or were placed on the developmental pathway and registered for a gateway course in conjunction with or following successful completion of one or more developmental English course(s) (ENG 095/096, RDG 095). Students were determined to be college ready via a placement exam score, standardized exam score, high school GPA, or other HCC exemption/prior coursetaking. Table 2 contains success rates by placement. In total, 448 students were considered college-ready for English: 346 students qualified for the 3.0 Exemption, the largest placement category; and 102 students were otherwise qualified as college-ready across four categories. Additionally, 104 students placed on the developmental level and 10 students did not have a placement on record. The college-ready students have a higher success rate compared to students who placed on the developmental level. Notably, the success rates for students who qualified as college-ready based on their PARCC scores, SAT/ACT scores, or other exemptions are fairly low. Some cell counts are small and therefore may not be representative and should be interpreted with caution.

Table 2. English Attempts and Successful Completions by Placement

Placement	Students	Course Attempts	Successful Completions	Success Rate
College Ready	448	364	242	66.5%
3.0 Exempt	346	277	203	73.3%
Placement Exam: College-Ready	21	17	11	64.7%
PARCC: College-Ready	53	51	21	41.2%
SAT/ACT: College-Ready	12	11	4	36.4%
Other Exemption	16	8	3	37.5%
Developmental (Placement Exam)	104	79	40	50.6%
None	10	1	1	100%
Total	562	444	283	63.7%

Race/Ethnicity and Gender

Success rates also varied by race/ethnicity and gender regardless of placement, as seen in Table 3. Females had higher success rates compared to males, and students in the white, non-Hispanic race/ethnicity group had the highest success rates compared to other race/ethnicity groups.

The interaction of race/ethnicity and gender regardless of placement also produced some variation in success rates, as seen in Table 4. The highest success rates are associated with white, non-Hispanic female students and other/two or more races/unknown female students. The lowest success rates are associated with black or African American, non-Hispanic male students and other/two or more races/unknown male students.

Table 3. English Attempts and Successful Completions by Student Characteristics

	Students	Course Attempts	Successful Completions	Success Rate
Race/Ethnicity				
Hispanic	54	40	24	60.0%
Black or African American, non-Hispanic	61	45	23	51.1%
White, non-Hispanic	382	304	201	66.1%
Other/Two or More/Unknown	65	55	35	63.6%
Gender				
Male	238	186	106	57.0%
Female	324	258	177	68.6%
Total	562	444	283	63.7%

Table 4. Race/Ethnicity and Gender Interactions and Success Rates

Successful/Attempted Success rate	Male	Female
Hispanic	11/18 61%	13/22 59%
Black or African American, non-Hispanic	9/21 43%	14/24 58%
White, non-Hispanic	78/131 60%	123/173 71%
Other/Two or More/Unknown	8/16 50%	27/39 69%

Outcomes by Term

The overall success rate across all three terms was 63.7%; however, both coursetaking attempts and successes vary by term. The students who attempted a gateway course in Summer 2020 had the highest attempt and success rates, likely because this group consisted of 2020 high school graduates who had their preparatory coursework recently completed and who were highly motivated to begin their college education quickly. The majority of attempts were in Fall 2020 for both groups. Table 5 outlines success rates by group and term. Some cell counts are small and therefore may not be representative and should be interpreted with caution.

Table 5. English Attempts and Successful Completions by Term

Group/Term	**Attempts**	**Successful Completions**	**Success Rate**
College Ready			
20/SU	34	31	91.2%
20/FA	310	197	63.5%
21/SP	20	14	70.0%
Developmental			
20/SU	2	2	100%
20/FA	65	32	49.2%
21/SP	12	6	50.0%
All Groups/Terms	444	283	63.7%

Unsuccessful Completions and Withdrawals

Unsuccessful completions and withdrawals make up a large proportion of outcomes for students who attempted a gateway course. Unsuccessful completion of a course is defined here as a verified grade of D or F, and was the result of 31.5% of course attempts. Withdrawals made up another 4.7% of course attempt results. As expected based on the variation seen in successful completions based on student characteristics, there was considerable variation in the rates of unsuccessful completion and withdrawal as well. The "Other College Ready" group, which includes students who qualified as college ready based on placement exam or an exemption other than 3.0 HS GPA, had the highest unsuccessful completion rate. The highest rate of withdrawal is associated with students who placed at a developmental level. All counts and rates of unsuccess and withdrawal are found in Table 6. Some cell counts are small and therefore may not be representative and should be interpreted with caution.

Table 6. English Attempts, Unsuccessful Completions, and Withdrawals

	Attempts	**Unsuccessful**		**Withdrawal**	
	#	**#**	**%**	**#**	**%**
Total Students	444	140	31.5%	21	4.7%
Placement					
3.0 Exemption	277	61	22.0%	10	3.6%
Other College Ready	76	38	50.0%	4	5.3%
Developmental	79	34	43.0%	5	6.3%
No Placement	1	0	--	0	--
Gender					
Male	186	68	36.6%	12	5.0%
Female	258	72	27.9%	9	3.5%
Race/Ethnicity					
Hispanic	40	15	37.5%	1	2.5%
Black or African American, non-Hispanic	45	20	44.4%	2	4.4%
White, non-Hispanic	304	87	28.6%	16	5.3%
Other/Two or More/Unknown	55	18	32.7%	2	3.6%

Developmental Coursetaking

In the FTFTFY Fall 2020 cohort, 104 students placed on a developmental level. According to the placement matrix, they needed to take at least one developmental course (ENG 095/096, RDG 095) prior to or in conjunction with the gateway English course (ENG 101). Seventy students on the developmental level attempted ENG 101 in Summer 2020, Fall 2020, or Spring 2021; and 69 of those took the recommended developmental course(s) prior to or in conjunction with ENG 101. The success rate for developmental level students taking ENG 101 was 50.6%. An additional 21 students attempted at least one developmental course during the included terms and may go on to take a gateway course in the future.

Summary

From Summer 2020 through Spring 2021, 444 FTFTFY full-time Fall 2020 cohort students attempted a gateway English course and 283 successfully completed that course, for an overall success rate of 63.7%. The vast majority of those students took ENG 101, with a success rate of 63.6%. Success rates varied by placement. The majority of students were placed in the "college ready" category, and the majority of those students received the 3.0 high school GPA exemption. Overall, the college-ready students had a higher success rate (66.5%) compared to the students who placed on the developmental level (50.6%). However, students who qualified as college-ready based on their PARCC scores, SAT/ACT scores, or other exemptions had lower success rates compared to students who qualified as college-ready based on HS GPA or placement test scores and students who placed on the developmental level.

Student race/ethnicity and gender were also associated with varied success rates. Females had slightly higher success rates compared to males, and students in the White, non-Hispanic category had the highest success rate compared to other racial/ethnic groups. The rates became even more disparate when interactions between race/ethnicity and gender are considered. The highest success rates are associated with white, non-Hispanic female students and other/two or more races/unknown female students. The lowest success rates are associated with black or African American, non-Hispanic male students and other/two or more races/unknown male students.

Coursetaking attempts and success rates also varied by term, with the highest success rates in Summer 2020 but the most attempts in Fall 2020. The students in this cohort who attempted courses in Summer 2020 were recent high school graduates who just completed high school English courses and who were likely highly motivated to complete courses prior to the fall, leading to higher success rates in Summer 2020.

A considerable number of students (161, 36%) either unsuccessfully completed or withdrew from their first gateway course. The highest unsuccessful completion (D/F) rates were associated with the group of students who qualified as college ready via an exemption other than HS GPA as well as students who placed at a developmental level. Males had higher rates of unsuccess compared to females, and black or African American, non-Hispanic students had higher rates of unsuccess compared to other race/ethnicity groups. The highest rate of withdrawal is associated with students who placed at a developmental level.

Overall, there are many different paths to success in gateway English courses. Students classified as college-ready seem to be better prepared for success compared to those in the developmental level, but there is variation within the college-ready group and those placed based on the placement exam, SAT/ACT, or PARCC had much lower success rates. The overall success rate was 63.7%, and considerable variations in success by course, placements, student characteristics, and terms were found. These variations may provide a direction for further research and procedural or program developments.

Gateway Coursetaking: Mathematics

2020-2021

Office of Planning & Institutional Effectiveness

August 26, 2021

Gateway Coursetaking

A "gateway course" is defined in this report as the first college-level course for credit toward degree in the given subject that students take as a first-time full-time first-year student (FTFTFY). This course fulfills general education program requirements and may be a prerequisite for other courses. Students may only take gateway courses if they are deemed "college ready" in the subject area, either through score on a placement test or through another exemption, such as a 3.0 or greater high school GPA. Students who do not meet minimum score requirements on a standardized placement test to be deemed "college ready" and who do not receive another exemption are required to take a developmental course prior to a gateway course. This report examines the FTFTFY Fall 2020 cohort over three terms: Summer 2020 (for June 2020 high school graduates only), Fall 2020, and Spring 2021. Each student's first attempt at a gateway course that resulted in a verified grade/withdrawal for those terms was included.

For mathematics, the placement matrix identifies the following options for course placement dependent upon assessment scores:

Approved College-Level General Education Mathematics (Gateway) Courses for 2020-2021:

MAT 101- College Algebra
MAT 103- Finite Mathematics
MAT 106- Elements of Logic
MAT 109- Intro to Statistics
MAT 114- Intro to Applied Algebra
MAT 115- Quantitative Reasoning
*MAT 102- Trigonometry
*MAT 161- Precalculus
*MAT 164- Calculus with Applications

**These have MAT 101 as a prerequisite as an alternative to assessment scores. These are only considered a gateway course for this report if it was the first mathematics course attempted by a FTFTFY Fall 2020 cohort student.*

Developmental Math Courses (to be taken prior to a college-level course if needed):

MAT 090- Foundations of Algebra
MAT 095- Foundations of Reasoning & Statistics

Per the guidelines on the HCC website, you are exempt from mathematics placement assessment if you:

- have a cumulative high school GPA of 3.0
- already have a college degree,
- have earned a SAT math score of 530* or higher,
- have earned an ACT math score of 21* or higher,
- have a high school MCAP (p*reviously PARCC)* Algebra II assessment score of 4 or 5 (750 or higher on the scale score),
- have a GED Mathematical Reasoning score of 165 or higher,
- have successfully completed a college-level mathematics course

Mathematics Coursetaking in Academic Year 2020-2021

In Fall 2020, there were 562 first-time first-year (FTFTFY) students. Of those students, 311 attempted a gateway math course in Summer 2020 (June 2020 high school graduates only), Fall 2020, or Spring 2021. Out of the 311 attempts, 177 (56.9%) successfully completed that course. This cohort of students took five of the college-level courses as gateway courses, and the vast majority (87.8%) took MAT 101 or MAT 109. The complete breakdown of attempts and successes by course is in Table 1. The success rates vary greatly and are notably low for MAT 101, the course attempted by the most students.

Table 1. Mathematics Attempts and Successful Completions by Course

Course	Attempts	Successful Completions	Success Rate
MAT 101	140	69	49.3%
MAT 109	133	86	64.7%
MAT 114	5	4	80.0%
MAT 115	7	2	28.6%
MAT 161	26	15	57.7%
Total	311	177	56.9%

Placements

Success rates also varied considerably by placement. Students were either considered college ready and registered directly for a gateway course or were placed on the developmental pathway and registered for a gateway course following successful completion of a developmental math course (MAT 090 or 095). Students were determined to be college ready via a placement exam score, standardized exam score, high school GPA, or other HCC exemption/prior coursetaking. Table 2 contains success rates by placement. In total, 395 students were considered college-ready: 346 students qualified for the 3.0 Exemption, the largest placement category; and 49 students were otherwise qualified as college-ready across four categories. Additionally, 144 students placed in the developmental category and 23 students did not have a placement on record. The college-ready students have a higher success rate compared to students who needed to take a developmental course prior to the gateway course. The success rate for students who qualified as college-ready based on the placement exam is relatively low compared to students who qualified as college-ready based on the 3.0 Exemption, SAT/ACT scores, or other exemptions. Some cell counts are small and therefore may not be representative and should be interpreted with caution.

Table 2. Mathematics Attempts and Successful Completions by Placement

Placement	Students	Course Attempts	Successful Completions	Success Rate
College Ready	395	260	153	58.8%
3.0 Exempt	346	226	136	60.2%
Placement Exam: College-Ready	29	24	12	50.0%
PARCC: College-Ready	3	2	0	0.0%
SAT/ACT: College-Ready	9	5	3	60.0%
Other Exemption	8	3	2	66.7%
Developmental (Placement Exam)	144	48	23	47.9%
None	23	3	1	33.3%
Total	562	311	177	56.9%

Race/Ethnicity and Gender

Success rates also varied by race/ethnicity and gender, as seen in Table 3. Females had slightly higher success rates compared to males, and students in the other/two or more races/unknown race and ethnicity category had the highest success rate compared to other racial/ethnic groups.

The interaction of race/ethnicity and gender also produced some variation in success rates, as seen in Table 4. The highest success rates are associated with other/two or more races/unknown race and ethnicity male and female students and white, non-Hispanic female students. The lowest success rates are associated with black or African American, non-Hispanic male students and Hispanic female students.

Table 3. Mathematics Attempts and Successful Completions by Student Characteristics

	Students	Course Attempts	Successful Completions	Success Rate
Race/Ethnicity				
Hispanic	54	29	13	44.8%
Black or African American, non-Hispanic	61	29	13	44.8%
White, non-Hispanic	382	218	128	58.7%
Other/Two or More/Unknown	65	35	23	65.7%
Gender				
Male	238	131	72	55.0%
Female	324	180	105	58.3%
Total	562	311	177	56.9%

Table 4. Race/Ethnicity and Gender Interactions and Success Rates

Successful/Attempted *Success rate*	Male	Female
Hispanic	6/12 50%	7/17 41%
Black or African American, non-Hispanic	5/13 38%	8/16 50%
White, non-Hispanic	52/94 55%	76/124 61%
Other/Two or More/Unknown	9/12 75%	14/23 61%

Outcomes by Term

The overall success rate across all three terms was 56.9%; however, both coursetaking attempts and successes vary by term. The students who attempted a gateway course in Summer 2020 had the highest success rate, likely because this group consisted of 2020 high school graduates who recently completed their preparatory coursework and were highly motivated to begin their college education quickly. The majority of attempts were in Fall 2020 for the college ready group, while the majority of attempts for the developmental group were in Spring 2021 because developmental coursework frequently took place in the fall. Table 5 outlines success rates by group and term. Some cell counts are small and therefore may not be representative and should be interpreted with caution.

Table 5. Mathematics Attempts and Successful Completions by Term

Group/Term	**Attempts**	**Successful Completions**	**Success Rate**
College Ready			
20/SU	16	12	75.0%
20/FA	227	131	57.7%
21/SP	38	34	50.0%
Developmental			
20/SU	0	--	--
20/FA	9	3	33.3%
21/SP	39	20	51.3%
All Groups/Terms	311	177	56.9%

Unsuccessful Completions and Withdrawals

Unsuccessful completions and withdrawals make up a large proportion of outcomes for students who attempted a gateway course. Unsuccessful completion of a course is defined here as a verified grade of D or F, and was the result of 36.7% of course attempts. Withdrawals made up another 6.8% of course attempt results. As expected based on the variation seen in successful completions in association with on student characteristics, there was considerable variation in the rates of unsuccessful completion and withdrawal as well. The "Other College Ready" group, which includes students who qualified as college ready based on placement exam or an exemption other than 3.0 HS GPA, had a higher unsuccessful completion rate compared to the 3.0 Exempt group and the Developmental group. Higher unsuccessful completion rates were also associated with males when compared to females and Hispanic and Black or African American, non-Hispanic students when compared to other race/ethnicity groups. The highest rate of withdrawal is associated with students who placed at a developmental level. All counts and rates of unsuccess and withdrawal are found in Table 6. Some cell counts are small and therefore may not be representative and should be interpreted with caution.

Table 6. Mathematics Attempts, Unsuccessful Completions, and Withdrawals

	Attempts	**Unsuccessful**		**Withdrawal**	
	#	**#**	**%**	**#**	**%**
Total Students	311	114	36.7%	21	6.8%
Placement					
3.0 Exemption	226	75	33.2%	15	6.6%
Other College Ready	34	16	47.1%	1	2.9%
Developmental	48	20	41.7%	5	10.4%
No Placement	3	2	66.7%	0	--
Gender					
Male	131	58	36.7%	10	6.3%
Female	180	65	28.8%	8	3.5%
Race/Ethnicity					
Hispanic	29	14	48.3%	2	6.9%
Black or African American, non-Hispanic	29	14	48.3%	2	6.9%
White, non-Hispanic	218	75	34.4%	15	6.9%
Other/Two or More/Unknown	35	11	31.4%	2	5.7%

Developmental Coursetaking

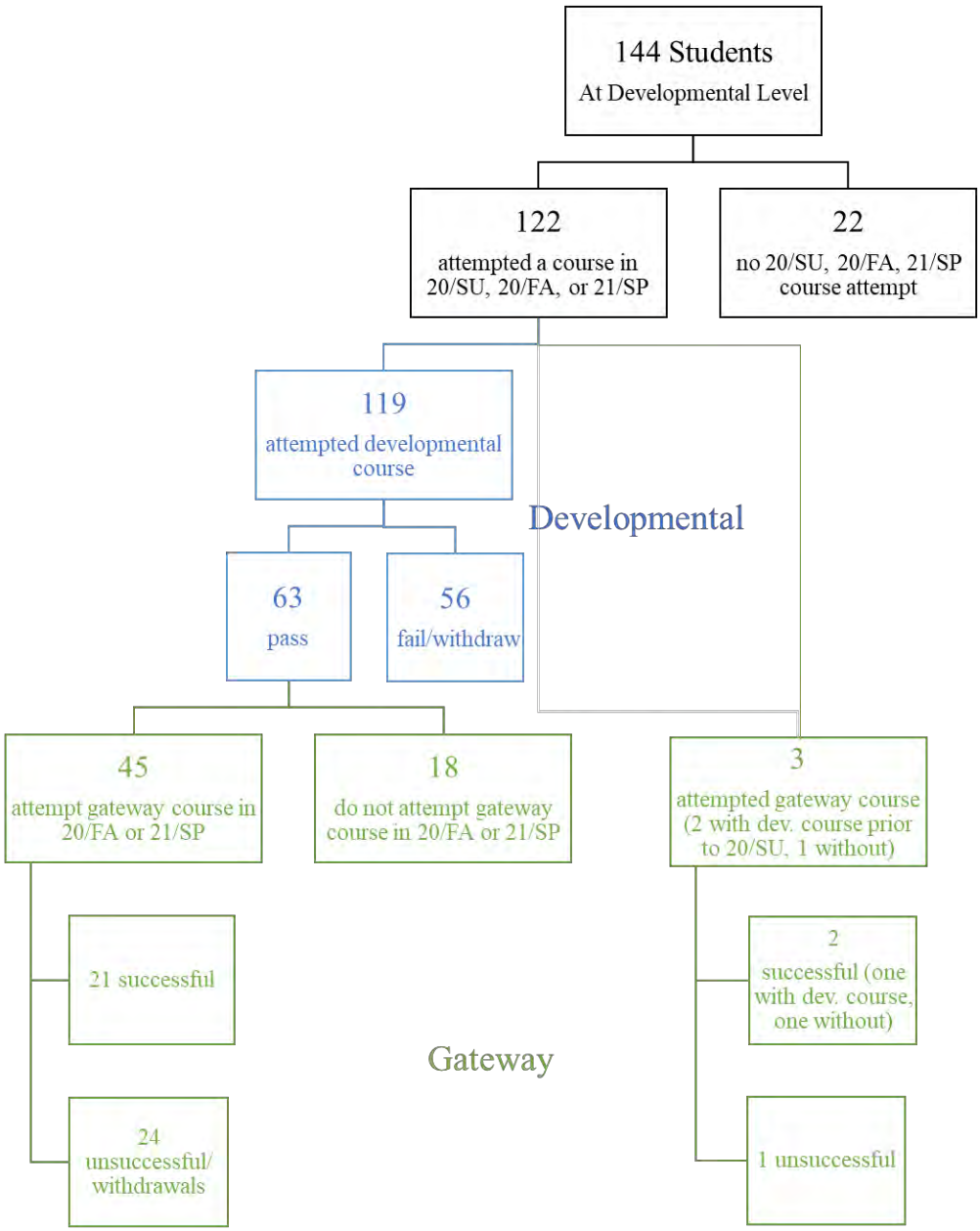
In the FTFTFY Fall 2020 cohort, 144 students placed on a developmental level according to the placement exam. According to the placement matrix, they needed to take and pass MAT 090 or MAT 095 prior to attempting a college-level course. Figure 1 shows the paths students took through developmental coursework in the three terms included here. Overall, 47 students followed the placement matrix pathway of taking and passing a developmental course prior to taking a gateway course (45 in the included terms, two with the developmental course completed prior to Summer 2020), and 22 of those students were successful (47%). One additional student

took a gateway course without taking a developmental course previously, and was successful. The 18 students who passed the developmental course but did not attempt a gateway course, many of whom took the course in Spring 2021, may go on to take the gateway course in the future.

The developmental level students took the following gateway courses:

MAT 101: 21 students, 8 successful completions (38%)
MAT 109: 25 students, 15 successful completions (60%)
MAT 115: 2 students, 0 successful completions (0%)

Figure 1. Course Pathways for Developmental Level Students



Summary

From Summer 2020 through Spring 2021, 311 FTFTFY Fall 2020 cohort students attempted a gateway math course and 177 successfully completed that course, for an overall success rate of 56.9%. Students took five different gateway math courses, but the vast majority took MAT 101 or MAT 109, which had success rates of 49.3% and 64.7%, respectively. Success rates also varied by placement. The majority of students were placed in the "college ready" category, and the majority of those students received the 3.0 high school GPA exemption. The college-ready students had higher success rates than the students who placed on the developmental level or who had no placement. Within the college-ready group, the students who scored as college-ready on the placement test had relatively low success rates.

Student race/ethnicity and gender were also associated with varied success rates. Females had slightly higher success rates compared to males, and students in the other/two or more races/unknown race and ethnicity category had the highest success rate compared to other racial/ethnic groups. The rates became even more disparate when interactions between race/ethnicity and gender are considered. The highest success rates are associated with other/two or more races/unknown race and ethnicity male and female students and White, non-Hispanic female students. The lowest success rates are associated with Black or African American, non-Hispanic male students and Hispanic female students.

Coursetaking attempts and success rates also varied by term. The majority of attempts for college-ready students were in Fall 2020 while the majority of attempts for developmental students were in Spring 2021 due to the prerequisite requirement. Also, the highest success rates were in Summer 2020, which is logical given that the students in this cohort who took courses in Summer 2020 were new high school graduates who recently completed high school math courses and who were likely highly motivated to complete courses prior to the fall.

A considerable number of students (135, 36.7%) either unsuccessfully completed or withdrew from their first gateway course. Higher unsuccessful completion rates were associated with the "other college ready" group compared to the 3.0 exempt and developmental groups, males when compared to females, and Hispanic and Black or African American, non-Hispanic students when compared to other race/ethnicity groups. The highest rate of withdrawal is associated with students who placed at a developmental level.

The prescribed pathway for students who place at a developmental level is to successfully complete a developmental course and then attempt a gateway course. Forty-five students made it through the pathway within the three terms included here, and 21 (47%) of those successfully completed the gateway course. Students on this pathway may take longer to complete the course sequence, so this first-year only picture of the developmental pathway may be incomplete.

Overall, there are many different paths to success in gateway math courses. Students classified as college-ready seem to be better prepared for success compared to those in the developmental level, but there is variation within the college-ready group. With an overall success rate of 56.9% there may be room for improvement, and the variations in success by course, placements, student characteristics, and terms may provide clues to what is influencing the success rate as well as a direction for further research and procedural or program developments. There is also an opportunity for further research on the developmental course pathway, which may benefit from examination over two years rather than one.

First Credit Bearning Math Grade (ABC/DF)
From Fall 2017 - Spring 2021

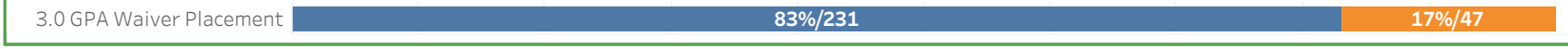
Passed first credit bearing Math Course (100+) Failed first credit bearing Math Course (100+)

Accuplacer

Blackboard

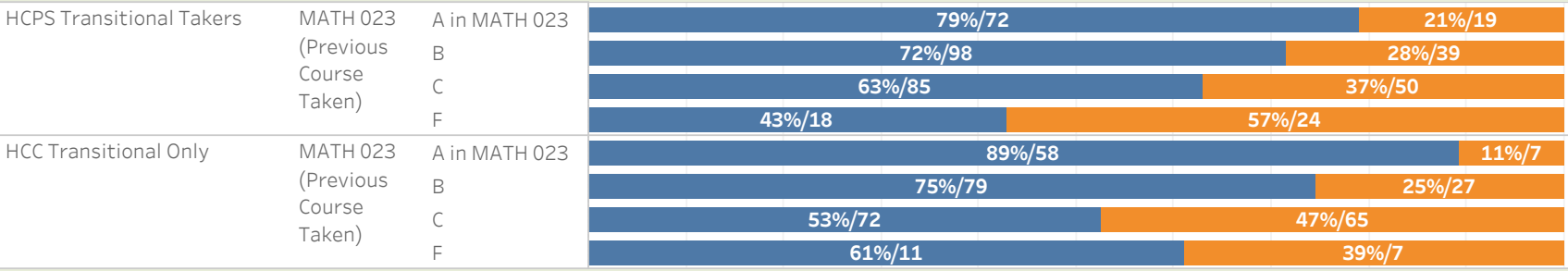
Transitional Takers

3.0 GPA Waiver

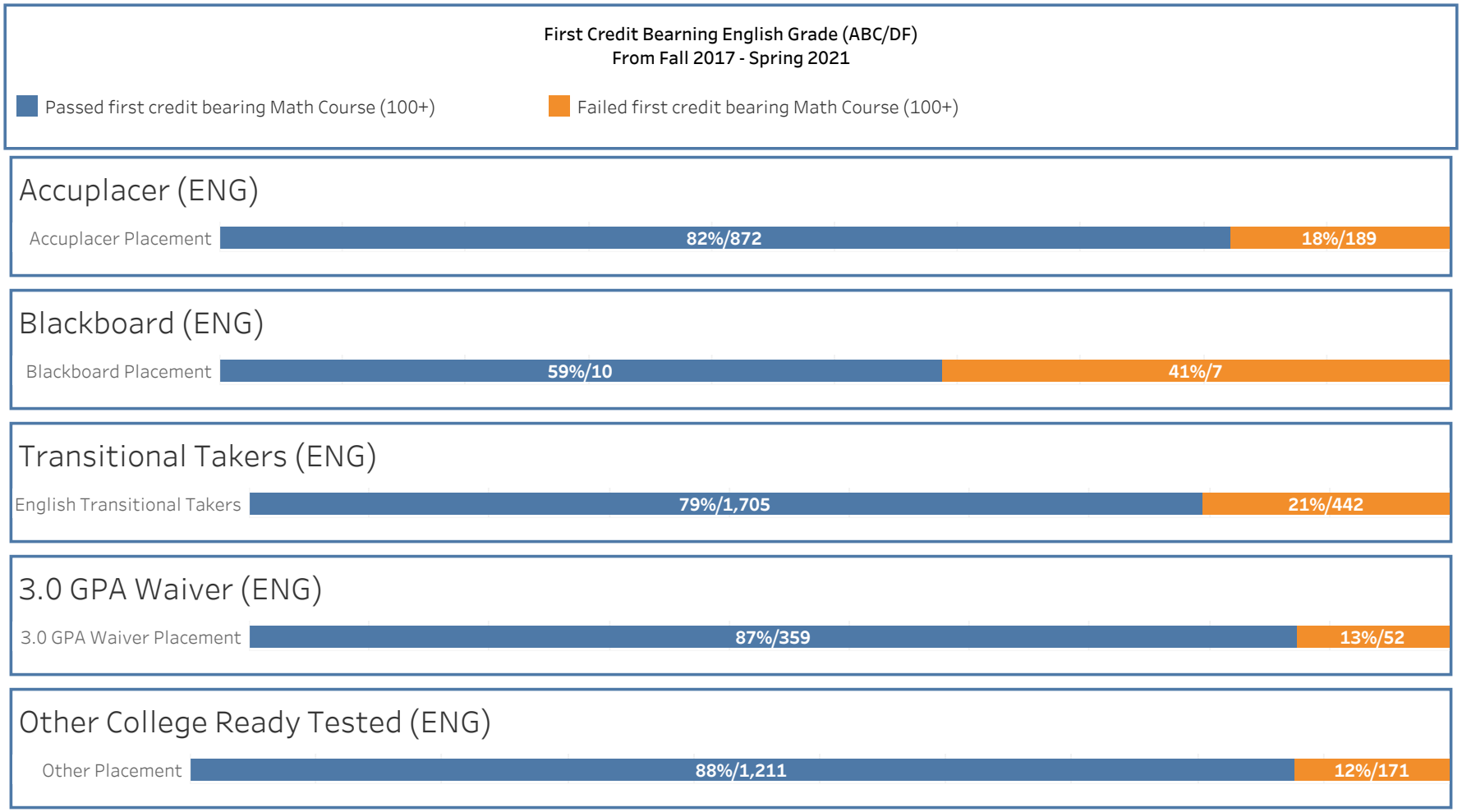


Other College Ready Tested

Transitional Course Takers by **Previous Course Taken (Math 023) Grade**



First Credit Bearning English Grade (ABC/DF)
From Fall 2017 - Spring 2021



Howard Community College Report August 2021

Recent Validity Studies Summary

Howard Community College (HCC) uses a variety of methods (referred to as multiple measures) to place students into their first English and math courses, including Accuplacer, Aleks, Guided Self Placement, high school grade point average (HSGPA), SAT, ACT, and advanced placement (AP) tests. The range of placement tools provides flexibility for students at all levels. HCC's Mathematics and English divisions periodically evaluate these placement. These evaluations are designed to help ensure that different tools are placing students into the appropriate level course to provide the highest probability of success. The intent is to support the student in finding the shortest path to the college-level math and English requirements.

English Assessment

In fiscal years 2019 and 2020, HCC conducted reviews of all English placements into college-level English Composition. The purpose of the study was to examine the impact of changes in placement due to the recently instituted "3.0 GPA initiative". Students in English Composition (ENGL-121) were surveyed and asked how they placed into the course (placement test, SAT/ACT, HSGPA, prerequisite developmental courses, transfer credits). This information was only used to indicate how students were placed. No success outcomes were examined.

HCC provides ALP (Accelerated Learning Program) sections of college-level English Composition (ENGL-121) for students whose placement test cut-off scores are just short of reaching college level, or who's HSGPA is between a 2.75 and 3.0. These sections use additional classroom time and assistance to support student mastery of the course objectives. Course success of students in the ALP and non-ALP sections is compared on a yearly basis toevaluate placement effectiveness.

In fiscal year 2020, HCC conducted an evaluation of the Next Generation Accuplacer results, and cut-off scores, used to place students into their first English courses. The evaluation was based on 75 sections of English courses typically enrolled in a student's first semester (developmental and college level) in the fall of 2019 and spring of 2020. Students were initially placed into courses using Accuplacer, and then asked to write an essay in the first week of class. Trained faculty members, who were blind to the student's actual placement, used the essay to assign a theoretical placement. Each essay was read by two readers, who each gave a placement recommendation. If the raters disagreed on placement, a third rater was used. The report examined 234 students who had both a Next Generation Accuplacer score and a faculty placement. The Next Generation Accuplacer placements were compared to placements by these experienced faculty and with course success. The position a student scored within the Accuplacer cut score range (higher end, middle or lower end of each range) was also comparedto course grade. Students on the higher end of a cut-off score were no more likely to be successful in the course than those on the lower end of each range. The analysis showed that faculty raters were more likely to place students into college level courses than the Accuplacer test, leading to a discussion of the Accuplacer cut-off scores.

In fiscal year 2021, HCC conducted an evaluation of the newly instituted Guided Self-Placementtest (GSP). This new placement tool was introduced during the COVID-19

pandemic to give students an online option for English placement. Students completed the essay and eight self-reflection questions remotely. A group of 16 English faculty members were trained in the placement process and completed norming sessions. Each essay was scored by at least two faculty members to ensure reliability. Course success for students placed using GSP was compared to students placed using other methods. Course success for students placed by GSPwas higher than the overall course success rates in ENGL-083/084, ENGL-095, and ENGL-121EALP. For other courses, the course success of students placed by GSP was lower than other placement tools.

Math Assessments

In fiscal years 2019 and 2020, HCC conducted a review of students' math placements to assess the association between placement method and course success. Placement methods included: placement test (ALEKS), SAT/ACT, successful completion of prerequisite course(s), transfer credit, HSGPA. Placement method was determined by surveying the students. The results suggested that overall, students placed using HSGPA were more successful in most math courses than students placed using other methods.

In 2019, the HCC Mathematics department introduced ALEKS-PPL™ and multiple measures for placement into Math courses. ALEKS-PPL™ is an online, adaptive system that provides incoming students with a custom learning module based on the results of the first attempt at theplacement test. Students can work through the learning module and retest. The success and withdrawal rates of students using these new placement methods into Basic Algebra and Geometry (MATH-061) were examined. Success from fall 2019 for those placing with multiple measures was equal or higher than the course overall success rate. Multiple measures shorten the mathematics pathway for those who meet the criteria and also allow many to bypass developmental mathematics courses. Success from fall 2019 for those placing with multiple measures are as follows: Basic Algebra and Geometry – 73 percent; Intermediate Algebra - 77 percent; Topics in Math Literacy - 100 percent; Statistics – 77 percent; College Algebra - 71 percent; and Pre-Calculus - 69 percent. In all these courses, those placing with multiple measures had an equal or higher success rate than the course overall success rate.

In FY2020-2021 the mathematics division continued the evaluation of multiple measures for placement by examining placement method and course success. The evaluation showed that multiple measures had an impact on developmental mathematics enrollments in the fall of 2020, with enrollments significantly declining. The evaluation specifically examined placement using a combination of HSGPA and high school coursework. Course success rates for students placed using HSGPA were higher than the overall success rates for these courses. In the fall of 2020, the overall success rates in developmental courses remained consistent with prior semesters.

2021

Student Placement Study

Research, Assessment, and Effectiveness

Prince George's Community College

9/1/2021

Contents

Purpose of the study

The purpose of this study is to analyze the placement methods of first-time credit students who enrolled in college-level math and/or English in fall 2018, fall 2019 and fall 2020. Further, this study aims to identify trends in student performance by student demographics. This study will address the following research questions:

1. How do first-time students placed into college-level English/Math based on the 3.0 GPA waiver perform in their first college-level English/Math course?
    a. Do we see differences based on gender and race/ethnicity?
    b. Do we see any trends over time?
    c. Do we see any differences by Math course?
2. How do first-time students placed into college-level English based on Accuplacer perform in their first college-level English course? How do first-time students placed into college-level Math based on Accuplacer and those placed through the unproctored ALEKS perform in their first college-level Math course?
    a. Do we see differences based on gender and race/ethnicity?
    b. Do we see any trends over time?
3. How do first-time students who self-placed into college-level English and students who were placed through Writeplacer perform in their first college-level English course?
    a. Do we see differences based on gender and race/ethnicity?
4. How do first-time students placed into college-level English/Math based on waivers other than the 3.0 GPA waiver perform in their first college-level English/Math course?
    a. Do we see differences based on gender and race/ethnicity?
    b. Do we see any trends over time?
5. How do performance outcomes compare among the different placement groups?

Methods

Data included in the analyses are based on first-time students (excluding transfers) enrolled as of census (20 days after the start of term) of the Fall terms. The data sources used for the analysis are the MHEC Enrollment Information System and Student Registration System reports. Students who were previously enrolled as dual students are included in the calculations.

Additional details about the data

1. For students with waivers, they must have had a waiver status date on or before the enrollment term census date (i.e., the waiver must have been applied on or before 20 days after the term started). Students with unknown waiver status dates are also included.
2. Calculations only include students who enrolled in college-level English or math courses for the fall terms.
3. Students were placed into one category based on the following hierarchy
    a. English
        i. 3.0 GPA waiver
        ii. Writeplacer (≥ 5)
        iii. Classic Accuplacer (scores ≥ 169) or Next Generation Accuplacer (≥ 254)
        iv. Self-guided placement (Fall 2020 only)
        v. Other
            1. SAT Reading and Writing (≥ 480)
            2. English Exemption (XEN)
            3. Other EGL waivers or unknown
    b. Math
        i. 3.0 GPA waiver
        ii. ALEKS (unproctored) (Fall 2020 only) (≥ 32)
        iii. Classic Accuplacer (≥ 90) or Next Generation Accuplacer (QAS ≥ 263 or AAF ≥ 240)
        iv. Other
            1. SAT Mathematics (≥ 530)
            2. Math Exemption (XMA)
            3. Other MAT waivers, or unknown
4. Demographic breakdowns with less than 20 students have been suppressed in accordance with MHEC'S guidelines.

Results

RQ1: How do first-time students placed into college-level English/Math based on the 3.0 GPA waiver perform in their first college-level English/Math course?

a. Do we see differences based on gender and race/ethnicity?
b. Do we see any trends over time?
c. Do we see any differences by Math course?

The majority of students who were placed into College-level English based on the 3.0 GPA Waiver were successful in the course, with success rates for each cohort hovering between 75% and 83% (see Table 1). We do not see yet a clear trend over time, but there are significant gaps in success rates when disaggregating the data by gender. For the three cohorts under analysis, the percentage of female students that were successful was larger compared to males, although the gap decreased from the earliest to the latest cohort (see Table 2). There were also differences among the success rates for Asian, Black/African American, and Hispanic/Latino students. Within the fall 2018 cohort, the percentage of students with As, Bs, or Cs was highest among Hispanic/Latino students (83% versus 75% for the two other groups). By contrast, within the other two cohorts, Asian students had the highest success rate (6.6 percentage points or higher compared to the other groups).

Table 1. Student Success in College-level English for Students placed using the 3.0 GPA Waiver

Student Grades	**Fall 2018**	**Fall 2019**	**Fall 2020**
Success (A, B, C)	79.1%	74.7%	82.5%
Non-Success (F or FX grade)	11.6%	15.3%	9.1%
Withdrawals	4.7%	2.3%	3.4%
Other Grades (D, I)	4.7%	7.7%	5.0%

Table 2. Student Success in College-level English for Students placed using the 3.0 GPA Waiver 3.0 – Differences by Gender and Race/Ethnicity

Gender	**Fall 2018**	**Fall 2019**	**Fall 2020**
Male	66.0%	70.4%	79.6%
Female	86.6%	77.7%	84.1%
Race/Ethnicity			
American Indian/Alaska Native	--	--	--
Asian	75.0%	85.7%	90.9%
Black/African American	75.4%	73.4%	80.2%
Hispanic	83.3%	79.1%	81.9%
Native Haw./Pacific Is.	--	--	--
Non-resident alien	--	69.2%	--
Two or more races	--	--	--
Unknown	--	--	--
White	--	--	--

While the use of the 3.0 GPA Waiver method worked well for placing students into college-level English, the results are less conclusive in the case of Math. Within the fall 2018 cohort, 43% of students placed in college-level Math courses by using the 3.0 GPA waiver were successful, with the percentage rising significantly for the two subsequent cohorts (see Table 3). As success rates increased over time, there was a steep drop in the percentage of withdrawals. By contrast, the percentage of F/FX grades experienced only a slight decline from the fall 2018 to the fall 2020 cohort. With the exception of the fall 2018 cohort, the percentage of students with As, Bs, and Cs was larger for male students compared to females (see Table 4). When disaggregating the data by race/ethnicity, the success rate was higher for Hispanic/Latino students compared to Black/African American students. There were also significant differences in the success rates by course; data for additional cohorts will be necessary to establish a clear trend (see Table 5).

Table 3. Student Success in College-level Math for Students placed using the 3.0 GPA Waiver

	Fall 2018	**Fall 2019**	**Fall 2020**
Student Grades			
Success (A, B, C)	43.0%	47.6%	60.0%
Non-Success (F or FX grade)	21.0%	23.1%	17.5%
Withdrawals	23.0%	17.9%	9.8%
Other Grades (D, I)	13.0%	11.3%	12.7%

Table 4. Student Success in College-level Math for Students placed using the 3.0 GPA Waiver 3.0 – Differences by Gender and Race/Ethnicity

Gender	**Fall 2018**	**Fall 2019**	**Fall 2020**
Male	19.4%	51.2%	62.4%
Female	56.3%	45.4%	58.6%
Race/Ethnicity			
American Indian/Alaska Native	--	--	--
Asian	--	60.9%	--
Black/African American	24.4%	38.8%	52.0%
Hispanic	65.2%	49.0%	64.6%
Native Haw./Pacific Is.	--	--	--
Non-resident alien	--	--	--
Two or more races	--	--	--
Unknown	--	--	--
White	--	--	--

Table 5 Student Success in College-level Math for Students placed using the 3.0 GPA Waiver 3.0 – Differences by Math course

Course Name	**Fall 2018**	**Fall 2019**	**Fall 2020**
Applied College Algebra (MAT-1250)	53.1%	41.9%	58.2%
Precalculus Part I MAT-1350	17.9%	53.4%	61.3%
Mathematical Ideas MAT-1130	*	69.2%	61.5%
Introduction to Statistics MAT-1140	*	34.7%	51.7%
*Enrollments must include 20 or more students			

RQ2: 2. How do first-time students placed into college-level English based on Accuplacer perform in their first college-level English course? How do first-time students placed into college-level Math based on Accuplacer and those placed through the unproctored ALEKS perform in their first college-level Math course?

a. Do we see differences based on gender and race/ethnicity?
b. Do we see any trends over time?

Utilization of Accuplacer as a placement method for College-level English has not yielded conclusive results of success rates for students. Student success rates have been inconsistent among the three terms. With the success percentages decreasing in fall 2019 and increasing in fall 2020, no clear trend can be determined (table 6). Conversely, non-success and withdrawal rates have remained consistent over time. Also, no clear pattern is found regarding performance by gender. With the exception of fall 2019, male students had a higher percentage of success than female students. Breakdowns by race/ethnicity indicate that in fall 2018, Hispanic students had a higher percentage of students with As, Bs or Cs in comparison to Black/African American students (table 7).

Table 6. Student Success in College-level English for Students placed using Accuplacer

	Fall 2018	**Fall 2019**	**Fall 2020**
	Accuplacer (Classic/Next Generation)	Accuplacer (Classic/Next Generation)	Accuplacer (Classic/Next Generation)
Success (A, B, C)	59.9%	55.7%	67.3%
Non-Success (F or FX grade)	25.6%	26.2%	26.5%
Withdrawals	6.8%	9.8%	6.1%
Other Grades (D, I)	7.7%	8.2%	0.0%

Table 7. Student Success in College-level English for Students placed using Accuplacer – Differences by Gender and Race/Ethnicity

Gender	Fall 2018	Fall 2019	Fall 2020
Male	62.5%	45.5%	78.3%
Female	56.8%	67.9%	57.7%
Race/Ethnicity			
American Indian/Alaska Native	--	--	--
Asian	--	--	--
Black/African American	52.1%	59.0%	53.8%
Hispanic	68.0%	--	--
Native Haw./Pacific Is.	--	--	--
Non-resident alien	--	--	--
Two or more races	--	--	--
Unknown	--	--	--
White	--	--	--

Table 8. Student Success in College-level Math for Students placed using Accuplacer/ALEKS

	Fall 2018	Fall 2019	Fall 2020	
Placement Type	Accuplacer (Classic/Next Generation)	Accuplacer (Classic/Next Generation)	Accuplacer (Classic/Next Generation)	ALEKS (unproctored)
Success (A, B, C)	80.0%	68.8%	95.2%[1]	34.2%
Non-Success (F or FX grade)	2.9%	16.7%	4.8%	40.1%
Withdrawals	11.4%	6.3%	0.0%	16.5%
Other Grades (D, I)	5.7%	8.3%	0.0%	9.3%

As in the findings for college-level English, we see no clear trend in student success in college-level math by Accuplacer placement. There is a significant decrease in success in Fall 2019, followed by a noticeable increase in Fall 2020; however, it is important to point out that the percentage for the fall 2020 cohort is based on a small sample size (table 8). The majority of students placed in college-level math through ALEKS unproctored testing were not successful. In comparison to all cohorts using Accuplacer placement, students with ALEKS unproctored placement had the lowest percentages of success and the highest percentages of non-success, withdrawal, and other grades. Comparing male and female students, there is a disparity between 7 and 19 percentage points across the terms with Accuplacer placement, with female students having a higher percentage of success. However, ALEKS placement reverses and minimizes this disparity, as males and females showed similar success rates.

[1] ^Calculation based on small sample size (n = 21)

Table 9. Student Success in College-level Math for Students placed using Accuplacer/ALEKS – Differences by Gender and Race/Ethnicity

Gender	**Fall 2018**	**Fall 2019**	**Fall 2020**	
	Accuplacer (Classic/Next Generation)	Accuplacer (Classic/Next Generation)	Accuplacer (Classic/Next Generation)	ALEKS (unproctored)
Male	76.9%	62.5%	92.9%	36.3%
Female	88.9%	81.3%	100.0%	32.6%
Race/Ethnicity				
American Indian/Alaska Native	--	--	--	--
Asian	--	--	--	--
Black/African American	--	72.4%	--	28.6%
Hispanic	--	--	--	40.0%
Native Haw./Pacific Is.	--	--	--	--
Non-resident alien	--	--	--	--
Two or more races	--	--	--	--
Unknown	--	--	--	--
White	--	--	--	--

RQ3: How do first-time students who self-placed into college-level English and students who were placed through Writeplacer perform in their first college-level English course?

a. Do we see differences based on gender and race/ethnicity?

In fall 2019, approximately half (53.7%) of first-time students placed in college-level English through Writeplacer were successful in their courses (table 10). Roughly one-third (26.5%) of first-time students placed using this method failed their course. In fall 2020, we see vast improvement in the subsequent cohort such that the success rate for Writeplacer placement increased to 75.8% and the non-success rate decreased to 9.1%. Implementation of Self-guided/Remote Placement in fall 2020 resulted in success, non-success, and withdrawal rates that were comparable to the early launch of Writeplacer the previous fall. Fifty-one percent of students placed in college-level English through self-guided/remote placement were successful and 33.2% failed their courses.

Disaggregating the course performance data by gender shows that male students placed through Writeplacer had higher success rates compared to female students in fall 2019 and fall 2020. Conversely, female students placed through the Self-guided placement method had a higher percentage of As, Bs, and Cs compared to males. When breaking down the performance data by race/ethnicity, there are no significant differences to be reported for students placed through Writeplacer. However, among students placed through the Self-guided placement method, Hispanic/Latino students had higher success rates compared to Black/African Americans.

Table 10. Student Success in College-level English for Students placed using Self-guided/Remote Placement/Writeplacer

English	**Fall 2019**	**Fall 2020**	
Placement Type	Writeplacer	Writeplacer	Self-Guided/Remote Placement
Success (A, B, C)	53.7%	75.8%	51.0%
Non-Success (F or FX grade)	26.5%	9.1%	33.2%
Withdrawals	8.1%	12.1%	8.2%
Other Grades	11.8%	3.0%	7.5%

Table 11. Student Success in College-level English for Students placed using the Self-guided/Remote Placement/Writeplacer – Differences by Gender and Race/Ethnicity

Gender	**Fall 2019**	**Fall 2020**	
	Writeplacer	Writeplacer	Self-Guided/Remote Placement
Male	55.7%	81.3%	45.5%
Female	50.9%	70.6%	55.0%
Race/Ethnicity			
American Indian/Alaska Native	--	--	--
Asian	--	--	--
Black/African American	52.1%	--	47.8%
Hispanic	50.0%	--	57.9%
Native Haw./Pacific Is.	--	--	--
Non-resident alien	--	--	--
Two or more races	--	--	--
Unknown	--	--	--
White	--	--	--

RQ4: How do first-time students placed into college-level English/Math based on waivers other than the 3.0 GPA waiver perform in their first college-level English/Math course?

a. Do we see differences based on gender and race/ethnicity?
b. Do we see any trends over time?

Table 12. Student Success in College-level English for Students placed using Other Placement Methods

	Fall 2018	Fall 2019	Fall 2020
Placement Type	Other Placement Methods	Other Placement Methods	Other Placement Methods
Success (A, B, C)	65.2%	67.6%	66.0%
Non-success (F or FX grade)	18.5%	18.9%	22.1%
Withdrawals	12.0%	5.4%	7.8%
Other Grades (D, I)	4.3%	8.1%	4.1%

Table 13. Student Success in College-level English for Students placed using Other Placement Methods – Differences by Gender and Race/Ethnicity

Gender	**Fall 2018**	**Fall 2019**	**Fall 2020**
Male	50.3%	59.4%	68.7%
Female	42.9%	77.4%	63.6%
Race/Ethnicity			
American Indian/Alaska Native	--	--	--
Asian	--	--	--
Black/African American	59.5%	66.9%	61.7%
Hispanic	68.4%	61.3%	69.4%
Native Haw./Pacific Is.	--	--	--
Non-resident alien	--	--	--
Two or more races	--	--	--
Unknown	--	--	75.0%
White	--	--	--

Students who placed into college-level English through other placement methods were fairly successful among the three cohorts. Student success rates remained consistent, hovering around 66% over time. Data from additional cohorts would inform if the positive trend will remain stable. Over time, the percentage of students who were unsuccessful increased (table 12). Overall, male student success rates increased every term, indicating a positive trend. However, female student success rates increased significantly (+34.5 percentage points) in fall 2019, but then decreased (-13.8 percentage points). For fall 2018 and fall 2020, success rates were highest among Hispanic/Latino students in comparison to Black/African American students. However, in fall 2019, Black/African American students experienced a noticeable increase in success rates, while the percentage of success rates for Hispanic/Latino students decreased.

Table 14. Student Success in College-level Math for Students placed using Other Placement Methods

Math	**Fall 2018**	**Fall 2019**	**Fall 2020**
Placement Type	Other Placement Methods	Other Placement Methods	Other Placement Methods
Success (A, B, C)	43.1%	50.9%	61.3%
Non-success (F or FX grade)	29.4%	27.2%	20.0%
Withdrawals	11.8%	13.2%	10.0%
Other Grades (D, I)	15.7%	8.8%	8.8%

Table 15. Student Success in College-level Math for Students placed using Other Placement Methods – Differences by Gender and Race/Ethnicity

Gender	**Fall 2018**	**Fall 2019**	**Fall 2020**
Male	45.0%	49.1%	61.0%
Female	40.5%	52.6%	61.5%
Race/Ethnicity			
American Indian/Alaska Native	--	--	--
Asian	--	--	--
Black/African American	27.7%	52.1%	60.0%
Hispanic	54.2%	34.6%	--
Native Haw./Pacific Is.	--	--	--
Non-resident alien	--	--	--
Two or more races	--	--	--
Unknown	--	--	--
White	--	--	--

Students who placed into college-level math through other methods show conclusive and consistent improvement in success rates. As success rates increased, we see a steady drop of F/FX grades. Disaggregation by gender shows that success rates increased over time for males and females (table 15). There were differences in success rates between Black/African American and Hispanic/Latino students, but no consistent trend. Within the fall 2018 cohort, Hispanic/Latino students had a higher percentage of successful grades, whereas in fall 2019, Black/African American students had the highest success rates.

RQ5: How do performance outcomes compare among the different placement groups?

Table 16. Student Success in College-level English by Placement Type

	Fall 2018	**Fall 2019**	**Fall 2020**
Overall Success by Cohort	66.3%	66.9%	67.4%
Placement Type			
3.0 GPA waiver	79.1%	74.7%	82.5%
Writeplacer	--	53.7%	75.8%
Self-Guided/Remote Placement	--	--	51.0%
Accuplacer (Classic/Next Generation)	59.9%	55.7%	67.3%
Other	65.2%	67.6%	66.0%

Over the last three fall cohorts, 66-67% of first-time students who placed into college-level English completed the course with a final grade of A, B, or C (see Table 16). Implementation of the 3.0 GPA waiver shows that students with this placement type had higher rates of success in every cohort than students using any other placement method. Students who placed using the 3.0 GPA waiver had course success rates ranging between 75% to 83% (table 16). Although students who placed using the Writeplacer in fall 2019 had a success rate of 53.7%, we see a dramatic increase (22.1 percentage points) in success in fall 2020. Additional cohorts would provide data to determine whether there is a continuous positive trend.

Students placed into college-level English using the Accuplacer show a slight drop in success rates in fall 2019, which could be due to the launch of Next Generation Accuplacer during that timeframe. In the subsequent cohort, we see Accuplacer placement success rates that are in line with the cohort's overall success. The placement method that showed the lowest success rates in college-level English across all cohorts was Self-guided/Remote Placement. Approximately half of the students who placed using Self-guided/Remote Placement were successful. However, these data are only based on the fall 2020 cohort. Students placed using "Other placement methods" showed the most consistency, with little to no change in success rates across the three cohorts. Further, compared to the 3.0 GPA waiver, Writeplacer, and Accuplacer, the "Other placement methods" category was the only one to not show an increase in success rates from fall 2019 to fall 2020.

Table 17. Student Success in College-level Math by Placement Type

	Fall 2018	**Fall 2019**	**Fall 2020**
Overall Success by Cohort	48.5%	51.3%	51.5%
Placement Type			
3.0 GPA waiver	43.0%	47.6%	60.0%
ALEKS (Unproctored)	--	--	34.5%

Accuplacer (Classic/Next Generation)	80.0%	68.8%	95.2%[2]
Other	43.1%	50.9%	61.3%

Out of the first-time students who placed into college-level math, approximately half of the students were successful, and we see little to no change in success rates over time. In every cohort, students who placed via the Accuplacer had the highest percentages of success (table 17). With the exception of ALEKS unproctored, which was initially implemented in fall 2020, each cohort showed an overall increase in success rates from fall 2018 to fall 2020. Students who placed through ALEKS unproctored showed the lowest success rates, falling significantly lower than the overall fall 2020 success rates.

Table 18. Student Success in College-level Math – Differences by Math Course (Fall 2018-Fall 2020)

	3.0 GPA Waiver	**ALEKS Unproctored**	**Classic Accuplacer/Next Generation**	**Other**
Elements of Numbers and Operations (MAT-1050)	68.8%	16.7%	100.0%	100.0
Mathematical Ideas (MAT-1130)	66.1%	41.0%	80.0%	62.5%
Introduction to Statistics (MAT-1140)	47.4%	15.6%	57.1%	44.7%
Applied College Algebra (MAT-1250)	48.9%	44.9%	72.0%	44.8%
Precalculus Part I (MAT-1350)	49.3%	28.2%	76.0%	45.3%
Precalculus Part II (MAT-1360)	66.7%	15.4%	100.0%	60.0%
Calculus I (MAT-2410)	80.0%	44.4%	100.0%	60.0%

Analysis of college-level math course success by placement method demonstrated much variation between the courses and placement types (table 18). We see that the Accuplacer yielded the highest course success rates for every course identified, with success rates ranging from 57.1% to 100%. Students who placed using ALEKS unproctored had the lowest success rates in every course, with the lowest rate (15.4%) in Precalculus Part II and highest (44.9%) in Applied College Algebra. Introduction to Statistics was the only course that demonstrated low success rates across all placement types.

[2] ^Calculation is based on a small sample size (n = 21)

Conclusions and further questions

The analysis conducted thus far shows that, overall, regardless of the placement method, success rates are much higher for college-level English compared to college-level Math. However, success in college-level Math varies widely by course and by term.

Another major finding is that the 3.0 GPA Waiver has been highly effective to place students into college-level English as shown by success rates that oscillate between 75% and 83%. The most recent data is also promising for the utilization of Writeplacer for English placement, but additional data obtained from future cohorts will be needed to confirm this finding.

With regards to Math placement, the conclusions are not as clear-cut, and further analyses will be crucial to determine which placement methods work best. First-time students placed into college-level Math through Accuplacer (considering together the old and new test) had the highest success rates in college-level Math. However, research on placement has suggested that this method may be too restrictive, resulting a high number of students that could be successful in college-level Math being placed into developmental courses. At the same time, the introduction of the 3.0 GPA for placing students into college-level Math has not produced uniform results; course performance for students placed through this method has so far shown drastic variations by semester and by course.

Similarly, additional data will be needed to determine the effectiveness of ALEKS. Since the data used for this study was based exclusively on the *unproctored* ALEKS—an exceptional approach dictated by the pandemic environment--the low course success rates for students placed through this method cannot be taken as evidence for deciding against the validity of the assessment tool itself. In fact, an internal pilot conducted prior to the pandemic had yielded promising results for the regular, *proctored* ALEKS. Unfortunately, the population included in that pilot did not meet the parameters for the methodology used in this study, and we were unable to include it here. In future semesters, we plan to gather sufficient data to examine the success rates of students placed in college-level math through the proctored ALEKS and attain a higher degree of confidence in the results.

Validity Study on Effectiveness of Assessment Tools.

No data available yet.

Wor-Wic Community College currently has a validity study in progress which is being evaluated, at no cost, by the College Board through their Admitted Class Evaluation Service (ACES). With input from the Maryland Placement Policies Community of Practice Committee the college decided to base the study on ENG-095, ENG-096 and ENG-097 students for the spring 2021 semester. Accuplacer scores for all the students in those classes were gathered along with the course grades at the end of the semester. This data has been submitted to CollegeBoard ACES. Once it has been fully evaluated, the college will be notified that the final report and summary is available on the ACES website for review of the results. Two deliverables will be provided: 1) a complete, printable report in PDF that shows the strength of the chosen predictors of success - along and in combination with charts, tables, and detailed explanations, and 2) a report in HTML format featuring interactive graphs. This report will allow the college to click to display or hide data, compare data, zoom in and out, take a snapshot, sort table columns, and more.

Public Four-Year Institutions

Developmental Mathematics Program

Annual Report for 2018-2019

Mission Statement

The mission of FSU's Developmental Mathematics (DVMT) Program is to provide a learning environment in which students can master the skills and concepts necessary for success in college-level mathematics courses and other courses that have a foundation in mathematics. We strive to offer skill-building courses to most efficiently meet students' needs. This program seeks to foster student success through cultivating students' self-confidence and self-management abilities, encouraging a positive attitude, and enhancing success through teaching and modeling study skills, problem solving, and critical thinking.

Staffing

Kimberly M. Kurek, Director

Justin C. Zimmermann, Instructional Coordinator

Student Coaches:

DVMT 095	**DVMT 100**
Christopher Bladen	Will Macomber
Nicholas Wade	Sophia Staggers
Brandi Binkley	Karen Murtaugh
Jessica Oswald	Chad Shumaker
Chester Dabrowski	Julia Hershman
Iris Salmeron-Lemus	Paul Rogers

Standard Goals/Outcomes: Mathematics Basic Skill Development

The fundamental goal of the DVMT Department is to assist students in achieving the skills and knowledge assumed by the university community to be prerequisite for the study of college-level mathematics. The primary focus of our efforts involves two mathematics courses offered to two different client groups. Students whose mathematics skills do not meet the prerequisites for any university mathematics course are enrolled in DVMT 095 - Pre-Algebra Mathematics, and those whose mathematics skills do not meet the prerequisites for several algebra-based math courses required for specific majors are encouraged to enroll in DVMT 100 - Intermediate Algebra. A crucial component of the DVMT program is its use of student staff in supporting roles and its participation in collaborative course/program redesign efforts.

Assessment Efforts

Evaluation of our primary goal is achieved by examining:

- how effectively we identify and place students into DVMT courses
- if we offer enough courses to meet the needs of DVMT students
- pass rates of DVMT courses
- how DVMT graduates perform in college level math courses
- retention rates of DVMT students
- recruitment, hiring, training, and supervision of student support staff

Assessment of standard program goals and outcomes			
Goal/Outcome	***Assessment Activity***	***Finding***	***Action(s)***
1. All students with math skills below university expectations are enrolled in appropriate skills classes.	Placement Testing/ Advising and registration events.	100% of students requiring DVMT 095 were placed.	We will continue to asses and enroll students in courses appropriate for their skill level.
2. There will be sufficient course offerings available for all students needing to be placed or those electing to take DVMT 100.	Registration events throughout drop/add week.	Sufficient seats available for both courses. Enrollment decreased from 2017: 095 - 8.1% 100 - 3.4% cohort - 5.3%	We decreased the number of DVMT 100 sections by one in the spring to accommodate less students.
3. The percent of students completing their pre-college math requirement in two semesters exceeds 85%.	Final grades of DVMT 095 sections.	Goal Met 96% passed DVMT 095 within two semesters. In fact, 19 students completed 095 prior to fall via the SOFI program.	We offered the SOFI program to more students during Summer 2018. DVMT 095 SOFI enrollment increased 26.7% from Summer 2017.
4. The percent of students electing to enroll in Intermediate Algebra who pass the course exceeds 70%.	Final Grades of DVMT 100 sections.	Goal met each semester: Summer 2018 – 95% Fall 2018 – 75.7% Spring 2019 – 72.2%	Several classroom lecture sessions were added to DVMT 100 in the spring to assist students with difficult concepts during the semester.

5. The percentage of successful DVMT095 (ML0) students who achieve a passing grade (C or better for college-level, B or better for developmental) in their following Level 1 course is similar to that of non-DVMT095 (ML1) students. (see chart below)	Final grades of Fall 2018 and Spring 2019 DVMT 100, Math 104 and 109 sections.	DVMT 100 - Goal Met ML0 – 78.7% ML1 – 78.0% MATH 104 - Goal Nearly Met ML0 – 40.7% ML1 – 41.9% MATH 109 – Goal Not Met ML0 – 38.5% ML1 – 53.1%	Math 109 historically yields lower pass rates for both ML0 and ML1 students. The overall pass rate for Math 109 during fall 2018 was 58%. Math department will offer MATH 109 pilot for ML0 students fall 2019 and we will support their efforts by connecting many of the participants to our learning communities.
6. The percentage of successful DVMT100 (ML1) students who achieve a passing grade or better in an algebra-based math course (Math 118, 119) is similar to that of non-DVMT100 (ML2) students. (see chart below)	Final grades of Summer/Fall 2018 and Spring 2019 DVMT 100, Math 118 & 119 sections.	MATH 118 Goal Nearly Met ML1 – 58.3% ML2 – 60.0% MATH 119 Goal Met ML1 – 54.2% ML2 – 52.9% *(includes SOFI DVMT 100)*	Only 20% of this cohort took Math 118 during the academic year so we are pleased with nearly meeting this goal. Eighty percent enrolled in 119 and we are pleased to see our ML1 students outperform students who place at ML2.
7. The 1st – 2nd year retention rate of students required to complete developmental mathematics will approximate those of students not required.	Excellence in Academic Advising Inventory (EAA)	Goal Not Met. 2017 cohort retention rate 76.93% DVMT 095 students 73.7% DVMT 100 students 76.4% Non DVMT students 78.1%	Math 109 pilot is in place for fall 2019 and will provide academic support to ML0 students. ASN will enroll more ML0/ML1 students in their ORIE sections in the fall to closely monitor and provide support for these students.

8. The six-year graduation rate of students required to complete developmental mathematics will approximate those of students not required.	Excellence in Academic Advising Inventory (EAA)	Goal Not Met. DVMT 095– 43.1% DVMT 100 – 47.2% Non DVMT - 53.8% Overall – 51.5%	Math 109 pilot is in place for fall 2019 and will provide academic support to ML0 students. ASN will enroll more ML0/ML1 students in their ORIE sections in the fall to closely monitor and provide support for these students.
10. A sufficient number of qualified student coaches and are recruited, hired, trained and supervised to meet the staffing needs of our program.	*Recruitment:* Number of applications equal or exceed previous search *Training:* All DVMT coaches participate in an online summer training course. *Supervision:* All DVMT Instructors will be observed during the classroom on a weekly basis.	Number of applicants exceeded last search. 100% of DVMT coaches (12) participated in the online summer training course. All coaches were observed and worked closely with lead instructor during each class period.	DVMT coaches attend scheduled staff meetings. In the future, more time will be devoted to tracking student progress and providing timely updates and encouragements through Beacon.

2018 Cohort							
ML0 students who passed DVMT 095 and enrolled in level 1 course this academic year:				ML1 students who enrolled in level 1 course this academic year:			
Level 1 Math	Enrolled	Passed	%	Level 1 Math	Enrolled	Passed	%
DVMT 100	47	37	78.7%	DVMT 100	109	85	78.0%
Math 104	54	22	40.7%	Math 104	31	13	41.9%
Math 109	26	10	38.5%	Math 109	32	17	53.1%

ML1 students who passed DVMT 100 and took level 2 course this academic year:			
Level 2 Math	Enrolled	Passed	%
Math 118	24	14	58.3%
Math 119	59	32	54.2%

ML2 students who enrolled in level 2 course this academic year:			
Level 2 Math	Enrolled	Passed	%
Math 118	10	6	60.0%
Math 119	70	37	52.9%

Other assessment results		
Assessment Activity	***Finding(s)***	***Action(s)***
SOFI DVMT Participation and Completion: Increase Enrollment of SOFI DVMT and maintain pass rate of 90%. Track progress in subsequent course.	DVMT 095 Enrollment increased 26.7% Pass rate: 100% Subsequent course success: 100 – 70% 104 – 42.9% 109 – 50% DVMT 100 Enrollment increased 53.8% Pass rate: 95% Subsequent course success: 109 – 50% (only 1 of 2 students) 118 – 0% (only 1 student) 119 – 69.2%	SOFI 095 students perform better when they follow a STEM track so we will target more students with STEM majors. DVMT 100 students also perform better when they follow a STEM track so we will continue to target these students based on their major.
ORIE 965: ML0 Community High risk students who are placed in the *PASS: It's Mathematically Possible* learning community will pass DVMT 095 at a rate equal to other ML0 students.	Exceeded expectations. Seven ML0 students withdrew from FSU early in the semester. Of the remaining 201 students, the pass rate for those enrolled in ORIE 965 was 90.9%. The pass rate for those not enrolled in ORIE 965 was 86.3%.	In the past, ORIE 965 was reserved for only ML0 students enrolled in 095. Next year, we will make it optional and encourage ML0 students participating in the Math 109 pilot to enroll for added support.

Initiatives, Innovations, Accomplishments:

Over the last ten years, Developmental Mathematics has implemented new initiatives geared towards improving pass rates and providing additional learning opportunities to our students who require math remediation. Adopting new curriculum, software platforms, and offering students alternatives to traditional math courses became the focus of our improvements.

Improvement	*Change Prompted by:*	*Measured success/effectiveness*
DVMT 095 adopts new version of text and upgrades MyMathLab course materials.	Pearson offered new text edition.	The new text offers more supplemental resources to support independent learning.
DVMT 095/100 adopts Canvas for single sign-on and inclusive access.	DVMT students sometimes struggle to maintain access to the online material after the 14 day trial period. Inclusive access ensures that all students have access from the first day of classes.	All students had immediate access to course materials on the first day of classes. Students could access MyMathLab by logging into Canvas. They no longer needed to log into two separate systems.
DVMT 100 held several classroom lecture sessions during the spring semester.	Spring pass rates are typically lower than fall. Therefore, DVMT 100 held five lecture sessions to assist students with learning difficult material and preparing for the module exams.	Spring 2019 pass rate: 72.2% Spring 2018 pass rate: 62.9% Spring 2017 pass rate: 61.6% DVMT 100 realized an increase of 14.8% over spring 2017.
ALT-Placement Pilot: Provided a means for incoming first-year students to take their math placement exam and remediate online before coming to campus.	Provost's Office/USM Kirwan Center for Academic Innovation	ALT-Placement Pilot Report Conclusion: Neither the ALEKS PPL or the in-house FSU math placement appeared to have much effect on the likelihood of placement success or course success for the students involved in the study.
Offer one section of DVMT 100 online for business students at Hagerstown campus	Dr. Martha Mattare, Director of Business Program at USMH	100% pass rate

Provide placement testing and transfer credit information to incoming first-year students prior to PreviewFSU	PASS/DVMT	PASS/DVMT sent an email (both personal and FSU) to each student planning to attend PreviewFSU during June reminding them of the placement exam and transfer/AP credit. Proctors surveyed students during testing and the majority indicated that they had received the information. A greater number of students came with documented transfer credit and more students brought their own calculator to the testing session.

Current Challenge	***Addressing the challenge by:***
Hiring a new Instructional Coordinator for DVMT 095 early in the fall semester.	Forming a hiring committee and communicating with HR to ensure timely progress.
Possible significant improvements	***Impediments***
Math 109 pilot for ML0 students.	Staffing

Collaborations

Partner	***Contributions***
Admissions Office	Admissions provides us with a platform for tracking basic skill requirements for re-admit students. We assist Admissions with the evaluation of basic skill transfer credit and by providing testing and placement services.
Disability Support Services	DSS is consulted about disability and accommodation(s) of individual DVMT students. We provide mathematics advising and professional math tutoring to students referred by DSS.
Education Department	EDUC allows us to offer EDUC 290 Field experience credits to DVMT student staff. We provide excellent teaching, mentoring, and leadership opportunities to EDUC majors who serve as DVMT coaches.
Mathematics Department	MATH faculty assists with the recruitment of DVMT student staff and the math department shares instructional lab space with DVMT courses when needed. We test and assess math levels for all incoming students, evaluating prerequisites so that students enroll in math courses that meet their skill level.

Academic Success Network	Monitors students through Beacon and provides support for those struggling in DVMT courses.
Registrar's Office	Provides priority enrollment to DVMT student instructional staff. Assists with DVMT schedule maintenance.
S.S.S. Office	Accepts eligible SSS students in designated DVMT095 section.
University Billing Office	Assists with the collection of lab fees used to pay student instructional staff.
Tutoring Center	Provides free tutoring support to DVMT students and additional employment opportunities to DVMT student staff.

Goals for 2019-2020

1. Hire Instructional Coordinator
    a. Goal: Complete process and make selection by late September
    b. Concerns: Qualifications of applicant pool
    c. Target completion date: September 2019
2. Offer one non-SOFI DVMT 099/100 course in addition to the already offered SOFI DVMT 099 course summer 2019.
    a. Goal: 80% or higher pass rate
    b. Concerns: Testing un-proctored outside of the classroom
    c. Target completion date: August 2019
3. Implement dedicated lectures outside of the Dunkle 110 computer lab for DVMT 095 in the spring
    a. Goal: Pass rate for students who attend these sessions will exceed the rate for those who do not attend
    b. Concerns: Attendance and space issues
    c. Target completion date: May 2020
4. Provide academic support for ML0 students participating in the Math 109 ACHIEVE Pilot by connecting them to Academic Success Network learning communities.
    a. Goal: Pass rate and retention rate for students in ASN communities will exceed the rate for those not in ASN communities
    b. Concerns: Communication with the math department and pilot instructors
    c. Target completion date: December 2019/September 2020

Placed English Sections over the last 10 years

Semester	LL1		LL2		LL3		Total Attempt	Total Pass
	Total	Pass	Total	Pass	Total	Pass		
Fall 2011	24	16 (67%)	44	40 (91%)	74	45 (61%)	142	**101 (71%)**
Fall 2012	22	17 (77%)	53	48 (91%)	57	32 (56%)	132	**97 (73%)**
Fall 2013	26	15 (58%)	71	46 (65%)	62	42 (68%)	159	**103 (65%)**
Fall 2014	29	24 (83%)	61	44 (72%)	73	58 (79%)	163	**126 (77%)**
Fall 2015	22	14 (64%)	51	41 (80%)	65	42 (65%)	138	**97 (70%)**
Fall 2016	26	17 (65%)	48	41 (85%)	63	52 (83%)	137	**110 (80%)**
Fall 2017	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
Fall 2018	26	19 (73%)	70	50 (71%)	34	21 (62%)	132	**90 (68%)**
Fall 2019	20	11 (55%)	45	36 (80%)	35	26 (74%)	171	**73 (42%)**
Fall 2020	26	17 (65%)	40	28(70%)	17	12 (71%)	83	**57 (69%)**
Total	**221**	**150 (68%)**	**483**	**374 (77%)**	**480**	**330 (69%)**	**1257**	**854 (68%)**

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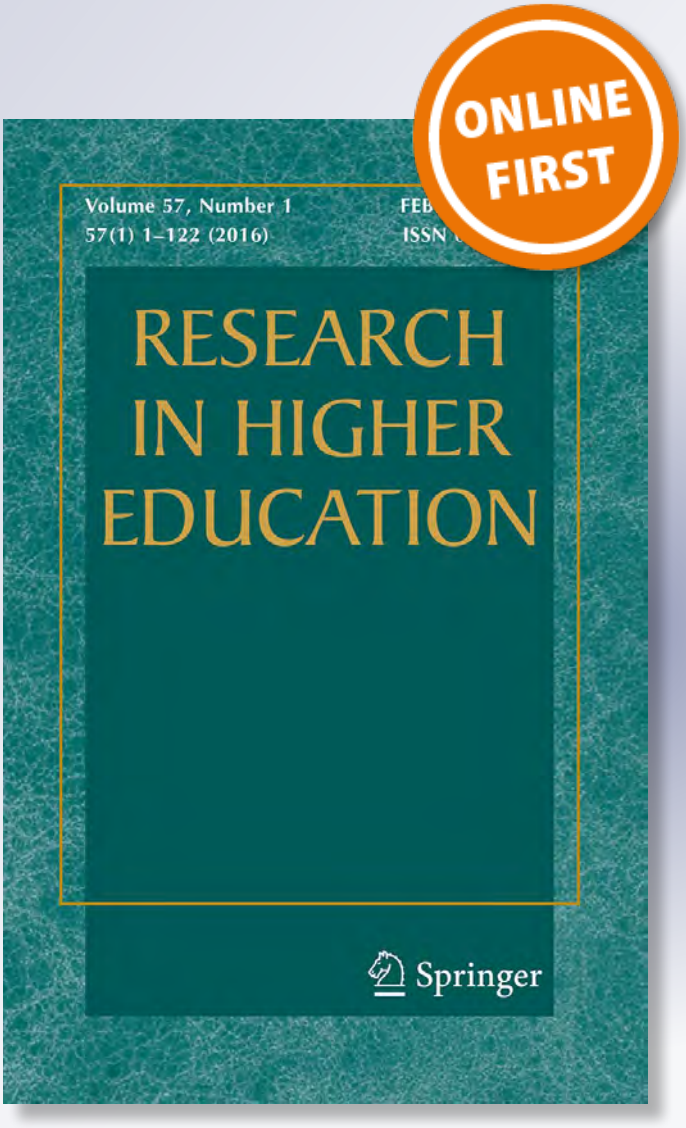

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Imagine No Remediation: Evaluation of a Placement Policy Change

Alexei Kolesnikov[1] · Xiaoyin Wang[1] · Michael Bonaduce[1] · Mark Cunningham[1] · Lillian Fontinell[1] · Tyler Halliwell[1] · Maura Twillman[1]

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Abstract
We describe the effects of a change in the mathematics placement policy at a large 4-year public university. The change resulted in a sharp reduction of the number of students placed in remedial courses, while the levels of academic preparedness of the students, the course content, and the instruction methods remained the same. This allows us to estimate the effects of remedial placement on the educational outcomes of the students. We find that a remedial placement policy that was based on a standardized test cut-score under-placed a large number of students into remedial courses. At the same time, we find that a placement policy based on BAT/CRT scores was placing under-prepared students into college level mathematics courses.

Keywords Placement policy · Regression discontinuity model · Remedial placement

Introduction

This paper grew from an attempt to rigorously evaluate a mathematics placement program at a large, public, 4-year university in Maryland. The placement policy was changed in 2014 to facilitate placement into college mathematics courses of different levels; we refer to the placement policy instituted in 2014 as Multi-Level Placement Model (MLPM). Prior to 2014, the policy only mandated developmental placement; we call this previously used placement policy a Developmental Placement Model (DPM). Prompted by growing instructor dissatisfaction with the quality of placement, a number of heuristically determined changes to placement cut-scores were made in 2016, but the changes did not result in a clear improvement. The main policy question motivating this study was the following. Should the MLPM policy be rolled back to DPM or to a policy similar to DPM?

With the above question in mind, this paper focuses on the impacts of the placement policy change on five cohorts of first-time freshmen during their first 2 years of study. Three of the cohorts (2011–2013) were placed using the DPM, and the remaining two (2014 and 2015) were placed using MLPM. Impacts on multiple outcomes are studied.

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Main Findings and Policy Implications

One of the consequences of the placement policy change was a sharp decrease in the number of freshmen assigned to pre-college level mathematics courses. The decrease was particularly pronounced among the group of students whose SAT or ACT Math scores had triggered the remedial placement under DPM (we refer to the students in this group as the *low-scoring students*). Approximately 21% of incoming freshmen fall into this category (this proportion remained statistically the same during the studied period).

We found clear evidence that DPM was under-placing a large proportion of students into remedial courses. One of the indications is a large increase, among the low-scoring students, in the number of students who are able to pass a college-level mathematics course without remediation in the first 2 years of their study. The increase, from 14 to 68%, is statistically significant even when controlling for demographics, selected major, and academic background.

At the same time, we found evidence that the change to MLPM substantially increased the number of low-scoring students who were not assigned to remediation and who attempted, but failed to pass, a college-level mathematics course within the first 2 years of their study. The changes are highly statistically significant even when controlling for demographic characteristics, students' major at matriculation, and academic background data.

Ultimately, the policy decision was to switch to a different mechanism for placement of incoming freshmen into mathematics courses of different levels. As of fall 2018, the university adopted the platform ALEKS that combines placement assessment with computer-guided remediation. The decision was based in part on a positive experience of other universities with the system [see, for example, Reddy and Harper (2013)].

More broadly, the study offers empirical evidence that Regression Discontinuity (RD) analysis is a suitable tool for the evaluation of placement policies that are based on cut-scores. We show in Table 9 that the discontinuities detected by the RD analysis are close to the observed changes in the student outcomes. This means that RD analysis can be used to estimate the effect of a possible change in the placement cut-score.

Place in the Literature

We found that even relatively simple comparison studies that examine and document the changes in outcomes for placement policies for 4-year universities are relatively uncommon. An example of such a study is Denny et al. (2012); the paper reports the method that was used to design a new placement policy and reports the changes in success rates in Intermediate Algebra, Precalclulus, and Calculus courses. Our study attempts to report a more complete picture by providing not only information about success rates, but also the attempt rates, retention information, and GPA earned in mathematics courses.

A number of recent rigorous studies examined the effects of the placement policies in the contexts of large community college and university systems using an RD design. A recent meta-study by Valentine et al. (2017) summarizes the findings of 11 studies (with a total of 21 independent samples) that use RD design to investigate the effects of placement into developmental education. It is worth noting that only 5 of the samples in the studies came from 4-year institutions (the rest are from community colleges). Our study contributes to this surprisingly limited body of evidence.

We chose to focus only on mathematics placement and primarily on mathematics course outcomes (the only general outcome we evaluate is the retention rate). The focus on placement and performance in a single subject is similar to that in Moss and Yeaton (2006), where the authors focus on English placement and subsequent performance in a college-level English course. The choice of discipline-specific outcomes allows to measure the impacts more accurately: arguably, the effect of mathematics placement on the GPA or credit accumulation in all the college courses is much less direct than the effect on GPA or credit accumulation in mathematics courses only. Using RD methods, Moss and Yeaton (2006) found that the assignment to remedial English courses benefits students with lower standardized test scores: the data suggests that the average grade of such students in an entry-level college English course is higher than it would have been without remedial intervention. We use the GPA in college-level mathematics courses as one of the outcome variables, and find *both* that DPM resulted in higher mathematics GPA for low-scoring students compared to the GPA of the students just above the cut-score; *and* that assigning fewer students to remediation under MLPM has led to lower mathematics GPA for low-scoring students, compared to low-scoring students under DPM. Thus, we see two independent pieces of evidence that show a similar effect to the one observed in Moss and Yeaton (2006). However, we also note that under DPM, a much larger percentage of low-scoring students chose not to take a college-level mathematics course during their 2 years of study. So the observed positive differences in the GPA might be due to the selection bias.

For the general—or not discipline-specific—outcomes, the picture tends to be murkier. The study by Boatman and Long (2010), for example, found no statistically significant effects of assignment to lower-level mathematics courses on total credit accumulation, college-level credit accumulation, as well as retention and completion rates of students in public 4-year institutions in Tennessee. By contrast, we do find highly statistically significant effects on *mathematics* course outcomes; the effects are more pronounced during the first year or studies compared to cumulative effect after the second year. Consistently with Boatman and Long (2010), we find no significant effect of developmental placement on the retention rates.

Using a sophisticated combination of discrete time hazard model and an RD design, Melguizo et al. (2016) found that assigning a student to a lower-level course increases the time to complete the higher-level mathematics course by approximately a year. At the time of this study, only 2 years of data was available for each cohort, so we are able to assess only the effects on the early outcomes. We plan to revisit the cohorts when 6 years of data for each cohort is available.

Ngo and Melguizo (2016) used heterogeneity of placement policies across different institutions to draw conclusions about the impact of placement policies. By contrast, this study benefits from having two different placement policies within the same institution, increasing the likelihood of similarities in the student cohorts to which the policies are applied and the likelihood that the outcomes are equivalent.

Background

The study is conducted at a large public 4-year university in Maryland. During the studied 5-year period (2011 through 2015), undergraduate FTE rose steadily from 17,517 in fall 2011 to 18,866 in fall 2015. For the purpose of this study, we focus on the cohorts of first-time freshmen because placement policies are uniform for this population.

The DPM was used at Towson University prior to Fall 2014. Under that policy, the freshmen with SAT mathematics score of at least 500 or ACT score at least 21 were placed into college level mathematics course following a conversation with a first-year advisor without any further placement testing. The advisors were asked to recommend the students to enroll in the mathematics course at the same level as the highest mathematics course taken in high school. The intention behind this *conservative placement* advice was to increase the likelihood of success in the first mathematics course taken at the college level. The students who did not have SAT mathematics score above 500 or ACT mathematics score above 21 (*the low-scoring students*) were required to take the ACCUPLACER test in a proctored environment. The score on this test determined whether the student was allowed to enroll in a college level mathematics course; or had to take one or both of the pre-college level mathematics courses offered at Towson. The students who were placed in a remedial course had to successfully complete the developmental sequence before being able to register for college level courses. In the studied dataset, freshmen were placed in mathematics courses using the DPM during three of the 5 years (2011, 2012, and 2013).

During the remaining 2 years (2014 and 2015), neither the SAT, nor the ACT scores were used to determine placement into mathematics courses. Instead, the university relied on the scores on two tests (one mandatory, another optional) from the suite provided by Maplesoft. The Basic Algebra Test (BAT) was used to determine the placement into courses for levels from developmental mathematics to Precalculus; in addition, a high enough BAT score qualified a student to take the optional Calculus Readiness Test (CRT). We refer the reader to "Regression Discontinuity Analysis" section of Madison et al. (2015) for a description of the tests.

All the students, except those with Advanced Placement credits in mathematics, were required to complete at least the BAT. Both BAT and CRT were administered online in an unproctored environment. Each of the students had two attempts at each of the test; the highest score from the two attempts was used. The students were placed in the highest mathematics course that was allowed by their score and that fit the study plan for their chosen major. This MLPM continued though Spring 2017, but there were a number of changes both to the placement cut-scores and to the pre-college level course offerings since Fall 2016. One of the substantial changes was the introduction of a new pathway course for the under-prepared students in the fields without algebra-intensive mathematics course requirements.

Since we did not want to confound the effect of changing the placement policy with the effects from the additional remedial course, we chose to exclude years 2016 and later from the study.

Table 1 summarizes the demographic information for the population used in the study. We note that for the two periods (2011–2013 and 2014–2015) the gender composition of freshmen has remained virtually the same, but there has been a statistically significant increase in racial diversity. The differences between DPM and MLPM cohort averages and their statistical significance (*t*-test) are also given in the table. Table 2

Table 1 Demographic characteristics of full-time freshmen

Year	Female(%)	White(%)	Asian(%)	Black(%)	Hispanic(%)	Other(%)	Total
All Freshmen							
2011	64.49	72.62	4.28	11.35	4.71	7.03	2546
2012	66.68	67.45	4.99	12.46	5.15	9.94	2464
2013	63.79	65.36	5.28	13.76	5.39	10.23	2748
2014	65.41	66.41	5.42	13.53	6.78	7.85	2712
2015	63.49	61.50	6.23	15.84	7.11	9.32	2714
DPM	64.90	68.40	4.90	12.60	5.10	9.10	
MLPM	64.40	64.00	5.80	14.70	6.90	8.60	
Change	− 0.50	− 4.40	0.90	2.10	1.80	− 0.50	
p-value	0.56	0.00	0.02	0.00	0.00	0.32	
All Low-scoring Freshmen							
2011	76.14	58.29	2.19	26.96	7.83	4.74	549
2012	76.97	57.14	3.62	26.65	4.05	8.53	469
2013	76.71	53.59	4.03	24.34	6.83	11.21	571
2014	78.77	67.02	4.04	14.74	7.19	7.02	570
2015	74.87	57.52	6.19	19.12	6.55	10.62	565
DPM	76.60	56.30	3.30	25.90	6.40	8.20	
MLPM	76.80	62.30	5.10	16.90	6.90	8.80	
Change	0.20	6.00	1.80	− 9.00	0.50	0.60	
p-value	0.88	0.00	0.02	0.00	0.59	0.56	

Table 2 Average mathematics standardized test scores and high school GPA for full-time freshmen

Year	All freshmen			Low-scoring freshmen		
	SAT	ACT	HS GPA	SAT	ACT	HS GPA
2011	547.50	22.76	3.62	458.60	18.02	3.53
2012	548.80	22.88	3.61	459.60	18.13	3.50
2013	546.90	23.09	3.61	459.70	18.07	3.50
2014	545.70	22.88	3.61	461.90	18.05	3.52
2015	546.00	22.84	3.62	460.00	18.01	3.52
DPM	547.72	22.92	3.61	459.28	18.07	3.51
MLPM	545.87	22.85	3.62	460.95	18.03	3.52
Change	− 1.85	− 0.06	0.00	1.67	− 0.04	0.00
p-value	0.13	0.62	0.59	0.14	0.71	0.68

describes the markers of mathematics preparedness and academic ability: the scores on standardized tests (the mathematics portion of SAT and ACT) and the high school GPA.

As we will see in "The Effects Among Low-Scoring First-Time Freshmen" section, the changes in placement policy had a profound effect on the population of low-scoring students. We provide the demographic and academic information for this group in Tables 1 and 2 as well. It is worth noting that the group of low-scoring students contains a substantially higher proportion of female students, and a higher proportion of minority students.

In "The Effects Among Low-Scoring First-Time Freshmen" section, we will compare the outcomes for the low-scoring students under DPM, years 2011–2013, and the MLPM, years 2014–2015. To control for differences in demographic characteristics, academic background, and major at matriculation, we use a multilinear regression model.

Methodology

As described in the previous section, during the studied period the mathematics courses at both pre-college and college levels remained the same. There were no sharp changes in mathematics requirements for the students, but there was a marked difference in the numbers of low-scoring students who were allowed to take college-level courses without remediation. Here is one way to quantify the difference: under DPM, 81% of low-scoring students took pre-college level mathematics courses during their first year of study; and under MLPM, nearly 72% of low-scoring students took a college level mathematics course during their first year *without taking a remedial course first*. We leverage this change into the following study designs.

First, we compare the outcomes of low-scoring students from DPM and MLPM cohorts within the framework of posttest-only nonequivalent group design. The low-scoring DPM students are considered to be the treatment group, and the low-scoring MLPM students the nonequivalent control group. We use multiple regression analysis to control for demographic characteristics (age, gender, and race); for selected major (grouped by college: art, business, education, health professions, liberal arts, and science); and for academic background (high-school GPA and mathematics SAT score). This design allows us to compare the outcomes for the groups of students with the same measures of academic ability and at the same institution, but across different years.

Second, we use the Regression Discontinuity (RD) design, with SAT score as the forcing variable, to examine the impact of the DPM policy on the students whose standardized test scores are within a margin on either side of the cut-score. The RD design compares the outcomes for the students with SAT scores just below the cut-score to the students whose scores are just above the cut-score, controlling for the same covariates as the regression model above. We use the same RD design for the MLPM students to confirm that all the statistically significant discontinuities in the outcomes observed for the DPM cohorts disappear in the absence of the policy that uses the SAT cut-score. This serves as an additional confirmation of the hypothesis that the studied outcomes are continuous functions of the forcing variable.

We note that the observed differences in the outcomes for low-scoring students in DPM versus MLPM cohorts match, for the most part, the discontinuities across the cut-score detected by the RD model for the DPM cohorts. This provides empirical evidence that the discontinuities detected by an RD model do in fact approximate the changes in the student outcomes, should the cut-score based policy be changed.

The Effects Among Low-Scoring First-Time Freshmen

In this section, we examine the differences in the performance of low-scoring students under DPM and MLPM. We provide some descriptive statistics and specify the multilinear regression model we use to control for differences in the demographic and academic

Table 3 Comparison of outcomes for low-scoring first-time students under different placement models

		First year				First 2 years			
		DPM	MLPM	Change	*p*-value	DPM	MLPM	Change	*p*-value
Pre College	Attempts	1.058	0.198	− 0.860	0.000	1.198	0.231	− 0.967	0.000
	≥C	0.880	0.147	− 0.733	0.000	0.953	0.171	− 0.782	0.000
	≥C|Att	1.084	0.831	− 0.253	0.000	1.162	0.886	− 0.276	0.000
College	Attempts	0.517	0.982	0.466	0.000	1.191	1.525	0.334	0.000
	≥C	0.443	0.726	0.283	0.000	0.950	1.116	0.167	0.000
	≥C|Att	0.941	0.886	− 0.055	0.023	1.248	1.242	− 0.006	0.864
	≥B	0.260	0.345	0.086	0.000	0.405	0.418	0.012	0.519
	≥B|Att	0.552	0.421	− 0.131	0.000	0.533	0.465	− 0.068	0.001
	GPA	2.679	2.246	− 0.433	0.000	2.443	2.220	− 0.223	0.000
Retention		86.0%	86.3%	0.3%	0.814	79.0%	80.3%	1.4%	0.483

Table 4 Comparison of distributions of outcomes for low-scoring students under different placement models

	First year				First 2 years			
	DPM	MLPM	Change	*p*-value	DPM	MLPM	Change	*p*-value
N =	1589	1135	–	–	1367	980	–	–
No Math%	5.29	10.40	5.11	0.000	1.46	3.78	2.32	0.001
PC Fail%	7.11	3.35	− 3.76	0.000	3.37	1.73	− 1.64	0.011
PC Pass%	40.72	4.76	− 35.96	0.000	12.29	2.35	− 9.94	0.000
PC Pass, C Fail%	4.53	2.64	− 1.89	0.008	9.14	2.86	− 6.28	0.000
PC Pass, C Pass%	28.82	6.96	− 21.86	0.000	58.81	12.14	− 46.67	0.000
C Fail%	1.51	14.45	12.94	0.000	0.66	8.78	8.12	0.000
C Pass%	12.02	57.44	45.42	0.000	14.26	68.37	54.11	0.000

composition of the two comparison groups. We conclude the section with the discussion of policy conclusions and limitations of the findings.

We consider the following outcome variables: the number of mathematics courses of pre-college and college level attempted by the students at the end of their first and second year of studies (abbreviated as "Attempts" in the tables below); the number of mathematics courses passed with a letter grade C or better ("≥C"); the number of college level mathematics courses in which the students earned a grade of B or better ("≥B"), the GPA in college level mathematics courses ("GPA"), and whether or not the students remained enrolled at the university in the fall semester of the following year ("Retention").

When computing the average number of courses passed with the grade C or better (or B or better), there are two choices: average over the entire student population, or average only over the population of students who attempted a mathematics course. Averaging over the entire population allows to easily compute the passing rates (or the rates of passing with the grade B or better) by taking the quotients of the averages. For example, using the data from Table 3, the passing rate for college level mathematics courses during the first year was $0.443/0.517 \approx 86\%$ under DPM and $0.726/0.982 \approx 74\%$ under MLPM. Averaging

over only those who attempted a mathematics course offers a different measure of success (in fact, we frequently see the two averages move in the opposite directions in our study). Thus, we found it informative to include these statistics as well, using the abbreviations "≥ C|Att" and "≥B|Att".

Finally, we provide data for some of the outcomes that count the number of students rather than the number of courses. The outcomes reported in Table 4 display the proportions of low-scoring students who have achieved one of the following complete set of mutually exclusive outcomes:

No Math: proportion of students who have taken no mathematics course of any level;
PC Fail: attempted pre-college course(s), but failed all the attempts;
PC Pass: passed at least one of the pre-college course attempts but have taken no college level courses;
PC, C Fail: passed at least one of the pre-college course attempts, attempted college level course(s), but failed all the attempts;
PC, C Pass: passed at least one of the pre-college course attempts and passed at least one college course attempt;
C Fail: did not take pre-college level courses, attempted college level course(s), but failed all the attempts;
C Pass: did not take pre-college level courses and passed at least one college course attempt.

Descriptive Statistics

We begin with a simple comparison of the averages of the outcome variables; the reported *p*-value of the difference is computed by the *t*-test.

Table 3 summarizes the student outcomes at the end of their first and second year. As we see from the first row of the table, an average group of 100 low-scoring students under the new placement policy took 86 fewer remedial courses during their first year (down from 106 to 20 such courses), and nearly 100 fewer remedial courses over the course of 2 years of study (down from 120 to 23). This is due to the fact that much fewer students were required to take pre-college level mathematics courses by the new placement policy. We know that the high school GPA and the standardized mathematics test scores remained statistically the same for the group of low-scoring students, so the differences we observe in the outcomes for college level courses are attributable to the change in placement policy.

We find that the students who do not have to take remedial courses do take more college level mathematics courses, but the increase in the number of attempted college level mathematics courses is smaller than the decrease in the number of attempted remedial courses. Thus, we do see evidence that remedial education diverts the students from taking college level courses, but it is not the case that the students take one college level course for each remedial course they do not have to take—the total number of mathematics courses of both pre-college and college levels has declined under MLPM (the new placement policy). This could be due to the fact that the students are postponing mathematics courses to third and later year of their education under the new policy; but a more likely explanation is that the students who used to take a pre-college level course (or two) and then the required college level mathematics course(s) now just take the required college mathematics, and nothing more. The replacement rate is approximately 2:1 after the first year (meaning that,

on average, the students in the low-scoring group take one college level course for 2 pre-college level courses they do not take); and approximately 3:1 after the second year.

The outcomes that measure the numbers of students (we present the numbers as a proportion of the population and give the population totals) are given in Table 4. We can use the information to give a conservative estimate of the percentage of DPM low-scoring students who were assigned to remedial education but who could have passed a college level course during their first year without remediation. From the table, we know that 81.18% of these students actually took remedial courses, so the percentage of students assigned to remediation is at least this number. For the estimation purposes, let us assume that the DPM and MLPM populations have the same distributions of skills. This assumption is supported by the regression models in the section below: the odds ratio coefficient given by the logistic regression for the number of students passing a college-level course without remediation, controlling for demographics and academic background, predicts that the percentage of such students would increase to 59%; we take the smaller number 57.44% for the estimate. Assuming that the two groups of students, those assigned to remediation and those who could have passed a college course without remediation, are as disjoint as possible, the minimal overlap between them is 38.62%. Thus, at least 38% of the low-scoring students who were assigned to remediation by DPM could have passed a college level course without remediation in their first year.

The retention rates have remained statistically the same both at the end of the first year and second year.

Regression Model

This part of the paper contains a more systematic comparison of the group of low-scoring students under DPM and the group of low-scoring students under MLPM. To account for the differences in the demographic characteristics, academic background, and chosen area of study among the two groups, we employ the following regression model:

$$Y = \beta_0 + \beta_1 \cdot \text{Placement} + \sum \gamma_i C_i + \varepsilon,$$

where Y is one of the non-binary outcomes; Placement is a binary variable indicating the placement model, 0 for DPM and 1 for MLPM; and C_i are the covariates: high-school GPA, SAT, gender, age, race, and major. To limit the number of independent variables, we group the students' majors by their academic college, using abbreviated names Art (for majors like music, theatre arts, etc.), Business, Education, Health (for health profession fields), Liberal arts (probably the most heterogeneous group in terms of mathematics requirements; it includes fields like psychology and history), and Science.

For the binary dependent variables (the last three columns in Tables 5 and 6), we ran the logistic regressions.

$$\text{logit}(P(Y = 1)) = \beta_0 + \beta_1 \cdot \text{Placement} + \sum \gamma_i C_i + \varepsilon.$$

The initial numbers in the treatment and control group were $n = 1589$ and $n = 1135$. For the analysis of first-year outcomes, we excluded the students with missing information (234 students were missing the SAT scores and 8 students were missing high-school GPA data), resulting in $n = 1461$ for the treatment group and $n = 1021$ for the control group. For

Table 5 Regression model coefficients for first year outcomes of low scoring students

	Pre college			College						College no REM		Retention
	Attempts	≥C	≥ C | Att	Attempts	≥C	≥ C | Att	≥ B	≥ B | Att	GPA	Fail	Pass	
Intercept	3.374	2.286	1.314	− 0.239	− 1.266	− 1.103	− 1.444	− 1.971	− 4.373	8.020	− 11.941	3.792
p-value	0.000	0.000	0.044	0.672	0.022	0.095	0.001	0.002	0.004	0.074	0.000	0.175
Placement	− 0.840	− 0.721	− 0.243	0.431	0.254	− 0.036	0.068	− 0.111	− 0.378	2.467	2.368	0.074
p-value	0.000	0.000	0.000	0.000	0.000	0.150	0.000	0.000	0.000	0.000	0.000	0.540
HS GPA	− 0.213	− 0.038	0.096	0.222	0.314	0.269	0.263	0.314	0.853	− 1.124	1.123	0.578
p-value	0.000	0.259	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
SAT	− 0.003	− 0.001	0.001	0.003	0.003	0.002	0.003	0.003	0.008	− 0.007	0.015	0.002
p-value	0.000	0.001	0.218	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.476
Male	0.091	0.034	0.014	− 0.012	− 0.039	0.010	− 0.056	− 0.057	− 0.140	− 0.054	− 0.064	0.162
p-value	0.002	0.204	0.678	0.681	0.167	0.758	0.013	0.073	0.059	0.802	0.631	0.282
Age	− 0.013	− 0.039	− 0.046	− 0.066	− 0.050	− 0.008	− 0.022	0.001	0.007	− 0.251	− 0.054	− 0.282
p-value	0.639	0.139	0.146	0.017	0.065	0.802	0.315	0.967	0.922	0.266	0.680	0.038
White	0.093	0.057	0.020	− 0.050	− 0.026	0.013	0.015	0.058	0.163	− 0.419	0.015	0.102
p-value	0.029	0.151	0.697	0.241	0.530	0.777	0.645	0.193	0.117	0.128	0.940	0.620
Black	0.133	0.094	0.021	− 0.045	0.001	0.055	0.017	0.044	0.143	− 0.412	− 0.115	0.450
p-value	0.004	0.030	0.706	0.328	0.974	0.280	0.638	0.368	0.217	0.203	0.594	0.056
Hispanic	0.144	0.014	− 0.027	− 0.115	− 0.063	− 0.001	− 0.027	0.006	0.114	− 0.070	− 0.062	0.703
p-value	0.016	0.796	0.707	0.053	0.281	0.983	0.563	0.928	0.446	0.859	0.821	0.038
Asian	− 0.024	− 0.077	− 0.119	0.026	− 0.046	− 0.075	− 0.018	− 0.033	− 0.095	0.300	− 0.052	− 0.453
p-value	0.728	0.233	0.202	0.711	0.491	0.292	0.737	0.627	0.557	0.453	0.862	0.145
Art	− 0.005	− 0.008	− 0.048	− 0.167	− 0.097	0.006	− 0.061	− 0.015	0.125	− 1.099	− 0.445	0.414
p-value	0.932	0.871	0.406	0.002	0.059	0.931	0.134	0.820	0.420	0.033	0.097	0.127
Business	− 0.065	− 0.020	0.050	0.243	0.151	0.075	− 0.007	− 0.097	− 0.240	0.223	0.364	0.227
p-value	0.157	0.639	0.356	0.000	0.001	0.134	0.837	0.045	0.034	0.467	0.081	0.310

Table 5 (continued)

	Pre college			College						College no REM		Retention
	Attempts	≥C	≥ C ⁄ Att	Attempts	≥C	≥ C ⁄ Att	≥ B	≥ B ⁄ Att	GPA	Fail	Pass	
Education	0.084	0.066	0.033	0.143	0.194	0.231	0.126	0.134	0.224	− 0.471	0.043	0.783
p-value	0.094	0.158	0.552	0.004	0.000	0.000	0.001	0.013	0.076	0.241	0.852	0.006
Health	− 0.042	− 0.020	0.000	0.119	0.177	0.106	0.108	0.053	0.252	− 0.691	0.546	0.190
p-value	0.273	0.576	1.000	0.002	0.000	0.014	0.000	0.206	0.010	0.023	0.002	0.300
Liberal Arts	− 0.032	− 0.046	− 0.021	− 0.018	− 0.014	0.009	− 0.056	− 0.087	− 0.123	− 0.273	0.124	0.288
p-value	0.395	0.189	0.619	0.626	0.707	0.838	0.056	0.044	0.225	0.330	0.490	0.113
Science	− 0.057	− 0.020	0.091	0.335	0.250	0.140	0.034	− 0.077	− 0.116	0.041	0.700	0.534
p-value	0.195	0.623	0.074	0.000	0.000	0.003	0.311	0.088	0.273	0.894	0.000	0.020

Table 6 Regression model coefficients for the outcomes of low scoring students after their first 2 years of study

	Pre college			College						College no REM		Retention
	Attempts	≥C	≥ C | Att	Attempts	≥C	≥ C | Att	≥ B	≥ B | Att	GPA	Fail	Pass	
Intercept	4.265	2.825	1.547	− 0.079	− 1.438	− 1.261	− 1.893	− 2.110	− 3.294	7.121	− 12.777	1.215
p-value	0.000	0.000	0.026	0.933	0.100	0.159	0.000	0.000	0.007	0.237	0.000	0.788
Placement	− 1.001	− 0.812	− 0.247	0.272	0.118	0.014	− 0.020	− 0.065	− 0.200	2.733	2.725	0.192
p-value	0.000	0.000	0.000	0.000	0.001	0.692	0.338	0.003	0.000	0.000	0.000	0.346
HS GPA	− 0.386	− 0.136	− 0.002	0.260	0.495	0.418	0.320	0.321	0.880	− 1.591	1.193	0.406
p-value	0.000	0.000	0.961	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.140
SAT	− 0.005	− 0.002	− 0.000	0.003	0.004	0.004	0.003	0.003	0.007	− 0.008	0.016	− 0.001
p-value	0.000	0.000	0.502	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.825
Male	0.139	0.079	0.090	0.047	− 0.044	− 0.025	− 0.091	− 0.095	− 0.254	0.253	− 0.142	− 0.067
p-value	0.000	0.008	0.008	0.313	0.305	0.575	0.000	0.001	0.000	0.361	0.324	0.749
Age	0.025	− 0.020	− 0.016	− 0.054	− 0.077	− 0.042	− 0.011	0.005	− 0.040	− 0.141	− 0.022	− 0.007
p-value	0.523	0.502	0.646	0.244	0.076	0.338	0.677	0.852	0.507	0.635	0.875	0.976
White	0.112	0.087	0.084	− 0.008	0.020	0.050	0.006	0.015	− 0.003	− 0.227	− 0.222	0.167
p-value	0.054	0.051	0.122	0.910	0.756	0.448	0.877	0.714	0.976	0.535	0.296	0.589
Black	0.130	0.110	0.058	0.038	0.038	0.053	0.013	0.015	− 0.046	− 0.699	− 0.240	0.512
p-value	0.041	0.024	0.304	0.622	0.590	0.461	0.763	0.734	0.633	0.130	0.306	0.141
Hispanic	0.223	0.060	0.011	− 0.122	− 0.087	− 0.009	− 0.025	0.012	− 0.024	0.058	− 0.421	0.271
p-value	0.005	0.328	0.878	0.202	0.329	0.920	0.634	0.837	0.847	0.909	0.150	0.537
Asian	0.000	− 0.036	0.022	0.084	0.053	0.102	0.045	0.058	0.003	0.100	0.073	0.755
p-value	0.999	0.630	0.827	0.472	0.624	0.351	0.488	0.398	0.983	0.866	0.830	0.257
Art	0.032	0.002	− 0.070	− 0.435	− 0.325	− 0.247	− 0.106	− 0.062	0.106	− 0.678	− 0.595	− 0.639
p-value	0.653	0.976	0.233	0.000	0.000	0.004	0.026	0.253	0.362	0.263	0.035	0.067
Business	− 0.127	− 0.043	0.030	0.489	0.279	0.241	− 0.005	− 0.029	− 0.207	0.151	0.313	− 0.269
p-value	0.042	0.371	0.596	0.000	0.000	0.001	0.911	0.500	0.028	0.720	0.168	0.430

Table 6 (continued)

	Pre college			College						College no REM		Retention
	Attempts	≥C	≥ C | Att	Attempts	≥C	≥ C | Att	≥ B	≥ B | Att	GPA	Fail	Pass	
Education	0.069	0.051	0.016	0.707	0.779	0.833	0.162	0.159	0.235	− 0.665	− 0.068	0.397
p-value	0.304	0.319	0.773	0.000	0.000	0.000	0.000	0.001	0.021	0.271	0.783	0.359
Health	− 0.063	− 0.026	0.033	− 0.007	0.124	0.113	0.073	0.068	0.285	− 0.783	0.390	− 0.265
p-value	0.233	0.527	0.474	0.910	0.035	0.056	0.036	0.071	0.000	0.070	0.044	0.365
Liberal Arts	− 0.033	− 0.042	− 0.004	− 0.219	− 0.169	− 0.143	− 0.080	− 0.071	− 0.047	− 0.056	0.115	− 0.044
p-value	0.521	0.293	0.935	0.000	0.004	0.016	0.020	0.059	0.562	0.883	0.553	0.882
Science	− 0.089	− 0.057	0.056	0.551	0.393	0.358	0.036	0.009	− 0.103	0.006	0.518	− 0.067
p-value	0.131	0.205	0.286	0.000	0.000	0.000	0.359	0.819	0.245	0.989	0.016	0.845

the 2-year outcomes, we additionally excluded the students who were not retained by the beginning of their second year ($n = 1255$ treatment, $n = 883$ control).

The results are reported in Tables 5 and 6. We note that the coefficients for the Placement dummy variable are very close to the plain differences of the means for the non-binary outcomes. The two columns under the "College no rem" heading correspond to the outcomes abbreviated as "C Fail" and "C Pass" in Table 4.

Regression Discontinuity Analysis

Regression discontinuity (RD) techniques are frequently used by researchers to estimate the effects of policies or interventions that are based on a particular "cut-value". In the context of remedial education, the majority of policies are based on a student's score on a standardized test. The students scoring below a specified score are assigned to a remediation, while the students scoring above a specified score are assigned to college level courses (or higher level remediation courses). Assuming that students who score just above and just below the placement cut-score have similar abilities, one can estimate the effects of remedial placement on the outcomes for those students. As we mentioned in the Introduction, a number of studies leveraged these techniques to estimate the effects of remedial placement.

The validity of the estimates obtained by RD analysis depends on a number of technical conditions that have to hold for the underlying data. A good general guide to RD designs can be found, for example, in Imbens and Lemieux (2008). For education-specific RD designs, we found that WWC (2015) sets the validity standards in a clear way; and we organized the design to meet these standards.

The data used in this study allows to use two separate ways to estimate the effects of remedial placement policy on the outcomes of the low-scoring students: (1) by comparing the outcomes of these students before and after the change in the policy, as we did in "The Effects Among Low-Scoring First-Time Freshmen" section, and (2) by computing the discontinuity estimates for the outcomes between the low-scoring and high-scoring students for the DPM cohorts as we do in this section. We use the RD model implemented by the `rdd` package in `R`. An interesting finding is that the estimates given by the RD model are close to the actually observed changes in the student outcomes; we offer a side-by-side comparison in "Comparison of the RD Estimates, the Observed Changes for the Low-Scoring Students, and the Regression Coefficients" section.

We found it illuminating to present the graphs of RD models for the MLPM cohorts as well: the graphs offer a more complete view of the changes in the outcomes following the change in the placement policy. As expected, there are no statistically significant discontinuities in any of the outcomes, since the MLPM placement policy is not based on the SAT score. For this RD study, the treatment group is the group of low-scoring students.

Design Validity

For the RD analysis, we chose the SAT score as the forcing variable because a much larger percentage of students have SAT scores than ACT scores in our dataset. We excluded the students without the SAT scores, and excluded the students with low SAT score (below 500) but high ACT score. The students who were not retained at the end of the first year were included in the first year analysis, but excluded from the 2-year analysis. The total

number of students in the dataset with complete information is 11912 (7050 DPM, 4862 MLPM) for the first year; and 10197 (6038 DPM, 4159 MLPM) for the second year. For first-year data, the percentage of the students excluded from the study is small: 9% excluded for DPM cohorts and 10% for MLPM cohorts. For second year data, the overall attrition is 22% for DPM cohorts and 23% for MLPM cohorts. The attrition information by treatment status is further provided below; there are virtually no differences in the attrition rates by treatment status.

We now address the criteria for the validity of the RD design set in WWC (2015). For the purpose of this study the treatment group is the group of low-scoring students. By restricting the dataset as described above, we ensure that the treatment assignment to this treatment group is only based on a single ordinal variable, the SAT Math score. The SAT Math score was not used to assign the students to any additional treatments. The SAT scores in the dataset are multiples of 10. To ensure that the forcing variable has at least 4 unique values above and below the cut-off, we used the minimal bandwidth of 40 when calculating the optimal bandwidth for the RD analysis. Thus, this study meets the criteria described in Sect. A of WWC (2015).

We now address the four RD design standards specified in Sect. C of WWC (2015) that apply to a sharp RD study.

Integrity of Forcing Variable

We give evidence that the forcing variable was not systematically manipulated around the cut-score. First, the forcing variable is a score on a standardized test taken by the students several months prior to making the decision about college enrollment (and so prior to any interaction with the placement policy). To establish the smoothness of the forcing variable both statistically and graphically, we used the `rddensity` package that implements the manipulation test of Cattaneo et al. (2018), with the null hypothesis of continuity of the forcing variable. For comparison purposes, we implemented the analysis for both the DPM cohorts and MLPM cohorts (there is no reason at all for the forcing variable manipulation in the latter case, since no placement decisions were based on the SAT scores under MLPM). The p-values of the test are quite large with $p = 0.4068$ for DPM (where the discontinuities in the outcomes actually exist) and $p = 0.0772$ for MLPM. The graphs in Figure 1 show an overlap of 95% confidence intervals at the cut point. This visually confirms the conclusion that the forcing variable was not systematically manipulated.

Attrition

The only students excluded from the RD study are the students whose placement was not determined by their SAT scores and those with missing high-school GPA. We reported the overall attrition numbers above. The attrition rates for the treatment group (and therefore, for the comparison group) are comparable: 8% of the students were excluded from the group of low-scoring students in DPM cohorts and 10% from low-scoring students in MLPM cohorts for the first-year analysis. For the second year, the attrition rates for the treatment and control groups are also similar to the overall attrition rates: 21% for the DPM cohorts and 22% for MLPM. Overall, we note that the attrition rates are low and are uniform for the treatment and the control groups.

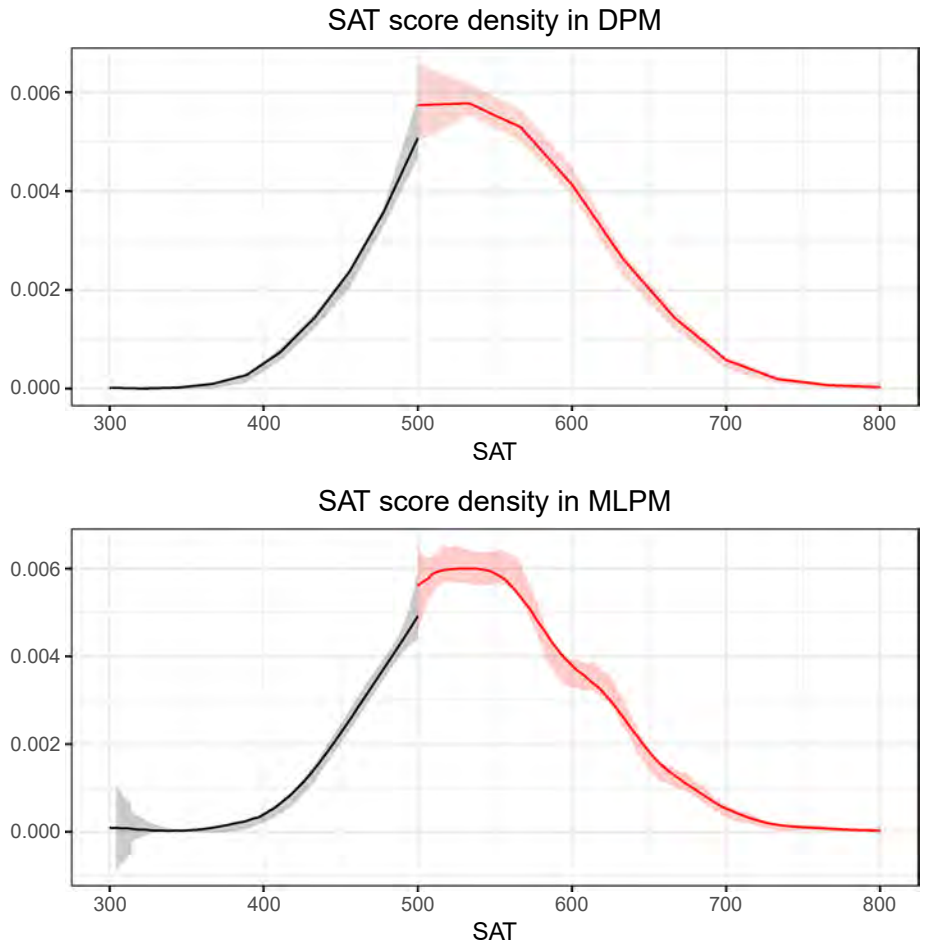

Fig. 1 Density plots for forcing variables

Continuity of the Relationship Between the Outcomes and the Forcing Variable

This is typically the hardest standard to meet. However, this study benefits from having a natural "discontinuity control group": the relationship between the forcing variable and all the outcomes is continuous in the absence of the DPM policy because the discontinuities disappear for the MLPM students. This is confirmed both visually in Figures 2 and 3 and numerically in Tables 7 and 8. We have slightly modified the graphing routine to allow overlaying the graphs for the cohorts before the change (shown in red) and the graphs for the cohorts after the change (shown in black).

Functional Form and Bandwidth

For each of the outcomes, we are choosing the optimal bandwidth using the cross-validation procedure described in Imbens and Lemieux (2008). As we mentioned, the SAT

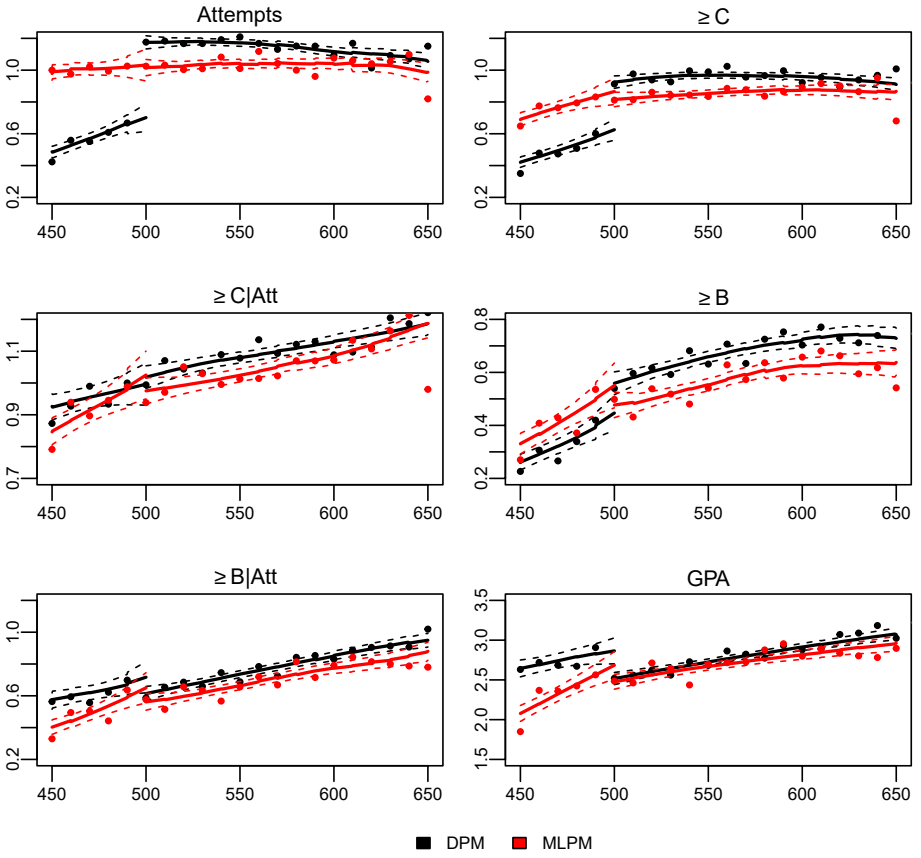

Fig. 2 Outcomes in college mathematics courses vs. SAT score, first-time students after the first year

scores change in increments of 10; so we analyze the possible values of bandwidth from 40 to 120. For each possible bandwidth, the residuals from linear regressions on the left and right of the cutoff point are computed. The optimal bandwidth is chosen to minimize the mean square error. We have selected the *locally linear functional form* because it is supported by visual evidence, and by the fact that there is no reason to expect that the relationship between the SAT score and any of the outcomes would be *locally* quadratic or cubic. The displayed graphs in Figures 2 and 3 provide the best fit lines (these are the solid lines); the 95% confidence band for the best fit line (the dashed lines); and the average values of outcomes from the data (the dots). In addition, we report the discontinuity estimates for the one half and double the optimal bandwidth. We found that, for the statistically significant effects, the results are robust; they are summarized in Tables 7 and 8.

RD Model Results

Figures 2 and 3 show the graphs of the RD models for the student outcomes after their first year and after 2 years, using the SAT mathematics score as the running variable. As expected, the graphs show discontinuities at the cut-score for DPM (when the SAT score

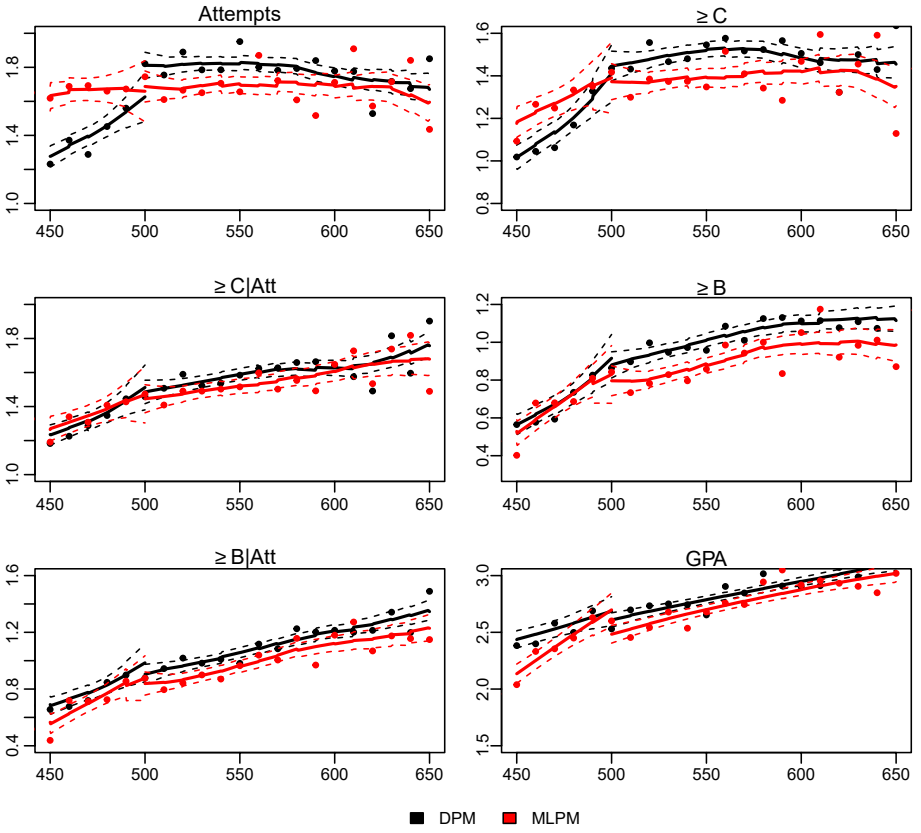

Fig. 3 Outcomes in college mathematics courses vs. SAT score, first-time students after 2 years

Table 7 RD effects for college mathematics courses, first-time students after the first year

		BW		Half BW		Double BW	
		DPM	MLPM	DPM	MLPM	DPM	MLPM
Attempts	Effect	0.464	0.002	0.459	− 0.019	0.487	− 0.005
BW = 40	p-value	0.000	0.960	0.000	0.728	0.000	0.884
≥ *C*	Effect	0.330	− 0.044	0.301	− 0.052	0.356	− 0.040
BW = 60	p-value	0.000	0.266	0.000	0.294	0.000	0.269
≥ *C*|Att	Effect	0.049	− 0.044	0.037	− 0.049	0.051	− 0.049
BW = 70	p-value	0.136	0.257	0.323	0.285	0.105	0.175
≥ *B*	Effect	0.147	− 0.076	0.121	− 0.102	0.172	− 0.047
BW = 50	p-value	0.000	0.047	0.004	0.042	0.000	0.168
≥ *B*|Att	Effect	− 0.051	− 0.086	− 0.073	− 0.111	− 0.050	− 0.066
BW = 50	p-value	0.244	0.043	0.190	0.044	0.208	0.085
GPA	Effect	− 0.280	− 0.198	− 0.294	− 0.223	− 0.267	− 0.171
BW = 90	p-value	0.000	0.010	0.000	0.009	0.000	0.022

Table 8 RD effects for college mathematics courses, first-time students after 2 years

		BW		Half BW		Double BW	
		DPM	MLPM	DPM	MLPM	DPM	MLPM
Attempts	Effect	0.181	0.023	0.138	0.016	0.227	0.009
BW = 40	p-value	0.002	0.744	0.079	0.868	0.000	0.879
$\geq C$	Effect	0.079	− 0.024	0.015	− 0.064	0.134	− 0.021
BW = 40	p-value	0.146	0.724	0.840	0.470	0.004	0.714
$\geq C$|Att	Effect	0.014	− 0.005	− 0.025	− 0.066	0.045	− 0.004
BW = 40	p-value	0.801	0.936	0.733	0.458	0.333	0.950
$\geq B$	Effect	0.022	− 0.109	− 0.021	− 0.124	0.063	− 0.072
BW = 40	p-value	0.672	0.062	0.766	0.111	0.156	0.153
$\geq B$|Att	Effect	− 0.022	− 0.097	− 0.047	− 0.116	− 0.003	− 0.069
BW = 40	p-value	0.698	0.108	0.535	0.153	0.944	0.185
GPA	Effect	− 0.039	− 0.172	− 0.067	− 0.197	− 0.026	− 0.154
BW = 100	p-value	0.519	0.009	0.311	0.006	0.663	0.015

was used to place the students into remedial mathematics courses); and, with one exception, do not show statistically significant discontinuities for MLPM cohorts.

The top left panel of Figure 2 displays a sharp discontinuity at the cut-score in the number of college level mathematics courses attempted by the students in their first year, under the DPM. We further see that after the policy change, the number of attempted college level courses increased for the low-scoring students (this is expected); and decreased for the students with higher SAT scores. The latter effect is somewhat surprising and merits some discussion. As we mentioned in "Background" section, the change in policy affected the students with the higher SAT scores in two ways. First, the students with a high SAT mathematics score but a low BAT score were placed into a remedial course by the new policy, and so not allowed to take a college level course at least in the first semester (the number of such students is too small to explain the difference). Second, the students were no longer advised to take a mathematics course at the level of the highest mathematics course they took in high school. It is possible that, as the result, the students are taking fewer college level mathematics courses because they are no longer advised to take prerequisite courses. We see that the decrease in the average number of attempts remained virtually the same after 2 years for the students with higher SAT scores.

Regardless of the reason, it is clear that under MLPM, the students with higher SAT scores take fewer college mathematics courses in their first year and over the first 2 years, and do worse in them (but still pass, on average).

We finish the description with Tables 7 and 8 that provide a summary of the RD effects for the optimal bandwidth and the half- and double-bandwidth. We note that none of the outcomes have highly statistically significant discontinuities "across the bandwidths" for MLPM cohorts. One cautionary exception is the GPA after 2 years of study for MLPM cohorts: the *p*-values of non-zero discontinuity effect for different bandwidths are between 0.006 and 0.015, even though no discontinuity is expected.

As is clear from the graphs, the RD effects are much weaker for the DPM cohorts after 2 years than after the first year (only the GPA is marginally statistically significant). After the first year, there are clear and robust RD effects for the average number of attempts, the

average number of courses passed, and the GPA in mathematics courses. The discontinuities show that a number of students "on the margin" were under-placed by the DPM. They also show that the low-scoring students who were allowed to take a college level mathematics course were, on average, much better prepared than the students with a higher SAT score who were not evaluated for the remedial placement. These effects are highly statistically significant (the p-values are below 10^{-6}).

Comparison of the RD Estimates, the Observed Changes for the Low-Scoring Students, and the Regression Coefficients

We saw above that a policy based on a cut-score has led to discontinuities in the student outcomes, especially the shorter-term ones. We also saw that after the change in the policy, so that remedial placement no longer depends on the SAT score, the student outcomes no longer display the discontinuities. Here, we provide the observed averages in the student outcomes for the low-scoring students with SAT scores between 450 and 490; and compare the regression coefficients obtained in "Regression Model" section to the RD estimates obtained above.

In Table 9, the columns marked "DPM" and "MLPM" provide the average outcomes for the students with SAT scores between 450 and 490, for DPM and MLPM cohorts, respectively. The RD estimate column shows the discontinuity estimate obtained by `rdd` with the optimal bandwidth, and the last column shows the Placement regression coefficient from "Regression Model" section. We note that the statistically significant effects are very close and are generally consistent with the observed changes in the averages.

Discussion

Are the students better off under a more lenient placement policy? The results are mixed. On the one hand, we see in Table 4 a substantially higher percentage of low-scoring students who were not assigned to pre-college level courses and who attempted and failed to pass a college-level course during their first year of study (up from 1.5 to 14%). This is an indication that MLPM allows more under-prepared students to enroll in college level courses.

At the same time, the percentage of low-scoring students who were able to pass a college level course without taking a pre-college level course has increased even more dramatically: from 12 to 57%. The results remain highly statistically significant when we control

Table 9 Comparison of observed averages, regression coefficients, and RD estimates, for 1-year outcomes

	DPM	MLPM	Reg. coeff.	RD estimates
Attempts	0.526	0.997	0.431***	0.464***
≥C	0.451	0.739	0.254***	0.330***
≥ C Att	0.943	− 0.036	− 0.036	0.049
≥ B	0.263	0.349	0.068***	0.147***
≥ B Att	0.550	− 0.111	− 0.111	− 0.051
GPA	2.733	2.364	− 0.378***	− 0.280***

***$p < 0.001$

for demographic and academic characteristics. As we estimated in "Descriptive Statistics" section, at least 38% of the low-scoring students were assigned to remediation by DPM, but could have passed a college level course without remediation in their first year. These findings contributed to the decision to change the placement mechanism starting in Fall 2018, and in particular made a convincing case against returning to the DPM.

We now discuss possible limitations of the findings. The main threat to the validity of the conclusion that DPM was under-placing a large number of students into remediation is the possible non-equivalence of outcomes. As a thought experiment, imagine the actions of an instructor in an introductory college level mathematics course that experiences a large influx of less-prepared students. The instructor could respond by giving lower grades, or by re-calibrating, lowering, expectations (or with a combination of both). While there is no pressure to maintain any particular passing rate, an instructor may be reluctant to fail a much larger percentage of her students compared to the historic norm. We did note the increase in the percentage of students who are not assigned to remediation under MLPM and who are not able to pass a college level course and a lower GPA in mathematics courses. While it is possible that some of the students in MLPM cohorts who received passing grades would have failed that course in previous years, this would not affect the overall conclusion due to the sheer size of the increase in the percentage of students able to pass a college course under MLPM.

A somewhat limiting factor is that this study uses only the data from the first 2 years of the students' university experience. We note that this does not affect the overall conclusion that DPM was under-placing and MLPM over-placing the students. However, this study cannot be used to draw conclusions about the long-term effects of remedial placement. We plan to revisit the studied cohorts after the majority of students in the 2015 cohort have graduated to see if there were lasting effects in the students' outcomes.

The results suggest that increases in the success rates, typical with more restrictive placement policy, should be interpreted with caution. In particular, it cannot be ruled out that the higher passing rates and the percentages of students with the grade B or better are simply due to the fact that the weaker students among the low-scoring group were prevented from or delayed taking college level mathematics under DPM. We see some evidence of this "prevention effect": the differences in the outcomes are less pronounced after 2 years, when more low-scoring students in DPM cohorts had an opportunity to take college level mathematics.

The students who were no longer required to take remedial courses do, in fact, take college level mathematics courses instead, with the replacement rate of approximately 2:1 (the ratio of the reduction in the number of remedial courses to the increase in the number of college level courses) after the first year at the university and 3:1 after 2 years.

We find that the placement policy that was based on a specific SAT/ACT score has created discontinuities, some very sharp, at the cut-score in student outcomes. It is encouraging to see that the observed changes in the outcomes for low-scoring students and their statistical significance largely agree with the discontinuity effect estimated by the RD models. This raises the possibility of using the RD analysis to make decisions about placement policies *prior* to changing the policies.

Finally, we note that it will be a methodologically interesting challenge to evaluate the placement policy based on ALEKS scores. On the one hand, the policy is based on certain cut-scores; but on the other, the ability of the students to manipulate the score is an intentional feature of the placement model. The students are given a diagnostic test first, and then have the opportunity to follow the computer-generated study modules to address deficiencies in their mathematical background. The premise is that the students who are able

to self-remediate will be placed in higher-level courses, leaving in the lower-level courses only the students who really need faculty guidance to master the material.

Acknowledgements The research presented in this paper is the result of an undergraduate research project led by Drs. Kolesnikov and Wang. The authors wish to thank Jess and Mildred Fisher Foundation for the support of this project. The data and policy information were provided by Towson University Office of Institutional Research, Academic Achievement Center, Academic Advising Center, and the Department of Mathematics.

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In light of the increased focus on early English Composition completion by the state, the University System of Maryland (USM) and UMBC, we believe this may be a strategic time to review our methods and strategies for assisting students to meet this important requirement within their first 30 credits. Indeed, we are grateful for all the collaboration that has taken place over the years between multiple offices and departments including English, OUE, LRC, OAPA, & DoIT. Significant efficiencies were recognized and implemented over time – especially as the campus scaled for larger and larger entering classes. Quality control measures were established within our processes, especially as they related to data entry of testing scores. Finally, these efforts have led to faster and more accurate placement testing results for critical advising activities. Building on these successes, this policy proposal examines the changing needs of UMBC and its students as they relate to English Placement testing.

Background and History

During the early years of the university, placement testing was an essential method through which student ability and college readiness was assessed. Without this mechanism, students were at risk of taking an English class for which they were not academically prepared. Such mismatching sets students up for failure. The English placement process has served the university well throughout its history by successfully preventing such mismatching.

In the last twenty years, the higher education landscape has experienced an infusion of new technologies and assessment schemes. In particular, both the SAT and ACT moved from simple measures of scholastic aptitude to measures of college readiness. They did so by providing scores associated with probabilities of student success at the college level. Both tests now provide benchmarks scores[1] for overall college readiness and for key academic areas associated with individual test components. For our purposes, the English component benchmark (500 on the SAT[2]) tells us a student is likely to successfully complete a first-year English class.

The process of benchmarking is interesting because it provides us with information that historically we could only gain from our internal English placement test. With the intent of freeing up time and energy of those faculty and staff involved in the English placement test, we set out to examine the relationship between our students' SAT scores and their UMBC English placement results.

The Analysis

To examine this relationship, we gathered data on freshmen who entered and enrolled at UMBC in the fall semesters of 2013, 2014, 2015, 2016, and 2017. 6,300 of these students completed the UMBC placement test.[3] We found that 97.7% of placement test takers placed

[1] Benchmarks are a score associated with a 65% probability that the student will earn a B- in the related first year class or 75% probability of a C in a first-year class.

[2] SAT and ACT work together to create concordance tables that allow for scores to be converted from one test to another. ACT and the College Board work together to determine concordances and accept that both tests predict success in college coursework.

[3] Students who did not take the placement test were eliminated from this analysis. Those eliminated represent students who had not taken the placement test by the time of analysis for various reasons including transfer credit.

into English 100 and 2.3% of them did not. This indicates that the overwhelming majority of our incoming freshmen are academically prepared to take English 100 based on our internal placement test alone. Our placement test is protecting 2.3% of our students from entering a course for which they are not necessarily prepared.

Next, we examined the SAT English component score to see if it is an accurate proxy for the UMBC English placement test. In other words, is this component score telling us the same thing as the placement test? To answer this question, we examined enrolled freshmen who took the English placement test and who reported SAT scores.[4] The average SAT English score of UMBC students who placed into English 100 was 572.5, which is higher than the national average. Those students who did not place into English 100, earned an average score of 470.5, which is below the national average. We ran statistical tests to determine if these numerical differences are meaningful. We found that the SAT English scores for the two groups are statistically different from each other. We also found that English 100 placers scored statistically higher than the national benchmark of 500, and those who placed below English 100 were had SAT English scores that were statistically lower than the college readiness benchmark.

Our Proposal

The above analysis shows us that the SAT English component score now tell us what only the placement test used to be able to tell us. This presents the university with an excellent opportunity. Since all of our incoming freshmen take the SAT or comparable test such as the ACT, we can reduce our reliance on the English placement test. Specifically, we propose that those freshmen or transfer students who meet the SAT English component benchmark of 500 on the SAT[5] be allowed to enroll directly into English 100 without taking the English placement test. Placement testing will remain a requirement for students who do not meet the college readiness benchmark and those transfer students who enter UMBC without SAT/ACT scores or some sort of transfer credit for English 100, including AP credit.

Benefits of Adjusting the Policy

Students: Students who meet the benchmark will be able to enter English 100 directly without taking any additional steps.

- Not only does this make our students' lives easier, but it facilitates their academic progress during the first year and beyond. It encourages them to take a class that is developmentally appropriate for them when it is appropriate and not after.
- For those students who do need to take the placement test, the reduced number of testers means that scheduling and completing the test can be quicker.

English Department and the LRC: This policy would reduce the number of placement tests given in an academic year by at least 1,000 tests.

[4] Due to a change in the design and scoring of the SAT, only students with pre-2016 SAT scores were examined in this analysis.

[5] Concordance from ACT to SAT results in an ACT English benchmark of 18.

- This translates into the ability for both departments to use the time and resources once dedicated to proctoring, reading, and grading to other important activities such as scholarship, teaching, and new projects to facilitate student learning and success.
- Will help the English department to more easily determine the seats needed in English 100 each semester. Using SAT/ACT scores allows the department to look at the incoming class before they arrive and estimate more accurately how many seats need to be offered. It will eliminate much of the guesswork.
- Reducing English placement will also benefit English 100 instructors. Currently those students who delay placement also by default delay their access to English 100. The result is that upper level students enroll in the class more often than they should. This poses a pedagogical challenge to instructors whose classes are designed for freshmen students with little to no college experience. The policy change here will reduce this occurrence.

Administration: This policy change proposed here removes a barrier to students entering a key first-year benchmark as outlined in Maryland State Bill 740. Allowing academically ready students to enter the course without additional steps, will assist UMBC in complying with this state mandate.

USM Carnegie Course Redesign Initiative

Final Report: Engl 100 / Composition at UMBC

A. Impact on Student Learning

1. Improved Learning

To measure the effect of the redesign on our learning outcomes for the course, we examined 27 essays from traditional sections in F11 and 49 essays from redesigned sections in Sp13, specifically assessing how well they satisfied four of our learning outcomes: #1 supporting assertions with evidence; #2 integrating one's own ideas with those of sources; #3 using academic documentation styles appropriately; #4 controlling surface features (syntax, grammar, punctuation, spelling). These learning outcomes were selected for their ease of measurability. The essays were from a range of assignments, and from a range of different instructors, and they represented a range of performance/grades. In addition, with the essays from Sp13, a number of other learning outcomes were also assessed, in order to help us more fully gauge the success of the course in helping students achieve the course's outcomes; however, since we had not included these other outcomes in evaluation of the F11 essays, results regarding these other outcomes do not appear here although they are noted later in the report.

Performance increased across all four learning outcomes in the redesigned course, indicating notable improvement in student learning.

See the attached appendix, with Full Implementation Assessment Form and Full Implementation Plan form.

2. Improved Retention

After one semester of full implementation, we see no significant change in grade results. As seen below, our redesigned course in Sp13, compared to the previous five years, had a slight decrease in As (31% instead of 34%) and a slight increase in Bs (38% instead of 36%), and all other grade results are unchanged. We are satisfied with these results, since we have had the new model in place for only one semester. We will continue to monitor grade results in future semesters.

1. Comparison of Sp13 grade results with results from individual semesters x5 years:

English 100/100A Combined Grades	A	B	C	D	F	W	Other
Spring 2013	31%	38%	16%	3%	7%	4%	1%
Fall 2012* (excludes pilot sections)	38%	36%	16%	2%	6%	2%	0%
Spring 2012	34%	34%	15%	2%	8%	7%	0%
Fall 2011	33%	37%	16%	4%	6%	4%	0%

Spring 2011	41%	32%	13%	4%	5%	5%	0%
Fall 2010	34.5%	36%	17%	3.5%	6%	3%	0%
Spring 2010	27.5%	39%	17%	5%	7.5%	4%	0%
Fall 2009	28%	38.5 %	16%	4.5%	9%	4%	0%

2. Comparison of Sp13 grade results with aggregate results x5 years:

	A	**B**	**C**	**D**	**F**	**W**	**Other**
Spring Grades 2013	31%	38%	16%	3%	7%	4%	1%
Average 100/100A Combined Grades Fall 2009-Fall 2012	34%	36%	16%	3%	7%	4%	0%

See the attached appendix, with Full Implementation Course Completion/Retention form.

3. Other Impacts on Students

Surveys conducted with students and faculty at mid-term and at the end of the semester during full implementation in Sp13 reveal that many aspects of the redesigned course were perceived as highly effective. On the mid-term student survey, on a scale of 1-5, with 5 as the highest score, 88% of students rated the small group conferences 3, 4, or 5. 88% of students rated the weekly full-class meetings 3, 4, or 5. 76% of students rated the lab day meeting, and the contribution of the Writing Fellows (peer facilitators), as 3, 4, or 5. The use of instructional technology received much lower scores—only 52% of students rated CompClass at 3, 4, or 5. The *Writing About Writing* content also earned lower scores, with 63% rating its contribution to their learning at 3, 4, or 5. Surveys of the faculty and Writing Fellows produced very similar results. The end-of-term survey produced virtually identical results for all the above questions.

On these surveys we also asked questions related to the course's learning outcomes. On the mid-term student survey, on the question of whether the course was helping them learn to produce writing over multiple drafts, 84% rated this 3, 4, or 5. Asked how well the course helped them recognize purpose, audience, and format for different documents, 83% rated this 3, 4, or 5. Asked how well it helped them learn to critique their own and others' work, 83% rated this 3, 4, or 5. Regarding how well the course helped them learn to manage grammar and punctuation, 75% rated this 3, 4, or 5. Again, the end-of-term survey echoed these findings.

Our examination of 49 essays from Sp13 classes, assessing students' performance on the same learning outcomes, reinforced these findings from the surveys. For example, 72% of the essays met or exceeded performance expectations for addressing audience, purpose, context, and genre. 92% of the essays met or exceeded performance expectations for using reading and writing for inquiry, learning, thinking, and communicating.

B. Impact on Cost Savings

As noted in our final proposal, we anticipated cost savings with the redesigned course of about $2 per student, which has proved to be the case. Although this is a minor reduction in cost, we are very satisfied because it was achieved despite the addition of instructional personnel in the form of our Writing Fellows, who are in the classroom with students once per week, and despite a marked increase in small-group instruction. The elimination of Engl 100A, the 4-credit composition class for less-prepared student writers, offsets the cost of the Writing Fellows.

The CPT submitted with our proposal took into account the additional courses that four of our full-time faculty would teach once Engl 100A was eliminated. Since these instructors' contracts require them to teach 24 credits per year, eliminating 100A means that each of them teaches on average one additional section per year—sections that the English department does not need to hire adjuncts to teach. However, the department and the Dean's office felt this was not appropriate to consider in budget calculations, with the result that in the view of the department and the Dean, the relevant cost savings is limited to the actual savings from the elimination of 100A sections that had been staffed by adjuncts. According to CPT calculations, though, the cost savings are greater.

See the attached appendix, with updated CPT form.

C. Lessons Learned

1. Pedagogical Improvement Techniques
    - Small group conferences: Students are placed into mixed-ability groups of four at the start of the semester, and every two weeks each group meets for a 25-minute conference with the instructor, for feedback/discussion of work in progress.
    - Writing Fellows: These peer facilitators meet with students for 75 minutes every week, meeting with half of the class (12 students) one week and the other half the next. They facilitate peer review groups, lead discussions, present mini-lessons, and assist students individually as they work on their writing and research. Most Writing Fellows are experienced undergraduate Writing Center tutors, but some are graduate students or recent grads of baccalaureate or graduate programs. All receive training for the WF role before they begin, and are supported and mentored on an ongoing basis. They are paid $10/hour and also earn academic credit.
    - Enhanced use of instructional technology: We provide a variety of online resources for students' use in and out of class, including a digital handbook, quizzes, and links to online resources and tutorials. Four instructors are piloting an online peer review tool called FRED, from Norton.

- Independent, self-study activities: Students complete a multi-step Library Literacy Assignment involving tutorials and a quiz, and they also view a video and complete a short quiz on the common policies regarding attendance, late work, etc. in Engl 100.
- *Writing About Writing* content: Drawing on the work of Downs and Wardle, this approach introduces students to the field of composition studies and to the notion that writing is itself a subject that can be studied and discussed. Students engage with scholarly publications in the field, and produce their own essays that grow from these readings. Faculty use this content, at a minimum, for a three-week unit, or use it throughout the semester. Norton, the publisher of the Downs and Wardle text, produced a custom, low-cost, condensed version of the text for our use.

2. Cost Reduction Techniques
    - Elimination of Engl 100A: This 4-credit version of first-year composition, which previously comprised about one third of our composition sections, is no longer being offered, saving approximately $18,000 per year according to CPT calculations. Students placed into 100A were less-prepared writers, identified by placement testing; however, their DFW rates over 10 years were significantly higher than Engl 100 students, causing us to question the effectiveness of the 100A approach. The Writing Fellows program, with its paid peer facilitators, offsets these savings, although CPT calculations show a savings of $2 per student.

3. Implementation Issues
    - Instructional technology: Originally, we used CompClass, a product from Bedford/St Martins with quizzes, tutorials, a "writing space" for peer review, and an online grammar handbook, but this proved too complex and "buggy." We now use a simpler approach, employing a digital handbook along with quizzes from Norton, and adding links ourselves on Bb that take students to various resources and tutorials.
    - Writing Fellows utilization: Survey data and discussions with WFs and faculty revealed that some WFs were being used more effectively than others. Some were being under-utilized, while others were being given a great deal of independence and inadequate direction. This caused us to revisit our guidelines for the WF's role, and to provide more guidance to instructors, an approach that is ongoing. As part of this, we had WFs write descriptions of successful classroom activities they had designed, which we shared with faculty.
    - *Writing About Writing* content: Survey results regarding this aspect of the course are mixed. At this time, we are not making

changes, interested to see how well the content is working after this second semester of its use in all sections.

- Most successful changes: The small group conferences are highly effective, and are the heart of the redesigned course. We are fully committed to this aspect of our meeting pattern, and going forward we will continue to refine other parts of the course that support it and make it possible, such as the Writing Fellows program. The self-study activities have also proved successful, as has the adoption of the common policies—these standardized policies regarding attendance, late work, class participation, and other issues give students clear, consistent guidance and are a benefit to faculty as well.

D. Sustainability

The success of our redesign of Engl 100 has earned it the support of the English department and the College of Arts, Humanities, and Social Sciences. Dr. Freeman Hrabowski, UMBC's president, has referred to our redesign numerous times in interviews and publications, and over the past year articles in *The Chronicle of Higher Education* and *The Washington Post* have focused on our redesign, and we have given presentations about it to audiences ranging from the annual UMBC University Retreat, to alumni donors, to the Writing Program Administrators' 2013 conference. This remarkable, positive reception has helped ensure that our redesign will continue to inspire and thrive. UMBC's culture of innovation encourages us to continually reassess, refine, and explore in Engl 100; for example, we plan to apply for UMBC Innovation Fund grants to let us pilot a new computer lab layout for the course in spring '14 and to do a research project involving audio feedback on student writing in fall '14.

Financially, the redesign is on solid, sustainable ground. In addition to the cost savings from eliminating Engl 100A, we have also seen a recent Engl 100-related cost reduction which, though not directly related to the redesign, is an important change—moving to the new Performing Arts and Humanities building in fall 2012 has meant we no longer need to pay student assistants to staff the English department's computer labs, or pay a faculty member a stipend to supervise them. This change in our composition classes represents a savings that is roughly equivalent, for example, to the cost of the Writing Fellows program. Again, this change is not part of our course redesign, but it does ensure we are on solid footing with Engl 100 going forward. Although the last few years have been challenging fiscal times for our English department and university, the teaching of first-year composition at UMBC is ready for the future, moving forward with strong support and great energy, learning and growing as we go.

Exhibit C - ALEK PPL Placement Efficacy Report
UMBC

1/9/19

Data & Placement in UMBC: The data file includes placement and grade data of 1,446 students who took their ALEKS PPL placement assessment in the academic year of 2017-18 and enrolled in Introductory Algebra, Intermediate & College Algebra, Statistics, Pre-Calculus, and Calculus courses with regards to the cut scores advised from the institution, see table 1. The only way a student can be exempted from Placement Testing is to have a corresponding AP scores, transfer credit, International Baccalaureate Exam, or corresponding College Level Examination Program. Assessments placement are given in un-proctored setting and one needs to wait at least 72 hours with spending the minimum of 5 hours in assigned remediation module to retake the placement. The cut scores for each course depends on student majors, whether she/he is pursuing "Art, Humanities, and Social Sciences," "STEM," "Early Childhood Education," or "Biology, Business Tech, and Information Systems." In the following table, we report each course with the range of its cut score regardless of the major.

Table 1: Cut Scores

	MATH 104	**MATH 106**	**MATH 120**	**MATH 150**	**MATH 151**	**MATH 155**	**STAT 121**
Cut Scores	0-49	30-60	50-100	61-75	76-100	76-100	50-100
Course Name	Quantitative Literacy	Int. & Col. Algebra	Concepts of Mathematics	Pre-Calculus	Calculus	Applied Calculus	Intro to Statistics

Overview of Placement Data: In the following table, we report the success rates, number of students, average hours in remediation, average number of topics learned, and average placement result for each given course and total for those who received a letter grade and placed using ALEKS PPL. We assume ALEKS PPL is the sole placement tool.

Table 2: Overview of Data

	Size of Enrollment	**# Stud. with Multiple Assessments**	**Average Hours in Remediation**	**Average # of Topics Learned**	**Average Placement Result**	**Success Rate**
MATH 104	87	n=4	2.6 hours	24 topics	34	90%
MATH 106	252	n=34	4.7 hours	37 topics	45	76%
MATH 120	32	n=6	7.8 hours	30 topics	60	90%
MATH 150	246	n=70	9.3 hours	42 topics	68	72%
MATH 151	466	n=119	7 hours	34 topics	84	68%
MATH 155	232	n=39	6.4 hours	35 topics	76	82%
STAT 121	131	n=13	4.3 hours	36 topics	70	90%
TOTAL	**n=1446**	**n=285**	**6.6 hours**	**36 topics**	**68**	**76%**

ALEKS Score vs. Success: To study the correlation between ALEKS PPL score and performance in the course, we look at courses with the success rates lower than 80%, MATH 106, MATH 150, and MATH 151. In so doing, we report the success rates for two groups of students, those who scored within 8 points from upper cut score, Upper End, and students who scored less than 8 points above the lower cut score, Lower End.

MATH 106

	30<=ALEKS Score<38	52=<ALEKS Score<=60
Success Rate	57%(n=54)	80%(n=42)

MATH 150

	60<=ALEKS Score<68	68=<ALEKS Score<=75
Success Rate	71%(n=106)	80%(n=78)

MATH 151

	76<=ALEKS Score<84	92=<ALEKS Score
Success Rate	67%(n=219)	73%(n=72)

Effectiveness of Remediation: To study the effectiveness of the remediation modules, we look at the success rates for three groups of students, those with only 1 placement assessment attempt, those who placed in the course initially, but decided to try another assessment placement to place in a higher course but they did not, and the third group are those who took the subsequent placement and were able to move to the course that were not placed initially.

Table 4: Effectiveness of Remediation

	MATH 106	**MATH 150**	**MATH 151**
Only 1 Attempt	74% (n=218)	72% (n=176)	71% (n=347)
Did not Move up	87% (n=23)	NAN (n=0)	NAN (n=0)
Moved Up >=1 Class	82% (n=11)	72% (n=70)	60% (n=119)

Then for each group of students with at least 2 attempts, we report average number of topics learned in the remediation modules:

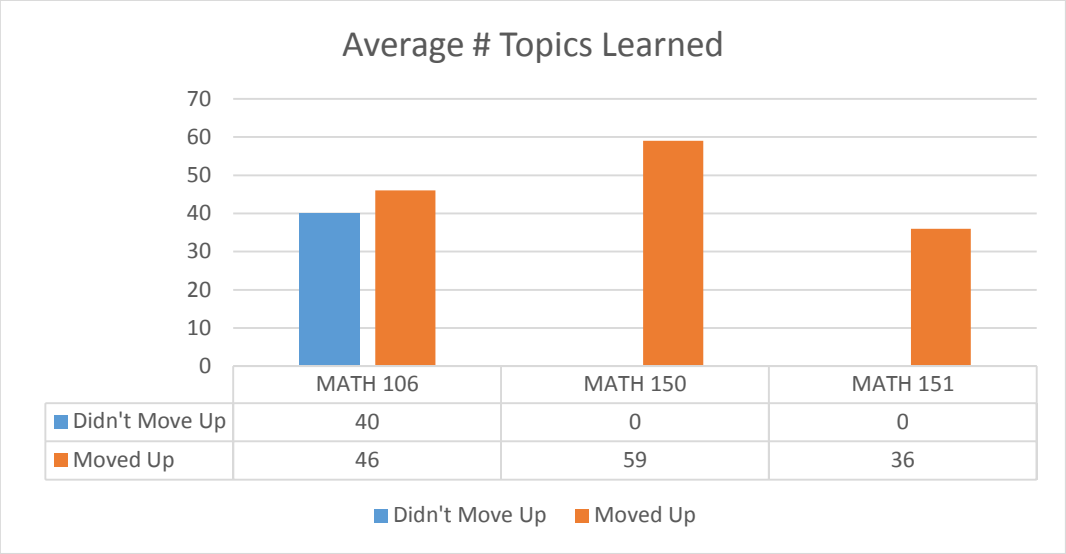


Figure 1: Topics Learned

Duration of Assessment vs. ALEKS Score: Looking at the duration of assessments, we can see more than 50% of students spent at least 2 hours in un-proctored Initial assessment placement. To study the effect of duration on ALEKS score and performance in the course, we group students based on the duration of initial assessment in 30 minutes intervals. Then for each group, we report % of students, average ALEKS score, and the success rate in the following graph:

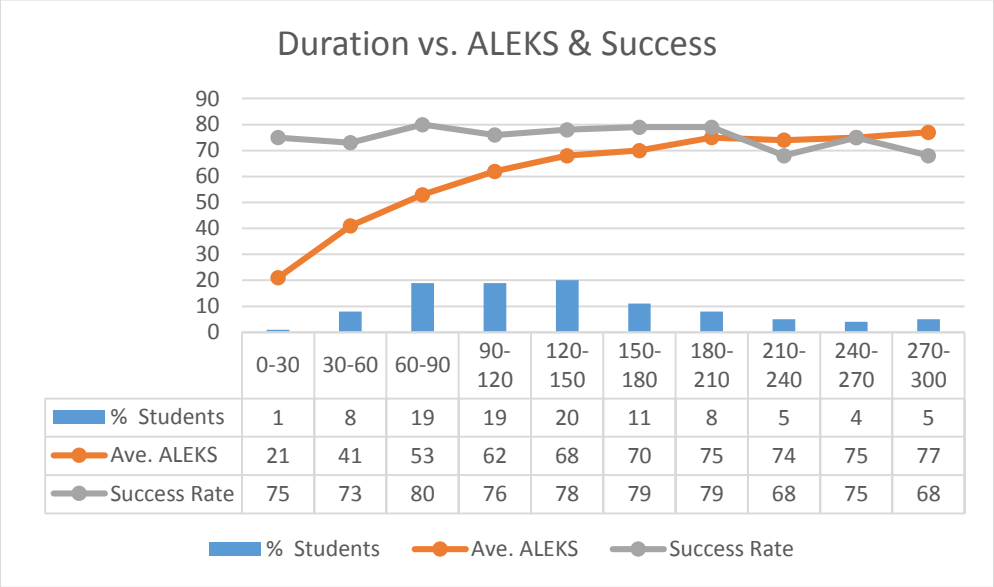


Figure 2: Duration of Assessment

Regression Analysis: In this analysis, we are investigating the association between increase in ALEKS PPL score and odds ratios of DFW. In doing so, we assume that the log odds ratios of likelihood of DFW is a linear function of ALEKS score, duration of assessment, and number of assessment placement attempts.

$$likelihood\ of\ odds(DFW) = \exp(\alpha + \beta * ALEKS + \gamma * Duration + \delta * Attempts)$$

The following table represents the coefficients of regression, corresponding p-values, and the accuracy of models on the training data set for each course:

Table 4: Regression Stats

Variable	MATH 106	MATH 150	MATH 151
ALEKS $(\beta, p\ value)$	(-0.02, 0.02)	(-0.009, 0.468)	(-0.012, 0.356)
Duration $(\gamma, p\ value)$	(0.005 , 0.85)	(0.002 , 0.156)	(0.002 , 0.05)
#of Attempts $(\delta, p\ value)$	(-0.3 ,0.50)	(-0.158 ,0.527)	(0.670 , 0.0008)
Accuracy	75%	72%	70%

In general, regression coefficients represent the mean change in the response variable (DFW here) for one unit change in the predictor variable while holding the rest in model constant. The coefficients with zero values implies no association between the predictor variable and likelihood of DFW. One unit increase in the predictor variable would decrease the odds of DFW in exponential rate for the negative coefficients. For example, the results of the regression analysis for 'MATH 106' indicates that performance in the course is significantly associated with the result of ALEKS PPL placement at $p < 0.05$. To be more precise, one unit increase in ALEKS score would decrease the odds of DFW by 3%.

Discussion:

For MATH 106, MATH 150, and MATH 151, we can see those who scored closer to the upper limit cut scores are performing significantly better compare to students with ALEKS score within 8 points of the lower limit of the cut scores, on average. To study the effectiveness of remediation, we compared those who placed initially vs. those who had to retake the assessment and spent at least 5 hours in the remediation. Beside MATH 151, we see that success rates are even higher for those with multiple assessments compare to the student with only one attempt. Results are stronger for MATH 150 - anyone who spent at least 5 hours were able to place in this course if they were not placed initially. These group of students learned about 59 topics on average within 5 hours in remediation! For 151, the temptation to use outside resources to attain the cut score may be driven by a need to Calculus 1 for a particular major.

Students are allowed to take their placement assessment test at home in an un-proctored environment. This setting lets students to spend a longer amount of time on the assessment. We see 20% of students are spending more than 3 hours in assessment, and they may use external tools for the help. To investigate the effect of this policy in placement, we reported student's performance based on their time spent in assessment. Looking at Fig 2, we can see there is a strong correlation between assessment time and placement result, orange curve, while the performance is almost plateau, gray curve. Moreover, 80% of those who spent between 60-90 minutes in assessment successfully completed the course.

Recommendations:

1. Implement a proctoring solution with ALEKS PPL to deter the use of outside resources while taking a placement assessment.

2. Limit the allowed time in assessment to maximum of 2 or 2.5 hours. This would increase student's focus on the subject and further deter students from using any external tools.

3. Encourage students to take multiple placement assessments. Among 285 students with at least two assessments, more than 85% of them placed in next level course after taking another assessment. This could be achieved by making the first assessment not count (practice), requiring time in the Prep and Learning Module and the second and subsequent assessments counting for placement.

4. For now, we do not recommend a change to the cut scores until we have a chance to compare the un-proctored and proctored data after Fall 19 (should UMBC implement a proctoring tool).

In January of 2019, the Math Department, in coordination with the Office of the Dean for Natural and Mathematical Sciences, the Learning Resources Center, the Department of Instructional Technology and Student Disability Services, made a change to the implementation of the Math Placement Test. The Placement Test, provided through agreement with ALEKS PPL, formerly allowed students 48 hours to complete the test. After consultation with ALEKS staff and an assessment provided by them ("ALEK PPL Placement Efficacy Report UMBC", 1/9/19), the Math Department changed the amount of time a student is allowed to complete the test to 2.5 hours. The Office of the Dean for Natural and Mathematical Sciences funded the creation of a video featuring Dr. Liz Stanwyck (Senior Lecturer, Math and Statistics) and student testimonials about the importance of not using outside resources on the Math Placement Test. Students who took the ALEKS math placement test March 2019 through August 2019 (new students entering UMBC Fall 2019) were provided with a link to the video and asked to check a box in Blackboard to indicate that they had viewed it before beginning the ALEKS Math Placement Test.

The following assessment seeks to understand the impact, if any, of these changes on student interaction with the ALEKS PPL Math Placement Test, math placement, enrollment and success in Fall 2019 first math courses at UMBC. This analysis focuses mainly on the STEM calculus sequence (LRC 099, MATH 106, 150, 151) courses, though when information was available on the non-STEM math courses, it is included (MATH 104, 120, 155, STAT 121).

The cut scores for ALEKS Math Placement used at UMBC have not changed.

Cut Scores

	MATH 104	**MATH 106**	**MATH 120**	**MATH 150**	**MATH 151**	**MATH 155**	**STAT 121**
Course Name	Quantitative Literacy	Int. and Col. Algebra	Concepts of Mathematics	Pre-Calculus	Calculus	Applied Calculus	Intro to Statistics
Cut Score	0-49	30-60	50-100	61-75	76-100	76-100	50-100

Of students who took the ALEKS Math Placement and enrolled in their placed first math course, here are their D/F rates.

Overview of Enrollment and DF rates for Fall 2019 compared to Fall 2018 for students taking ALEKS Placement Test and then Enrolling in First Math Course (Delana Gregg)

Fall 2019						Fall 2018				
First Course	ABC	DF	Total			ABC	DF	Total		
	N	N		Success Rate	**DF Rate**	N	N		Success Rate	**DF Rate**
MATH 104	51	17	68	75.00%	25.00%	77	12	89	86.52%	13.48%
MATH 106	153	44	197	77.66%	22.34%	185	35	220	84.09%	15.91%
MATH 120	14	2	16	87.50%	12.50%	14	1	15	93.33%	6.67%
MATH 150	155	22	177	87.57%	12.43%	169	48	217	77.88%	22.12%
MATH 151	343	73	416	82.45%	17.55%	408	126	534	76.40%	23.60%
MATH 155	109	19	128	85.16%	14.84%	173	37	210	82.38%	17.62%
STAT 121	60	5	65	92.31%	7.69%	127	14	141	90.07%	9.93%
Total	885	182	1067	83%	17.06%	1,153.00	273	1426	80.86%	19.14%

Enrollment Comparisons Fall 2019/Fall 2018 First Math Places from ALEKS Placement Test

	Fall 2019		Fall 2018	
	N enrolled	% of enrolled	N enrolled	% of enrolled
MATH 104	68	6%	89	6%
MATH 106	197	18%	220	15%
MATH 120	16	1%	15	1%
MATH 150	177	17%	217	15%
MATH 151	416	39%	534	37%
MATH 155	128	12%	210	15%
STAT 121	65	6%	141	10%
Total	1067	100%	1426	100%

Fall 2018 DF Rate based on Number of Attempts

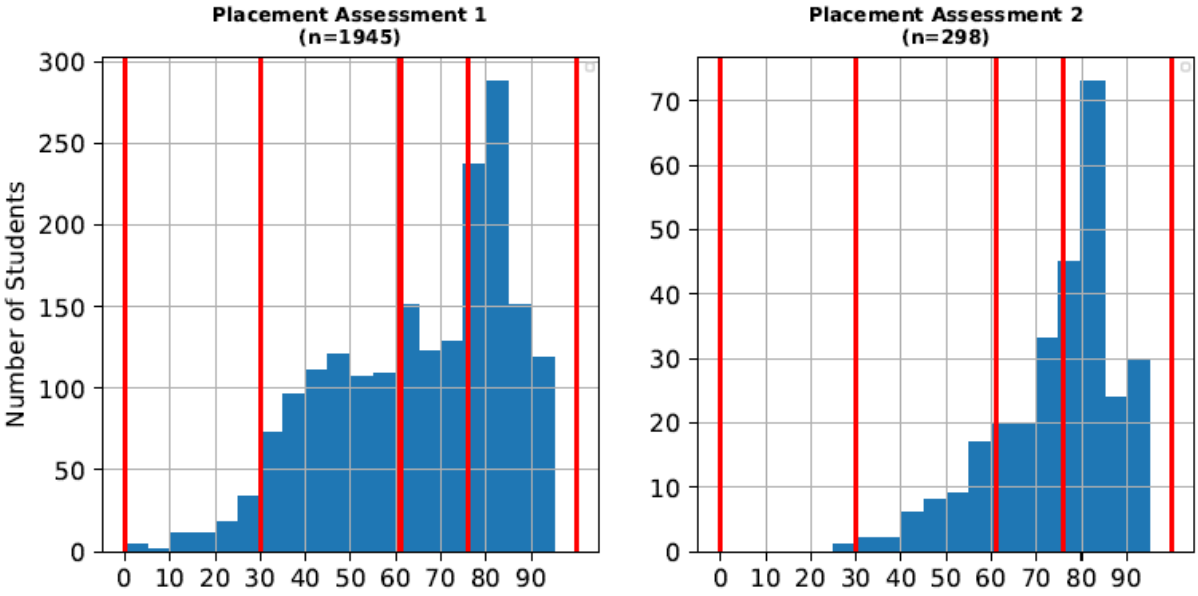
Number of Attempts	**Math 106 (N)**	**Math 150 (N)**	**Math 151 (N)**
1	15.3% (31)	17.9% (28)	20.7% (85)
2	20.0% (4)	32.1% (17)	32% (35)

Fall 2019 DF Rate based on Number of Attempts

Number of Attempts	**Math 106 (N)**	**Math 150 (N)**	**Math 151 (N)**
1	19.7% (39)	11.3% (15)	14.9% (47)
2	17.2% (5)	13.2% (7)	19% (23)

Fall 2018

Comparisons between Placement Score on First Attempt (Placement Assessment 1) and Second Attempt (Placement Assessment 2) Data and charts provided by ALEKS



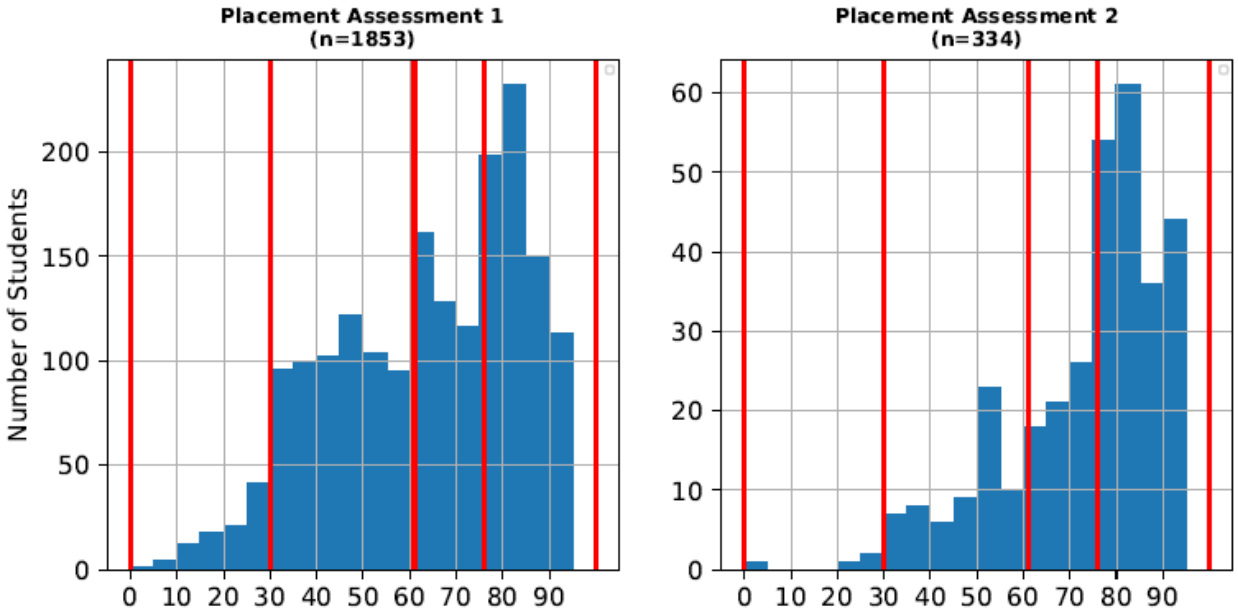
	Average Placement Result	Average Placement Time (Minutes)
Placement Assessment 1 (n=1945)	65.61	135.82
Placement Assessment 2 (n=298)	74.73	167.88
Placement Assessment 3 (n=27)	73.11	164.67

	Did Not Improve	Improved 1 Placement Level	Improved 2 Placement Levels	Improved More than 2 Placement Levels
Number of Students	33	134	127	4
Average Time in Prep & Learning Modules (Hours)	11.01	9.38	9.85	5.45
Average Number of Topics Learned	39	32.65	40.12	38.96

	Average Improvement in Placement Score	Number of Students who Improved at Least 1 Course Level	Average Course Level Improvement
Placement Assessment 1 to 2 (n=298)	24.79	253	1.26
Placement Assessment 2 to 3 (n=27)	13.81	19	0.96

Fall 2019

Comparisons between Placement Score on First Attempt (Placement Assessment 1) and Second Attempt (Placement Assessment 2) Data and charts provided by ALEKS



	Average Placement Result	Average Placement Time(Minutes)
Placement Assessment 1 (n=1853)	63.75	94.98
Placement Assessment 2 (n=334)	73.34	102.16
Placement Assessment 3 (n=35)	73.63	103.89

	Did Not Improve	Improved 1 Placement Level	Improved 2 Placement Levels	Improved More than 2 Placement Levels
Number of Students	40	157	133	4
Average Time in Prep & Learning Modules (Hours)	8.36	9.35	9.28	8.77
Average Number of Topics Learned	37.12	33.32	37.16	34.84

	Average Improvement in Placement Score	Number of Students who Improved at Least 1 Course Level	Average Course Level Improvement
Placement Assessment 1 to 2 (n=334)	22.84	275	1.2
Placement Assessment 2 to 3 (n=35)	17.14	27	1.03

These logit models duplicate the work of the earlier ALEKS analysis, but the numbers are much smaller, and this is why the models explain so little of the variability.

Fall 2018

The following table represents the coefficients of logit regression, corresponding p-values, and the accuracy of models on the training data set for each course:

Likelihood of odds (DF) = exp ($\alpha = \beta$* ALEKS score + γ*Attempts)

Variable	Math 106	Math 150	Math 151
Final ALEKS Score (β, p value)	(-2.11, 0.164)	(-1.67, 0.279)	(.275, 0.821)
# of Attempts (γ, p value)	(.25, 0.639)	**(.65, 0.016)**	**(.68, 0.001)**
Accuracy, N	1%, 225	3%, 218	2%, 535

In general, regression coefficients represent the mean change in the response variable (DFW here) for one unit change in the predictor variable while holding the rest in model constant. The coefficients with zero values implies no association between the predictor variable and likelihood of DFW. One unit increase in the predictor variable would decrease the odds of DFW in exponential rate for the negative coefficients. For example, the results of the regression analysis indicates that performance in the course is significantly associated with the number of attempts on the ALEKS PPL at $p < 0.05$. To be more precise, one unit increase in attempts would increase the odds of DFW by 65% for 'MATH 150' and 68% for MATH 151. However, the R-squared is very small, indicating that this model explains very little of the variation in DF rate.

Fall 2019

The following table represents the coefficients of logit regression, corresponding p-values, and the accuracy of models on the training data set for each course:

Likelihood of odds (DF) = exp ($\alpha = \beta$* ALEKS score + γ*Attempts)

Variable	Math 106	Math 150	Math 151
Final ALEKS Score (β, p value)	(-2.04, 0.228)	(.41, 0.861)	(-.029, 0.984)
# of Attempts (γ, p value)	(-.37, 0.420)	(-.07, 0.872)	(.33, 0.169)
Accuracy, N	1%, 233	0%, 191	0%, 447

No statistically significant findings for fall 2019.

Morgan State University

Transcript Study

Background

For many years, the University used Accuplacer for placing students in Freshman English and Developmental Reading. With the discontinuation of the Accuplacer in 2016, the University switched to a University developed diagnostic reading test. For fall 2020, the University decided to place students based on high school English grades and high school GPA. Standardized tests scores (SAT, ACT) were not used as the University was test optional due to the COVID-19 pandemic.

Participants

Participants were the 1,107 incoming first-time undergraduates who signed up for the summer Access Orientation program. Of those, 626 were not placed in Development Reading, while 481 were placed in Developmental Reading.

Methodology

High School English Grade GPA: A high school English grade GPA was calculated for students with 9^{th}, 10^{th}, and 11^{th} grade English grades.

High School GPA: The high school GPA from the final high school transcript was used.

Students without English grades or high school transcripts: International students without United States high school transcripts and U.S. students who have been out of high school for three or more years and do not have to submit high school transcripts were placed into Developmental Reading.

Research Questions

1. For those students placed in Developmental Reading, is there a difference in course outcome based on high school English grade GPA?
2. Is there a difference in Freshman English course outcome based on Development Reading placement?

Results

Table 1 displays the placement into Developmental Reading of the participants by high school English GPA, and high school GPA. High school GPA was the primary factor in Developmental Reading placement. Students with a high school GPA of 3.0 or above were not placed in Developmental Reading, while students with a high school GPA below 3.0 or who were missing high school GPA were placed in Developmental Reading.

Table 1

Placement into Developmental Reading

		Placed in Developmental Reading				Not Placed in Developmental Reading		
		High School GPA						
		Less than 2.0	2.00 - 2.49	2.50 - 2.99	Missing data	3.00 - 3.49	3.50 - 4.00	Total
High School English Grades	Less than 2.0	6	42	21	2	5	0	76
	2.00 - 2.49	1	63	84	11	42	13	214
	2.50 - 2.99	1	21	54	7	70	26	179
	3.00 - 3.49	1	10	42	12	143	131	339
	3.50 - 4.00	0	0	4	18	32	109	163
	Missing data	1	13	18	66	25	13	136
Total		10	149	223	116	317	292	1107

Results for Research Question 1 are displayed in Table 2. A chi square test of association was conducted on participants (N=319) who were placed in Developmental Reading and enrolled in Development Reading in fall 2020 to determine if there was a relationship between high school English grades GPA and the final grade in Developmental Reading. Results indicate there was not a statistically significant relationship ($\chi 2=$, df=2, p =.234) at the .05 level of significance. The assumption of an expected frequency of at least 5 per cell was met. The assumption of independence was not met since the participants were not randomly selected; thus, there is an increased probability of a Type I error. The University uses EAB Navigate, a predictive analytics platform, and historic data show that students who receive a C or below or W's in Developmental Reading have a six-year graduation rate of 24%.

Table 2
Relationship between High School English Grades and Final Grades in Developmental Reading

		High School English Grades			
Developmental Reading Final Grade		Less than 3.0	3.0 or higher	Missing data	Total
A or B	Count	137	30	34	201
	Expected Count	139.9	25.2	35.9	201
	% within High School English Grades	61.70%	75.00%	59.60%	63.00%
	Standardized Residual	-0.2	1	-0.3	
C or other	Count	85	10	23	118
	Expected Count	82.1	14.8	21.1	118
	% within High School English Grades	38.30%	25.00%	40.40%	37.00%
	Standardized Residual	0.3	-1.2	0.4	
Total	Count	222	40	57	319
	Expected Count	222	40	57	319
	% within High School English Grades	100.00%	100.00%	100.00%	100.00%

Results for Research Question 2 are shown in Table 3. A chi square test of association was conducted to determine if there was a relationship between placement in Developmental Reading and Freshman English course outcomes. Participants (N=808) in this analysis included those students from Access Orientation who were enrolled in Freshman English in fall 2020. The assumption of an expected frequency of at least 5 per cell was met. The assumption of independence was not met since the participants were not randomly selected; thus, there is an increased probability of a Type I error. Results indicate there was a statistically significant relationship at the .05 significance level ($\chi 2=30.637$, df=1, p=.000). From Table 3, we can see that overall 63% of the participants earned an A or B in Freshman English, while 37% earned a grade of C or below. However, of those students placed in Developmental Reading, 52% earned an A or B, compared to 71% of those students not placed in Developmental Reading. Forty-eight percent of those placed in Developmental Reading earned C's or other grades, while 29% of those not placed in Developmental Reading earned C's or other grades. A Cramer's V of .195 suggests a small effect size. Our data from EAB indicates that students with a grade of C or below or W in Freshman English have a 25% six-year graduation rate.

Table 3

Relationship between Developmental Reading Placement and Final Grade in Freshman English

Freshman English Final Grade		Developmental Reading Placement: Placed in Developmental Reading	Developmental Reading Placement: Not placed in Developmental Reading	Total
A or B	Count	185	322	507
	Expected Count	222.8	284.2	507
	% within Developmental Reading Placement	52.10%	71.10%	62.70%
	Standardized Residual	-2.5	2.2	
C or other	Count	170	131	301
	Expected Count	132.2	168.8	301
	% within Developmental Reading Placement	47.90%	28.90%	37.30%
	Standardized Residual	3.3	-2.9	
Total	Count	355	453	808
	Expected Count	355	453	808
	% within Developmental Reading Placement	100.00%	100.00%	100.00%

Implications

As results indicated there was not a statistically significant relationship between high school English grade GPA and final grade in Developmental Reading, continuing to use the overall high school GPA to place students in Developmental Reading would be a recommendation. The cut point of 3.0 for not placing into Development Reading seems appropriate.

Results indicated that there was a statistically significant relationship between placement in Developmental Reading and final grade in Freshman English. As historic data show that students in Freshman English who receive grades of C or below have a 25% six-year graduation rate, collaborative initiatives between faculty and student success staff can be undertaken to improve the success of students placed in Developmental Reading who also are enrolled in Freshman English.

MORGAN STATE UNIVERSITY – Office of Student Success and Retention
Fall, 2020 Placement Testing Update / ALEKS Report

What is ALEKS?

- By focusing on improving skills in Arithmetic, College Algebra, and Trigonometry, ALEKS helps freshman students avoid being placed in Developmental Math (Math 106), a 3-credit prep course that does not count toward graduation requirements.
- ALEKS includes up to four practice math placement exams with online remediation modules and only requires about 2-3 hours of time on a daily basis; ALEKS is great for students who can work from home or are out of state or overseas.
- All first-time freshmen (except Transfer, CASA Academy, and NEXUS students) are required to take the Accuplacer Reading and ALEKS placement tests.

FALL SEMESTER 2020 – FRESHMAN CLASS

Reading Placement by Cum High School GPA >3.0	TOTAL #	Developmental Reading (ALCR) REQUIRED	Developmental Reading (ALCR) NOT REQUIRED
TOTAL (%)	1,107 (100%)	481 (43%)	636 (57%)

ALEKS Math Placement Test	TOTAL # TESTED	Score 0-44 MATH 106 REQUIRED	Score 45-59 MATH 108, MATH 109, MATH 110, MATH 113, MATH 118, MATH 120	Score 60-74 MATH 114, MATH 141, MATH 201	Score 75-100 MATH 241
TOTAL (%)	1,063 (100%)	396 (37%)	231 (22%)	244 (23%)	192 (18%)

Implications of the Fall, 2020 Placement Test Results:

- With an average of **43%** (40% in 2019) of students testing into developmental reading and **37%** (70% in 2019) testing into developmental math, math placement results have dramatically improved from last year.
- The **COVID-19** crisis forced us into an all virtual/online test environment where the Accuplacer Next Generation Reading test was not an option and ALEKS math placement had to be done completely online with no proctoring.
- The **18%** (188) of students took at least 3 ALEKS tests in 2020 compared to **24%** (301) of students competed at least three ALEKS practice tests at home in 2019.
- Changes to ALEKS testing in an all virtual/online environment should be considered such as limiting the time allotted for each assessment.
- Eliminating reading placement testing and using cumulative high school GPA should be considered as a permanent solution for ALCR 101 course placement.

MORGAN STATE UNIVERSITY – Office of Student Retention
Fall, 2011 Placement Testing Update / Accuplacer Report

What is Accuplacer?

- The purpose of ACCUPLACER is to provide useful information about students' academic skills in math, English, and reading. The results of the assessment are used by academic advisors to determine students' course placement.
- ACCUPLACER is an adaptive test. Questions are chosen on the basis of students' answers to previous questions. This technique selects just the right questions for students' ability level.
- All first-time freshmen (except CASA Academy students) are required to take the Accuplacer placement test.

FALL SEMESTER 2011 – FRESHMAN CLASS

	TOTAL # TESTED	Developmental Reading REQUIRED	Developmental Reading NOT REQUIRED	FRESHMAN STUDIES ENGLISH	ENGLISH 101/111	MATH 106	ABOVE MATH 106
TOTAL (%)	943 (100%)	643 (68%)	300 (32%)	635 (67%)	308 (33%)	590 (63%)	353 (37%)

Implications of the Fall, 2011 Accuplacer Results:

- With an average of 65% of students testing into one or more developmental courses, results are consistent with national data;
- Accuplacer results are consistent with the previous ETS & Accuplacer placement test results at Morgan;
- And, results confirm the CLA (Collegiate Learning Assessment) data.

Profile of First-time Freshman Students:

- (1) The Accuplacer results indicate that at least 2 out of every 3 first-time freshmen need development or "remediation".
- (2) Only a handful of students pass the diagnostic tests in the developmental courses during the first week of class.

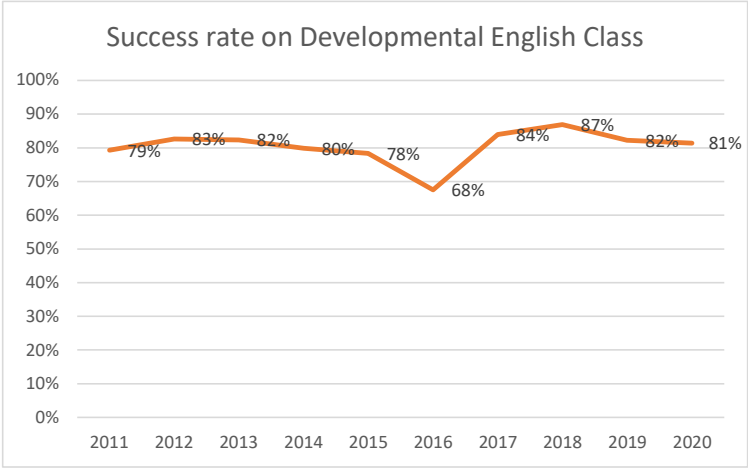
Conclusion:

The Accuplacer placement test provides the University with a level of individual student adaptability, systematic accuracy, and administrative flexibility in an effort to appropriately place new students in freshman courses consistent with their level of preparation and skill.

Final grade distibutions of developmental reading course from 2011 to 2020 Fall for first-time students

	Final Grade														
Year	A	A%	B	B%	C	C%	D	D%	F	F%	W	W%	Total	Success ra	Non-success rate
2011	111	21%	172	32%	138	26%	45	8%	37	7%	28	5%	531	79%	21%
2012	92	18%	167	33%	159	31%	25	5%	39	8%	24	5%	506	83%	17%
2013	88	23%	140	37%	84	22%	24	6%	34	9%	9	2%	379	82%	18%
2014	101	22%	143	32%	117	26%	34	8%	49	11%	8	2%	452	80%	20%
2015	133	21%	213	34%	141	23%	46	7%	72	12%	17	3%	622	78%	22%
2016	61	11%	154	29%	147	27%	51	10%	94	18%	29	5%	536	68%	32%
2017	173	29%	208	35%	114	19%	27	5%	60	10%	8	1%	590	84%	16%
2018	239	28%	319	38%	174	21%	44	5%	46	5%	20	2%	842	87%	13%
2019	36	20%	74	41%	38	21%	15	8%	16	9%	1	1%	180	82%	18%
2020	202	37%	145	26%	101	18%	28	5%	53	10%	21	4%	550	81%	19%

Year	Success rate
2011	79%
2012	83%
2013	82%
2014	80%
2015	78%
2016	68%
2017	84%
2018	87%
2019	82%
2020	81%

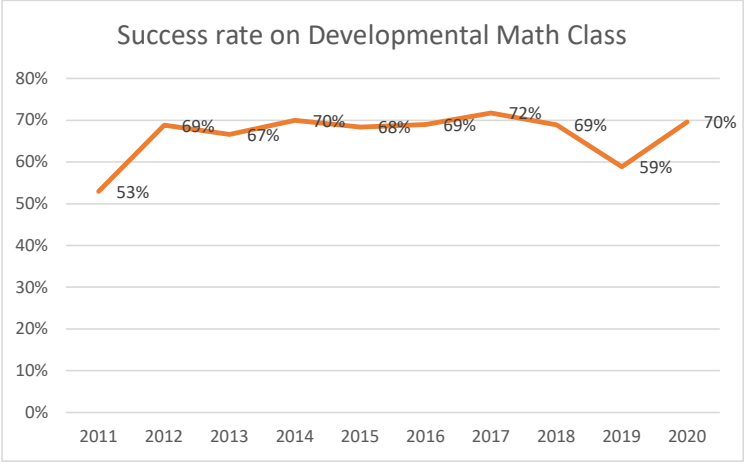


On average, 80% of new freshmen students from Fall 2011 to 2020 who took developmental English course successully completed them. The highest percent of students completed the course in 2018 Fall which was 87% and the lowest percent of students completed the course in 2016 Fall was 68%.

Final grade distibutions of developmental math course from Fall 2011 to 2020 for first-time students

	Final Grade														
Year	A	A%	B	B%	C	C%	D	D%	F	F%	W	W%	Total	Success ra	Non-unsuccess rate
2011	59	14%	66	16%	99	23%	11	3%	147	35%	41	10%	423	53%	47%
2012	60	15%	80	21%	127	33%	6	2%	93	24%	22	6%	388	69%	31%
2013	64	19%	68	20%	97	28%	2	1%	93	27%	20	6%	344	67%	33%
2014	75	16%	87	19%	164	35%	8	2%	115	25%	17	4%	466	70%	30%
2015	147	25%	126	21%	137	23%	47	8%	110	18%	33	6%	600	68%	32%
2016	99	20%	105	21%	140	28%	32	6%	109	22%	14	3%	499	69%	31%
2017	133	24%	122	22%	136	25%	37	7%	99	18%	18	3%	545	72%	28%
2018	167	22%	156	21%	191	26%	63	8%	150	20%	19	3%	746	69%	31%
2019	98	14%	155	22%	163	23%	63	9%	207	29%	21	3%	707	59%	41%
2020	161	32%	94	19%	91	18%	30	6%	98	20%	23	5%	497	70%	30%

Year	Success rate
2011	53%
2012	69%
2013	67%
2014	70%
2015	68%
2016	69%
2017	72%
2018	69%
2019	59%
2020	70%



On average, 66% of new freshmen students from Fall 2011 to 2020 who took developmental math course successully completed them. The highest percent of students completed the course in 2017 Fall which was 72% and the lowest percent of students completed the course in 2011 Fall was 53%.

Final grade distribution of first-time students in English 101 by developmental reading status from Fall 2011 to 2020

YEAR	GRADE	OUTCOME	DEV_READ_STATUS	FREQ_OF_STUDENTS
2011	A	S	Yes	112
2011	A	S	No	102
2011	B	S	Yes	186
2011	B	S	No	120
2011	C	S	Yes	114
2011	C	S	No	139
2011	D	N	Yes	37
2011	D	N	No	41
2011	F	N	Yes	43
2011	F	N	No	37
2011	W	N	Yes	17
2011	W	N	No	18
2012	A	S	Yes	43
2012	A	S	No	17
2012	B	S	Yes	58
2012	B	S	No	22
2012	C	S	Yes	93
2012	C	S	No	34
2012	D	N	Yes	4
2012	D	N	No	2
2012	F	N	Yes	66
2012	F	N	No	27
2012	W	N	Yes	17
2012	W	N	No	5
2013	A	S	Yes	43
2013	A	S	No	76
2013	B	S	Yes	118
2013	B	S	No	163
2013	C	S	Yes	93
2013	C	S	No	113
2013	D	N	Yes	24
2013	D	N	No	38
2013	F	N	Yes	31
2013	F	N	No	45
2013	W	N	Yes	4
2013	W	N	No	4
2014	A	S	Yes	61
2014	A	S	No	112
2014	B	S	Yes	139
2014	B	S	No	167
2014	C	S	Yes	109
2014	C	S	No	110
2014	D	N	Yes	55
2014	D	N	No	55
2014	F	N	Yes	43
2014	F	N	No	61

2014	W	N	Yes	4
2014	W	N	No	6
2015	A	S	Yes	87
2015	A	S	No	87
2015	B	S	Yes	227
2015	B	S	No	159
2015	C	S	Yes	156
2015	C	S	No	102
2015	D	N	Yes	43
2015	D	N	No	35
2015	F	N	Yes	62
2015	F	N	No	49
2015	W	N	Yes	7
2015	W	N	No	7
2016	A	S	Yes	80
2016	A	S	No	110
2016	B	S	Yes	171
2016	B	S	No	172
2016	C	S	Yes	132
2016	C	S	No	127
2016	D	N	Yes	59
2016	D	N	No	52
2016	F	N	Yes	66
2016	F	N	No	40
2016	W	N	Yes	2
2016	W	N	No	7
2017	A	S	Yes	94
2017	A	S	No	88
2017	B	S	Yes	225
2017	B	S	No	162
2017	C	S	Yes	118
2017	C	S	No	114
2017	D	N	Yes	40
2017	D	N	No	53
2017	F	N	Yes	56
2017	F	N	No	55
2017	W	N	Yes	5
2017	W	N	No	9
2018	A	S	Yes	153
2018	A	S	No	88
2018	B	S	Yes	308
2018	B	S	No	139
2018	C	S	Yes	173
2018	C	S	No	105
2018	D	N	Yes	36
2018	D	N	No	39
2018	F	N	Yes	49
2018	F	N	No	26
2018	W	N	Yes	6

2018	W	N	No	12
2019	A	S	Yes	40
2019	A	S	No	306
2019	B	S	Yes	44
2019	B	S	No	348
2019	C	S	Yes	37
2019	C	S	No	213
2019	D	N	Yes	14
2019	D	N	No	44
2019	F	N	Yes	25
2019	F	N	No	111
2019	W	N	Yes	1
2019	W	N	No	20
2020	A	S	Yes	169
2020	A	S	No	193
2020	B	S	Yes	128
2020	B	S	No	141
2020	C	S	Yes	110
2020	C	S	No	76
2020	D	N	Yes	19
2020	D	N	No	31
2020	F	N	Yes	61
2020	F	N	No	50
2020	W	N	Yes	17
2020	W	N	No	17

S=Success
N=Non-success

Table: Final grade distribution of New freshmen students in English 101 based on developmental reading status Fall 2011 to 2020

Fall grades in English 101		Developmental reading status		
Grade	Count	No	Yes	Total
A	Count	1179	882	2061
	Expected Count	1070.6	990.4	2061
	% within DEV_READ_STATUS	24.10%	19.50%	21.80%
	Standardized Residual	3.3	-3.4	
B	Count	1593	1604	3197
	Expected Count	1660.7	1536.3	3197
	% within DEV_READ_STATUS	32.50%	35.40%	33.90%
	Standardized Residual	-1.7	1.7	
C	Count	1133	1135	2268
	Expected Count	1178.1	1089.9	2268
	% within DEV_READ_STATUS	23.10%	25.00%	24.00%
	Standardized Residual	-1.3	1.4	
D	Count	390	331	721
	Expected Count	374.5	346.5	721
	% within DEV_READ_STATUS	8.00%	7.30%	7.60%
	Standardized Residual	0.8	-0.8	
F	Count	501	502	1003
	Expected Count	521	482	1003
	% within DEV_READ_STATUS	10.20%	11.10%	10.60%
	Standardized Residual	-0.9	0.9	
W	Count	105	80	185
	Expected Count	96.1	88.9	185
	% within DEV_READ_STATUS	2.10%	1.80%	2.00%
	Standardized Residual	0.9	-0.9	
Total	Count	4901	4534	9435
	Expected Count	4901	4534	9435
	% within DEV_READ_STATUS	100.00%	100.00%	100.00%

A Chi-square test of association was conducted to determine if there was a relationship between placement in Developmental Reading and Freshman English course outcomes. Participants (N=9435) in this analysis included those students from new freshmen cohorts from Fall 2011 to 2020 who were enrolled in Freshman English in fall 2011 to 2020. The assumption of an expected frequency of at least 5 per cell was met. The assumption of independence was not met since the participants were not randomly selected. Thus, there is an increased probability of Type 1 error. Results indicate there was a statistically significant relationship at the .05 significance level ($\chi 2=36.826$, df=5, p=.000). A Cramer's V of .062 suggests a small effect size.

Fall new freshmen students (from 2011 to 2012 Fall) math grades in Spring based on if they took Math106 in prior Fall from Spring 2012 to 2021

Course	NewFreshi	Spring_of_	Final_Grad	Outcome	Took_math106_i	Freq_of_students
Math106	2011	2012	A	S	Yes	13
Math106	2011	2012	A	S	No	4
Math106	2012	2013	A	S	Yes	5
Math106	2012	2013	A	S	No	11
Math106	2013	2014	A	S	Yes	15
Math106	2013	2014	A	S	No	4
MATH106	2014	2015	A	S	Yes	11
MATH106	2014	2015	A	S	No	6
Math106	2015	2016	A	S	Yes	19
Math106	2015	2016	A	S	No	5
Math106	2016	2017	A	S	Yes	9
Math106	2016	2017	A	S	No	10
Math106	2017	2018	A	S	Yes	16
Math106	2017	2018	A	S	No	0
Math106	2018	2019	A	S	Yes	5
Math106	2018	2019	A	S	No	8
Math106	2019	2020	A	S	Yes	40
Math106	2019	2020	A	S	No	7
Math106	2020	2021	A	S	Yes	14
Math106	2020	2021	A	S	No	0
Math107	2014	2015	A	S	Yes	1
Math107	2014	2015	A	S	No	0
Math107	2015	2016	A	S	Yes	0
Math107	2015	2016	A	S	No	1
Math107	2016	2017	A	S	Yes	0
Math107	2016	2017	A	S	No	2
Math107	2018	2019	A	S	Yes	5
Math107	2018	2019	A	S	No	1
Math107	2019	2020	A	S	Yes	7
Math107	2019	2020	A	S	No	6
Math107	2020	2021	A	S	Yes	5
Math107	2020	2021	A	S	No	8
Math108	2013	2014	A	S	No	1
Math108	2014	2015	A	S	No	2
Math108	2016	2017	A	S	No	2
Math108	2018	2019	A	S	No	1
Math108	2019	2020	A	S	No	1
Math108	2020	2021	A	S	No	2
Math109	2011	2012	A	S	Yes	8
Math109	2011	2012	A	S	No	10
Math109	2012	2013	A	S	Yes	12
Math109	2012	2013	A	S	No	5
Math109	2013	2014	A	S	Yes	12

Math109	2013	2014	A	S	No	14
Math109	2014	2015	A	S	Yes	18
Math109	2014	2015	A	S	No	5
Math109	2015	2016	A	S	Yes	11
Math109	2015	2016	A	S	No	0
Math109	2016	2017	A	S	Yes	13
Math109	2016	2017	A	S	No	2
Math109	2017	2018	A	S	Yes	9
Math109	2017	2018	A	S	No	3
Math109	2018	2019	A	S	Yes	16
Math109	2018	2019	A	S	No	6
Math109	2019	2020	A	S	Yes	17
Math109	2019	2020	A	S	No	5
Math109	2020	2021	A	S	Yes	20
Math109	2020	2021	A	S	No	6
Math109	2020	2021	A	S	No	0
Math110	2016	2017	A	S	Yes	3
Math110	2016	2017	A	S	No	4
Math110	2017	2018	A	S	Yes	17
Math110	2017	2018	A	S	No	3
Math110	2018	2019	A	S	Yes	23
Math110	2018	2019	A	S	No	7
Math110	2019	2020	A	S	Yes	25
Math110	2019	2020	A	S	No	6
Math110	2020	2021	A	S	Yes	7
Math110	2020	2021	A	S	No	5
Math112	2011	2012	A	S	Yes	1
Math112	2011	2012	A	S	No	0
Math112	2013	2014	A	S	Yes	1
Math112	2013	2014	A	S	No	1
Math112	2014	2015	A	S	No	2
Math112	2017	2018	A	S	Yes	0
Math112	2017	2018	A	S	No	1
Math112	2018	2019	A	S	Yes	2
Math112	2018	2019	A	S	No	1
Math112	2019	2020	A	S	Yes	1
Math112	2019	2020	A	S	No	1
Math113	2011	2012	A	S	Yes	17
Math113	2011	2012	A	S	No	8
Math113	2012	2013	A	S	Yes	20
Math113	2012	2013	A	S	No	12
Math113	2013	2014	A	S	Yes	30
Math113	2013	2014	A	S	No	44
Math113	2014	2015	A	S	Yes	53
Math113	2014	2015	A	S	No	19
Math113	2015	2016	A	S	Yes	56
Math113	2015	2016	A	S	No	7

Math113	2016	2017	A	S	Yes	34
Math113	2016	2017	A	S	No	11
Math113	2017	2018	A	S	Yes	22
Math113	2017	2018	A	S	No	7
Math113	2018	2019	A	S	Yes	51
Math113	2018	2019	A	S	No	5
Math113	2019	2020	A	S	Yes	63
Math113	2019	2020	A	S	No	4
Math113	2020	2021	A	S	Yes	44
Math113	2020	2021	A	S	No	13
Math114	2011	2012	A	S	Yes	1
Math114	2011	2012	A	S	No	17
Math114	2012	2013	A	S	Yes	1
Math114	2012	2013	A	S	No	20
Math114	2013	2014	A	S	Yes	0
Math114	2013	2014	A	S	No	6
Math114	2014	2015	A	S	No	25
Math114	2015	2016	A	S	Yes	7
Math114	2015	2016	A	S	No	22
Math114	2016	2017	A	S	Yes	1
Math114	2016	2017	A	S	No	19
Math114	2017	2018	A	S	Yes	0
Math114	2017	2018	A	S	No	23
Math114	2018	2019	A	S	Yes	0
Math114	2018	2019	A	S	No	13
Math114	2019	2020	A	S	Yes	1
Math114	2019	2020	A	S	No	23
Math114	2020	2021	A	S	No	19
Math118	2011	2012	A	S	Yes	1
Math118	2011	2012	A	S	No	10
Math118	2012	2013	A	S	No	9
Math118	2013	2014	A	S	No	16
Math120	2013	2014	A	S	No	1
Math120	2015	2016	A	S	Yes	1
Math120	2015	2016	A	S	No	5
Math120	2016	2017	A	S	No	10
Math120	2017	2018	A	S	Yes	1
Math120	2017	2018	A	S	No	5
Math120	2018	2019	A	S	No	2
Math120	2019	2020	A	S	No	17
Math120	2020	2021	A	S	Yes	3
Math120	2020	2021	A	S	No	35
Math126	2011	2012	A	S	Yes	0
Math126	2011	2012	A	S	No	1
Math141	2011	2012	A	S	Yes	1
Math141	2011	2012	A	S	No	0
Math141	2013	2014	A	S	Yes	8

Math141	2013	2014	A	S	No	0
Math141	2015	2016	A	S	Yes	3
Math141	2015	2016	A	S	No	0
Math141	2016	2017	A	S	Yes	0
Math141	2016	2017	A	S	No	1
Math141	2018	2019	A	S	Yes	2
Math141	2018	2019	A	S	No	0
Math201	2011	2012	A	S	No	4
Math201	2014	2015	A	S	No	2
Math201	2015	2016	A	S	Yes	2
Math201	2015	2016	A	S	No	5
Math201	2016	2017	A	S	Yes	3
Math201	2016	2017	A	S	No	8
Math201	2017	2018	A	S	No	7
Math201	2018	2019	A	S	Yes	1
Math201	2018	2019	A	S	No	8
Math201	2019	2020	A	S	No	14
Math201	2020	2021	A	S	No	22
Math241	2011	2012	A	S	No	17
Math241	2012	2013	A	S	No	17
Math241	2013	2014	A	S	No	17
Math241	2014	2015	A	S	No	6
Math241	2015	2016	A	S	Yes	1
Math241	2015	2016	A	S	No	8
Math241	2016	2017	A	S	Yes	0
Math241	2016	2017	A	S	No	22
Math241	2017	2018	A	S	No	12
Math241	2018	2019	A	S	No	9
Math241	2019	2020	A	S	No	15
Math241	2020	2021	A	S	Yes	0
Math241	2020	2021	A	S	No	23
Math242	2011	2012	A	S	No	3
Math242	2012	2013	A	S	No	4
Math242	2013	2014	A	S	No	6
Math242	2014	2015	A	S	No	4
Math242	2015	2016	A	S	No	4
Math242	2016	2017	A	S	No	3
Math242	2017	2018	A	S	No	4
Math242	2018	2019	A	S	No	3
Math242	2019	2020	A	S	No	7
Math242	2020	2021	A	S	No	18
Math243	2012	2013	A	S	No	1
Math243	2014	2015	A	S	No	1
Math243	2017	2018	A	S	No	1
Math106	2011	2012	B	S	Yes	7
Math106	2011	2012	B	S	No	9
Math106	2012	2013	B	S	Yes	7

Math106	2012	2013	B	S	No	7
Math106	2013	2014	B	S	Yes	8
Math106	2013	2014	B	S	No	2
MATH106	2014	2015	B	S	Yes	21
MATH106	2014	2015	B	S	No	2
Math106	2015	2016	B	S	Yes	27
Math106	2015	2016	B	S	No	2
Math106	2016	2017	B	S	Yes	15
Math106	2016	2017	B	S	No	8
Math106	2017	2018	B	S	Yes	16
Math106	2017	2018	B	S	No	3
Math106	2018	2019	B	S	Yes	15
Math106	2018	2019	B	S	No	9
Math106	2019	2020	B	S	Yes	23
Math106	2019	2020	B	S	No	0
Math106	2020	2021	B	S	Yes	16
Math106	2020	2021	B	S	No	2
Math107	2011	2012	B	S	Yes	1
Math107	2011	2012	B	S	No	1
Math107	2012	2013	B	S	Yes	1
Math107	2012	2013	B	S	No	2
Math107	2013	2014	B	S	Yes	1
Math107	2013	2014	B	S	No	0
Math107	2014	2015	B	S	Yes	2
Math107	2014	2015	B	S	No	1
Math107	2015	2016	B	S	Yes	1
Math107	2015	2016	B	S	No	4
Math107	2016	2017	B	S	Yes	0
Math107	2016	2017	B	S	No	1
Math107	2017	2018	B	S	Yes	2
Math107	2017	2018	B	S	No	1
Math107	2018	2019	B	S	Yes	4
Math107	2018	2019	B	S	No	1
Math107	2019	2020	B	S	Yes	1
Math107	2019	2020	B	S	No	2
Math107	2020	2021	B	S	Yes	1
Math107	2020	2021	B	S	No	0
Math108	2011	2012	B	S	No	4
Math108	2013	2014	B	S	No	1
Math108	2016	2017	B	S	No	1
Math108	2019	2020	B	S	No	1
Math109	2011	2012	B	S	Yes	18
Math109	2011	2012	B	S	No	10
Math109	2012	2013	B	S	Yes	19
Math109	2012	2013	B	S	No	18
Math109	2013	2014	B	S	Yes	20
Math109	2013	2014	B	S	No	12

Math109	2014	2015	B	S	Yes	15
Math109	2014	2015	B	S	No	14
Math109	2015	2016	B	S	Yes	21
Math109	2015	2016	B	S	No	5
Math109	2016	2017	B	S	Yes	20
Math109	2016	2017	B	S	No	10
Math109	2017	2018	B	S	Yes	18
Math109	2017	2018	B	S	No	6
Math109	2018	2019	B	S	Yes	27
Math109	2018	2019	B	S	No	4
Math109	2019	2020	B	S	Yes	20
Math109	2019	2020	B	S	No	5
Math109	2020	2021	B	S	Yes	24
Math109	2020	2021	B	S	No	6
Math110	2016	2017	B	S	Yes	4
Math110	2016	2017	B	S	No	4
Math110	2017	2018	B	S	Yes	11
Math110	2017	2018	B	S	No	6
Math110	2018	2019	B	S	Yes	21
Math110	2018	2019	B	S	No	9
Math110	2019	2020	B	S	Yes	17
Math110	2019	2020	B	S	No	5
Math110	2020	2021	B	S	Yes	8
Math110	2020	2021	B	S	No	2
Math112	2011	2012	B	S	Yes	0
Math112	2011	2012	B	S	No	1
Math112	2012	2013	B	S	Yes	0
Math112	2012	2013	B	S	No	1
Math113	2011	2012	B	S	Yes	26
Math113	2011	2012	B	S	No	17
Math113	2012	2013	B	S	Yes	30
Math113	2012	2013	B	S	No	30
Math113	2013	2014	B	S	Yes	25
Math113	2013	2014	B	S	No	24
Math113	2014	2015	B	S	Yes	52
Math113	2014	2015	B	S	No	22
Math113	2015	2016	B	S	Yes	43
Math113	2015	2016	B	S	No	13
Math113	2016	2017	B	S	Yes	21
Math113	2016	2017	B	S	No	8
Math113	2017	2018	B	S	Yes	37
Math113	2017	2018	B	S	No	21
Math113	2018	2019	B	S	Yes	50
Math113	2018	2019	B	S	No	8
Math113	2019	2020	B	S	Yes	51
Math113	2019	2020	B	S	No	10
Math113	2020	2021	B	S	Yes	52

Math113	2020	2021	B	S	No	11
Math114	2011	2012	B	S	Yes	1
Math114	2011	2012	B	S	No	6
Math114	2012	2013	B	S	Yes	0
Math114	2012	2013	B	S	No	14
Math114	2013	2014	B	S	Yes	0
Math114	2013	2014	B	S	No	12
Math114	2014	2015	B	S	No	17
Math114	2015	2016	B	S	Yes	4
Math114	2015	2016	B	S	No	18
Math114	2016	2017	B	S	Yes	12
Math114	2016	2017	B	S	No	22
Math114	2017	2018	B	S	Yes	1
Math114	2017	2018	B	S	No	19
Math114	2018	2019	B	S	Yes	0
Math114	2018	2019	B	S	No	7
Math114	2019	2020	B	S	Yes	0
Math114	2019	2020	B	S	No	15
Math114	2020	2021	B	S	No	11
Math118	2011	2012	B	S	Yes	0
Math118	2011	2012	B	S	No	10
Math118	2012	2013	B	S	No	8
Math118	2013	2014	B	S	No	11
Math120	2013	2014	B	S	No	1
Math120	2015	2016	B	S	Yes	1
Math120	2015	2016	B	S	No	3
Math120	2016	2017	B	S	No	3
Math120	2017	2018	B	S	Yes	0
Math120	2017	2018	B	S	No	2
Math120	2018	2019	B	S	No	3
Math120	2019	2020	B	S	No	2
Math120	2020	2021	B	S	Yes	0
Math120	2020	2021	B	S	No	11
Math126	2011	2012	B	S	Yes	0
Math126	2011	2012	B	S	No	4
Math141	2011	2012	B	S	Yes	0
Math141	2011	2012	B	S	No	1
Math141	2012	2013	B	S	Yes	2
Math141	2013	2014	B	S	Yes	2
Math141	2013	2014	B	S	No	0
Math141	2015	2016	B	S	Yes	4
Math141	2015	2016	B	S	No	0
Math141	2016	2017	B	S	Yes	8
Math141	2016	2017	B	S	No	0
Math141	2019	2020	B	S	Yes	1
Math141	2019	2020	B	S	Yes	2
Math201	2011	2012	B	S	No	1

Math201	2014	2015	B	S	No	7
Math201	2015	2016	B	S	Yes	0
Math201	2015	2016	B	S	No	5
Math201	2016	2017	B	S	Yes	1
Math201	2016	2017	B	S	No	8
Math201	2017	2018	B	S	No	4
Math201	2018	2019	B	S	Yes	0
Math201	2018	2019	B	S	No	5
Math201	2019	2020	B	S	No	10
Math201	2020	2021	B	S	No	15
Math241	2011	2012	B	S	No	11
Math241	2012	2013	B	S	No	7
Math241	2013	2014	B	S	No	5
Math241	2014	2015	B	S	No	4
Math241	2015	2016	B	S	Yes	0
Math241	2015	2016	B	S	No	7
Math241	2016	2017	B	S	Yes	0
Math241	2016	2017	B	S	No	8
Math241	2017	2018	B	S	No	10
Math241	2018	2019	B	S	No	6
Math241	2019	2020	B	S	No	10
Math241	2020	2021	B	S	Yes	0
Math241	2020	2021	B	S	No	11
Math242	2011	2012	B	S	No	3
Math242	2012	2013	B	S	No	8
Math242	2014	2015	B	S	No	4
Math242	2015	2016	B	S	No	1
Math242	2016	2017	B	S	No	3
Math242	2017	2018	B	S	No	2
Math242	2018	2019	B	S	No	3
Math242	2019	2020	B	S	No	8
Math242	2020	2021	B	S	No	6
Math243	2015	2016	B	S	No	1
Math243	2016	2017	B	S	No	1
Math106	2011	2012	C	S	Yes	20
Math106	2011	2012	C	S	No	13
Math106	2012	2013	C	S	Yes	21
Math106	2012	2013	C	S	No	22
Math106	2013	2014	C	S	Yes	19
Math106	2013	2014	C	S	No	11
MATH106	2014	2015	C	S	Yes	21
MATH106	2014	2015	C	S	No	4
Math106	2015	2016	C	S	Yes	21
Math106	2015	2016	C	S	No	6
Math106	2016	2017	C	S	Yes	18
Math106	2016	2017	C	S	No	5
Math106	2017	2018	C	S	Yes	20

Math106	2017	2018	C	S	No	1
Math106	2018	2019	C	S	Yes	31
Math106	2018	2019	C	S	No	13
Math106	2019	2020	C	S	Yes	30
Math106	2019	2020	C	S	No	8
Math106	2020	2021	C	S	Yes	7
Math106	2020	2021	C	S	No	1
Math107	2011	2012	C	S	Yes	2
Math107	2011	2012	C	S	No	3
Math107	2012	2013	C	S	Yes	0
Math107	2012	2013	C	S	No	4
Math107	2013	2014	C	S	Yes	1
Math107	2013	2014	C	S	No	2
Math107	2014	2015	C	S	Yes	5
Math107	2014	2015	C	S	No	3
Math107	2015	2016	C	S	Yes	4
Math107	2015	2016	C	S	No	1
Math107	2016	2017	C	S	Yes	1
Math107	2016	2017	C	S	No	5
Math107	2017	2018	C	S	Yes	3
Math107	2017	2018	C	S	No	5
Math107	2018	2019	C	S	Yes	1
Math107	2018	2019	C	S	No	2
Math107	2019	2020	C	S	Yes	2
Math107	2019	2020	C	S	No	0
Math107	2020	2021	C	S	Yes	1
Math107	2020	2021	C	S	No	0
Math108	2011	2012	C	S	No	1
Math108	2012	2013	C	S	No	1
Math108	2013	2014	C	S	No	2
Math108	2014	2015	C	S	No	1
Math108	2020	2021	C	S	No	1
Math109	2011	2012	C	S	Yes	10
Math109	2011	2012	C	S	No	9
Math109	2012	2013	C	S	Yes	15
Math109	2012	2013	C	S	No	13
Math109	2013	2014	C	S	Yes	11
Math109	2013	2014	C	S	No	9
Math109	2014	2015	C	S	Yes	25
Math109	2014	2015	C	S	No	11
Math109	2015	2016	C	S	Yes	28
Math109	2015	2016	C	S	No	4
Math109	2016	2017	C	S	Yes	20
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Math109	2018	2019	C	S	Yes	20

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Math114	2012	2013	C	S	No	8
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Math118	2013	2014	C	S	No	4
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Math141	2011	2012	C	S	No	0
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Math141	2015	2016	C	S	No	3
Math141	2016	2017	C	S	Yes	8
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Math241	2011	2012	C	S	No	8
Math241	2012	2013	C	S	No	5
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Math241	2016	2017	C	S	No	4
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Math106	2017	2018	D	N	No	0
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Math107	2014	2015	D	N	No	0
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Math107	2015	2016	D	N	No	2
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Math113	2017	2018	D	N	No	13
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Math113	2019	2020	D	N	Yes	3
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Math113	2020	2021	D	N	Yes	10
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Math114	2011	2012	D	N	Yes	0
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Math241	2015	2016	D	N	Yes	0
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Math241	2017	2018	D	N	No	3
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Math114	2018	2019	W	N	Yes	0
Math114	2018	2019	W	N	No	2
Math114	2019	2020	W	N	Yes	0
Math114	2019	2020	W	N	No	4
Math114	2020	2021	W	N	No	3
Math118	2011	2012	W	N	Yes	0
Math118	2011	2012	W	N	No	4
Math120	2019	2020	W	N	No	1
Math126	2011	2012	W	N	Yes	2
Math126	2011	2012	W	N	No	1
Math141	2015	2016	W	N	Yes	1
Math141	2015	2016	W	N	No	0
Math141	2016	2017	W	N	Yes	2
Math141	2016	2017	W	N	No	1
Math141	2018	2019	W	N	Yes	0
Math141	2018	2019	W	N	No	1
Math201	2014	2015	W	N	No	1

Math201	2015	2016	W	N	Yes	0
Math201	2015	2016	W	N	No	2
Math201	2018	2019	W	N	Yes	0
Math201	2018	2019	W	N	No	1
Math201	2020	2021	W	N	No	1
Math216	2018	2019	W	N	No	1
Math241	2011	2012	W	N	No	2
Math241	2015	2016	W	N	Yes	0
Math241	2015	2016	W	N	No	1
Math241	2016	2017	W	N	Yes	0
Math241	2016	2017	W	N	No	1
Math241	2017	2018	W	N	No	2
Math241	2019	2020	W	N	No	1
Math241	2020	2021	W	N	Yes	0
Math241	2020	2021	W	N	No	3

Fall new freshmen students (2011 to 2012 Fall) math grades in Spring 2012 to 2021 based on if they took Math106 in Prior Fall

Spring Grades on Math Classes	Took_math106_in_prior_Fall			
Grade	**Count**	**No**	**Yes**	**Total**
A	Count	873	809	1682
	Expected Count	786.9	895.1	1682
	% within Took_math	25.80%	21.00%	23.20%
	Standardized Residu	3.1	-2.9	
B	Count	720	858	1578
	Expected Count	738.2	839.8	1578
	% within Took_math	21.20%	22.30%	21.80%
	Standardized Residu	-0.7	0.6	
C	Count	753	919	1672
	Expected Count	782.2	889.8	1672
	% within Took_math	22.20%	23.80%	23.10%
	Standardized Residu	-1	1	
D	Count	232	282	514
	Expected Count	240.5	273.5	514
	% within Took_math	6.80%	7.30%	7.10%
	Standardized Residu	-0.5	0.5	
F	Count	612	766	1378
	Expected Count	644.7	733.3	1378
	% within Took_math	18.10%	19.90%	19.00%
	Standardized Residu	-1.3	1.2	
W	Count	199	221	420
	Expected Count	196.5	223.5	420
	% within Took_math	5.90%	5.70%	5.80%
	Standardized Residu	0.2	-0.2	
Total	Count	3389	3855	7244
	Expected Count	3389	3855	7244
	% within Took_math	100.00%	100.00%	100.00%

A Chi-square test of association was conducted to determine if there was a relationship between prior completion of developmental math course and outcomes in Spring math classes.
Participants (N=7244) in this analysis included those students from new freshmen cohorts from Fall 2011 to 2020 who were enrolled in math classes in following Spring from 2012 to 2021.
The assumption of an expected frequency of at least 5 per cell was met. The assumption of independence was not met since the participants were not randomly selected.
Thus, there is an increased probability of Type 1 error. Results indicate there was a statistically significant relationship at the .05 significance level ($\chi 2=24.334$, df=5, p=.000).
A Cramer's V of .058 suggests a small effect size

Maryland Independent Colleges and Universities (MICUA)

Capitol Technology University Validity Studies

Capitol Technology University monitors student success in remedial courses as part of ongoing efforts to support student success. In preparation for submission of the 2021 Self Study for Middle States Commission on Higher Education reaccreditation the university examined placement in true remedial coursework for writing and math. This examination included identifying successful completion rates of EN001 Basic Writing Skills and MA005 Basic Mathematics since 2014. The data includes successful completion rates from 2014-2016 while Compass was used and from spring 2017 through Fall 2019.

The Self Study indicates that "The University has been using Accuplacer since 2017 and has administered 305 tests. … Since fall 2014 236 placed in remedial courses with the majority being in MA005 – 75%. The passing rate for first attempt is 51% MA005 and 91% EN001. With the mentoring of the Academic Advisor the success rate of remedial is indicated by the students attainment of their educational goals – 83% are have passed are enrolled or graduated." Attached is the data which was included in the Self Study Appendix.

Data since Spring 2017 when Accuplacer was implemented indicates that, the passing rate for a first attempt at MA005 31% is and EN001 is 61%. The retention and graduation rate of students who placed into at least one remedial course is 83%.

Semester	Remedial	EN001	MA005	Pass	Fail	Graduated	WD	Enrolled	
Fall 2014	21								
		6		4	2	2	2	2	
			15	15	0	5	4	6	
Spr 2015	3								
		3		1	2	1	0	2	
Sum 2015	13								
		3		3	0	1	1	1	
			10	9	1	5	1	4	
Fall 2015	36								
		10		5	5	1	4	5	
			26	17	8	6	5	16	1 dropped course
Spr 2016	14								
		7		4	3	0	2	5	
			7	2	5	2	1	4	
Sum 2016	14								
		3		2	1	1	0	2	
			11	7	4	2	1	8	
Fall 2016	54								
		14		8	6	4	2	8	
			40	20	20	8	4	29	
Spr 2017	20								
		6		4	2	2	0	4	
			14	5	8	1	1	12	1 dropped course
Sum 2017	4								
			4	1	3	0	2	2	
Fall 2017	18								
		3		2	0	0	0	3	1 dropped course
			15	2	12	0	4	11	1 dropped course
Spr 2018	9								
			9	5	2	1	2	6	2 dropped course
Sum 2018	4								
			4	1	3	0	1	3	
Fall 2019	26								
		4		2	2	0	0	4	
			22	7	13	0	6	16	2 dropped course
	236	59	177	126	102	42	43	153	

EN - 35
MA - 91

Analysis

1. More students place in remedial math than English (MA005 75% & EN
2. Overall 53% pass first attempt. 91% pass EN005. 51% pass MA005.
3. Success rate of remedial - 195 of 236 students in remedial are enrolle

Placement analysis

2017-06-07

1 Introduction

The Mathematics Department is in the process of evaluating and revising the placement system that Hood has used for mathematics placement since AY2014-15. The placement system uses an online test system based on three validated tests developed by the Mathematical Association of America (MAA). (The MAA's guide to using their placement suite is online at MAA guide to test suite (http://www.maa.org/sites/default/files/pdf/ptp/ptpguide.pdf).)

Since adopting the current placement system, we in the Mathematics Department have been satisfied that students are not being placed into classes where they are not equipped to succeed. On the other hand, we have worried that the system may place some students into classes below where they could succeed. These underplacements can costs students time and money, and they can be a blow to confidence.

The main change that we plan to make in the placement system is to include more factors in deciding placement. The current system places most students using only placement test scores. Although the MAA guide to the placement system explicitly recommends against this practice, we adopted it when we revised our placement system in AY2014-15 primarily because in the preceding years, placement had also been a function of performance on a placement test alone.

During AY2016-17, Ann Stewart did extensive research on placement practices. She concluded, on the one hand, that the overall structure of our courses matched well the modern "pathways" model, which reduces the importance of algebra in parts of the introductory-level mathematics curriculum in favor of more conceptual and contextualized learning. She found, though, that many authorities agreed with the advice in the MAA guide to the placement system that institutions should use multiple factors to determine placements instead of relying on a single set of tests.

The following report starts with an overview of the current placement system and a summary of how it has placed students into classes during the past three academic years. It next examines the effectiveness of our placement practices at three critical points:

- placement in the MATH 111/112 classes that most students use to fulfill their core mathematics requirements;
- placement in MATH 120 (Precalculus), the gateway to the 200-level mathematics courses required for those majoring in biochemistry, chemistry, computational science, computer science, economics, and mathematics; and

- placement in MATH 201 (Calculus 1) and MATH 207 (Discrete Mathematics), the entry 200-level mathematics courses.

At each of these points, we consider how well the placement system is evaluating student readiness for these courses. We also investigate what data from three years of the current placement system tell us about how our developmental and prerequisite courses are preparing students for classes at these three levels. The report concludes with a discussion of our work toward a new placement system that incorporates analysis of high-school transcripts. We hope that this review of current practices will help us make the case for change in the placement system and will help us design the new system to address student needs.

2 The current placement system

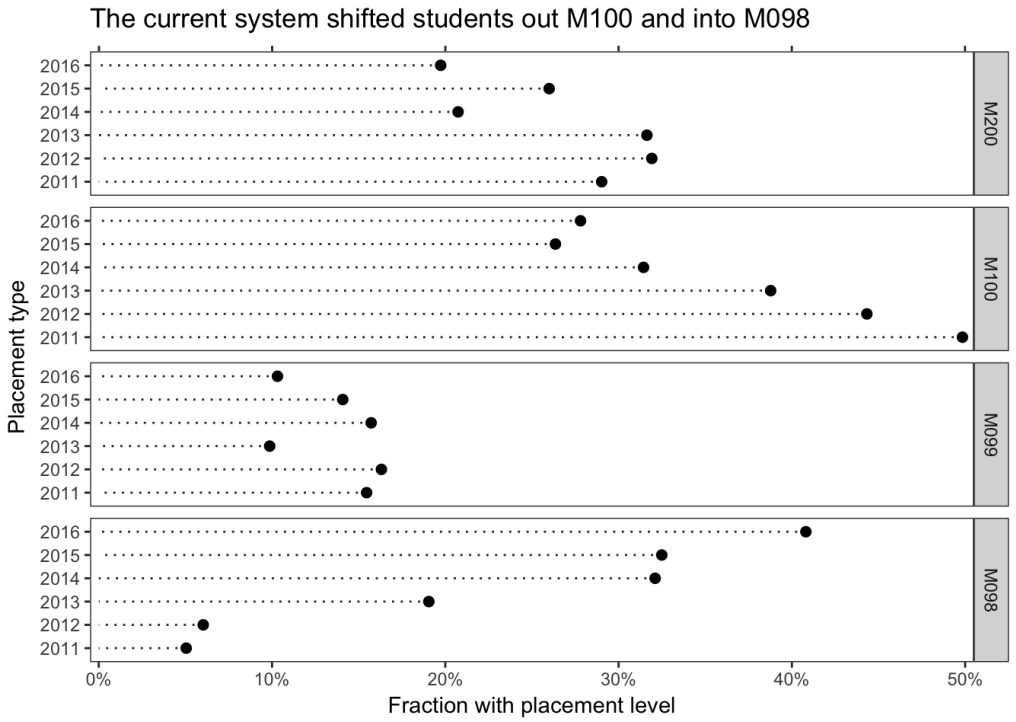
2.1 The current placement levels

Our current placement system sorts students into five levels: M098, M099, M99L, M100, and M200:

- The bottom level is M098. We require all students who place at this level to complete the developmental (non-credit) course MATH 098 (corresponding roughly to high-school Algebra 1) before they take any credit-bearing mathematics courses.
- The second level is M099. Students who place at this level are permitted to enroll in MATH 111 (``liberal arts mathematics'') and MATH 112 (Statistics) courses. Before spring 2014, students had to place at the M100 level to enroll in 111/112 classes, but starting then (just before we adopted the MAA placement tests), we allowed students who had M099 placement to enroll in these classes. Two departments offering alternatives to MATH 112 (PSY 211 and SOC 261) followed suit, allowing students with M099 placement to enroll. Students who place at this level and who want to take either MATH 120 (Precalculus) or MATH 106/107 (mathematics courses for education majors) must first complete the developmental course MATH 099 (corresponding roughly to high-school Algebra 2). Students with M099 placement who wish to enroll in ECMG 212 (another alternative to MATH 112) must also first complete MATH 099.
- The third level, M99L, is for students who do not show mastery of all topics from high-school Algebra 2 but who are likely to succeed in MATH 120 (Precalculus) with extra support. These students may enroll in MATH 120, if they enroll simultaneously in the 1-credit course MATH 120L. This course (graded S/U) provides students with a weekly session of supplementary instruction to support their learning in MATH 120. Students who place at this level and who want to take MATH 106/107 must still first complete MATH 099. The Mathematics Department created this new placement level (and the class MATH 120L) as part of the implementation of new placement system in AY2014-15.
- The fourth level, M100, is for students who are ready for all 100-level mathematics courses, including MATH 111/112 courses as well as MATH 106/107 and MATH 120. Some other disciplines require students to place at this level or to complete MATH 099 before enrolling in courses; these courses include CS 110, CS 112, and IT 180 (all core non-lab science courses) as well as ECMG 212 (a statistics course).
- The fifth level, M200, is for students who are ready for the introductory 200-level mathematics courses, MATH 201 (Calculus 1) and MATH 207 (Discrete Mathematics). To place at this level, students should have mastered the core topics from high-school precalculus.

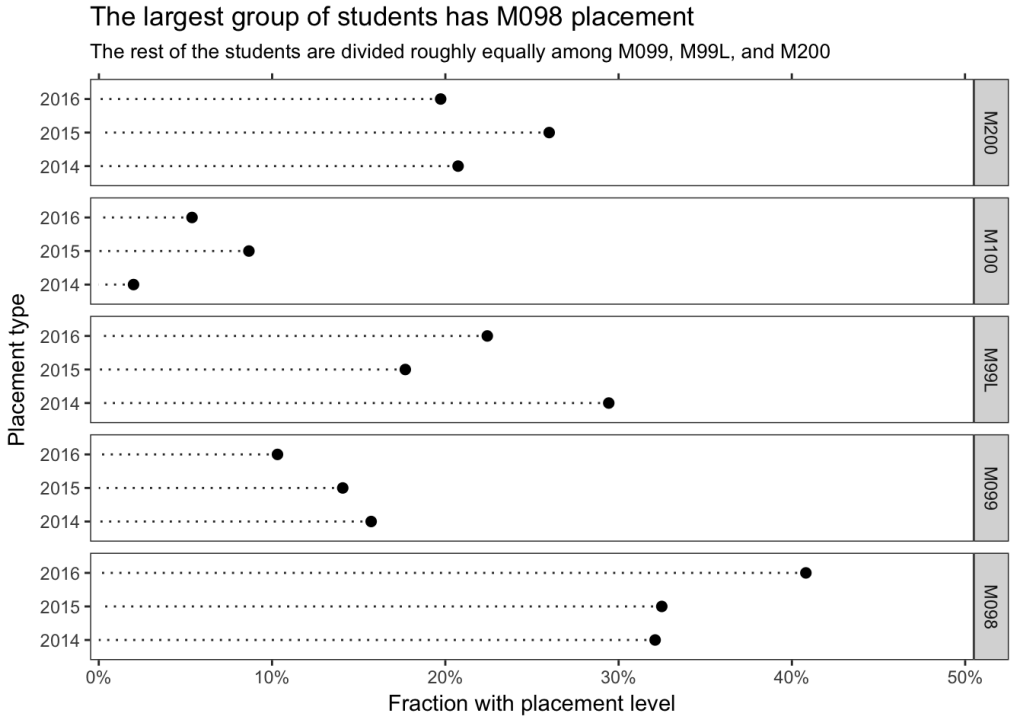
2.2 History of placement distributions

The current placement system replaced a system based on an in-house placement test in place of the externally validated MAA test suite. This earlier system had only four levels of placement: M098, M099, M100, and M200. The M100 level was much more important in the earlier system, since until spring 2014, in order to enroll in MATH 111 or MATH 112 classes, students needed to place at the M100 level. The following graph compared the distribution of placement levels in the final three years of the earlier system with the distribution of levels in the first three years of the current system. Since the M99L level did not exist in the earlier system, for the purpose of comparison, we have reclassified students with M99L placement as having M100 placement.



The most significant effect on placement distributions of the changing from the earlier placement system was to shift students from the M100 level to the M098. (In the current system, most of the students classified in the above graph as M100 are at the M99L level.) The current system also reduced the fraction of students placed at the M200 from about 30% to between 20% and 25%. Placements in M099, however, stayed essentially the same after adoption of the current system.

The following figure shows the distribution of all placements by the placement test during AY2014-15, AY2015-16, and AY2016-17. We repeat the data from these three years to show M99L and M100 placements separately. We note that the largest single placement group is M098; the M099, M99L, and M200 groups are roughly of the same size, but the M100 group is very small.

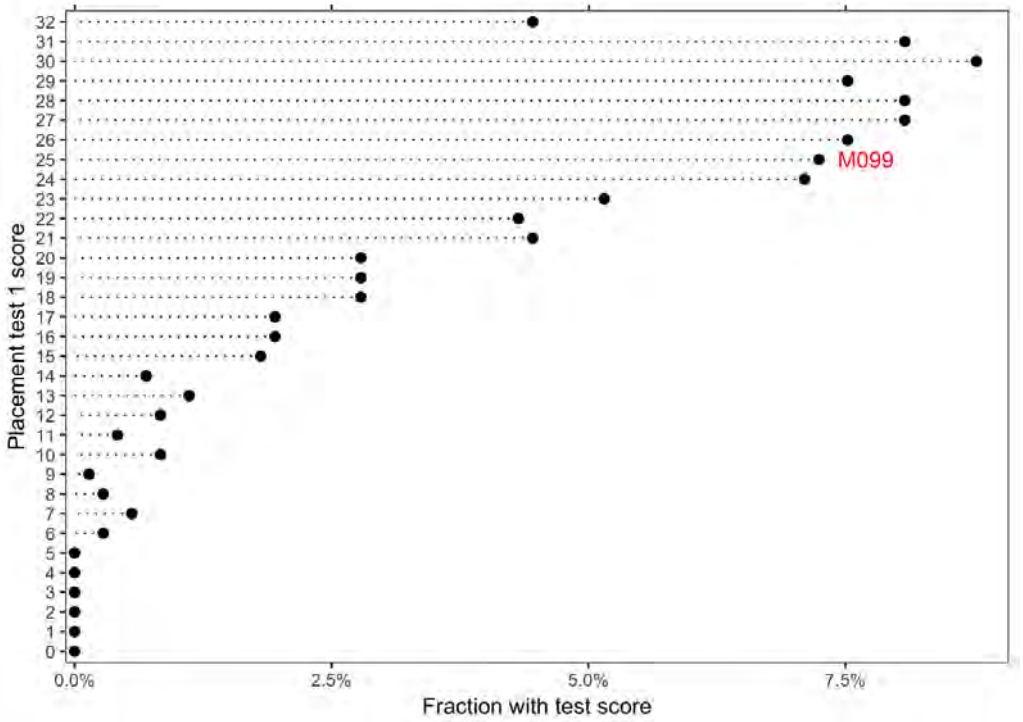


2.3 The current placement tests

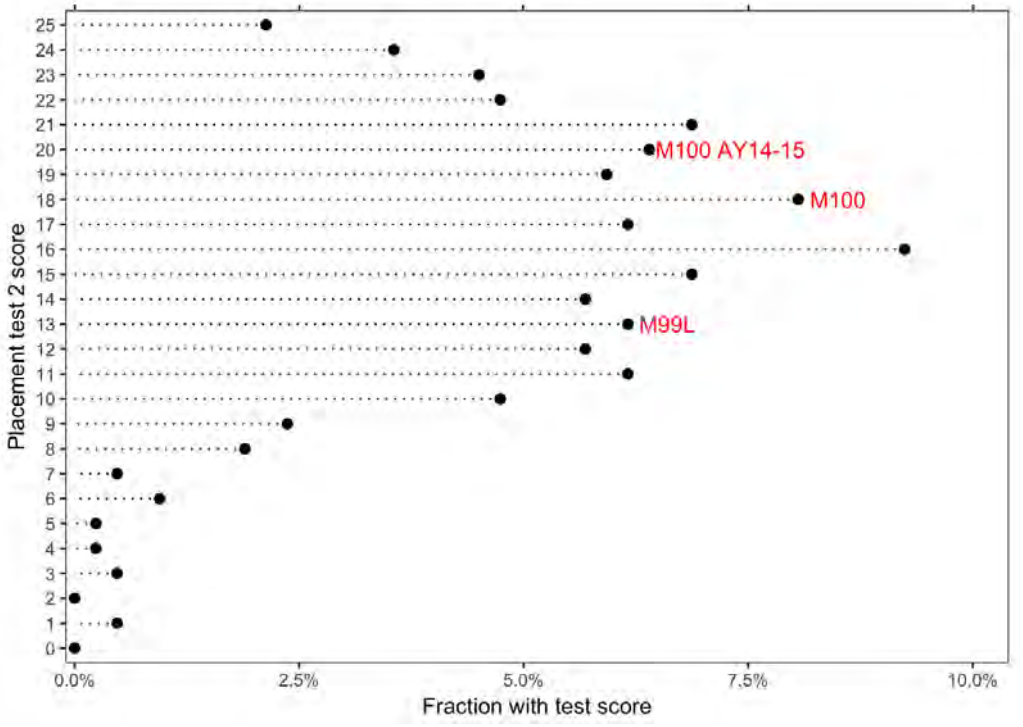
For AY2014-15, AY2015-16, and AY2016-17, we used mostly placement-test scores to place students. The only systematic exceptions to placement by tests were for students who had AP credit for mathematics classes and students who had transfer credit for mathematics classes.

We used three placement tests for placement:

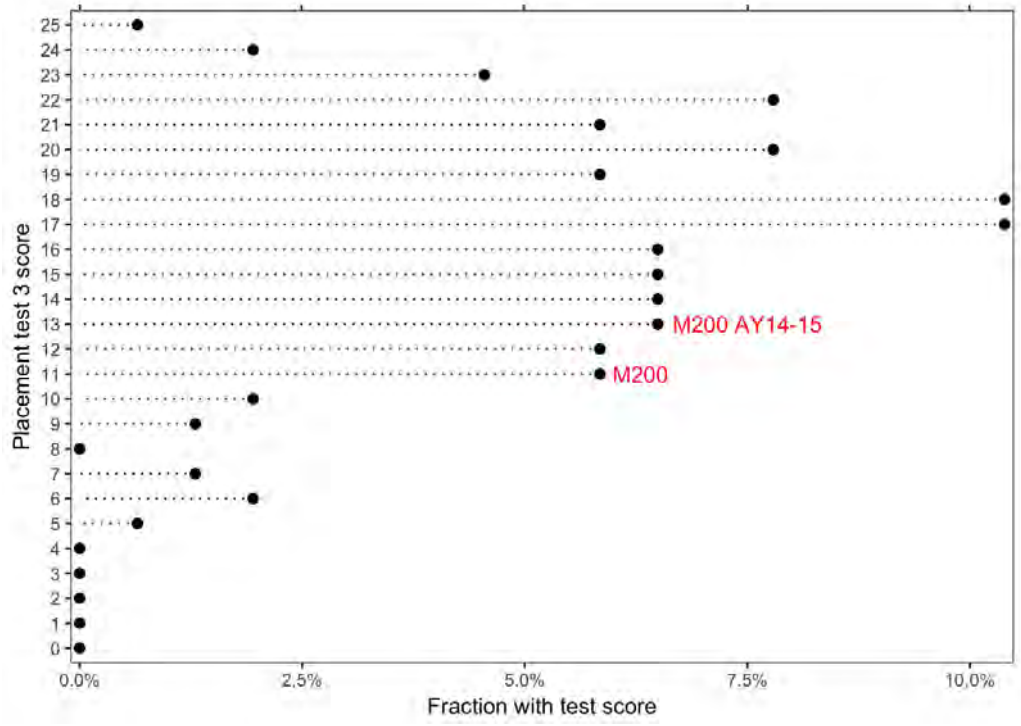
1. The first test (the MAA “Algorithmic Arithmetic and Skills” test) is scored out of 32 points. Students who score at least 25 out of 32 will have placement at least at the M099 level. These students continue on to the second test. Students who score below 25 out of 32 are placed at the M098 level and take no further tests. The following figure shows the distribution of three years of test 1 scores. Most students (about 2/3 of the entire group) reach the 25/32 threshold to place above the M098 level, but some students earn startlingly low scores (as low as 6/32).



2. The second test (the MAA “Algorithmic Basic Algebra” test) is scored out of 25 points. Students who score below 13 out of 25 are placed at the M099 level. Students who score between 13 and 17 are placed at the M99L level. Students who score 18 or higher will be placed at least at the M100 level. (In AY2014-15, the cutoff score was 20.) These students continue on to the third test. The following figure shows the distribution of three years of test 2 scores. Students who take test 2 split roughly evenly among those who are placed at the M099 level, those who are placed at the M99L level, and those who move on to test 3.



3. The third test (the MAA “Algorithmic Calculus Readiness” test) is scored out of 25 points. Students who score below 11 out of 25 are placed at the M100 level. Students who score at least 11 out of 25 are placed at the M200 level. (In AY 2014-15, the cutoff score was 13.) The following figure shows the distribution of three years of test 2 scores. Almost all of the students who reach test 3 place at the M200 level; the placement tests almost never place students at the M100 level.



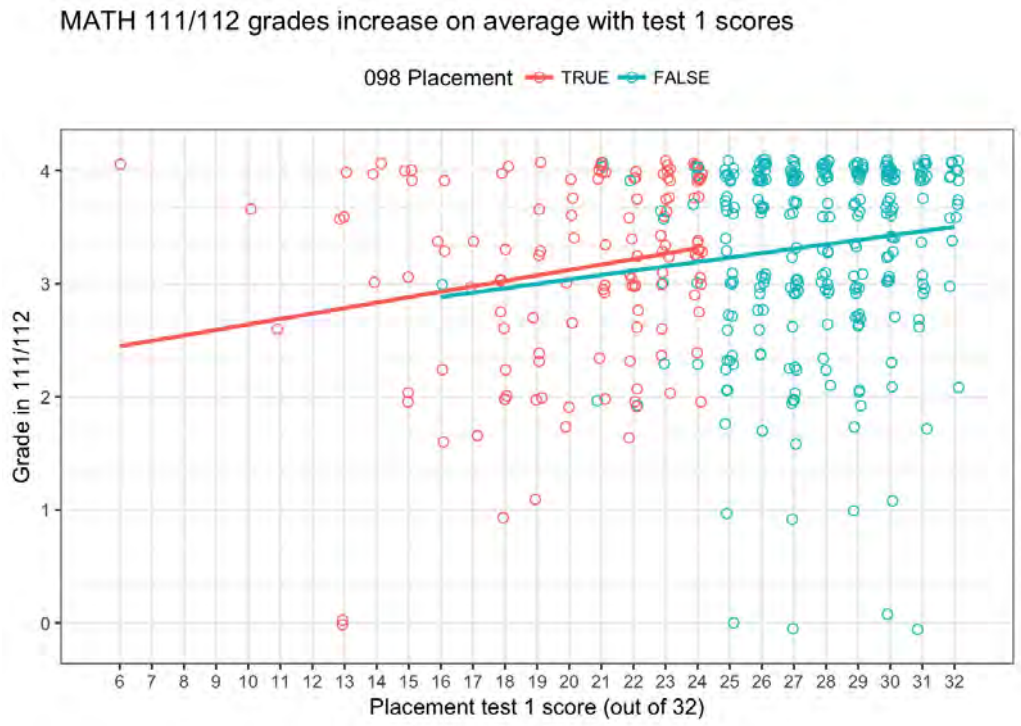
3 MATH 111/112 classes

3.1 Effectiveness of placement test 1

As discussed above, test 1 determines whether students have M098 placement (and must thus enroll in MATH 098) or have at least M099 placement. Students with at least M099 placement may enroll in MATH 111 and MATH 112 classes, and the Mathematics Department thus thinks of test 1 as determining whether students are ready to succeed in the 111/112 classes. We picked this particular test from the MAA placement suite since it measures the sort of basic quantitative skills that we use in 111/112 classes.

We begin by assessing the effectiveness of test 1 at determining this sort of readiness. The MAA guide to the placement test suite explains that placement tests are rarely good predictors of final student course grades, suggesting instead that one use first-midterm grades to validate placements. We do not have this sort of data, however, and so we resort to course grades. (It might be interesting in the future to record first-midterm grades for all students enrolled in 111/112 classes for the purpose of assessing placements.)

We start by graphing the data on grades in 111/112 classes versus scores on test 1 scores.



Our graph separates the data into two groups: grades for students who took MATH 098 before taking MATH 111 or MATH 112 and grades for students who did not take 098. (We generally require students who score below 25/32 on the first placement test to take MATH 098, but a few students with such scores were placed at higher levels because of other factors.) In the graph, the lines are mathematical models representing a good candidate for the center of the grade distributions for students grouped by placement score.

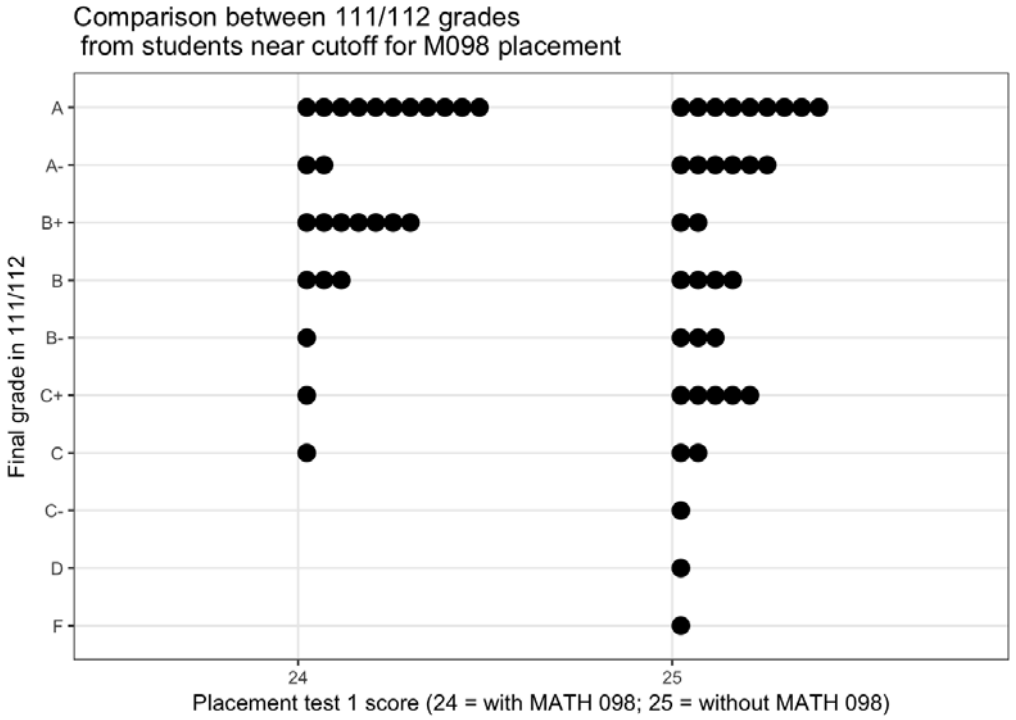
We see that on average, grades in 111/112 do increase with test 1 scores: at the lowest test score groups with significant numbers of students (around 15), the average grade is around a B-. At the highest test score groups, the average grade is a B+ or A-. Although there is considerable variability in the grades associated with each score level on test 1, the great majority of 111/112 grades are C's and above (our standard cutoff for judging successful completion of courses).

3.2 What is the effect of taking MATH 098?

Comparing the two groups (MATH 098 and no MATH 098) in the graph of 111/112 grades versus test 1 scores, we note two interesting features: first that grades from students who earn a 24 on test 1 and take MATH 098 seem to be higher on average in 111/112 than grades from students who earn a 25 or 26 and do not take MATH 098; and second that there are fewer unsatisfactory grades (C- or below) in 111/112 from students who place into MATH 098 compared with students who do not place into MATH 098. Two possible explanations for these effects are:

- Students in MATH 098 learn important mathematical skills for success in their 111/112 classes.
- MATH 098 filters out those students who do not have the basic skills required to succeed in a 100-level class. To pass MATH 098, students must have the non-mathematical skills to pass 100-level college classes in addition to certain mathematical skills. Consequently, the only unsatisfactory grades for students who have passed MATH 098 are for those with the weakest mathematical skills (exhibited, for example, by their having test 1 placement scores below 20).

To study the effect of MATH 098 further, we can compare the grades in 111/112 classes from students who earned a 24 on placement test 1 with the grades of students who earned a 25 on placement test 1. The difference in scores of a single point probably does not indicate much about the mathematical skills of students in these two groups, but the one-point difference has the large practical consequence of directing the lower-scoring students into MATH 098. The following figure shows the grade distributions for the two groups.



We see from the distributions that grades from students with M098 placement (score 24) seem to be higher on the whole than grades from students without M098 placement (score 25), even if we disregard the three lowest grades in the score-25 group. Although the high grades (B and above) make up a similar portion of both groups, the score-25 group has significantly more B-, C, and C+ grades than the score-24 group. Looking at grade point averages in the two groups, (3.49 for the score-24 group versus 3.03 for the score-25 group), we see that the mean grade in the score-24 group is about half of a grade step higher than the mean grade in the score-25 group.

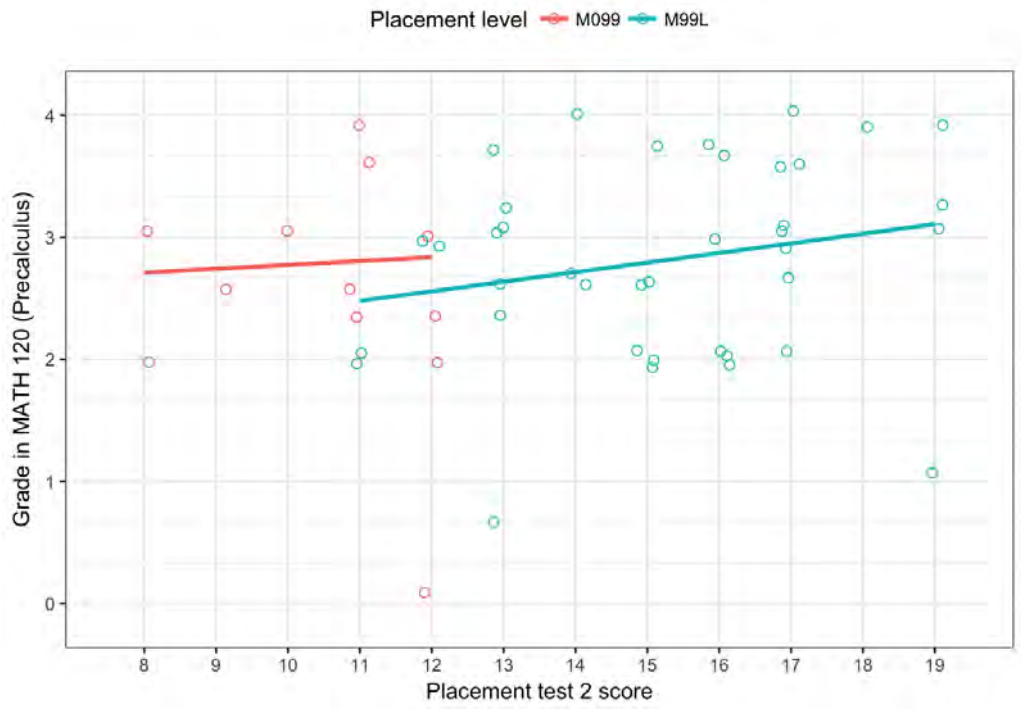
Although it is difficult to assess from the data we have, it seems that MATH 098 likely changes the distribution of grades in 111/112 by both mechanisms: it improves student performance in 111/112 classes (perhaps on the order of half of a grade step on average), and it filters out students lacking the academic skills to succeed in a 100-level mathematics course. We worry, though, that the sharp cutoff for M098 placement may be harmful to some students: placements for students who score 25 on test 1 range from M099 to M200; students just below this cutoff, whom we place in MATH 098, may be discouraged from pursuing studies in disciplines requiring more mathematics (especially biochemistry, chemistry, computational science, computer science, economics, and mathematics), where they could be successful. We hope that a new placement system that considers other factors besides placement tests may help us identify such students.

4 MATH 120 (Precalculus)

MATH 120 (Precalculus) is designed to prepare students for MATH 201 (Calculus), although MATH 120 is also a prerequisite for MATH 207 (Discrete Mathematics) and PHYS 101 (General Physics). In our original plan for the placement system implemented in AY2014-15, we imagined that one of the principal roles of placement test 2 (the MAA's "basic algebra test") would be to determine readiness for MATH 120. We felt that students should have mastered the algebra-2-level skills that make up this test in order to succeed in MATH 120. We thus first intended to require a score of 80% (20/25) on test 2 for M100 placement and enrollment in MATH 120. To evaluate our plan before fully implementing it, in spring 2014 we asked a group of Hood students to try out some of the placement tests, including test 2. We found that these students generally scored poorly on test 2, suggesting that our original plan for AY2014-15 was unworkable, as very few students would have placed high enough to enroll in the MATH 120 that they needed to complete for their intended majors. In response to these findings, we proposed the new intermediate M99L placement level along with the MATH 120L supplement to MATH 120, which would allow students with weak algebra skills (as revealed by test 2) to enroll in MATH 120 with extra support.

4.1 Effectiveness of placement test 2 for determining readiness for MATH 120

Since test 2 focuses on the foundational algebra skills that we feel are necessary for success in MATH 120, we expected that scores on this test would indicate well readiness for success in MATH 120. To evaluate how well the test works in this capacity, we graph final course grade in MATH 120 versus test 2 placement score. All of the grades in the following graph come from students who placed at the M099 or M99L level: it seems that none of the small number of students who placed at the M100 level actually took MATH 120. As in our graph for 111/112 grades, we separate the student grades into two groups, here according to whether the students took MATH 099 or not prior to enrolling in MATH 120. We note that when adding the line to the data for grades from M099 students, we excluded the failing grade in MATH 120 from a student with test 2 score 12. Because of the small sample size, this single low grade seemed to pull the line down in a way that masked the general pattern of grades from M099 students.

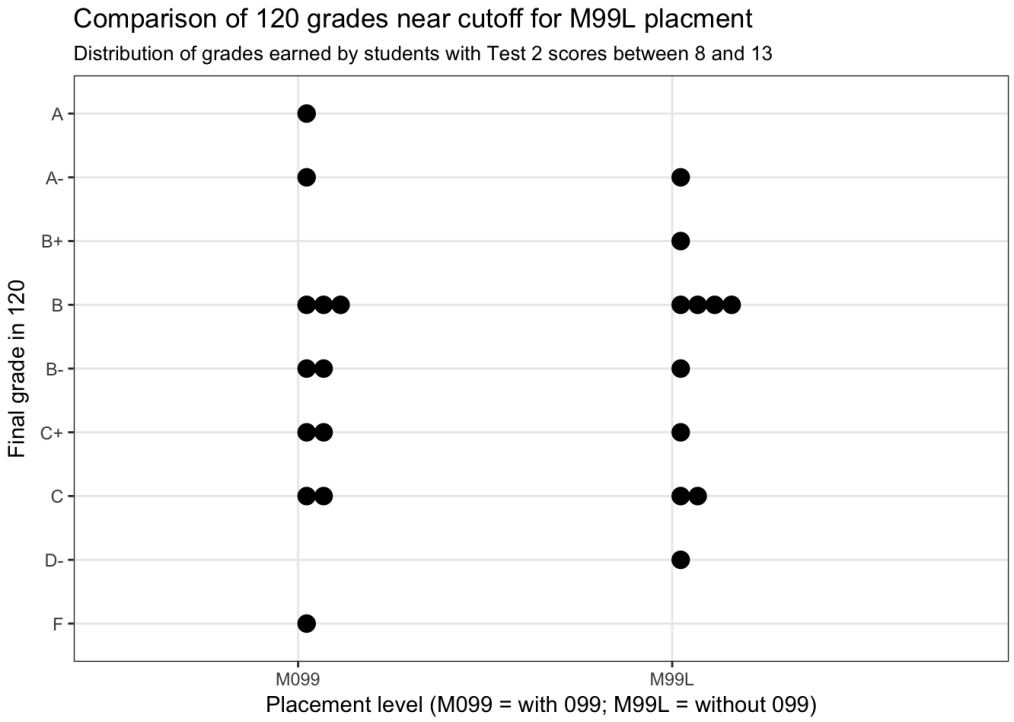


Test 2 does seem to have some predictive value for MATH 120 grades. Although the data are rather sparse, it appears that students at the lower end of the M99L placement range earned grades at the C+ or B- level on average whereas students at the top end the placement range earned grades at the B level on average. For a given placement score, though, there is considerable variability: at the top of the range, for example, the average grade is a B, but typical grades range from A to C. It is possible that the fact that all of these students had the extra support of MATH 120L sessions masks somewhat the effect of their algebra skills on final MATH 120 course grades.

For students who completed MATH 099, we do not see much predictive value in test 2 scores. (The data set is so small, though, that one should be careful about drawing any broad conclusions.) It may be that MATH 099 is very effective at providing students with precisely the algebra skills that they need to succeed in MATH 120, and so completing MATH 099 brings all of the students up to a level comparable to the mid range of M99L placements. Perhaps one should think of these MATH 099 students as doing even better than that group of M99L placement students, since when the MATH 099 completers enroll in MATH 120, they do not have the extra support of MATH 120L.

4.2 What is the effect of taking MATH 099?

Comparing the M099 and M99L groups in the graph of MATH 120 grades, we see that the M099 students (who took MATH 099 before enrolling in MATH 120) did better on average in MATH 120 than the M99L students at the bottom of the placement range. On the other hand, there is not a clear filtering effect from MATH 099 like the filtering effect we saw from MATH 098 on 111/112 grades. We compare the grade distribution for grades earned in MATH 120 by M099 students with the distribution for grades earned by M99L students.



The comparison does not show as clear an advantage for M099 students as the group averages do, but it does seem clear that MATH 099 prepares the M099 students well enough to succeed in MATH 120 at the level of the M99L students even without the support of MATH 120L.

5 MATH 201 and MATH 207

When picking tests from the MAA test suite to use for placement starting in AY2014-15, our first thought for the highest level test was to use this test to ensure that students who placed at the M200 level were ready to succeed in MATH 201 (Calculus 1). We thus picked the MAA's wonderful ``calculus readiness'' test as our third placement test.

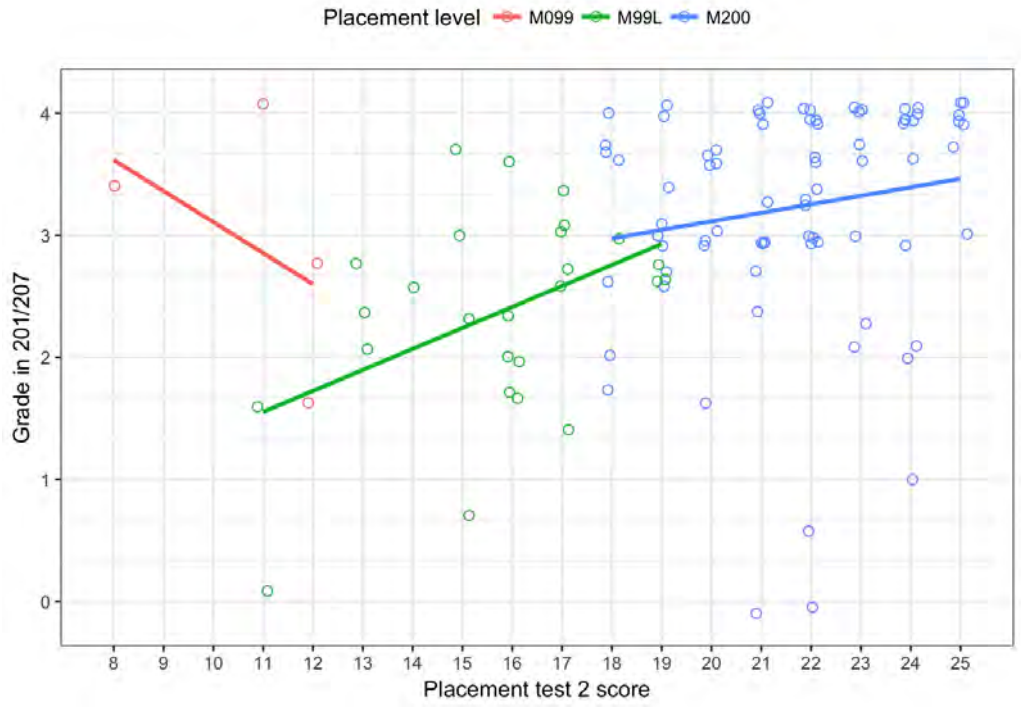
Although our other gateway 200-level course, MATH 207 (Discrete Mathematics), also requires M200 placement, we imagined that students who were ready for calculus would also be ready for MATH 207; we did not include anything in our placement tests specifically aimed at assessing readiness for MATH 207. It may be worth reassessing this expectation while reworking our placement system. It is possible that students placing at the M100 level may be just as prepared to succeed in MATH 207 as students placing at the M200 level, since we do not use any precalculus-specific skills in MATH 207.

5.1 Effectiveness of placement tests for determining readiness for 201/207

In our design of the placement system implemented in AY2014-15, we thought of test 2 as an algebra test, assessing student mastery of foundational material for MATH 120 (Precalculus) rather than MATH 201 (Calculus 1). Since basic algebraic facility is still quite important in MATH 201 and in MATH 207, we will investigate how test 2 scores predict grades in these courses. We will also investigate how test 3 scores predict MATH 201 and MATH 207 grades.

5.1.1 Placement test 2

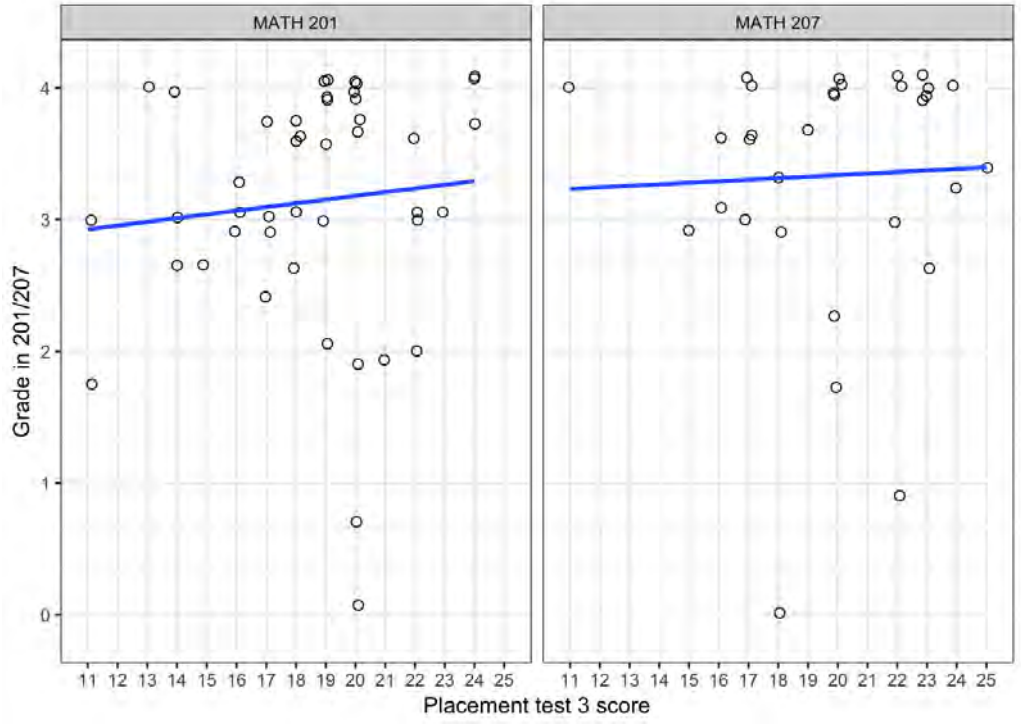
We first examine test 2 scores as predictors for 201/207 grades. We group the grades by student placement levels. Only students with placement levels M099, M99L, M100, and M200 could have taken test 2. Apparently none of the small number of students with M100 placement earned 201/207 grades, and so this placement level does not appear in the graph. The overlap in the M099 and M99L placement ranges comes from an usual placement for one student (with test score 11). The overlap in the M99L and M200 placement ranges comes from the change in the top cutoff for M99L placement from 19 in AY2014-15 to 17 in AY2015-16.



We see from the graph that test 2 scores do seem to have some predictive value for 201/207 grades, especially in the M99L group. (The collection of grades from the M099 group is so small that we simply ignore it.) In the M99L group, we see 201/207 grades rise on average from C's at the lower test scores to B's at the higher test scores. In the M200 group, however, we do not see much change across the range of test scores, with average grades rising only from B's to B+'s. We return below to compare the M99L and M200 groups in more detail for the purpose of assessing the effect of MATH 120 for M99L students at the top of the placement range.

5.1.2 Placement test 3

Placement test 3 is the official "calculus readiness" test offered in the the suite of MAA placement tests. Given this advertised purpose, we would expect that higher scores on this test would correspond strongly to higher grades in MATH 201 (Calculus 1). Since MATH 207 (Discrete Mathematics) is not at all a calculus, course, we would not be surprised, if higher scores on test 3 did not strongly correspond to higher grades in MATH 207. The following figure shows the relations between test 3 scores and grades in MATH 201 and MATH 207.



The results are disappointing for MATH 201: on average, grades earned in MATH 201 by students with the highest test-3 score are B+'s, whereas grades earned by students with the lowest test-3 scores are B's, which is not much of a difference. For MATH 207, the results are what one might expect: there is essentially no difference on average in MATH 207 grades among any groupings of students by test 3 score.

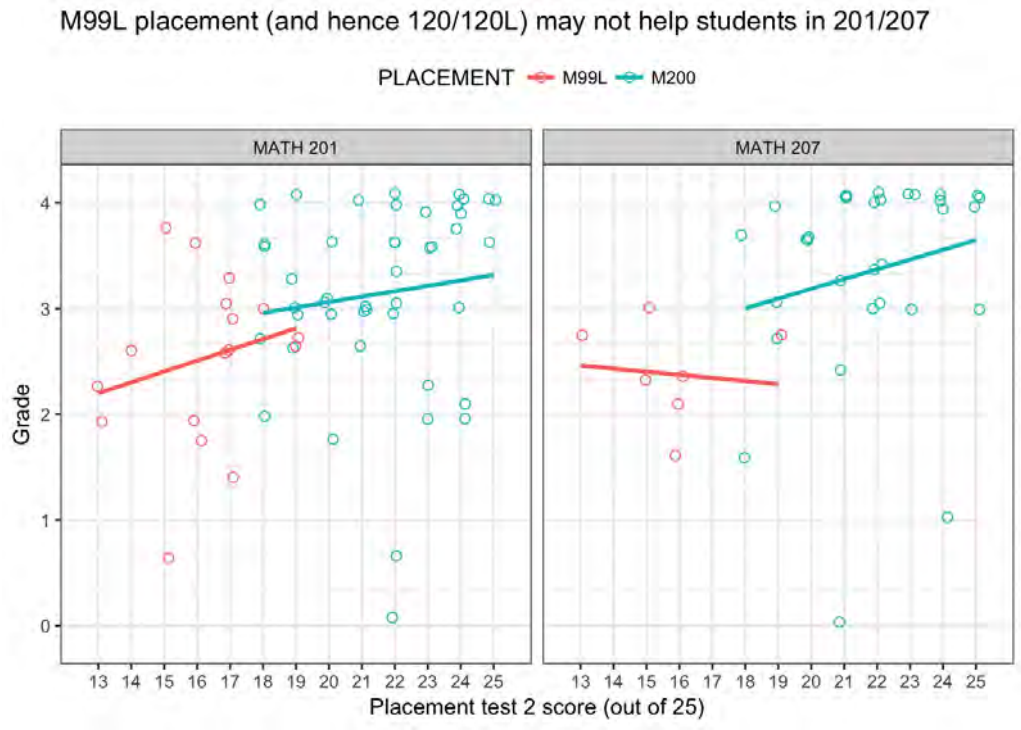
These results suggest that test 3 is providing us with very little information about students. It may make sense to drop test 3 entirely from our placement system, especially if we fortify our judgments by considering factors other than placement test scores.

5.2 What is the effect of taking MATH 120?

A strange feature of our current placement system is that very few students place at the M100 level. There are, however, always large groups of students who place at the M99L and M200 levels. Because of this feature, we treat M99L placement as if it were immediately below M200 placement and compare the performance of students from these two groups in 201/207 courses in the same way that we compared M098 and non-M098 students in 111/112 courses and M099 and M99L students in MATH 120.

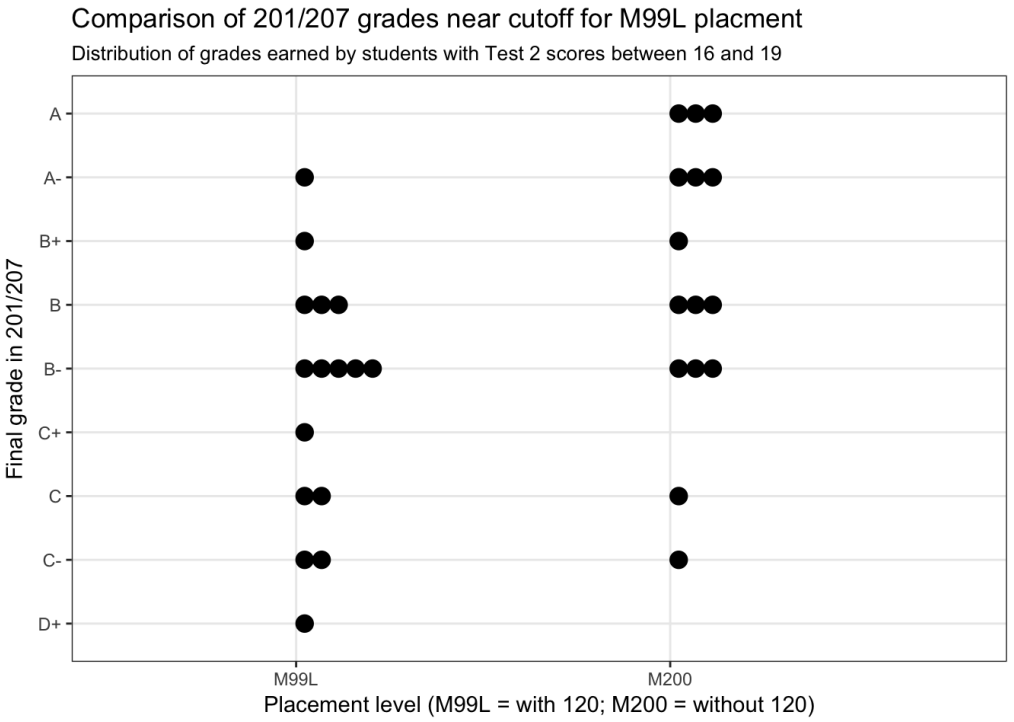
To study the boundary between these two groups, we look at student scores on placement test 2. Comparing the graph above relating 201/207 grades to test 2 scores with the earlier graphs comparing 111/112 grades with test 1 scores and 120 grades with test 2 scores, we see a worrisome difference. In the 201/207 graph, the lower placement group (M99L) seems to do worse at similar test score levels, whereas in the other two data sets, the lower placement groups did better at similar test score levels. We would certainly expect to see better performance from the lower groups in these situations, since students from the lower groups have taken a semester-long preparatory class (MATH 098, MATH 099, or MATH 120 + MATH 120L in these three situations).

In the following graphs, we separate the 201/207 grades to see whether there is evidence that taking MATH 120 may help students prepare for MATH 201 more than for MATH 207.



The graph for 201 grades alone is very similar to the graph combining 201 and 207 grades, but it still appears that M99L students who have taken MATH 120 do slightly worse on average than M200 students with similar test 2 scores. The sample size for 207 grades is so small that one should not draw strong conclusions, but the graph of 207 grades, if anything, suggests more harm from taking MATH 120 for students in MATH 207.

As we did above for 111/112 and for 120, we examine the distributions of grades earned in MATH 201/207 by M99L students with the distribution for grades earned by M200 students all with similar scores (between 16 and 19) on test 2.

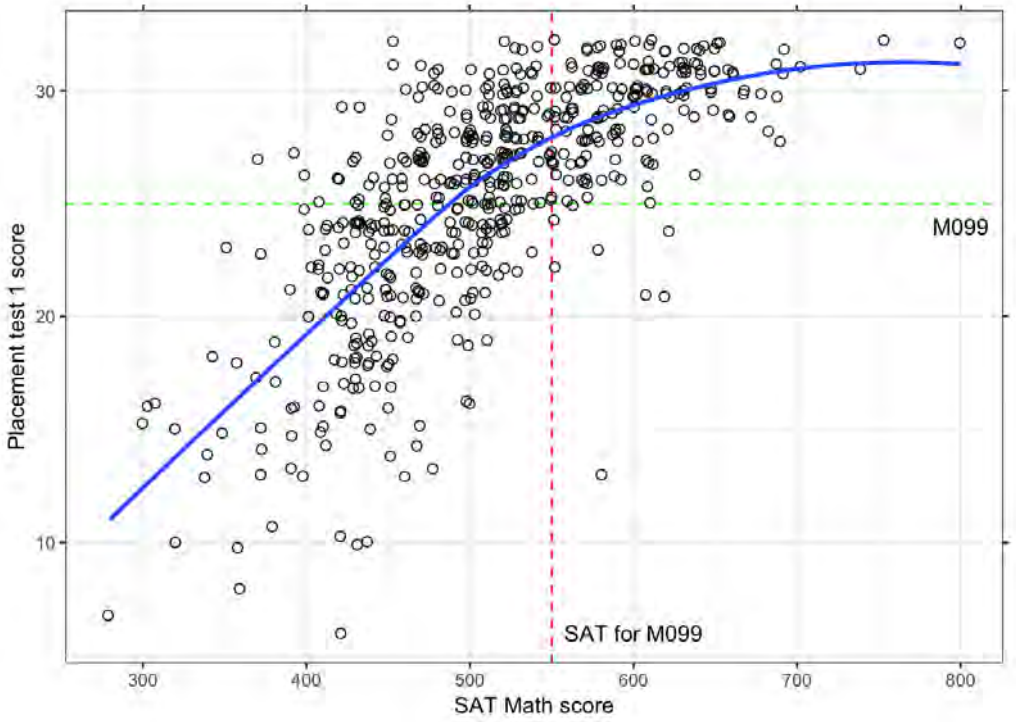


The grade distributions reinforce the concerns raised by the above graphs. Students with M99L placement who complete MATH 120 before enrolling in MATH 201 earn grades that are markedly lower than students with M200 placement having similar test 2 scores. For example, in our data set, only one of the M99L students earned and A or an A-, while six of the M200 students earned such grades. The center of the M99L distribution appears to be a B-, while the center of the M200 distribution is a B or B+. To put these local observations in context, one may read the blog post, The Pitfalls of Precalculus (http://launchings.blogspot.com/2014/10/the-pitfalls-of-precalculus.html), by former MAA president David Bressoud, who discusses more systematic research on the value or harm of precalculus classes and on useful factors for placement into calculus.

6 Placement tests and SAT Math scores

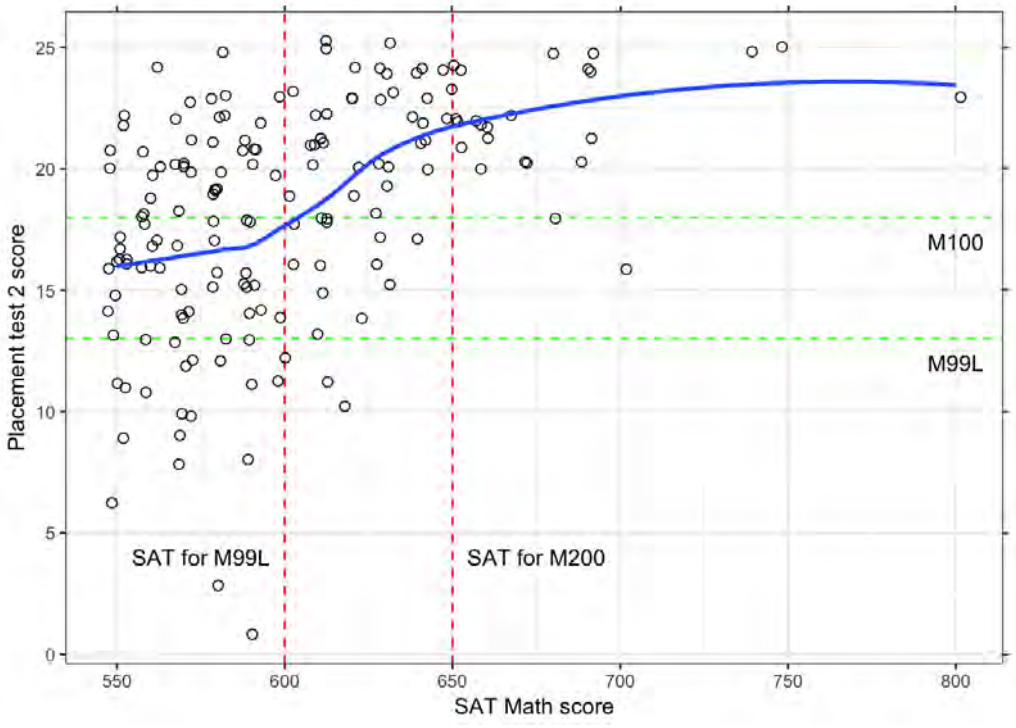
In this section, we examine the relation between placement test scores and SAT Math scores. The variability in the relation prevents us from making direct translations: we cannot predict the placement test scores exactly based on SAT Math scores. Nonetheless, in our analysis, we find some simple SAT-score cutoffs where we can be fairly confident that students should earn various placement levels. Although Hood no longer requires SAT scores of applicants, we can use SAT scores when provided as one of the factors in our new multi-factor placement model.

We first examine the relation between SAT Math scores and the score on placement test 1, displayed in the following figure.



The figure shows that on average test 1 scores increase steadily with SAT Math scores toward the maximum score of 32. On average, a student with an SAT Math score of around 500 will score at least 25 (the green line in the figure) and thus place above the M098 level. Within each group of SAT scores, there is considerable variability in test 1 scores, which decreases as the scores increase. At SAT score around 450, for example, the central test score is around 22 and typical scores range from around 15 to around 29. At SAT score around 600, on the other hand, the central score is around 30, and typical scores range from around 27 to 32. At SAT score around 550 (the red line in the figure), the central score is about 27 or 28 and typical scores range from about 25 to about 30. Based on the distribution of scores visible in the figure, we propose that any student who earns an SAT Math score of at least 550 should automatically have placement at the M099 level or higher.

Next we examine the relation between SAT Math scores and the score on placement test 2. We focus our attention on SAT Math scores of at least 550 to investigate the possible SAT Math cutoffs for placement beyond M099.



We see in the figure a similar pattern of placement scores increasing in tandem with SAT Math scores. The variability among placement scores for a given SAT score also decreases as the SAT score increases. For example, the central test 2 score for students whose SAT Math score is around 600 is around 18, and typical scores range from around 11 to around 23. For students whose SAT Math score is around 650, on the other hand, the central test 2 score is around 22, and typical scores range from around 20 to around 25. Based on the distribution of

scores visible in the figure, we propose that any student who earns an SAT Math score of at least 600 should automatically have placement at the M99L level or higher. Any student who earns an SAT Math score of at least 650 should automatically have a placement at the M100 level or higher; in fact, since very few students who place about the M99L level end up at the M100 level, we propose that these students be placed at the M200 level.

7 The proposed new placement model

We will try a new placement model this year based on Ann's research. The new model is *multifactorial* in the sense that it incorporates many factors to determine the placement. The three factors are: the placement test used for 2014-16, student SAT scores (when available), and a combination high-school course work and overall unweighted high-school GPA.

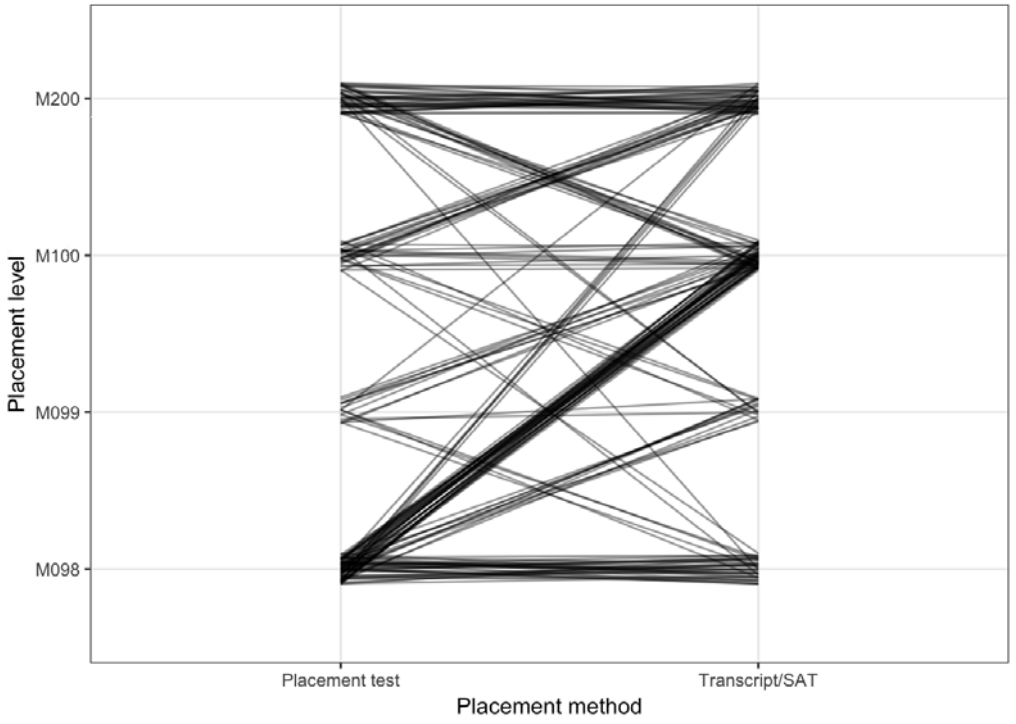
Our fundamental expectation is that students who have completed a standard college-preparatory mathematics curriculum in high school (typically at least Algebra 1, Geometry, and Algebra 2) will be ready to succeed in our 100-level courses. Student who have completed upper-level mathematical course work (e.g. precalculus or calculus) will be ready to succeed in our 200-level courses. We hope to require development courses only for students who have not successfully completed (at the C grade level or higher) the college-preparatory mathematics curriculum.

A distinctive feature of the transcript-analysis component of the model, which we adapted from a large project studying placement in California (the subject of a webinar that Ann attended), is that it combines high-school coursework with overall high-school GPA. The California data set and our own internal analysis support the conclusion that overall (unweighted) high-school GPA strongly predicts success: students with high high-school GPAs are ready to succeed in courses building on their high-school work (regardless of their placement test scores); students with low high-school GPAs may struggle even in courses that build on their high-school work.

7.1 Results of our transcript analysis

Ann and James analyzed the transcripts of all of the students in the incoming first-year class for Academic Year 2017-8 on June 1st and June 2nd 2017. The analysis of 239 transcripts took the two of us about 4 hours, divided between 3 hours on June 1st and 1 hour on June 2nd. We both noticed that our review pace was faster (thanks to experience reading transcripts and freshness) on June 2nd. We felt that reading the transcripts was an interesting and worthwhile task, and we would be willing to do it in the future. If we had all five mathematics faculty members working together on this sort of review, the entire job might take less than 2 hours.

The following figure compares how students placed using the placement test with how they placed using transcript analysis (and SAT scores). In this work, we have compressed the placement levels to M098, M099, M100, and M200, dropping the few students with AP or transfer placement and mapping M99L placement to M100 placement. We map M99L to M100, since our new model does not place many students at the M99L level, and compressing the two levels gives a clearer picture of how we move students around with the new model.

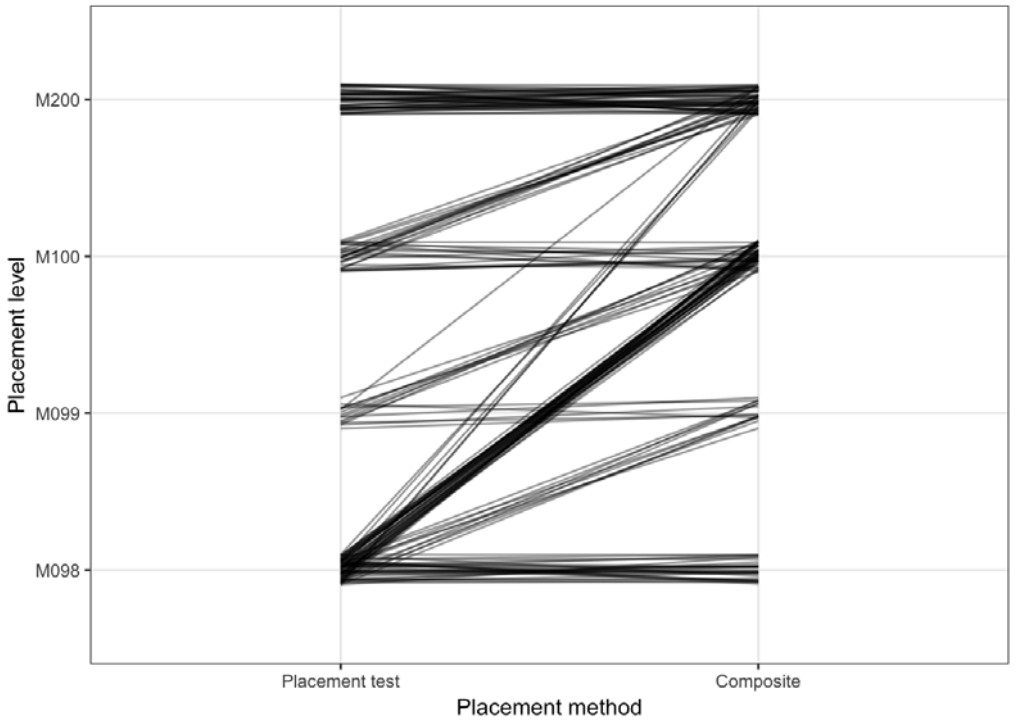


We can see from the figure that many students move from the M098 level to the M100 level. These students are typically those who have completed the college-preparatory curriculum and who have strong high-school GPAs. The students who moved from the M098 level to the M099 level are often those who did not complete the college-preparatory mathematics curriculum by the end of 11th grade or who completed this curriculum but did not have very high GPAs.

Another significant group of students moves from the M100 level to the M200 level. These are often students who have completed precalculus or calculus classes in high-school for whom our MATH 120 class does not seem particularly valuable (as discussed above).

The students who moved from M200 placement by the placement test down to M100 placement by transcript analysis are often those

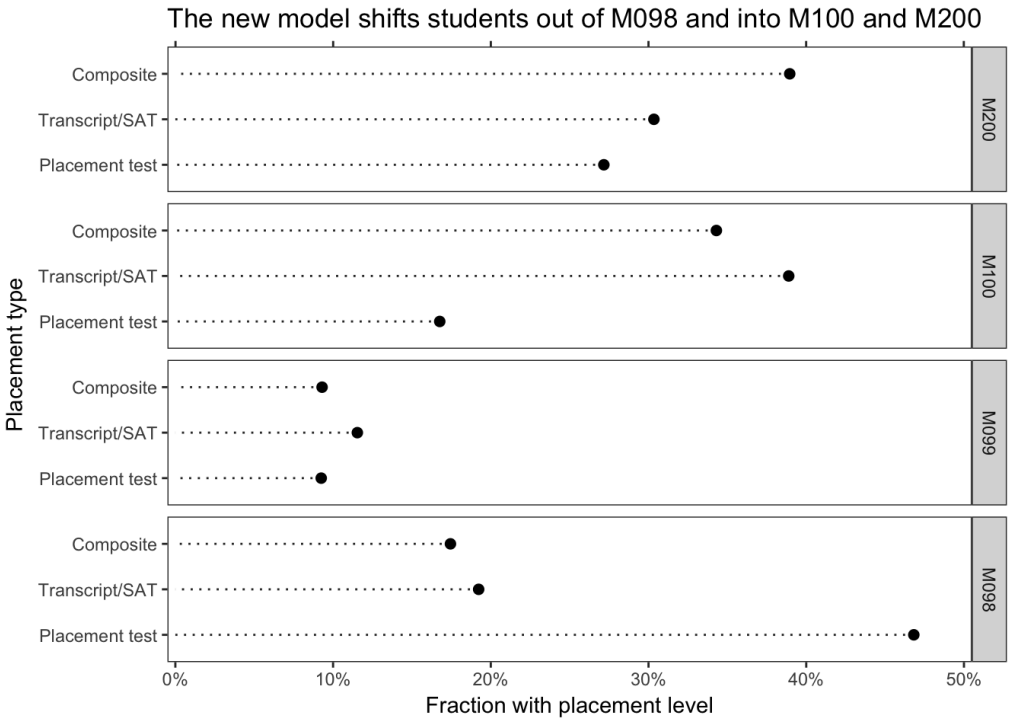
The following figure shows how student placement moves when we shift from the placement test alone to using all three factors (test, transcript, and SAT).



We can see the net effect of the multi-factor placement system:

- M098 placement (by test) splits essentially in two with one large group staying at M098 placement and another large group moving to M100 placement. A small number of students also move up to M099 placement.
- The few students who have M099 placement (by test) split roughly evenly between M099 placement and M100 placement.
- The students who have M100 (by test) split roughly evenly between M100 and M200 placement.
- Of course, all of the students at the top placement level (M200) keep this placement.

Another way to summarize the effect of the multi-factor system is to look at how it changes the overall distribution of student placements. We display these changes in the following figure.

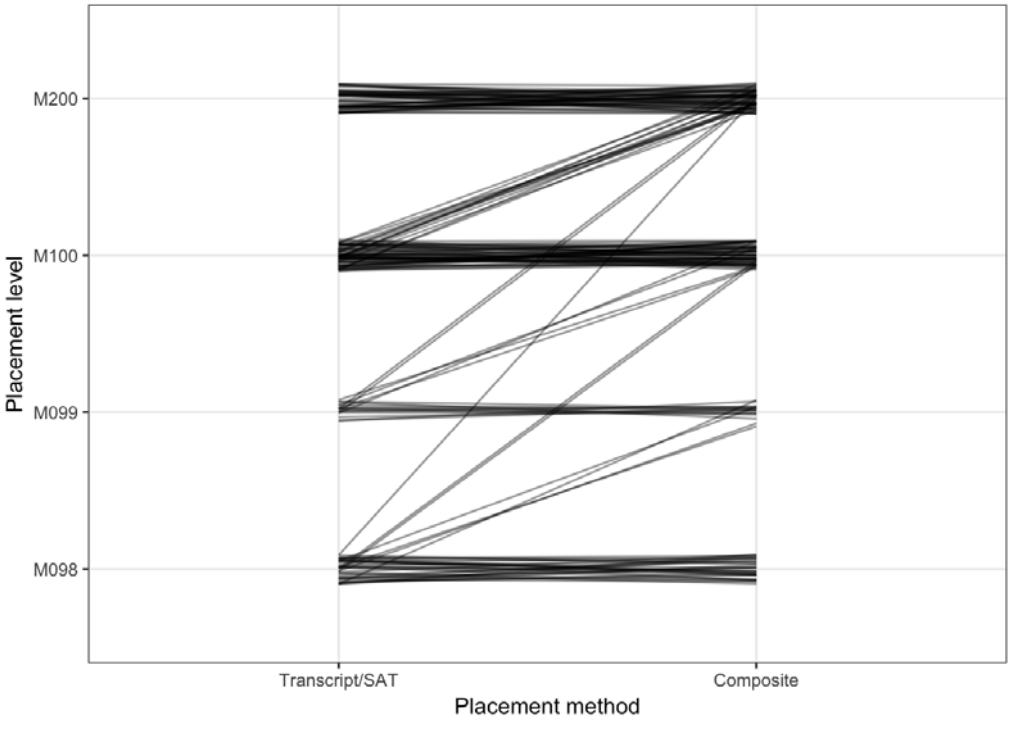


We first compare the composite and transcript systems. We see from the figure that the composite and transcript placement systems yield very similar distributions. The composite system places significantly more students at the M200 level (about 40% of students versus about 30% of students). The composite system places fewer students at each of the three lower levels with the largest difference at the M100 level (35% for composite versus 40$ for transcript).

The most dramatic difference between the composite and test systems is that the test system places many more students at the M098 level (about 45% for the test system versus about 17% for the composite system) and many fewer students at the M100 level (about 17% for the test system versus about 35% for the composite system). As we saw above, the cause of this difference is that transcript analysis moves students with college-preparatory mathematics and solid high-school GPAs from M098 placement to M100 placement.

7.2 Do we still need the placement test at all?

The placement test is still an important component of the overall placement system, even if we use transcript analysis. The following figure shows how student placements change between transcript analysis and the final composite placement.



The biggest change in moving from the transcript system to the final composite system comes for students who move from M100 placement by transcript analysis to M200 placement in the composite analysis. These students are often enrolled in precalculus or some other advanced course in their senior years. Their expertise from these advanced courses allows them to place into M200 by the test. It is possible that we could catch many of these students using a second round of transcript analysis over the summer just as we catch students with AP credit then. Nonetheless, the placement test does provide a way for these students to demonstrate their skills early and allows them enroll in 200-level classes before final transcripts are available.

A second role for the placement test is to allow students with lower high-school GPA (typically unweighted GPA below 3.0) to move into 100- and 200-level classes at Hood. Our transcript model penalizes such students by requiring much stronger evidence for placement than for students with higher high-school GPA. We can promote some of these students based on their SAT scores, but since submission of these scores is optional, it is useful to have an additional method.

A final important role for the placement test is as a method of last resort. For many international students, for example, it is difficult for us to tell using transcript review what level of placement is appropriate. Even some domestic students have an unusual collection of high-school courses that does not match the standard college-preparatory sequence, and we need test scores to determine placement.

It is possible that we could stop requiring all students to take the placement test and use it only to address the three roles. Students who were unsatisfied with their placement by transcript analysis could request either a further analysis of their final transcripts (including senior-year coursework) or could request to take the placement test.

From the perspective of timing, there is another practical value for the placement test: students can take the test as soon as they pay their deposits, but for the sake of efficiency, we may not choose to schedule transcript analysis until late May once essentially the entire first-year class has paid deposits. If we are interested in getting placement information as early as possible, the test is one way to get it.

Placement assessment

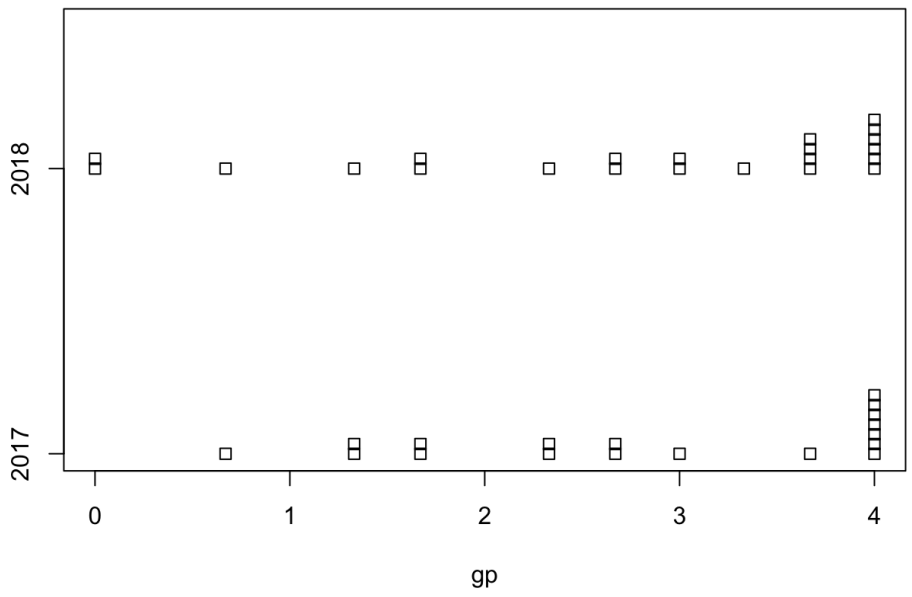
2019-01-24

1 Introduction

In what follows, I've started by looking at the 100-level core courses (the 111s and 112) and at 201 and 207.

2 Placement and grades for 200-level courses

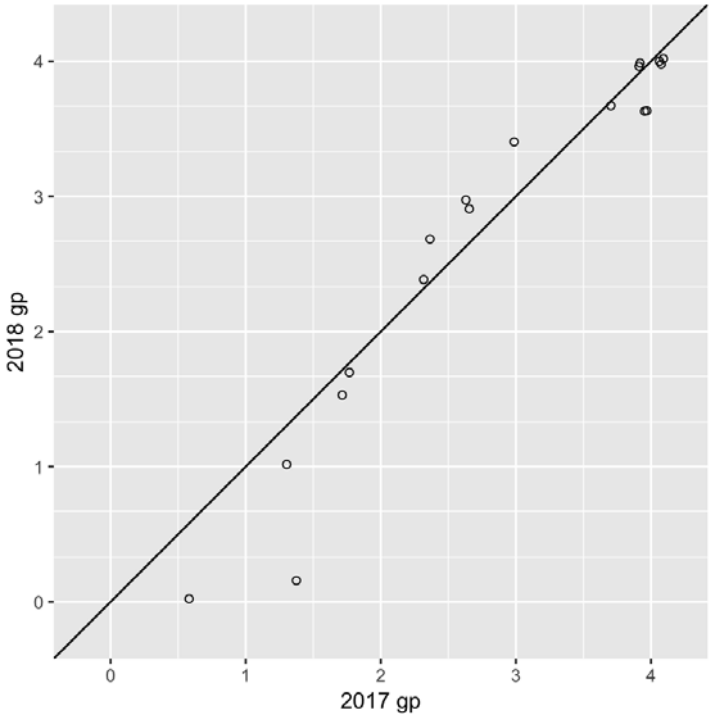
Some preliminary exploration: grade distributions in 200-level courses for students who matriculated in 2018 and 2017. Note that I did something funny in the processing here (and again below) with the "distinct" command: there are a few students who are listed twice in the file, not because they took two mathematics courses but because they have two different placement levels. I think these are all students from fall 2017, and perhaps they are the few whose placement levels Ann bumped up. (We'll have to ask her about that.) One should adjust things more carefully, but the adjustment below should be fine for a first look.



Here are summary statistics for the two groups. On the whole, they seem fairly similar.

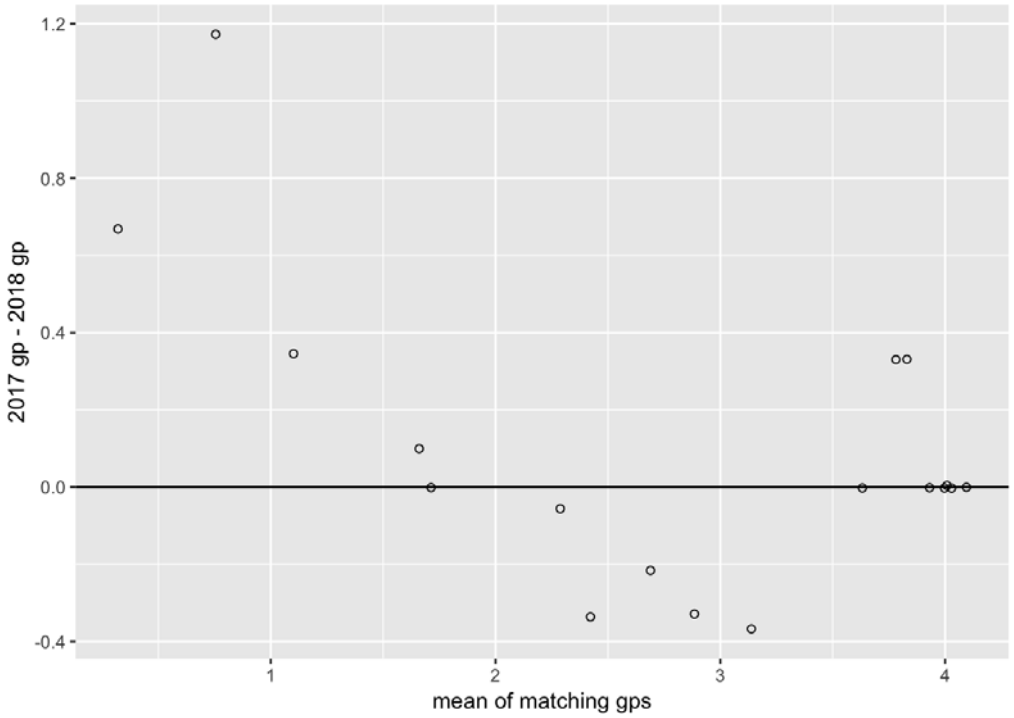
```
##   ACADEMIC_YEAR  min    Q1 median     Q3 max     mean       sd  n missing
## 1          2017 0.67 1.835  2.835 4.0000   4 2.852222 1.155954 18       0
## 2          2018 0.00 1.835  3.165 3.9175   4 2.773636 1.330941 22       0
```

We can look at a qq-plot to get a full comparison of the distributions. (We match students by their rankings in the two groups–perhaps with some interpolation–and plot (2017 gp value, 2018 gp value) for each pair.)



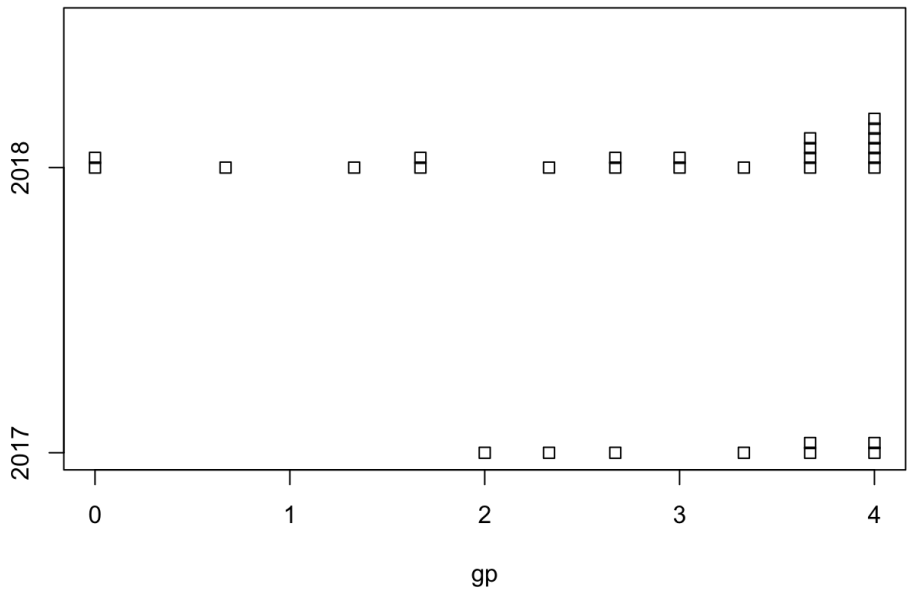
The Tukey mean-difference plot is a bit easier to process. (We match up students by rank in the group; the x-axis gives us the average gp value for a pair of students, and the y-axis gives is the difference (2017 student gp value - 2018 student gp value).) It suggests that 200-level students in fall 2017 at the very bottom of the distribution generally earned grades about a letter grade higher than the bottom students in fall 2018. Students in the middle did better in 2018 (by about a third of a letter grade), and students at the top did about the same.

Seeing no systematic difference here does not surprise me, judging from our earlier analysis of placement in summer 2017.



2.1 Comparison between 2017 and 2018 groups in fall 2018 courses

We can also compare grades between 2017 students and 2018 students in 200-level courses.



The 2017 students tended to do better than the 2018 students in 200-level classes. I don't know that this difference says anything about our placement system: the 2017 students had an extra year of maturity and experience with college-level coursework. The students who could meet the expectations of Hood had largely disappeared from the 2017 pool by fall 2018.

```
##   MATRIC_YEAR min    Q1 median     Q3 max     mean        sd  n missing
## 1        2017   2 2.585  3.500 3.7525   4 3.208750 0.7760603  8       0
## 2        2018   0 1.835  3.165 3.9175   4 2.773636 1.3309415 22       0
```

2.2 Conditioning on placement test and on final placement

Let's break down the grades in fall 2018 200-level courses for students who matriculated in 2018 according to their placement tests. We are looking at a small group, but the row for M098 by test it quite worrisome. It suggests to me that we might consider not M200 placement by transcript for anyone who placed into M098 by the test. Judging from this small group, I am not so worried about those who placed above M098 by test.

```
##   MAPLE_PLACEMENT  min     Q1 median    Q3  max     mean        sd  n
## 1            M098 0.00 0.5025   1.00 1.580 2.33 1.082500 0.9932229  4
## 2            M099 3.00 3.0000   3.00 3.000 3.00 3.000000        NA  1
## 3            M99L 1.67 1.6700   1.67 2.835 4.00 2.446667 1.3452261  3
## 4            M100   NA     NA     NA    NA   NA      NaN        NA  0
## 5            M200 0.00 3.0000   3.67 4.000 4.00 3.283077 1.1042221 13
##   missing
## 1       0
## 2       0
## 3       0
## 4       0
## 5       0
```

We can also condition on final placement, which does not provide any further information, since (of course!) everyone who matriculated in fall 2018 and who took a 200-level course then must have had 200-level placement.

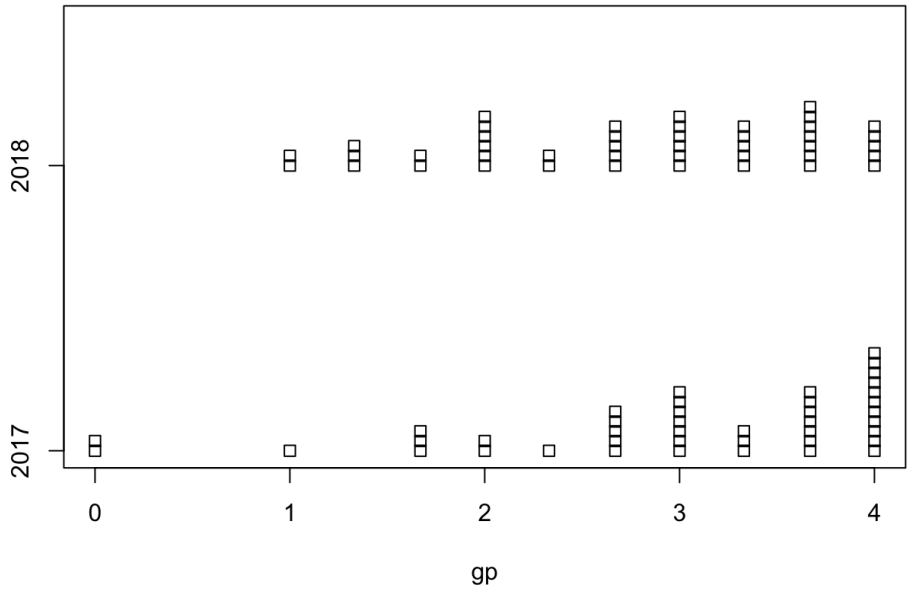
```
##   MATH_PLACEMENT min    Q1 median     Q3 max     mean       sd  n missing
## 1           M098  NA    NA     NA     NA  NA      NaN       NA  0       0
## 2           M099  NA    NA     NA     NA  NA      NaN       NA  0       0
## 3           M99L  NA    NA     NA     NA  NA      NaN       NA  0       0
## 4           M100  NA    NA     NA     NA  NA      NaN       NA  0       0
## 5           M200   0 1.835  3.165 3.9175   4 2.773636 1.330941 22       0
```

2.3 Summary

Although we are looking at small groups of students here, I am concerned about those students whose test placement was M098 but whose transcript placement was M200. I wonder if we need to provide extra support for these students–or if we need to consider placing them at the 100-level despite their strong transcripts.

3 Placement and grades for 100-level courses

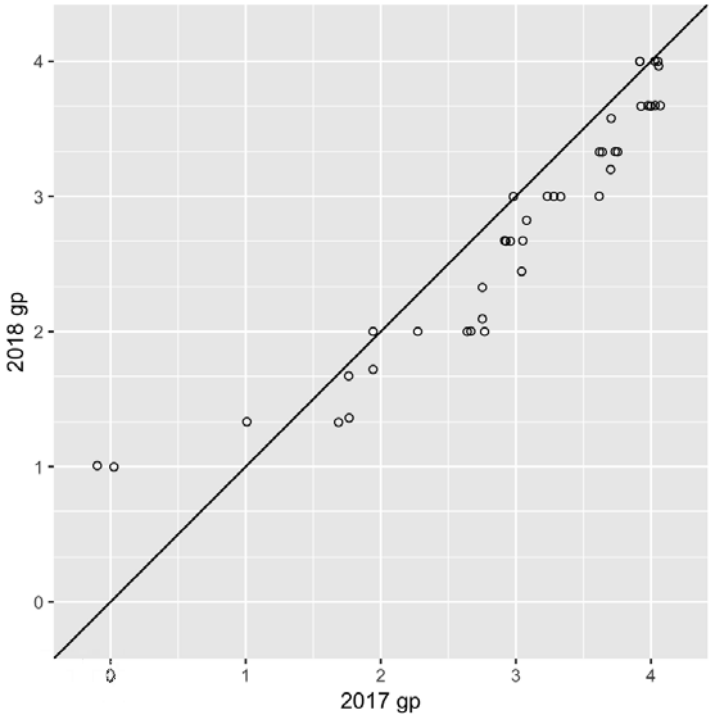
We can analyze grades in 100-level courses similarly. The grade distributions in fall 100-level for first-semester students look generally similar.



The summary statistics suggest that students in the 2017 group tended to do a bit better.

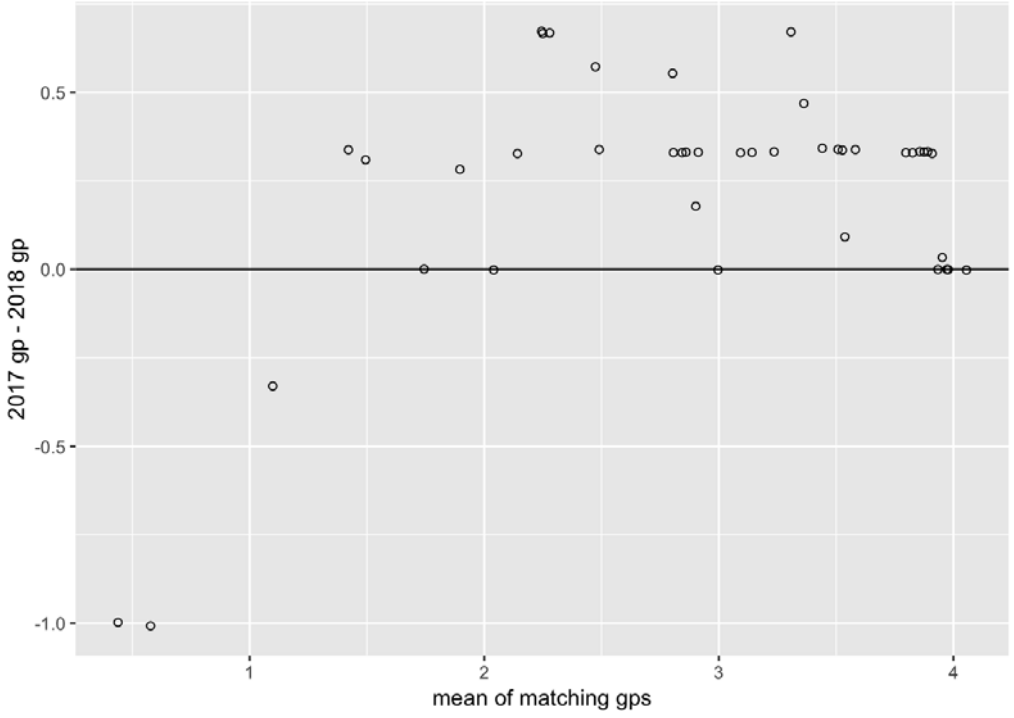
```
##   ACADEMIC_YEAR min   Q1 median     Q3 max     mean        sd  n missing
## 1          2017   0 2.67  3.165 3.9175   4 3.008810 1.0449162 42       0
## 2          2018   1 2.00  3.000 3.6700   4 2.783256 0.8999146 43       0
```

We can see how the distributions compare more clearly with another qq-plot.



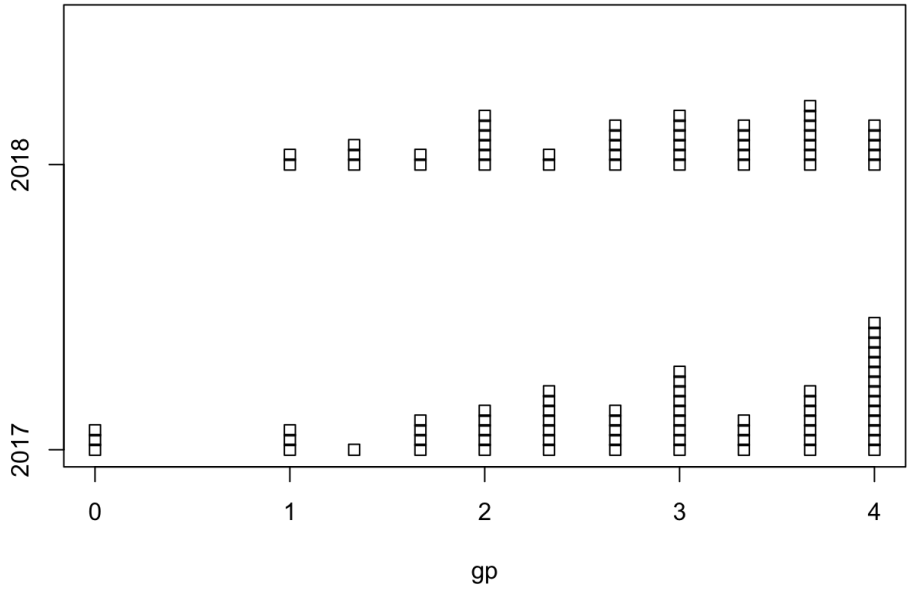
The Tukey mean-difference plot is a bit easier to process than the qq-plot.

It suggests that 100-level students in fall 2017 generally earned grades about a third of a letter grade higher than students in fall 2018. (This “third of a letter grade” difference seems plausible as the effect size of changing the placement scheme, judging from our detailed analysis of placement from summer 2017.)



3.1 Comparison between 2017 and 2018 groups in fall 2018 courses

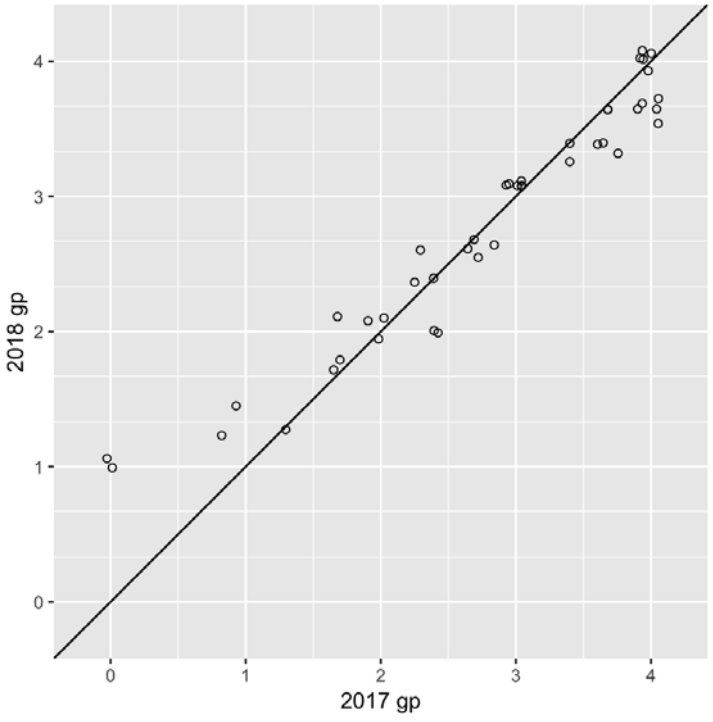
We can also compare 2017 and 2018 students in fall 2018 100-level courses (as we did above with 200-level courses).



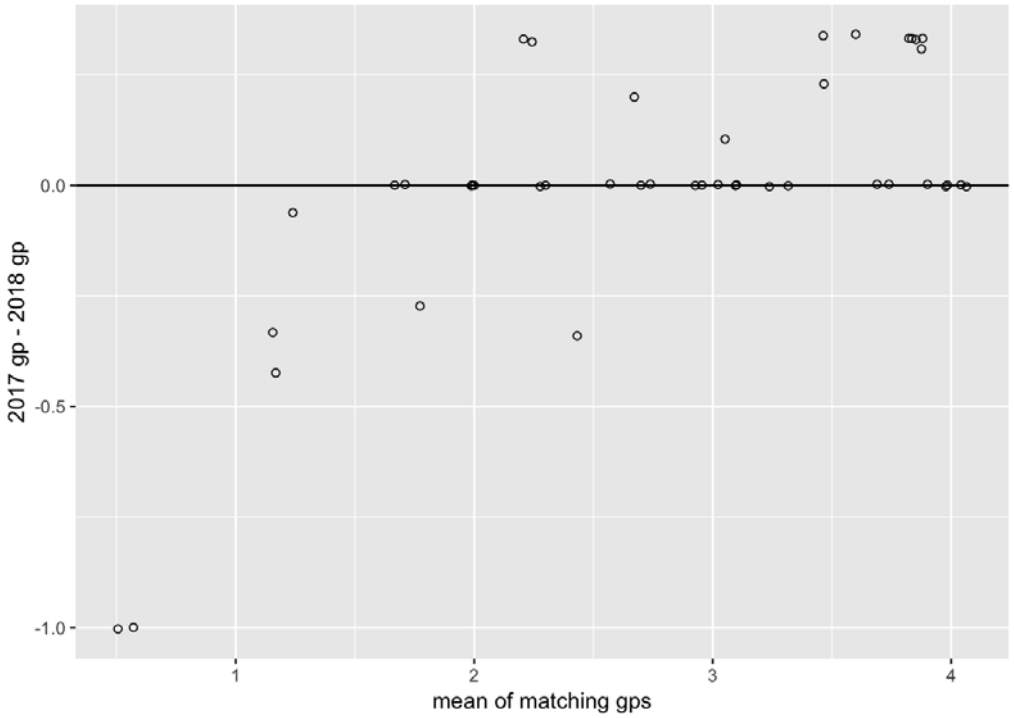
The summary statistics suggest that the two groups (2017 and 2018 students) had very similar performance overall in 100-level courses during fall 2018. (Corresponding statistics are nearly equal.)

```
##   MATRIC_YEAR min     Q1 median   Q3 max     mean        sd  n missing
## 1        2017   0 2.0825      3 3.67   4 2.785161 1.0884456 62       0
## 2        2018   1 2.0000      3 3.67   4 2.783256 0.8999146 43       0
```

The qq-plot supports this apparent close similarity in the distributions.



We get another view of the same matching from the Tukey sum-difference plot.



3.2 Conditioning on placement test and on final placement

We can look at grade distributions conditioned on placement by test. It is striking to see that almost half of the grades (among those who matriculated in fall 2018) for 100-level courses were for students who placed at the M098 level. These students all would have been required to take M098 if we had not incorporated transcript analysis into the placement. It appears from the data on final placements below that some of these students (three of them?) took M098 over the summer.

```
##   MAPLE_PLACEMENT  min   Q1 median   Q3  max     mean        sd  n missing
## 1            M098 1.00 2.00   2.67 3.00 3.67 2.537778 0.8500281 18       0
## 2            M099 1.67 2.00   3.33 3.67 4.00 3.000000 0.8969114  9       0
## 3            M99L 1.33 2.67   3.00 3.67 4.00 2.926667 0.9100137  9       0
## 4            M100   NA   NA     NA   NA   NA      NaN        NA  0       0
## 5            M200 2.00 2.33   3.33 4.00 4.00 3.132000 0.9314881  5       0
```

Here are summaries of the grade distributions conditioned on final placement (instead of test-only placement). The large group of students with M100 placement is probably essentially the same as the group of students who would have placed at the M098 level by the test.

```
##   MATH_PLACEMENT  min     Q1 median     Q3  max     mean        sd  n
## 1           M098 1.33 1.6650  2.000 2.8350 3.67 2.333333 1.2050864  3
## 2           M099 3.33 3.3300  3.330 3.3300 3.33 3.330000        NA  1
## 3           M99L 3.00 3.1675  3.335 3.5025 3.67 3.335000 0.4737615  2
## 4           M100 1.00 2.0000  2.670 3.2475 4.00 2.577308 0.9267214 26
## 5           M200 2.00 2.8350  3.330 3.6700 4.00 3.242727 0.6688960 11
##   missing
## 1       0
## 2       0
## 3       0
## 4       0
## 5       0
```

3.3 Summary

My overall impression here is that our adjustment to the placement system has not caused any harm to students in 100-level courses. First-semester students did perform a bit worse in fall 2018 than first-semester students performed in fall 2017. Judging from the parity in performance between 2017 and 2018 students in fall 2018 courses, perhaps this difference was simply a consequence of slightly different instructor expectations rather than a consequence of inferior student preparation for these courses within the 2018-matriculation group.

4 Math 120

There are not many MATH 120 students in this group. From the summary statistics below (taken from all of the students in the data set who earned grades in MATH 120), we can see that students who were placed at the M098 or M099 level and who continued on to MATH 120 were geenrally successful. In fact, they tended to do better on average than the M99L-level students, who took MATH 120 with the extra support of MATH 120L. These patterns are consistent with our earlier analysis of the effect of MATH 099 on performance in MATH 120.

```
##   MATH_PLACEMENT  min     Q1 median     Q3  max  mean        sd n missing
## 1           M098 1.67 2.0000  2.000 2.3300 4.00 2.400 0.9243646 5       0
## 2           M099 3.00 3.0000  3.000 3.0000 4.00 3.200 0.4472136 5       0
## 3           M99L 0.00 2.0000  2.000 2.6700 4.00 2.134 1.4456071 5       0
## 4           M100 0.00 1.5000  3.000 3.0000 3.00 2.000 1.7320508 3       0
## 5           M200 2.00 2.1675  2.335 2.5025 2.67 2.335 0.4737615 2       0
```

We can look at the small group of students who matriculated in 2018 and who took MATH 120 in fall 2018. Although there were only a handful of students, the low grades (two F's and a C) for students with test-based M098 placement echo the worrisome pattern visible in the fall 2018 grades for MATH 201 and MATH 207: students who place by test at the M098 level struggle in MATH 120, MATH 201, and MATH 207, even if their transcripts place them at the M100 or M200 level.

```
##   MAPLE_PLACEMENT min Q1 median Q3 max      mean       sd n missing
## 1            M098   0  0      0  1   2 0.6666667 1.154701 3       0
## 2            M099  NA NA     NA NA  NA       NaN       NA 0       0
## 3            M99L   3  3      3  3   3 3.0000000 0.000000 2       0
## 4            M100  NA NA     NA NA  NA       NaN       NA 0       0
## 5            M200  NA NA     NA NA  NA       NaN       NA 0       0
```

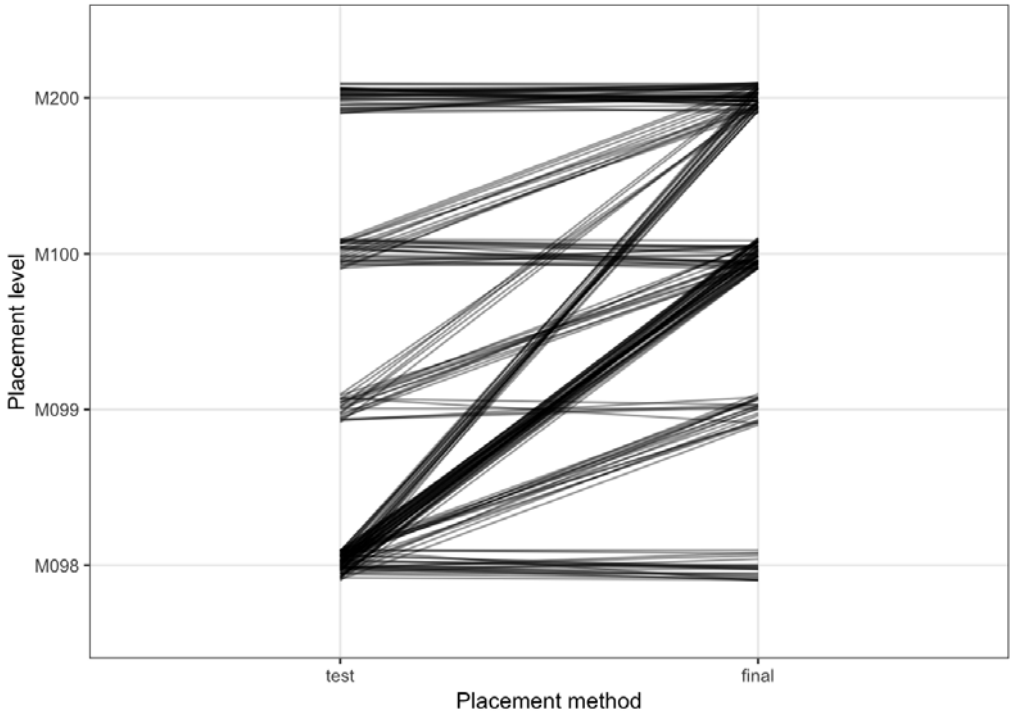
5 Effect of placement changes on course enrollments

I was surprised to see that the number of students who enrolled in 100-level or 200-level courses during their first semesters was essentially the same for the 2017 and 2018 groups.

6 Overall analysis of placement changes

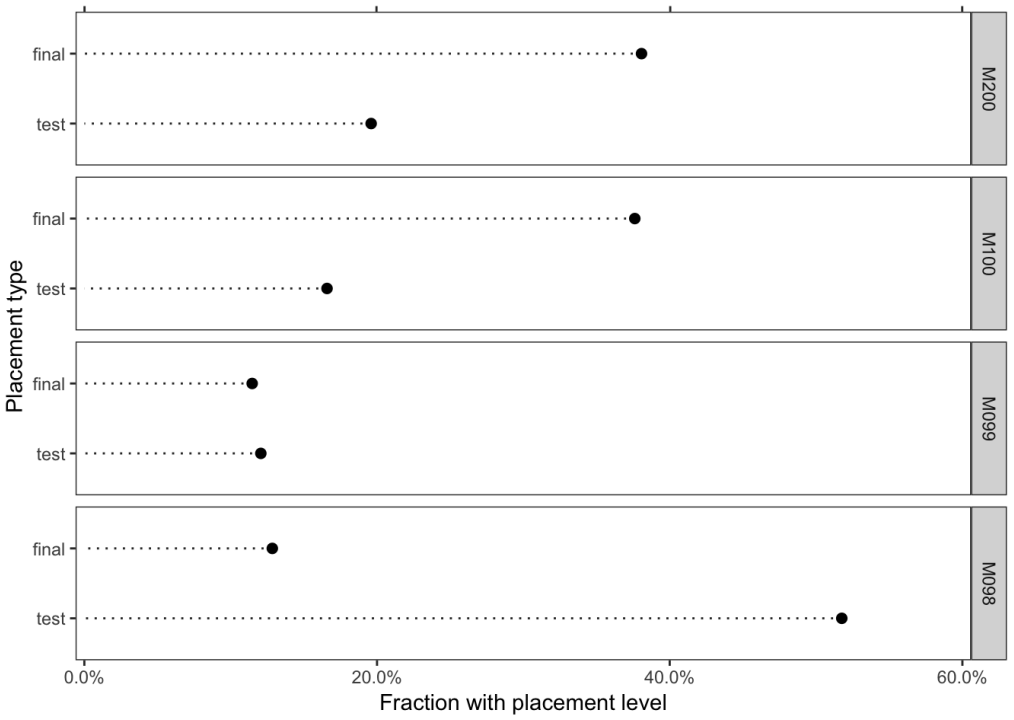
When we look at the effect of adding transcript analysis to the placement test results, we see

- Many students move from M098 to M100 placement.
- A significant number (more than in 2017) move from M098 placement to M200 placement. Judging from the small group of these students who took a 200-level course, I worry that this kind of movement may be placing unprepared students in 200-level courses.



We can see in the following chart that an astonishing fraction of the 2018 class placed at the M098 level by test–more than 50%. Here is the overall pattern since we started using this test (AY2014-15):

- about a third at the M098 level in 2014 and 2015
- about 40% in 2016
- about 47% in 2017
- about 52% in 2018.



6.1 Do we still need the placement test?

- The test lets us judge something objectively about changes in incoming classes.
- We can see a striking increase in the fraction of students placed into M098 by the test alone.
- Without the test, we would not have been able to see this change.
- The test-alone placement appears to be more strongly predictive of course grades than the test + transcript placement system.

7 Questions

1. Why did the new placement system not increase enrollment by first-semester students in our 100-level courses or 200-level courses?
2. How do spring courses look for students who took their first matheamtics course in the spring?
3. What happened to the small group of students whose placements we adjusted using transcript analysis in summer 2017?
4. Given that the placement test–at least the first part of it–seems to be a useful predictor of success in 100-level and 200-level courses, should we increase its role in placement decisions? (Should we not simply take the maximum placement of test and transcript methods?)

McDaniel College Placement Exams External Evaluation Documents

First Year Team

McDaniel College

March 16, 2018

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McDaniel College Mission Statement

McDaniel College is a diverse student-centered community committed to excellence in the liberal arts & sciences and professional studies. With careful mentoring and attention to the individual, McDaniel changes lives. We challenge students to develop their unique potentials with reason, imagination, and human concern. Through flexible academic programs, collaborative and experiential learning, and global engagement, McDaniel prepares students for successful lives of leadership, service, and social responsibility.

First Year Team/First Stop

The First Year Team is a cross-divisional group of McDaniel Faculty and Staff members who work to ensure a smooth transition from high school to college, and continue that support throughout a student's entire first year.

The First Stop Office serves as a central point, the "home base," of support, connection and welcome, for all new first-year and transfer students at McDaniel College.

The goal of First Stop is to connect students, in a "one stop" approach, to people, places and programs. New students are supported in their development within the offering of orientation, first year and transfer seminars, the Peer Mentor program, and overall programming and support for academic and social engagement in the college community.

The First Stop aims to build a strong foundational base for new students and support their development into a lifelong path of learning and success at McDaniel and beyond.

The initial point of contact for all incoming students can be found at this page: https://www.mcdaniel.edu/undergraduate/24-7-journey/your-first-year.

The homepage of the First Stop Office can be found at this page: https://firststop.mcdaniel.edu.

McDANIEL COLLEGE

Class of 2021 Profile

APPLICATION DATA	
First Year Applications	3,667
Transfer Applications	222
Total Applications	3,889
First Year Accepted	2,391
Transfer Accepted	138
Total Accepted Students	2,529
First Year Enrolled	450
Transfer Enrolled	60
Total Enrolled	510

DEMOGRAPHIC DATA (FY)	
States Represented (includes DC)	23
Multicultural Students	164 (36%)
Relatives of Alumni	43 (8%)
Honors Program	52 (11%)

2017 States Represented:

AZ, CA, CO, CT, DE, FL, GA, HI, KS, MA, MD, MI, NC, NJ, NM, NY, OH, OR, PA, TX, VA, WA, and the District of Columbia

Countries Represented by Passports:

Colombia, Cote D'Ivoire, Ecuador, Ethiopia, France, Germany, Guatamala, Guyana, Honduras, Kenya, Mexico, Nepal, Rwanda, Sierra Leone, Switzerland, The Bahamas, United Kingdom, United States

ENROLLED GPA DATA	
Average GPA	3.54
Middle 50%	3.1–3.9
Percent of Class w/GPA > 3.0	87%
Rank in Class (of those w/rank)	
Top 10 Percent	26%
Top 25 Percent	51%
Top 50 Percent	83%

HONORS PROGRAM PROFILE	
Average SAT Score	1396
Average GPA	3.93

SIGNIFICANT PARTICIPATION IN:	
Community Service	269 (52%)
Student Leadership	257 (50%)
Music and Theatre	172 (33%)
High School Athletics	361 (70%)
Recruited College Athletes	147 (32%)
Athletic Captains	160 (31%)
Student Government	62 (12%)
National Honor Society	109 (21%)
After School Employment	249 (48%)

McDANIEL COLLEGE

Office of Admissions • 2 College Hill • Westminster, Maryland 21157-4390

PHONE 800-638-5005 • **EMAIL** admissions@mcdaniel.edu • **WEB** www.mcdaniel.edu

Undergraduate Student Profile, Fall 2017

Enrollment

	FULL-TIME		PART-TIME	
	Men	**Women**	**Men**	**Women**
Undergraduates				
Degree-seeking, first-time freshmen	231	219	0	0
All other degree-seeking	523	558	9	9
Total degree-seeking	**754**	**777**	**9**	**9**

Enrollment by Ethnicity/Race

	Degree-Seeking First-Time First Year	Degree-Seeking Undergraduates (include first-time first-year)
Nonresident aliens	12	55
Hispanic/Latino	35	99
Black or African American, non-Hispanic	81	221
White, non-Hispanic	284	1,005
American Indian or Alaska Native, non-Hispanic	2	4
Asian, non-Hispanic	15	41
Native Hawaiian or other Pacific Islander, non-Hispanic	1	1
Two or more races, non-Hispanic	13	61
Race and/or ethnicity unknown	7	62
TOTAL	**450**	**1,549**

Enrollment by Ethnicity/Race, Trend Data

	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Nonresident aliens	3	-	-	14	22	16	54	55
Hispanic/Latino	59	84	75	100	95	96	93	99
Black or African American	117	155	192	218	195	225	211	221
White	1,326	1,274	1,250	1,249	1,252	1,116	1,012	1,005
American Indian or Alaska Native	12	16	14	22	6	3	3	4
Asian	59	65	62	66	54	58	37	41
Native Hawaiian or other Pacific Islander, non-Hispanic	1	-	-	1	1	1	1	1
Two or more races, non-Hispanic	15	-	-	-	50	50	50	61
Race and/or ethnicity unknown	43	35	57	22	31	39	93	62
TOTAL	**1,635**	**1,629**	**1,650**	**1,692**	**1,706**	**1,604**	**1,554**	**1,549**

General Education Requirements – the "McDaniel Plan"

The McDaniel Plan provides a liberal education that combines a comprehensive program of general education and a rigorous program in the major, complemented by electives and a range of special opportunities.

Many courses may be counted in fulfillment of more than one requirement. Please consult the listing of courses by department and the designations after each course.

I. Integrated Study in the Liberal Arts

A. First Year Seminar. First Year Seminars are innovative topical and thematic courses on a range of subjects suitable for first-year students that provide an introduction to the liberal arts and an academic transition to college. They seek to excite students intellectually and engage them as scholars. In addition to offering a rigorous academic content, First Year Seminars focus on fundamental skills that are necessary for academic success: critical thinking, effective writing, analytic reading, and oral communication.

Additionally, courses engage students as members of the McDaniel community by providing an introduction to important dimensions of the College: the nature of the liberal arts and sciences, The First Principles, the Honor System, academic expectations, information literacy, study skills and time management, cultural and co-curricular opportunities, and choosing a major.

Seminars are limited to 15 students, and Seminar instructors serve as students' first academic advisors. All first-year students must enroll in a First Year Seminar in the fall semester. For a list of First Year Seminars offered, see Academic Departments and Programs of Instruction.

B. Introduction to College Writing. All first-year students will be given introductory instruction in writing through course work offered by the English Department. As determined by the online placement examination, students will be placed in either ENG 1002: College Composition or ENG 1101: The Argument. Students must complete ENG 1101 with a grade of "C" or higher. If a student does not earn a grade of "C," he or she must take the course again by the end of the sophomore year and earn a grade of "C" or better.

Incoming students who have earned the following scores will satisfy the first-year writing requirement:

1. Pre-March 2016 SAT Critical Reading or SAT II in English - score of 700 or higher (no additional credit awarded)

2. New SAT (Post-March 2016) Evidenced-based Reading and Writing - score of 710 or higher (no additional credit awarded)

3. ACT - score of 32 or higher (no additional credit awarded)

4. AP Language test - score of 4 or 5 or AP Literature test - score of 5 (students will be awarded 4-8 credits)

5. IB English higher level exam - score of 4 or higher (students will be awarded 4 credits)

C. Global Citizenship. A McDaniel education is multicultural and international in scope. Students must develop an understanding of the world within and beyond the United States to develop into critical, sensitive, respectful, and compassionate global citizens. To fulfill the Global Citizenship requirement, students must take one course with a multicultural focus, and two courses with an international or cross-cultural focus.

1. Global Citizenship: Multicultural. Multicultural education will give students an understanding of the cultural pluralism of American society. Multicultural courses focus on the cultures and experiences of diverse groups in the United States that have been historically subordinated or marginalized and defined by such categories as race, gender, sexuality, class, religion, and disability. Students must complete one course with a multicultural focus.

2. Global Citizenship: International. International education is a critical component of global education. Students must understand, from contemporary and historical perspectives, their place in the global community and be prepared to navigate ever faster and more complex patterns of social and institutional interaction. International courses examine the perspectives and customs of cultures outside the U.S. or the relationship between the U.S. and world cultures. Students must complete two courses with an international focus. One of these courses must be nonwestern—that is, it must examine the cultures of Asia, Africa, the indigenous Americas, or the Pacific Rim, either exclusively or in explicit comparison with other regions. One of the two courses may be fulfilled by successful completion of an approved program of study abroad.

D. Second Language. The study of other languages introduces important avenues of communication and promotes linguistic, cultural, historical, and international understanding. Second language skills are an important and often necessary prerequisite for graduate study and provide an advantage for careers in many fields. McDaniel students must fulfill the second language requirement in one of the following ways:

1. Placing above the second semester of college-level language instruction through an examination administered by the Department of World Languages, Literatures, and Cultures or the ASL/Deaf Studies Program

2. Completing a 1102- or 1103-level language course

3. Completing an approved program of second language in a study abroad program

Students who fulfill their language requirement in ASL must fulfill their Global Citizenship requirement with three International courses instead of two International courses and one Multicultural course.

Second language study is not required of students who are demonstrably proficient in a language other than English. Proficiency can be demonstrated through one or more of the following:

1. School diploma or transcript from a program where the language of study is other than English

2. Official TOEFL score

3. Performance on a test similar to placement exams given by the Foreign Language department at McDaniel.

4. Documentation provided by externally by another institution (another college, embassy).

5. Documented work/life experience in a language other than English. Documentation may include a letter by an employer, a sponsoring organization, etc.

The burden of evidence is the responsibility of the student seeking the waiver.

E. Departmental Writing. Students will further develop their abilities in writing through a program of departmental writing. Each department or major program at the College provides a course or courses or a strategy to develop writing skills appropriate for its majors. Students must complete the requirement in Departmental Writing as indicated in their declared major. In some cases, this is incorporated into the course requirements for the major; in other cases, it is in addition to the requirements for the major. For further information, see the listings for the individual departments and programs or consult with the chair.

F. Critical Inquiries in the Liberal Arts. Critical Inquiry courses explore vital areas of knowledge in ways that stretch students' abilities to inquire and imagine. They focus on

key practices and methodologies that are central to the academic search for knowledge and are designed to advance the capacity for clear, critical, and creative thinking and communication across the breadth of the liberal arts. The areas of knowledge covered by these categories are important for the development of thoughtful, informed, and imaginative citizens. Students must take a total of seven courses in Critical Inquiries. Although some courses may count toward several different categories, a given course may be used in fulfillment of only one category.

1. Scientific Inquiry and Quantitative Reasoning. Scientific Inquiry and Quantitative Reasoning courses explore various areas of scientific knowledge and quantitative analysis. Scientific Inquiry courses teach students how scientists ask particular questions and the methods by which they attempt to answer these questions. Quantitative Reasoning courses teach students how to think logically and how to analyze problems. They provide students with the ability to read and use quantitative data, interpret quantitative evidence, and apply basic quantitative skills to problem solving. Students must take three classes in Scientific Inquiry and Quantitative Reasoning: these three must include one course in Quantitative Reasoning and one Scientific Inquiry course that includes an approved laboratory component.

2. Social, Cultural, and Historical Understanding. Courses in Social, Cultural, and Historical Understanding explore the richness of human experience. These courses examine the myriad dimensions of human experience and achievement—ethical, historical, political, psychological, religious, and social—and teach students the methods of research and theoretical analysis necessary for the study of individuals, societies, or cultures. Students must take one course in Social, Cultural, and Historical Understanding.

3. Textual Analysis and Creative Expression. Human creativity may be defined by and explored from a broad range of disciplinary perspectives—the humanities, sciences, and the fine arts. Creativity usually results in new insights, understanding or aesthetic appreciation. Courses in this category require students to examine creativity from different perspectives. Textual Analysis courses focus on the interpretation of written texts. They provide students with extensive practice in the art of reading and close analysis of sophisticated writing. Creative Expression courses focus on the interpretation of creative texts or products, or on the reflective participation in the creative process itself. Students must take one course in Textual Analysis and one course in Creative Expression.

G. January Term. January Term is a three-week term between the fall and spring semesters in which students and faculty explore new areas and expand their intellectual horizons. Students choose from specially designed courses offered on and off campus. Some students take advantage of January Term for independent off-campus study or join one of the popular study tours abroad.

All students must complete one two-credit January Term course. For a fuller description of Jan Term, see below under Electives and Special Opportunities. For a list of Jan Term courses, see Academic Departments and Programs of Instruction.

H. Physical Activity and Wellness. Each student at McDaniel College must demonstrate an acceptable level of knowledge and competence in two courses or activities that are intended to develop physical fitness and/or promote informed and positive attitudes and behaviors that lead to lifetime wellness. Students may satisfy all or part of this requirement through certification or by departmentally administered competence tests. Intercollegiate athletes can receive a waiver of one course per season. ROTC cadets receive a waiver of one course per semester enrolled. Veterans of the US Armed Services receive a waiver for both courses. A credit/fail option is available for all Physical Activity courses that are not taken as a requirement for a specific program.

Student Learning Outcomes for General Education Tags

Overview: These student learning outcomes (SLOs) were reviewed and refined by the Faculty over the course of the 2015-2016 academic year through online surveys, open meetings, and consultations with stakeholders. The Curriculum Committee then reviewed these SLOs and offered further feedback. They were approved by the Faculty on May 3, 2016.

First-Year and Transfer Student Seminar

FY/TSS_SLO 1: Students demonstrate the ability to critically analyze college level material.
FY/TSS_SLO 2: Students demonstrate effective oral communication, both in class presentations and informal discussions.
FY/TSS_SLO 3: Students demonstrate basic information literacy skills, including research, evaluation and citation.

Introduction to College Writing

COMP_SLO1: Students demonstrate an ability to construct an argument and offer appropriate evidence in support of their argument.
COMP_SLO2: Students can identify the resources and processes they need to use in order to write well.
COMP_SLO3: Students have strategies for analyzing and interpreting written texts.
COMP_SLO4: Students understand and employ the conventions appropriate to particular writing situations.

Global Citizenship: International (Western or Non-Western)

I_SLO1: Students will be able to apply knowledge gained regarding their own culture and place in the global community, in order to make informed comparisons
of different historical and/or contemporary perspectives.
I_SLO2: Students demonstrate skills and attitudes (e.g., heightened self-awareness, capacity for perspective shifting, acceptance of global civic responsibility) conducive to intercultural competence.
I_SLO3: Students demonstrate knowledge of a cultural group outside of the United States.

Global Citizenship: Multicultural

M_SLO1: Students analyze the effect of marginalization and subordination of groups defined by categories, (e.g., race, ethnicity, gender, sexuality, religion, language, social class, and disability).
M_SLO2: Students demonstrate skills and attitudes (e.g., heightened self-awareness, capacity

for perspective shifting, acceptance of personal and social responsibility) conducive to intercultural competence.
M_SLO3: Students demonstrate knowledge of the cultural pluralism of American society and identify the histories and contributions of diverse communities in the United States.

Second Language

SL_SLO1: Students will perform fundamental communicative tasks, express personal meaning, and demonstrate basic knowledge of selected Second Language culture at the "Novice High" level as defined by the American Council on The Teaching of Foreign Languages (ACTFL).

Departmental Writing

DW_SLO 1: Students demonstrate rhetorical knowledge (i.e., the ability to analyze and act on understandings of audiences, purposes, and contexts in creating and comprehending texts).
DW_SLO 2: Students demonstrate critical thinking through writing, reading, and research (i.e., the capacity to analyze, synthesize, interpret, and evaluate ideas, concepts, and evidence).
DW_SLO 3 Students demonstrate adaptive writing processes (i.e., the ability to conceptualize, develop, revise, and finalize writing projects for varied contexts and occasions).
DW_SLO 4: Students demonstrate knowledge of discipline-specific conventions in the genres they are asked to produce.

Scientific Inquiry

SI_SLO1: Students understand how scientists generate hypotheses and use appropriate methods to test them.
SI_SLO2: Students distinguish between scientific and non-scientific evidence.
SI_SLO3: Students understand how scientific theory and research can be applied to problems facing our world, while considering ethical practices, the social context of science, and methods of communication of scientists.
SI_SLO4: Students demonstrate the ability to design scientific experiments or make objective, empirical observations, and analyze their data and draw logical conclusions. [Laboratory component only]

Quantitative Reasoning

QR_SLO1: Students identify essential quantitative elements of a problem, formulate a strategy for solving the problem, and then apply techniques they have learned to solve the problem.
QR_SLO2: Students demonstrate an understanding of the logic behind quantitative reasoning by developing a formula/algorithm to solve a problem**,** and by explaining the rationale behind the formula/algorithm and what its elements mean.

Social, Cultural and Historical Understanding

SCH_SLO1: Students understand the effect of social, cultural, or historical variables on the human experience.
SCH_SLO2: Students understand how theories and methods are used to arrive at social, cultural, or historical knowledge within a discipline.

Textual Analysis

TA_SLO1: Students demonstrate close reading of a written text.
TA_SLO2: Students demonstrate the ability to critically analyze a written text in terms of structure and rhetorical strategies.
TA_SLO3: Students demonstrate the ability to interpret the meaning of a written text.

Creative Expression

CE_SLO1: Students demonstrate skills (e.g., interpretation, creation, practice, performance) relevant to the creative process.
CE_SLO2: Students demonstrate an awareness of the value of the creative process in the human experience.

Physical Activity and Wellness

PAW_SLO1: Students demonstrate the knowledge, skill, and ability to safely participate in physical activity.
PAW_SLO2: Students will be able to explain the importance of lifetime fitness.

Current Practices – English

This exam is *required* of all students. Exams are located on Blackboard. Completion of the exams is part of the First Year Student Checklist, found here: https://www.mcdaniel.edu/undergraduate/24-7-journey/your-first-year/first-year-student-checklist.

All first-year students will be given introductory instruction in writing through course work offered by the English Department. The English placement exam (created internally) is given online in Blackboard starting in March of the spring prior to the new student's arrival. The first deadline is typically in early June. The student submits an essay for review. The essay is reviewed by the English department and the student can place into: ENG 1002 (Pre-Req to 1101: 4 credits), ENG 1101 (4 credits) or participate in Directed Self Placement (DSP) in which the student is given a choice between ENG 1002 and ENG 1101 to best suit their identified needs.

The online placement examination entails reading an essay prompt (approximately 10-15 minutes), then composing an essay of about 500 words in response. Estimated time for completion is 1 hour. Course placement is available under the test summary page on the student portal. Blackboard will show the essay has been completed and a coded score, but not their course placement.

Incoming students who have earned the following scores will satisfy the first-year writing requirement:

1. Pre-March 2016 SAT Critical Reading or SAT II in English - score of 700 or higher (no additional credit awarded)
2. New SAT (Post-March 2016) Evidenced-based Reading and Writing - score of 710 or higher (no additional credit awarded)
3. ACT - score of 32 or higher (no additional credit awarded)
4. AP Language test - score of 4 or 5 or AP Literature test - score of 5 (students will be awarded 4-8 credits)
5. IB English higher level exam - score of 4 or higher (students will be awarded 4 credits)

HOWEVER, students should take the English placement exam even with pending SAT, AP or transfer credit, since such credit is not official until the Registrar's Office has received the official reports and the results are posted in the college's information system. This does not happen until after the exam period.

Current Practices – Mathematics

This exam is *optional* for students. Exams are located on Blackboard. Completion of the exams is part of the First Year Student Checklist, found here: https://www.mcdaniel.edu/undergraduate/24-7-journey/your-first-year/first-year-student-checklist.

Placement exam is only available online for limited times in June and July, and in person in October and March. The exam is in four parts, although Part Four is optional.

- Part One--Arithmetic (32 questions; 75 minutes time limit)
- Part Two--Algebra 1 (25 questions; 60 minutes time limit)
- Part Three--Algebra 2 (10 questions; 30 minutes time limit)
- Part Four--Elementary Calculus (15 questions; 45 minutes time limit)

Test scores are not available to students. Course placements are available under the test summary page on the student portal. PLEASE NOTE: The table below is currently under revision.

What does my Mathematics placement score mean?		
Placement reported	**What Mathematics courses am I eligible to take?**	**What other courses have become available to me because of this placement?**
Placement: MAT-1001 Placement: MAT-1002	You have not yet demonstrated knowledge of arithmetic or algebra. You may enroll in the non-credit MAT 1001 and MAT 1002 courses to build these skills, or possibly re-take the Placements Test.	
Placement: MAT-1001 Met: MAT 1002	You have demonstrated knowledge of algebra, but have not yet demonstrated knowledge of arithmetic. You may enroll in the non-credit MAT 1001 course, or possibly re-take the arithmetic section of the Placement Test.	
Placement: MAT-1002 Met: MAT-1001	You have demonstrated knowledge of arithmetic, but have not yet demonstrated knowledge of algebra. You may enroll in the non-credit MAT 1002 course, or possibly re-take the algebra section of the Placement Test.	BUA 1101, ECO 1101, EPE 3325
Placement: MAT-1106/1107	You are eligible to enroll in either MAT 1106 Mathematical Excursions or MAT 1107 College Algebra. If you might take Calculus at some point, opt for MAT 1107 rather than MAT 1106!	Courses listed in the cell above, plus CHE 1103, CSC 1106, ECO 2201 and higher, GSC 1153, PHI 2233, PSY 2223, STA 2215
Placement: MAT-1117	You are eligible to enroll in MAT 1117 Calculus I.	Courses listed in all cells above, plus PSY 1101 (MAT 1117 is a co-requisite of PHY 1101)
Placement: MAT-1118	You are eligible to enroll in MAT 1118 Calculus II.	Courses listed in all cells above

Current Practices – Foreign Language

This exam is *required* of all students. Exams are located on Blackboard. Completion of the exams is part of the First Year Student Checklist, found here: https://www.mcdaniel.edu/undergraduate/24-7-journey/your-first-year/first-year-student-checklist.

Students can take Spanish, French or German placement exams online. Students who need a test in ASL, Arabic, Latin or Chinese need to contact the First Year Team for further instruction. Students should take the language exam in the language they studied in high school, even if they choose to start a new language at McDaniel. Students who place into a 2100 level or higher class based on their written exam will also need to take a required oral exam administered at orientation. Only those students who score high on the written AND oral portions are eligible to place out of the language requirement. Course placement is available under the test summary page on the student portal. Blackboard will show the exam has been completed and the coded score, but not their course placement. PLEASE NOTE: The table below is currently under revision.

Language	Placed into	Score
FRENCH	FRE 1101	00-22
	FRE 1103	23-36
	FRE 2100 or 2200-level courses	37-45 (=SL fulfilled)
	FRE 2500 to 2900-level courses	46-54 (=SL fulfilled)
	FRE 3000-level courses	55- (=SL fulfilled)
GERMAN	GER 1101	00-29
	GER 1102	30-50
	GER 2211	51-60 (=SL fulfilled)
	GER 2212/2221	61-80 (=SL fulfilled)
	GER 3000-level course	81-100 (=SL fulfilled)
SPANISH	SPA 1101	0-8
	SPA 1102	9-15
	SPA 2211	16-21 (=SL fulfilled)
	SPA 2212	22-28 (=SL fulfilled)
	SPA 2230 (Fall or Spring)	29-38 (=SL fulfilled)
	SPA 3303/3309	39-46 (=SL fulfilled)

Blackboard Portal

The placement exams at McDaniel College use Blackboard for administration. In the pages that follow, you will see:

- Welcome Page
- English
  - Instructions/FAQ
  - Writing Prompt
  - Submission Page
- Foreign Languages
  - Instruction Page
  - Spanish Placement, Parts 1-3
  - French Placement, Parts 1-3
  - German Placement, Parts 1-2
- Mathematics
  - Instruction Page
  - Arithmetic Sample Test, as referenced on Instruction Page
  - Algebra Sample Test, as referenced on Instruction Page
  - Mathematics Placement Background Questionnaire
  - Mathematics Placement, Parts 1-4
    - Please note that only the first question from each part was printed
- My Grades
  - This is the location where a student can view their raw score for English and Foreign Language Placement
- What do my Scores Mean?
  - Information for students after the placement testing is complete

You recently left the test 'Mathematics Placement Part 3 (Algebra 2)' without submitting it. It was automatically submitted for you. Contact your instructor for assistance if you did not mean to leave and submit your test.

Course

Announcements

Welcome class of 2021!

Posted by: Laura Wyatt
Posted to: First Year Placement Exams Fall 2017

Posted on: Wednesday, March 8, 2017 12:41:05 PM EST

Your Placement Exams Course in Blackboard has been made available for you. Please log into the MyMcDaniel Portal and click on the Blackboard link to enter Blackboard. Your Placements course will be located under the My Courses module on the Blackboard dashboard page.

We strongly recommend that you use Firefox or Google Chrome to take your placement tests. Please avoid taking your placement tests on mobile devices such as iPads, iPhones, and Android devices.

Before you connect with your academic advisor and register for your fall semester classes, you must take placement exams. These exams are designed to help you and your adviser make informed decisions about which courses to take. Placement exam results will not show up on your transcript or affect your grade; they are only one of many factors to consider when choosing courses. If you believe that your placement exam results are not an accurate reflection of your knowledge and experience in these fields you should discuss this with your adviser or a member of the First Year Team.

You **must** take the English placement exam.

You **should** take the Math placement exam, especially if you plan to take any courses in Math or Computer Science or any courses that might use mathematics.

You **must** take placement exams in Spanish, French, or German. You should take the language exam in the language you studied in high school, even if starting a new language at McDaniel.

If you plan to take American Sign Language, Arabic, Chinese, or Latin at McDaniel, the placement test is offered only during Orientation. Please contact the First Year Team (firstyearteam@mcdaniel.edu) to sign up.

WHAT TO DO:

1. **Take your English Placement first**. You will not be allowed to register for classes until you complete this task. Allow about an hour and 15 minutes to read the essay prompt and write your essay.
2. **Next take your Mathematics Placement.** There are four parts to the exam, but part 4 (calculus) is optional. Allow about two and a half hours to take these placements.
3. **Then take your Language Placement**. Choose from Spanish, French, or German. Allow about an hour and a half. If you need to test in ASL, Arabic, Latin, or Chinese, please email the First Year Team at firstyearteam@mcdaniel.edu.

SUGGESTED STRATEGY.

- **Do not wait until the last minute**. It makes the most sense to take these over several days. For example, take your English placement one day, your Mathematics another, and your Language placements yet another.
- **Read Instructions carefully**. First click on the instructions link for the exam you plan to take that day, read

the instructions, then click on the link to the placement exams.

I. English Instructions

English Instructions

NOTE: Please take these placements using a desktop or laptop computer. Phones, Kindles, and even iPads are not able to display the Blackboard scripts. Students have found that Mozilla Firefox to be the best browser.

This placement exam is designed to help place you into either **1002: College Composition OR 1101: Introduction to Writing: The Argument**.

Although most students will be automatically placed into the appropriate course by the placement essay readers, those students whose essays indicate that they could benefit from placement within either course will be allowed to choose the placement that best suits them. If the readers determine that you are in this second category, you will be contacted prior to enrolling for your fall courses.

> Students should take the English placement exam even with pending SAT, AP or transfer credit, since such credit is not official until the Registrar's Office has received the official reports and the results are posted in the college's information system. This does not happen until after the exam period.

If you have other questions about this placement test, see our list of Frequently Asked Questions (below).

WHAT TO DO:

Click the "--English Placement" link on the Main Course Menu

1. Click on the **English Placement Prompt and Submission Area** folder
2. Read the Essay prompt (this should take you about 10-15 minutes)
3. Click on the link directly below the prompt to compose and submit your essay of about 500 words (this should take you about an hour).

- If you have questions about the test itself, contact Suzanne Nida at snida@mcdaniel.edu.
- If you have technology-related concerns or questions, contact Steve Kerby at skerby@mcdaniel.edu.

ENGLISH PLACEMENT FAQs

1. I took the AP test. Do I have to take this writing placement essay as well?

Yes. You will need a 4 or a 5 on the AP Language test or a 5 on the AP Literature test to place out of English 1101. Since you most likely will not have the results of your AP test until after your fall schedule is determined, you must still take the writing placement essay.

However, if you do have your scores and they have been sent to and received by the McDaniel College registrar, you do not have to take the placement test if the scores exempt you from English 1101.

2. Why can't I wait to get my AP scores and THEN take the writing placement essay?

Because placement for your fall courses will be made before you get your AP test results back, you must take the writing test by the **June 1** deadline. If, when your AP scores arrive (usually early July), you score high enough to place out of composition, you may then drop the composition course for which you registered and, after consulting with your advisor, replace it with an alternate course.

3. What happens if I don't take the English placement essay by the June 15 deadline?

If you do not take the test by the June 1st deadline, you will only be allowed to register for your first-year seminar course. You will have to wait to register for you other courses in late August. This means that your selection of courses may be limited.

4. I received a 4 or 5 on the AP language test. What does that place me out of?

A score of 4 or 5 on the AP language test places you out of English 1101.

5. I received a 4 on the AP literature test. What does that place me out of?

This does not place you out of a course. You must register for English 1101.

6. I received a 5 on the AP language test and/or the AP literature test. What does that place me out of?

A score of 5 on the AP literature test places you out of English 1101

7. Do I have to take the test if I took a composition class at another college?

If you've already taken a college-level composition course, you need to contact the McDaniel College registrar at sgclark@mcdaniel.edu prior to the **June 15** deadline. She can tell you whether your course will satisfy the McDaniel College composition requirement. If you are still waiting for a response from the registrar when the **June 15** writing placement deadline arrives, you should take the placement test anyway. If your class transfers, your essay will be disregarded.

8. I almost scored a 700 on the critical reading portion of my SAT test and am a really good writer who got As in all my writing classes. Do I still have to take the test?

Yes, you must take the test unless you scored a 700 or higher..

9. If I place into English 1002, can I make the decision to skip it and register for 1101 anyway?

Unless you have been notified by the placement readers that you may choose between 1002 and 1101, you will only be allowed to register for the class you place into.

10. I don't want to take composition the first semester. Do I have to? If not, do I have to take the placement test now?

You may choose to take English 1101 in either the first or second semester. You must take

English 1002 your first semester if you place into that course.

11. If I want to take English 1101 in the second semester, do I have to take the placement test now?

Yes, you must take the placement test now, regardless of which semester you plan to take 1101.

12. What do I need to receive on my SAT II exam in order to be exempt from ENG 1101?

If you receive a 700 or above on one of the following SAT II tests, you are exempt from taking ENG 1101:

- SAT II: English Composition
- SAT II: English Composition (with essay)
- SAT II: Writing

Scores received on the SAT II: Literature are not used for exemption.

If you have questions about the test itself, or if you have been notified that you may select which course is appropriate for you, and you have questions or need help deciding, contact Suzanne Nida at sseibert@mcdaniel.edu..

If you have technology-related concerns or questions, contact Steve Kerby at skerby@mcdaniel.edu

English Placement Prompt and Submission area.

English STEP ONE: Read the Prompt

Read the reproduced article below, and then respond to the prompt in an approximately-500-word argumentative essay:

> **Explain what the university should do in response to such a party.**
> It is fine to focus on what university administrators should do or to consider a different part of the university, such as students, faculty, student groups, or the fraternity's national headquarters. As in any argument, it may be useful to include a rebuttal argument that identifies an approach that you ultimately reject.

Duke fraternity suspended after hosting a party slammed as racist

The Kappa Sigma party saw students wearing Asian-style clothing and mimicking stereotypical Asian accents.

By Victoria Cavaliere / NEW YORK DAILY NEWS Thursday, February 7, 2013, 8:54 AM

Flyers protesting an Asian-themed party hosted by the Kappa Sigma fraternity appeared around Duke's campus featuring photos from the bash with the hashtage #racistrager. Protests were also held on campus.

A fraternity at Duke University has been suspended after hosting an Asian-themed party opponents dubbed the "racist rager."

Students attending the weekend party hosted by Kappa Sigma wore Asian-style clothing and mimicked stereotypical Asian accents.

The invitation to the event, at first named "Asia Prime" told attendees "We look forward to having Mi, Yu, You and Yo Friends over for some Sake. Chank You." The invitation also contained a meme based on the former North Korean leader Kim Jong Il's character in the movie "Team America: World Police."

The party's name was changed to "International Relations" after opponents on campus got wind of the event. Angry students posted dozens of fliers around Duke's campus urging people to boycott the "racist rager."

GERRY BROOME/ASSOCIATED PRESS

A fraternity at Duke University has been suspended after hosting an Asian-themed party where students wore Asian-style clothing and mimicked accents, prompting an outcry on campus.

The Feb. 1 party went ahead as planned, but ongoing anger over the event prompted the parent organization of Kappa Sigma to suspend the Duke chapter on Wednesday.

"The Kappa Sigma Fraternity finds that the actions which have been associated with this event are inappropriate and insensitive and Kappa Sigma does not condone such activity," Kappa Sigma executive director Mitchell Wilson said in a statement. "This matter will be investigated and the fraternity will address this matter in an appropriate fashion."

Duke's chapter of Kappa Sigma had only just come back to campus last year after having its charter yanked a decade ago.

The party also led to protests on campus, with Asian student groups calling for an apology and a cultural shift at the prestigious school in Durham, N.C. They also posted Facebook photos of the event, with attendees faces blurred, around campus.

"This is not just about Asians, one party or one frat," Ashley Tsai, a Duke senior told the student newspaper the Duke Chronicle. "This is a consistent thing happening. We want serious things to be done by the student body and the university so that this never happens again."

At an on-campus rally on Wednesday, students from a variety of racial backgrounds chanted "racist parties make no sense."

The fraternity this week apologized for hosting the party, saying the event should have been "completely canceled."

"The Duke Community in which we exist is one that we see too often as divided, and while our actions have brought attention to and widened that divide, it is our sincere intention to work to contribute to a United Duke," Kappa Sigma President Luke Keohane said in an email.

School officials said they were sitting down with Kappa Sigma to discuss how to deal with fallout from the party.

"The event was thoughtless and offensive but we're not sure if it actually broke any rules," Larry Moneta, vice president for student affairs told the Herald-Sun.

English STEP TWO: Click Here (then click WRITE SUBMISSION button) to

Compose and Submit Essay

....

Preview Upload Assignment: English STEP TWO: Click Here (then click WRITE SUBMISSION button) to Compose and Submit Essay

Preview Upload Assignment: English STEP TWO: Click Here (then click WRITE SUBMISSION button) to Compose and Submit Essay

You are previewing the assignment - your submission will not be saved.

ASSIGNMENT INFORMATION

Points Possible

100

....

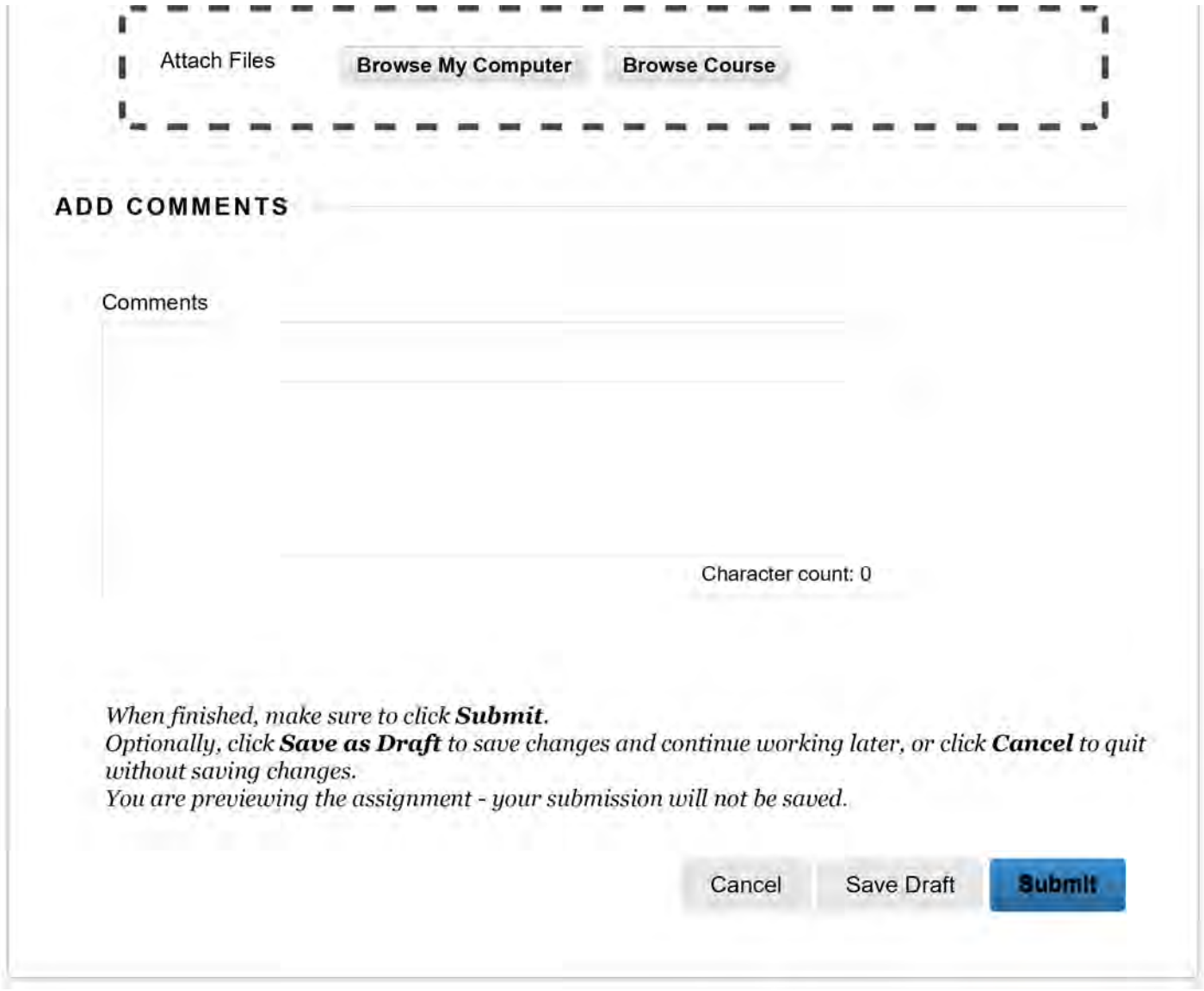
ASSIGNMENT SUBMISSION

Text Submission Write Submission

Paragraph Arial 3 (12pt)

Mashups

Path: p Words:0


Attach Files
Browse My Computer
Browse Course
ADD COMMENTS
Comments
Character count: 0
When finished, make sure to click Submit.
Optionally, click Save as Draft to save changes and continue working later, or click Cancel to quit without saving changes.
You are previewing the assignment - your submission will not be saved.
Cancel
Save Draft
Submit

II. Language Instructions

Language Instructions

NOTE: Please take these placements using a desktop or laptop computer. Phones, Kindles, and even iPads are not able to display the Blackboard scripts. Students have found that Mozilla Firefox to be the best browser.

Scores are not on a 100 point scale, so a score of 40 does not mean you have "failed" the test. Actually, this is not really about pass/fail, but primarily about placing you in the most appropriate foreign language class at McDaniel. **The results will not appear on your transcripts.**

If you place ABOVE the 2100 level or higher in Spanish, French, or German, you qualify to take the second round (the oral portion) of the placement exams, which will occur during orientation in August in a proctored language lab

Only students who score high on the ***written*** (here online) and ***oral*** (in person in the language lab) exams will be able to actually place out of the language requirement.

For information on placement exams in ASL, Arabic, Chinese, Latin, or another language not offered at McDaniel, contact the First Year Team at firstyearteam@mcdaniel.edu. If you have any questions about the Foreign Language program at McDaniel, contact Dr. Tom Deveny (tdeveny@mcdaniel.edu).

---Spanish Placement

Spanish Placement Examination: Part 1 (General)

85 Questions.

Spanish Placement Examination: Part 2 (Listening Comprehension A)

5 Questions Based on audio clip.

Spanish Placement Examination: Part 3 (Listening Comprehension B)

5 Questions.

You recently left the test 'French Placement Examination: Part 1 (General) New' without submitting it. Return to the test and click Save and Submit or contact your instructor for assistance.

Continue: Spanish Placement Examination: Part 1 (General)

INSTRUCTIONS

Timed Test	This test has a time limit of 1 hour. Your remaining time is approximately 56 minutes, 08 seconds.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.
Multiple Attempts	This test allows multiple attempts.

Click **Continue** to continue: Spanish Placement Examination: Part 1 (General). Click **Cancel** to go back. You will be previewing this assessment and your results will not be recorded.

Click Continue to start. Click Cancel to quit.

Cancel Continue

Preview Test: Spanish Placement Examination: Part 1 (General)

Test Information

Description	85 Questions.
Instructions	Part One has 85 multiple choice questions. Pick the best answer from the choices available. **PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.** This will ensure that you are placed at the adequate level. After you have submitted part one, you will need to go back into the exam section and take parts two and three. **Please take this placement exam only once.** Although technically you are allowed to take it multiple times, only your first submission will be considered.
Timed Test	This test has a time limit of 1 hour. You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain. *[The timer does not appear when previewing this test]*
Multiple Attempts	This test allows 3 attempts. This is attempt number 1.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

+ Question Completion Status

QUESTION 1 1 points Save Answer

Una bebida española que se prepara principalmente con vino y fruta se llama _____ .

- horchata
- sangría
- pulque
- yerba mate

QUESTION 2 1 points Save Answer

¿Dónde _____ sus libros?

- son
- están
- hay
- eran

QUESTION 3 1 points Save Answer

Se cantan villancicos durante _____.

- Navidad
- Carnaval
- la Cuaresma
- la Semana Santa

QUESTION 4 1 points Save Answer

Busco un apartamento que _____ tres cuartos.

- tiene
- tuviera
- tenga
- tuviese

QUESTION 5 1 points Save Answer

La paella es una _____ .

- moneda
- comida
- prenda de vestir
- fiesta

QUESTION 6 1 points Save Answer

Los aztecas vivieron en _____ .

- Chile
- México
- La Argentina
- El Ecuador

QUESTION 7 1 points Save Answer

El habitante de Lima puede llamarse limeño y tambien _____.

- peruano
- panameño
- ecuatoriano
- venezolano

QUESTION 8 1 points Save Answer

No comprendo _____ .

- que usted dice
- lo que usted dice
- cual usted dice
- de lo que usted diga

QUESTION 9 1 points Save Answer

El gaucho argentino se asocia con _____ .

- los desiertos
- los mercados
- las plazas
- las pampas

QUESTION 10 1 points Save Answer

No había nadie en clase que _____ diez hermanos.

- tuvo
- tenía
- tiene
- tuviera

QUESTION 11 1 points Save Answer

Aquí se prohíbe _____.

- fumando
- fuman
- fumar
- fumen

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

QUESTION 12 1 points Save Answer

¿Les paso la factura ahora?

- Si, pásamela.
- Si, pásenosla.
- Si, pásanosla.
- Si, pásemela.

QUESTION 13 1 points Save Answer

Quiero mirar este programa de televisión, querido.

- Bien, mírela.
- Bien, mírelo.
- Bien, mirala.
- Bien, mirelo.

QUESTION 14 1 points Save Answer

Si yo _____ rico, iría a Buenos Aries de vacaciones.

- fui
- era
- fuera
- soy

QUESTION 15 1 points Save Answer

Mañana _____ para el trabajo a las siete.

- saldré
- salire
- dejaré
- dejere

QUESTION 16 1 points Save Answer

¿Dónde facturan ustedes su equipaje?

- En un garaje.
- En un hospital.
- En una biblioteca.
- En un aeropuerto.

QUESTION 17 1 points Save Answer

¿Cómo es su madre?

- Ella está bien.
- Ella es bien.
- Ella es alta.
- Ella está alta.

QUESTION 18 1 points Save Answer

Vosotros _____ de Madrid.

- estáis
- están
- son
- sois

QUESTION 19 1 points Save Answer

¿Cuántos dormitorios tiene la casa de vuestros padres?

- La vuestra tiene tres dormitorios.
- Los vuestros tienen tres dormitorios.
- La suya tiene tres dormitorios.
- Las suyas tienen tres dormitorios.

QUESTION 20 1 points Save Answer

¿Hay algo en la pizarra?

- No, no hay nada.
- No, no hay nadie.
- No, no hay algo.
- No, no hay ninguno.

QUESTION 21 1 points Save Answer

¿A usted le gustan las naranjas?

- Si, las gusto.
- Si, me gusta.
- Si, me gustan.
- Si, me las gustan.

QUESTION 22 1 points Save Answer

¿Qué hacen ustedes cuando tienen sed?

- Como una tortilla.
- Comemos una tortilla.
- Bebo un refresco.
- Bebemos un refresco.

QUESTION 23 1 points Save Answer

¡Hombre, no se juega al _____ con una pelota!

- ajedrez
- futbol
- jai-alai
- baloncesto

QUESTION 24 1 points Save Answer

¿A qué hora se acuesta usted normalmente?

- Acuesto a las once.
- Acuesto son las once.
- Me acuesto son las once.
- Me acuesto a las once.

QUESTION 25 1 points Save Answer

Juan tiene tres hermanas; Dolores tiene tres hermanas. Juan tiene _____ hermanas _____ Dolores.

- tan / que
- tan / como
- tantas / que
- tantas / como

QUESTION 26 1 points Save Answer

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

QUESTION 27 1 points Save Answer

Es cierto que la conferencia _____tres días.

- dura
- duraron
- dure
- duramos

QUESTION 28 1 points Save Answer

Me enoja que durante la fiesta, su vecino _____ a la policía.

- llama
- llamaba
- llame
- llamara

QUESTION 29 1 points Save Answer

Yo _____ Buenos Aires muy bien.Viví dos años allí.

- sé
- sabe
- conozco
- conoce

QUESTION 30 1 points Save Answer

Ellos _____ ir a Madrid este verano.

- podemos
- puedes
- pueden
- podéis

QUESTION 31 1 points Save Answer

Yo _____ dos hermanos.

- tiene
- tenemos
- tenéis
- tengo

QUESTION 32 1 points Save Answer

Todo el mundo aclama a Picasso como un gran _____ .

- pintor
- escritor
- compositor
- matador

QUESTION 33 1 points Save Answer

Quería que María no me los _____ .

- da
- dé
- daría
- diera

QUESTION 34 1 points Save Answer

En un día caluroso de verano, una mujer no llevaría _____ .

- una falda
- sandalias
- un abrigo
- una blusa de manga corta

QUESTION 35 1 points Save Answer

Después de comer, el camarero me trae _____ .

- la cuenta
- el cuento
- la lista
- el listo

QUESTION 36 1 points Save Answer

Mi collar es de _____ .

- plata
- chocolate
- plato
- adobe

QUESTION 37 1 points Save Answer

El _____ es un animal domestico.

- gato
- zorro
- elefante
- tigre

QUESTION 38 1 points Save Answer

Yo como _____ para el postre.

- guisantes
- helado
- aceitunas
- atun

QUESTION 39 1 points Save Answer

Dora sale _____.

- sólo
- solo
- sola
- solamente

QUESTION 40 1 points Save Answer

Los chicos estaban cansados de _____.

- jugando
- jugar
- juegan
- jueguen

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers | Save and Submit

QUESTION 41 1 points Save Answer

Siento que su hermana no _____.

- viene
- venga
- vendrá
- ha venido

QUESTION 42 1 points Save Answer

Si usted lo tiene, _____.

- démelo
- dámelo
- me lo de usted
- me lo dio usted

QUESTION 43 1 points Save Answer

Cuando entre en casa, Federico _____.

- hablara por telefono
- hablará por telefono
- hablaría por telefono
- hablaba por telefono

QUESTION 44 1 points Save Answer

Benito me lo dará cuando _____.

- venga
- vendrá
- viene
- vino

QUESTION 45 1 points Save Answer

Yo estaba comiendo cuando usted me _____.

- telefoneo
- telefoneara
- telefoneara
- telefonearía

QUESTION 46 1 points Save Answer

Antonio trabaja mejor _____.

- que yo creo
- que yo creere
- de lo que yo creía
- de que yo creía

QUESTION 47 1 points Save Answer

Era necesario que ustedes _____ a la oficina.

- ir
- vayan
- van
- fueran

QUESTION 48 1 points Save Answer

Si tuviera más tiempo, yo _____ con ustedes.

- ceno
- cenaré
- cené
- cenaría

QUESTION 49 1 points Save Answer

Cuando eramos jovenes, _____ a Europa todos los años.

- íbamos
- vamos
- fuimos
- iríamos

QUESTION 50 1 points Save Answer

Ayer _____ de la muerte de su padre.

- sabía
- sabré
- supe
- sé

QUESTION 51 1 points Save Answer

Busco una secretaria que _____ usar el ordenador.

- sabe
- supo
- sepa
- sabrá

QUESTION 52 1 points Save Answer

No me gusta que nosotros _____ para el trabajo todos los dias a las 5: 30 de la mañana.

- salíamos
- salgamos
- salimos
- saldremos

QUESTION 53 1 points Save Answer

_____ las dos y media cuando llegamos anoche.

- Fueron
- Serian
- Son
- Serán

QUESTION 54 1 points Save Answer

Pedro promete que va a estar en casa antes de que _____ los invitados.

- llega
- llegas
- llegan
- lleguen

QUESTION 55 1 points Save Answer

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

QUESTION 56 1 points Save Answer

Juan y Alicia dijeron que _____ a la fiesta.

- vendrán
- vinieran
- vendrían
- vengan

QUESTION 57 1 points Save Answer

¿Cuál es el quinto mes del año?

- Es marzo.
- Es abril.
- Es mayo.
- Es junio.

QUESTION 58 1 points Save Answer

¿Quién es el hermano de su padre?

- Es mi primo.
- Es mi tío.
- Es mi abuelo.
- Es mi suegro.

QUESTION 59 1 points Save Answer

¿Qué ropa lleva usted hoy?

- Llevo mis libros.
- Lleva mis libros.
- Lleva pantalones.
- Llevo pantalones.

QUESTION 60 1 points Save Answer

¿Qué tiempo hace?

- Son las tres.
- Yo lo hago muy bien.
- Hace buen tiempo.
- Hace mucho tiempo que no la veo.

QUESTION 61 1 points Save Answer

Cuando yo _____ joven, pasaba las vacaciones en la playa.

- soy
- sería
- fuí
- era

QUESTION 62 1 points Save Answer

Cada vez que mis amigos _____ agua de un país extranjero, ____ _____.

- tomamos / nos enfermamos
- tomaron / nos enfermamos
- tomabamos / se enfermaraban
- tomaban / se enfermaban

QUESTION 63 1 points Save Answer

Fernando y yo _____ los discos allí hace 30 minutos.

- ponemos
- pondremos
- pusimos
- pondríamos

QUESTION 64 1 points Save Answer

Yo no _____ mi libro ayer.

- traigo
- traí
- traje
- trajera

QUESTION 65 1 points Save Answer

Anoche, vosotros _____ los ejercicios.

- hicimos
- hicieron
- hacéis
- hicisteis

QUESTION 66 1 points Save Answer

El martes pasado, Juan _____ a clase temprano.

- viene
- vendrá
- vino
- venía

QUESTION 67 1 points Save Answer

Ayer yo _____ a la cafetería a las ocho.

- voy
- iré
- fuera
- fui

QUESTION 68 1 points Save Answer

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers | Save and Submit

Caracas se localiza aquí _____.

- a
- b
- c
- d

QUESTION 69 1 points Save Answer

Buenos Aires se localiza aquí _____.

- a
- b
- c
- d

QUESTION 70 1 points Save Answer

España

Sevilla se localiza aquí _____ .

- a
- b
- c
- d

QUESTION 71 1 points Save Answer

La nueva democracia en España, visualizada en la constitución de 1977 y establecida después de las primeras elecciones generales en casi cuatro décadas, ha logrado reestablecer las libertades individuales y reintegrar diversas facciones regionales. Esto has sido un éxito impresionante cuando se consideran las tradiciones e instituciones totalitarias que dejo instituidas el régimen franquista. El nuevo gobierno, sin embargo, ha tenido sus dificultades. En un reciente discurso público, Su Majestad, Juan Carlos I, identifico dos de los problemas más serios, el terrorismo y el desempleo.

En 1977 se creía que los actos violentos de grupos separatistas como la ETA y el GRAPO desaparecerían con la descentralización del poder. Pero cuando el gobierno les concedió una autonomía parcial a las distintas regiones del país, no pararon las actividades terroristas. De hecho, en 1978, la ETA asesinó a sesenta víctimas más.

Tampoco ha mejorado la situación económica en España. Durante los últimos años, más de un millón de obreros españoles se han encontrado sin trabajo. Aunque estos obreros ya tienen el derecho de expresar sus frustraciones, de elegir sus líderes y de declararse en huelga, estas libertades representan poca consolación para las familias de recursos económicos limitados.

La democracia no ha causado estas situaciones, pero tampoco las ha mejorado. Sin embargo, dado el Nuevo espíritu de cooperación nacional creado por la democracia, es de esperar que estos problemas se resuelvan en un futuro próximo.

Question: ¿Qué demuestra que los grupos terroristas continúan sus actividades?

- La descentralización del poder.
- La muerte por el asesinato de muchas personas.
- La concesión de una *autonom*ía regional.
- Muchos obreros se han encontrado sin empleo.

QUESTION 72 1 points Save Answer

La nueva democracia en España, visualizada en la constitución de 1977 y establecida después de las primeras elecciones generales en casi cuatro décadas, ha logrado reestablecer las libertades individuales y reintegrar diversas facciones regionales. Esto has sido un éxito impresionante cuando se consideran las tradiciones e instituciones totalitarias que dejo instituidas el régimen franquista. El nuevo gobierno, sin embargo, ha tenido sus dificultades. En un reciente discurso público, Su Majestad, Juan Carlos I, identificó dos de los problemas más serios, el terrorismo y el desempleo.

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Question: ¿Cómo es diferente el obrero de hoy al obrero que vivió durante la dictadura?

- Tiene más oportunidades de trabajo.
- Tiene más libertades personales.
- Tiene más autonomía.
- Tiene más consolación.

QUESTION 73 1 points Save Answer

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

La nueva democracia en España, visualizada en la constitución de 1977 y establecida después de las primeras elecciones generales en casi cuatro décadas, ha logrado reestablecer las libertades individuales y reintegrar diversas facciones regionales. Esto has sido un éxito impresionante cuando se consideran las tradiciones e instituciones totalitarias que dejo instituidas el régimen franquista. El nuevo gobierno, sin embargo, ha tenido sus dificultades. En un reciente discurso público, Su Majestad, Juan Carlos I, identificó dos de los problemas más serios, el terrorismo y el desempleo.

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Question: ¿Qué quiere ETA?
- La separación del estado y la iglesia.
- La reinstalación del régimen franquista.
- Más que una autonomía.
- Más trabajo.

QUESTION 74 1 points Save Answer

La nueva democracia en España, visualizada en la constitución de 1977 y establecida después de las primeras elecciones generales en casi cuatro décadas, ha logrado reestablecer las libertades individuales y reintegrar diversas facciones regionales. Esto has sido un éxito impresionante cuando se consideran las tradiciones e instituciones totalitarias que dejo instituidas el régimen franquista. El nuevo gobierno, sin embargo, ha tenido sus dificultades. En un reciente discurso público, Su Majestad, Juan Carlos I, identifico dos de los problemas más serios, el terrorismo y el desempleo.

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La democracia no ha causado estas situaciones, pero tampoco las ha mejorado. Sin embargo, dado el Nuevo espíritu de cooperación nacional creado por la democracia, es de esperar que estos problemas se resuelvan en un futuro próximo.

Question: ¿Cuál es una de las mayores dificultades que enfrenta el país según dijo el rey?
- La falta de trabajo.
- La cooperación nacional.
- Las autonomías.
- Un reciente discurso

QUESTION 75 1 points Save Answer

La nueva democracia en España, visualizada en la constitución de 1977 y establecida después de las primeras elecciones generales en casi cuatro décadas, ha logrado reestablecer las libertades individuales y reintegrar diversas facciones regionales. Esto has sido un éxito impresionante cuando se consideran las tradiciones e instituciones totalitarias que dejo instituidas el régimen franquista. El nuevo gobierno, sin embargo, ha tenido sus dificultades. En un reciente discurso público, Su Majestad, Juan Carlos I, identifico dos de los problemas más serios, el terrorismo y el desempleo.

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Question: ¿Por qué son tan impresionantes los éxitos de la nueva democracia?
- Porque Franco no estaba de acuerdo.
- Porque formaron el Nuevo gobierno después de muchos años de un régimen totalitario.
- Porque España nunca ha tenido una democracia.
- Porque no había instituciones totalitarias.

QUESTION 76 1 points Save Answer

Parece que en todas partes coexisten la riqueza y la pobreza, y los Estados Unidos no son ninguna excepción. En nuestro país, la población con escasos recursos económicos tiende a desplazarse a las ciudades, mientras que la clase media prefiere irse al campo o a las afueras de la ciudad. La tendencia de los pobres a dirigirse a las grandes ciudades es aun más marcada en los países del mundo hispánico. Esta llegada de los campesinos a la ciudad es uno de los problemas urbanos mas graves que tiene Hispanoamérica, y las ciudades se ven rodeadas por barrios pobres. En muchos países, especialmente en Venezuela y en Méjico, esto se ha debido a la intense actividad económica provocada por el descubrimiento de grandes yacimientos de petróleo. Ante las nuevas perspectivas que ofrecía tal descubrimiento, los gobiernos inauguraron grandes proyectos para la construcción de edificios, carreteras y puertos. Mucha gente pensó que los campesinos podrían proporcionar la mano de obra que la nueva ola prosperidad necesitaba. Pero desgraciadamente no todo salio tal como lo habían soñado los gobiernos. Debido a la baja en la demanda y en el precio del petróleo, los campesinos tuvieron que enfrentarse con el desempleo y la falta de vivienda adecuada.

Question: En todo el mundo, los pobres tienden a buscar una vida mejor en _____.
- el campo
- las afueras de las ciudades
- el centro de las ciudades
- los pueblos pequeños del campo

QUESTION 77 1 points Save Answer

Parece que en todas partes coexisten la riqueza y la pobreza, y los Estados Unidos no son ninguna excepción. En nuestro país, la población con escasos recursos económicos tiende a desplazarse a las ciudades, mientras que la clase media prefiere irse al campo o a las afueras de la ciudad. La tendencia de los pobres a dirigirse a las grandes ciudades es aun más marcada en los países del mundo hispánico. Esta llegada de los campesinos a la ciudad es uno de los problemas urbanos mas graves que tiene Hispanoamérica, y las ciudades se ven rodeadas por barrios pobres. En muchos países, especialmente en Venezuela y en Méjico, esto se ha debido a la intense actividad económica provocada por el descubrimiento de grandes yacimientos de petróleo. Ante las nuevas perspectivas que ofrecía tal descubrimiento, los gobiernos inauguraron grandes proyectos para la construcción de edificios, carreteras y puertos. Mucha gente pensó que los campesinos podrían proporcionar la mano de obra que la nueva ola prosperidad necesitaba. Pero desgraciadamente no todo salio tal como lo habían soñado los gobiernos. Debido a la baja en la demanda y en el precio del petróleo, los campesinos tuvieron que enfrentarse con el desempleo y la falta de vivienda adecuada.

Question: La falta de trabajo y de vivienda adecuada para la gente refleja un defecto en _____.
- el gobierno del país
- la gente del país
- la economía del mundo
- el gobierno del mundo

QUESTION 78 1 points Save Answer

Parece que en todas partes coexisten la riqueza y la pobreza, y los Estados Unidos no son ninguna excepción. En nuestro país, la población con escasos recursos económicos tiende a desplazarse a las ciudades, mientras que la clase media prefiere irse al campo o a las afueras de la ciudad. La tendencia de los pobres a dirigirse a las grandes ciudades es aun más marcada en los países del mundo hispánico. Esta llegada de los campesinos a la ciudad es uno de los problemas urbanos mas graves que tiene Hispanoamérica, y las ciudades se ven rodeadas por barrios pobres. En muchos países, especialmente en Venezuela y en Méjico, esto se ha debido a la intense actividad económica provocada por el descubrimiento de grandes yacimientos de petróleo. Ante las nuevas perspectivas que ofrecía tal descubrimiento, los gobiernos inauguraron grandes proyectos para la construcción de edificios, carreteras y puertos. Mucha gente pensó que los campesinos podrían proporcionar la mano de obra que la nueva ola prosperidad necesitaba. Pero desgraciadamente no todo salio tal como lo habían soñado los gobiernos. Debido a la baja en la demanda y en el precio del petróleo, los campesinos tuvieron que enfrentarse con el desempleo y la falta de vivienda adecuada.

Question: Los campesinos salieron del campo hacia la ciudad porque _____.
- estaban cansados del campo
- buscaban una vida mejor
- buscaban petróleo
- querían divertirse en los clubes nocturnos

QUESTION 79 1 points Save Answer

Parece que en todas partes coexisten la riqueza y la pobreza, y los Estados Unidos no son ninguna excepción. En nuestro país, la población con escasos recursos económicos tiende a desplazarse a las ciudades, mientras que la clase media prefiere irse al campo o a las afueras de la ciudad. La tendencia de los pobres a dirigirse a las grandes ciudades es aun más marcada en los países del mundo hispánico. Esta llegada de los campesinos a la ciudad es uno de los problemas urbanos mas graves que tiene Hispanoamérica, y las ciudades se ven rodeadas por barrios pobres. En muchos países, especialmente en Venezuela y en México, esto se ha debido a la intense actividad económica provocada por el descubrimiento de grandes yacimientos de petróleo. Ante las nuevas perspectivas que ofrecía tal descubrimiento, los gobiernos inauguraron grandes proyectos para la construcción de edificios, carreteras y puertos. Mucha gente pensó que los campesinos podrían proporcionar la mano de obra que la nueva ola prosperidad necesitaba. Pero desgraciadamente no todo salio tal como lo habían soñado los gobiernos. Debido a la baja en la demanda y en el precio del petróleo, los campesinos tuvieron que enfrentarse con el desempleo y la falta de vivienda adecuada.

Question: La coexistencia de la pobreza con la riqueza existe _____.
- solamente en los Estados Unidos.
- solamente en México y Venezuela.
- en todas partes.
- en los Estados Unidos, México, y Venezuela exclusivamente.

QUESTION 80 1 points Save Answer

Parece que en todas partes coexisten la riqueza y la pobreza, y los Estados Unidos no son ninguna excepción. En nuestro país, la población con escasos recursos económicos tiende a desplazarse a las ciudades, mientras que la clase media prefiere irse al campo o a las afueras de la ciudad. La tendencia de los pobres a dirigirse a las grandes ciudades es aun más marcada en los países del mundo hispánico. Esta llegada de los campesinos a la ciudad es uno de los problemas urbanos mas graves que tiene Hispanoamérica, y las ciudades se ven rodeadas por barrios pobres. En muchos países, especialmente en Venezuela y en Méjico, esto se ha debido a la intense actividad económica provocada por el descubrimiento de grandes yacimientos de petróleo. Ante las nuevas perspectivas que ofrecía tal descubrimiento, los gobiernos inauguraron grandes proyectos para la construcción de edificios, carreteras y puertos. Mucha gente pensó que los campesinos podrían proporcionar la mano de obra que la nueva ola prosperidad necesitaba. Pero desgraciadamente no todo salio tal como lo habían soñado los gobiernos. Debido a la baja en la demanda y en el precio del petróleo, los campesinos tuvieron que enfrentarse con el desempleo y la falta de vivienda adecuada.

Question: En algunos países, la llegada de muchos campesinos a las grandes ciudades fue causada al principio por _____.
- el descubrimiento del petróleo
- la falta de vivienda adecuada

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

En el Escorial, Juan de Herrera creo un estilo especial que fue copiado y repetido en numerosos edificios españoles, desde el antiguo Alcázar de Toledo hasta el moderno Ministerio del Aire de Madrid. Este estilo consistía principalmente en fachadas severas y sin adornos, con torres cuadradas y tejados sencillos. A este estilo inventado por Herrera podríamos llamarlo también "Filipino" porque el rey Felipe II ordeno miles de alteraciones en el edificio y era el quien decía la ultima palabra en todos los detalles. Durante los años de su construcción llegaron viajeros de todas partes para admirar aquella "octava maravilla del mundo." Y fue también maravilla que El Escorial se hubiera terminado en solo 21 años, hecho extraordinario en el siglo XVI.

Question: Un aspecto interesante en la construcción del edificio fue _____ .

- la necesidad de cambiar el estilo
- el corto tiempo en que se hizo
- el escaso dinero que costó
- el poco interés de Felipe II

QUESTION 82

1 points Save Answer

En el Escorial, Juan de Herrera creo un estilo especial que fue copiado y repetido en numerosos edificios españoles, desde el antiguo Alcázar de Toledo hasta el moderno Ministerio del Aire de Madrid. Este estilo consistía principalmente en fachadas severas y sin adornos, con torres cuadradas y tejados sencillos. A este estilo inventado por Herrera podríamos llamarlo también Filipino porque el rey Felipe II ordeno miles de alteraciones en el edificio y era el quien decía la ultima palabra en todos los detalles. Durante los años de su construcción llegaron viajeros de todas partes para admirar aquella octava maravilla del mundo. Y fue también maravilla que El Escorial se hubiera terminado en solo 21 años, hecho extraordinario en el siglo XVI.

Question: El estilo del Escorial es notable por _____ .

- su sencillez
- sus adornos
- su forma moderna
- sus torres góticas

QUESTION 83

1 points Save Answer

En el Escorial, Juan de Herrera creo un estilo especial que fue copiado y repetido en numerosos edificios españoles, desde el antiguo Alcázar de Toledo hasta el moderno Ministerio del Aire de Madrid. Este estilo consistía principalmente en fachadas severas y sin adornos, con torres cuadradas y tejados sencillos. A este estilo inventado por Herrera podríamos llamarlo también "Filipino" porque el rey Felipe II ordeno miles de alteraciones en el edificio y era el quien decía la ultima palabra en todos los detalles. Durante los años de su construcción llegaron viajeros de todas partes para admirar aquella "octava maravilla del mundo." Y fue también maravilla que El Escorial se hubiera terminado en solo 21 años, hecho extraordinario en el siglo XVI.

Question: ¿Qué pasó durante la construcción del Escorial?

- Hubo un gran milagro.
- La familia real puso a un lado el proyecto.
- Llamó la atención de mucha gente.
- Se perdieron muchos trabajadores.

QUESTION 84

1 points Save Answer

En el Escorial, Juan de Herrera creo un estilo especial que fue copiado y repetido en numerosos edificios españoles, desde el antiguo Alcázar de Toledo hasta el moderno Ministerio del Aire de Madrid. Este estilo consistía principalmente en fachadas severas y sin adornos, con torres cuadradas y tejados sencillos. A este estilo inventado por Herrera podríamos llamarlo también "Filipino" porque el rey Felipe II ordeno miles de alteraciones en el edificio y era el quien decía la ultima palabra en todos los detalles. Durante los años de su construcción llegaron viajeros de todas partes para admirar aquella "octava maravilla del mundo." Y fue también maravilla que El Escorial se hubiera terminado en solo 21 años, hecho extraordinario en el siglo XVI.

Question: Felipe II se interesó mucho en _____ .

- el bienestar de los trabajadores
- la arquitectura del Ministerio del Aire
- la opinión de los que lo visitaban
- el plano de la construcción

QUESTION 85

1 points Save Answer

En el Escorial, Juan de Herrera creo un estilo especial que fue copiado y repetido en numerosos edificios españoles, desde el antiguo Alcazar de Toledo hasta el moderno Ministerio del Aire de Madrid. Este estilo consistía principalmente en fachadas severas y sin adornos, con torres cuadradas y tejados sencillos. A este estilo inventado por Herrera podriamos llamarlo también "Filipino" porque el rey Felipe II ordeno miles de alteraciones en el edificio y era el quien decia la última palabra en todos los detalles. Durante los años de su construcción llegaron viajeros de todas partes para admirar aquella "octava maravilla del mundo." Y fue también maravilla que El Escorial se hubiera terminado en solo 21 años, hecho extraordinario en el siglo XVI.

Question: Juan de Herrera es famoso porque fue _____ .

- el defensor del Alcazar
- un gran enemigo del rey
- un famoso viajero
- el arquitecto del Escorial

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers | Save and Submit

Continue: Spanish Placement Examination: Part 2 (Listening Comprehension A)

INSTRUCTIONS

Timed Test	This test has a time limit of 20 minutes. Your remaining time is approximately 16 minutes, 03 seconds.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.
Multiple Attempts	This test allows multiple attempts.

Click **Continue** to continue: Spanish Placement Examination: Part 2 (Listening Comprehension A). Click **Cancel** to go back.
You will be previewing this assessment and your results will not be recorded.

Click Continue to start. Click Cancel to quit.

Cancel Continue

Preview Test: Spanish Placement Examination: Part 2 (Listening Comprehension A)

Test Information

Description	5 Questions Based on audio clip.
Instructions	Listen to the audio on the media clip below. Then answer the following questions based upon what you heard.

After you have submitted part two, you will need to go back into the exam section and take part three.

Please take this placement exam only once. Although technically you are allowed to take it multiple times, only your first submission will be considered.

PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.

Timed Test	This test has a time limit of 20 minutes.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	This test allows 3 attempts. This is attempt number 1.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

+ Question Completion Status

QUESTION 1 1 points Save Answer

Question 86 (as referred to in the media above)

- En el XIV.
- En el XV
- En el XVI.
- En el XVII.

QUESTION 2 1 points Save Answer

Question 87 (as referred to in the audio clip)

- En la mano derecha.
- En la mano izquierda.
- En el pie derecho.
- En el pie izquierdo.

QUESTION 3 1 points Save Answer

Question 88 (as referred to in the audio clip)

- La novela no era muy popular.
- Cervantes decidió no escribir más.
- La novela gozó de gran popularidad.
- Nadie lo leía.

QUESTION 4 1 points Save Answer

Question 89 (as referred to in the audio clip)

- Era muy rico.
- Tenía una familia muy grande.
- Todavía quería terminar la segunda parte de Don Quijote.
- Era pobre.

QUESTION 5 1 points Save Answer

Question 90 (as referred to in the audio clip)

- Eran físicamente gigantes.
- Sufrieron heridas en la misma batalla naval.
- Eran autores importantes y nacieron en la misma fecha.
- Eran autores importantes y murieron en la misma fecha.

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

Continue: Spanish Placement Examination: Part 3 (Listening Comprehension B)

INSTRUCTIONS

Timed Test	This test has a time limit of 20 minutes. Your remaining time is approximately 15 minutes, 50 seconds.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.
Multiple Attempts	This test allows multiple attempts.

Click **Continue** to continue: Spanish Placement Examination: Part 3 (Listening Comprehension B). Click **Cancel** to go back.
You will be previewing this assessment and your results will not be recorded.

Click Continue to start. Click Cancel to quit.

Cancel Continue

Preview Test: Spanish Placement Examination: Part 3 (Listening Comprehension B)

Test Information

Description	5 Questions.
Instructions	Listen to the media clip below. Then answer the following questions based upon what you heard.

Spanish Listening Comprehension B

Pay close attention. After a short narration, the questions will be asked in Spanish. Be ready to click on the appropriate answer.

Please take this placement exam only once. Although technically you are allowed to take it multiple times, only your first submission will be considered.

PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.

Timed Test	This test has a time limit of 20 minutes.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	This test allows 3 attempts. This is attempt number 1.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Question Completion Status

QUESTION 1 1 points Save Answer

Question 91 (as referred to in the media clip)

- En Europa.
- En los Estados Unidos.
- En España.
- En Mexico.

QUESTION 2 1 points Save Answer

Question 92 (as referred to in the audio clip)

- Los aztecas.
- Hernan Cortes.
- Maximiliano.
- Los invasores norteamericanos.

QUESTION 3 1 points Save Answer

Question 93 (as referred to in the audio clip)

- Hernan Cortes.
- Soldados norteamericanos.
- Maximiliano y Carlota.
- Soldados españoles.

QUESTION 4 1 points Save Answer

Question 94 (as referred to in the audio clip)

- Los cadaveres de los seis Heroes que perdieron la vida alli.
- Los cadaveres de Maximiliano y Carlota.
- Los muebles que usaron Maximiliano y Carlota.
- Los muebles de los invasores estadounidenses.

QUESTION 5 1 points Save Answer

Question 95 (as referred to in the audio clip)

- Un sitio historico.
- Un mercado de drogas.
- Un almacén que vende muebles europeos.
- Una fábrica de monumentos.

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

---French Placement

French Placement Examination: Part 1 (General) New

French Placement Examination: Part 2 (Listening Comprehension A)

French Placement Examination: Part 3 (Listening Comprehension B)

Continue: French Placement Examination: Part 1 (General) New

INSTRUCTIONS

Timed Test	This test has a time limit of 1 hour and 15 minutes. Your remaining time is approximately 1 hour, 10 minutes, 22 seconds.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.
Multiple Attempts	This test allows multiple attempts.

Click **Continue** to continue: French Placement Examination: Part 1 (General) New. Click **Cancel** to go back.
You will be previewing this assessment and your results will not be recorded.

Click Continue to start. Click Cancel to quit.

Cancel **Continue**

Preview Test: French Placement Examination: Part 1 (General) New

Test Information

Description	
Instructions	This portion of the test has 60 multiple choice questions. Select the most appropriate answer. **PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.** After you have submitted part one, you will need to go back into the exam section and take parts two and three. **Please take this placement exam only once.** Although technically you are allowed to take it multiple times, only your first submission will be considered.
Timed Test	This test has a time limit of 1 hour and 15 minutes.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	This test allows 3 attempts. This is attempt number 1.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

+ Question Completion Status

QUESTION 1 1 points Save Answer

Nous voulons que tu _____ tes devoirs.
- finis
- finisses
- finesse
- finiras
- finissant

QUESTION 2 1 points Save Answer

D'où venez-vous?
- Nous venons manger avec vous.
- Nous venons du restaurant.
- Nous venons vous dire au revoir.
- Tu viens du café.
- Nous venons vous voir.

QUESTION 3 1 points Save Answer

Il n'y a plus _____ poisson.
- du
- de la
- de
- des
- d'

QUESTION 4 1 points Save Answer

C'est la candidate _____ de la campagne électorale.
- plus libérale
- plus libéral
- le plus libéral
- la plus libérale
- très libérale

QUESTION 5 1 points Save Answer

Comment devient-on critique cinématographique? C'est _____ énormément de films.
- regardant
- regarder
- en regardant
- à regarder
- de regarder

QUESTION 6 1 points Save Answer

Je travaille plus _____ 60 heures par semaine.
- que
- des
- d'
- de
- de temps

QUESTION 7 1 points Save Answer

Combien de cousins avez-vous? - _____deux.
- Il y a
- J'en ai
- J'y ai
- J'ai
- Il y en a

QUESTION 8 1 points Save Answer

Tu vas à la plage?
- Oui, j' y vais.
- Oui, j'y suis allé.
- Oui, j'y serais allé.
- Oui, je viens d'y aller.
- Oui, vas-y!

QUESTION 9 1 points Save Answer

Voilà la place que j'ai _____ .
- prise
- pris
- prit
- prends
- prendre

QUESTION 10 1 points Save Answer

La ville de Chartres est très connue pour _____
- ses musées.
- ses châteaux.
- sa cathédrale.
- son vin.
- sa cuisine et ses fromages.

QUESTION 11 1 points Save Answer

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

Cette personne est _____.

- cruels
- cruelles
- cruel
- cruelle
- cruèle

QUESTION 12 1 points Save Answer

Aussitôt qu'il _____, nous irons au restaurant.

- vient
- vienne
- viendra
- venait
- venir

QUESTION 13 1 points Save Answer

Vous avez sommeil?

- Oui, j'ai trop dormi.
- Oui, j'ai beaucoup dormi.
- Non, pas du tout.
- Non, je n'ai pas dormi.
- Non, merci, c'est trop fort.

QUESTION 14 1 points Save Answer

Allez-vous au cinéma avec les garçons? Oui, nous y allons avec _____.

- les
- eux
- leurs
- ils
- ceux

QUESTION 15 1 points Save Answer

J'ai ouvert la fenêtre; pourquoi _____ avez-vous _____?

- les ...fermées
- l'... fermée
- l'...fermé
- les...fermés
- la...fermée

QUESTION 16 1 points Save Answer

Avant de _____, Pierre finira ses devoirs.

- être venu
- venir
- avoir venu
- viendra
- venant

QUESTION 17 1 points Save Answer

Il n'a pas travaillé hier parce qu'il _____ malade.

- était
- a été
- fut
- fut
- ait été

QUESTION 18 1 points Save Answer

_____ t'a donné ce beau livre?

- Qu'est-ce qui
- Qu'est-ce que
- Qui est-ce qui
- Qui est-ce que
- Qu'est-ce

QUESTION 19 1 points Save Answer

Qui est le Roi Soleil?

- Napoléon
- Louis XIV
- Louis XV
- Louis XVI
- Charles IX

QUESTION 20 1 points Save Answer

_____ de la patience!

- es
- avoir
- aie
- avez
- aies

QUESTION 21 1 points Save Answer

Le baccalauréat est un examen qui termine les études _____

- dans les écoles maternelles.
- dans les universités.
- dans les Grandes Ecoles.
- dans les lycées.
- à la Sorbonne.

QUESTION 22 1 points Save Answer

Tu _____ beaucoup demain.

- parlerais
- parleras
- parlas
- parlais
- parles

QUESTION 23 1 points Save Answer

Un pianiste joue _____ piano.

- du
- au
- (blank)
- avec le
- en face du

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

QUESTION 24 1 points Save Answer

Moi, j'invite toujours mes amis. Et vous, invitez-vous toujours _____?

- votres
- les vôtres
- la vôtre
- le vôtre
- les vôtres

QUESTION 25 1 points Save Answer

Elle regrette que son ami _____ communiste.

- être
- soit
- est
- sera
- était

QUESTION 26 1 points Save Answer

Elles _____ les livres le semestre dernier.

- prennent
- ont pris
- prendraient
- prit
- prendront

QUESTION 27 1 points Save Answer

Violá les jeunes filles qu'il _____

- a invité.
- a invitée.
- a invités.
- a inviteés.
- a invité.

QUESTION 28 1 points Save Answer

Après _____ au revoir, Hélène est partie.

- dire
- a dit
- avoir dit
- être dit
- dit

QUESTION 29 1 points Save Answer

Aujourd'hui elles _____ beaucoup à cause de la température.

- boivent
- boire
- boient
- buveaient
- bouillir

QUESTION 30 1 points Save Answer

Est-ce que tu _____ les cheveux chaque jour?

- te laver
- te laves
- laves
- as lavé
- vas laver

QUESTION 31 1 points Save Answer

_____ des jupes.

- Elles sont
- Ce sont
- Ceux sont
- Ils sont
- C'était

QUESTION 32 1 points Save Answer

Il écoute _____ le professeur.

- à
- (blank)
- au
- du
- aux

QUESTION 33 1 points Save Answer

Vous n'êtes pas français?

- Oui, je suis français.
- Oui, en effet.
- Mais si, je suis français.
- Bien sûr, je suis français.
- Non, pas du tout, je suis français.

QUESTION 34 1 points Save Answer

On peut camper ici?

- Oui c'est permis.
- Oui, c'est entendu.
- Oui, c'est interdit.
- Oui, c'est défendu.
- Oui puisque c'est une rue.

QUESTION 35 1 points Save Answer

Nous sommes _____.

- le mercredi 15 septembre
- mercredi 15 septembre
- mercredi, 15 septembre
- mercredi, septembre 15
- Septembre 15

QUESTION 36 1 points Save Answer

Simone de Beauvoir était:

- une femme poète
- une artiste
- un écrivain féministe
- une politicienne
- la première femme française premier ministre

QUESTION 37 1 points Save Answer

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers | Save and Submit

C'est la vérité, _____!
- absolument
- absolu
- absolutement
- absoluement
- absolement

QUESTION 38 1 points Save Answer

Toi, tu _____ dix-huit ans.
- vas
- es
- est
- as
- va

QUESTION 39 1 points Save Answer

_____ Espagne est jolie.
- L'
- (blank)
- La
- Le
- Les

QUESTION 40 1 points Save Answer

Je n'ai pas vu mes parents depuis plusieurs mois.
- Je les manque.
- Ils me manquent.
- Je les manques.
- Ils leur manquent.
- Je manque leur.

QUESTION 41 1 points Save Answer

Si nous ne _____ pas à notre examen, nous serions obligés de le repasser.
- réussissons
- réussirons
- réussons
- réussissions
- réunirons

QUESTION 42 1 points Save Answer

_____ il est content!
- Naturellement
- Naturelment
- Naturèlement
- Naturement
- Naturlement

QUESTION 43 1 points Save Answer

_____ robes préférez-vous?
- Quel
- Lesquelles
- Quelle
- Belles
- Quelles

QUESTION 44 1 points Save Answer

Est-ce que tu travailles toujours?
- Oui, je ne travaille pas.
- Non, je travaille.
- Non, je travaille encore.
- Oui, je travaille plus.
- Non, je ne travaille plus.

QUESTION 45 1 points Save Answer

Est-ce qu'il répond à sa mère quand elle crie?
- Oui, il me répond.
- Oui, il vous répond.
- Oui, il leur répond.
- Oui, il lui répond.
- Oui, elle me répond.

QUESTION 46 1 points Save Answer

Il fait _____ devoirs.
- sa
- ses
- seul
- s'
- son

QUESTION 47 1 points Save Answer

Part II: Cultural Questions

Quel pays n'est pas francophone?
- Le Gabon
- Le Maroc
- Le Sénegal
- Le Nigéria
- La Côte d'Ivoire

QUESTION 48 1 points Save Answer

La forme de la France est souvent comparée à:
- un octogone
- un cercle
- un triangle
- un hexagone
- un pentagone

QUESTION 49 1 points Save Answer

Le président de la République française actuellement est:
- François Mitterrand (as of 5/14/17)
- Emanuel Macron (as of 5/14/17)
- François Hollande (as of 5/14/17)
- Jacques Chirac (as of 5/14/17)
- Charles De Gaulle

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers 1 points Save Answer

Les films _____ je préfère sont les films d'horreur.

- dont
- qui
- que
- lesquels
- (blank)

QUESTION 51 1 points Save Answer

La France libre fait référence

- à la France sous la Révolution française
- Au sud de la France en 1940
- à l'Alsace et à la Lorraine reconquise sur les Allemands
- à la France non socialiste
- à un système économique

QUESTION 52 1 points Save Answer

La théorie qui influence l'écriture de Zola est:

- la théorie de l'hérédité
- la théorie de l'art pour l'art
- le dadaisme
- le surréalisme
- la théorie de l'évolution

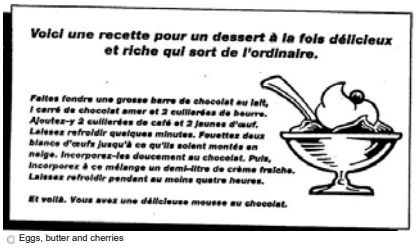
QUESTION 53 1 points Save Answer

La Révolution française a eu lieu en _____.

- 1776
- 1783
- 1789
- 1793
- 1755

QUESTION 54 1 points Save Answer

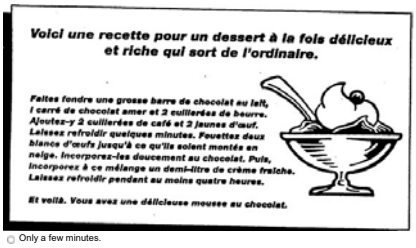
This recipe uses the following ingredients:



- Eggs, butter and cherries
- Egg yolks, butter and coffee
- Milk chocolate, flour and cooked rice
- Egg whites, chocolate and sugar
- Canned fruit (for decoration)

QUESTION 55 1 points Save Answer

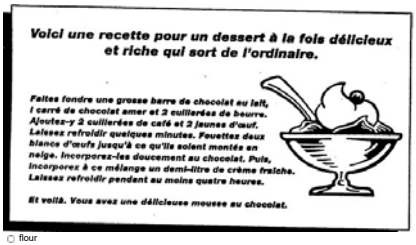
How much time do you need for this recipe to be ready to serve?



- Only a few minutes.
- It has to be refrigerated overnight.
- It is intended to be served immediately.
- Several hours.
- It does not say.

QUESTION 56 1 points Save Answer

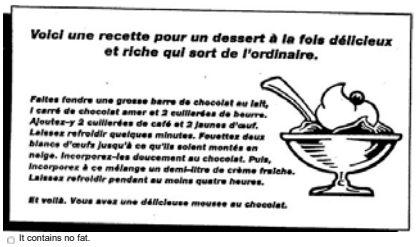
What ingredient is not included in this recipe?



- flour
- eggs
- butter
- table cream
- coffee

QUESTION 57 1 points Save Answer

Why is this recipe interesting?



- It contains no fat.
- It uses unusual ingredients.
- It can be served hot or cold.
- It produces a tasty end to a meal.
- It's low in cholesterol.

QUESTION 58 1 points Save Answer

Demain, dès l'aube

Demain, dès l'aube, à l'heure où blanchit la campagne,
Je partirai. Vois-tu, je sais que tu m'attends.
J'irai par la forêt, j'irai par la montagne.
Je ne puis demeurer loin de toi plus longtemps.

Je marcherai les yeux fixés sur mes pensées,
Sans rien voir au-dehors, sans entendre aucun bruit,
Seul, inconnu, le dos courbé, les mains croisées,
Triste, et le jour pour moi sera comme la nuit.

Je ne regarderai ni l'or du soir qui tombe,
Ni les voiles au loin descendant vers Harfleur,
Et quand j'arriverai, je mettrai sur ta tombe
Un bouquet de houx vert et de bruyère en fleur

Question: A quel moment de la journée le poète part-il?

- Le matin
- A midi
- Le soir
- L'après-midi
- La nuit

QUESTION 59 1 points Save Answer

Demain, dès l'aube

Demain, dès l'aube, à l'heure où blanchit la campagne,
Je partirai. Vois-tu, je sais que tu m'attends.
J'irai par la forêt, j'irai par la montagne.
Je ne puis demeurer loin de toi plus longtemps.

Je marcherai les yeux fixés sur mes pensées,
Sans rien voir au-dehors, sans entendre aucun bruit,
Seul, inconnu, le dos courbé, les mains croisées,
Triste, et le jour pour moi sera comme la nuit.

Je ne regarderai ni l'or du soir qui tombe,
Ni les voiles au loin descendant vers Harfleur,
Et quand j'arriverai, je mettrai sur ta tombe
Un bouquet de houx vert et de bruyère en fleur

Question: Où va le poète?

- Dans un bâteau
- Dans un jardin
- Dans un cimetière
- Sur un rocher
- Sur la côte

QUESTION 60 1 points Save Answer

Demain, dès l'aube

Demain, dès l'aube, à l'heure où blanchit la campagne,
Je partirai. Vois-tu, je sais que tu m'attends.
J'irai par la forêt, j'irai par la montagne.
Je ne puis demeurer loin de toi plus longtemps.

Je marcherai les yeux fixés sur mes pensées,
Sans rien voir au-dehors, sans entendre aucun bruit,
Seul, inconnu, le dos courbé, les mains croisées,
Triste, et le jour pour moi sera comme la nuit.

Je ne regarderai ni l'or du soir qui tombe,
Ni les voiles au loin descendant vers Harfleur,
Et quand j'arriverai, je mettrai sur ta tombe
Un bouquet de houx vert et de bruyère en fleur

Question: Pourquoi le poète fait-il ce voyage?

- Parce qu'il aime la nature
- Parce qu'il veut voir la mer
- Parce qu'il aime marcher
- Parce qu'il a perdu un être cher
- Parce qu'il aime la solitude

Begin: French Placement Examination: Part 2 (Listening Comprehension A)

INSTRUCTIONS

Timed Test	This test has a time limit of 20 minutes.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.
Multiple Attempts	This test allows multiple attempts.

Click **Begin** to start: French Placement Examination: Part 2 (Listening Comprehension A). Click **Cancel** to go back.
You will be previewing this assessment and your results will not be recorded.

Click Begin to start. Click Cancel to quit.

Cancel **Begin**

Preview Test: French Placement Examination: Part 2 (Listening Comprehension A)

Test Information

Description	
Instructions	Listen to the media clip below. Then answer the following questions based upon what you heard.

French Comprehension A

Please take this placement exam only once. Although technically you are allowed to take it multiple times, only your first submission will be considered.

After you have submitted part two, you will need to go back into the exam section and take part three.

PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.

Timed Test	This test has a time limit of 20 minutes.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	This test allows 3 attempts. This is attempt number 1.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

+ Question Completion Status

QUESTION 1 1 points Save Answer

Son nom s'écrit

- Bohringer
- Behringer
- Borhinger
- Bohrenger
- Dorhinger

QUESTION 2 1 points Save Answer

La personne qui téléphone est:

- française
- allemande
- suisse
- anglaise
- américaine

QUESTION 3 1 points Save Answer

Elle habite à

- Toulon
- Francfort
- Strasbourg
- Paris
- Marseille

QUESTION 4 1 points Save Answer

Erika est

- professeur
- secrétaire
- technicienne
- chef d'entreprise
- économiste

QUESTION 5 1 points Save Answer

Elle est de

- Toulon
- Francfort
- Strasbourg
- Paris
- Marseille

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

You recently left the test 'French Placement Examination: Part 2 (Listening Comprehension A)' without submitting it. Return to the test and click Save and Submit or contact your instructor for assistance.

Begin: French Placement Examination: Part 3 (Listening Comprehension B)

INSTRUCTIONS

Timed Test	This test has a time limit of 20 minutes.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.
Multiple Attempts	This test allows multiple attempts.

Click **Begin** to start: French Placement Examination: Part 3 (Listening Comprehension B). Click **Cancel** to go back.
You will be previewing this assessment and your results will not be recorded.

Click Begin to start. Click Cancel to quit.

Cancel Begin

Preview Test: French Placement Examination: Part 3 (Listening Comprehension B)

Test Information

Description	
Instructions	Listen to the media clip below. Then answer the following questions based upon what you heard.

French Listening Comprehension B

Please take this placement exam only once. Although technically you are allowed to take it multiple times, only your first submission will be considered.

After you have submitted part two, you will need to go back into the exam section and take part three.

PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.

Timed Test	This test has a time limit of 20 minutes.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	This test allows 3 attempts. This is attempt number 1.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

+ Question Completion Status

QUESTION 1 1 points Save Answer

La solution finale suggérée par Hélène est

- de ne pas manger du tout
- de faire plus d'exercice
- de ne manger que des fruits
- de sauter le petit déjeuner
- de ne pas prendre de dîner

QUESTION 2 1 points Save Answer

Le problème de l'amie d'Hélène est qu'elle

- mange trop de viande
- ne mange pas assez de poisson
- ne fait pas assez d'exercice
- grignote tout le temps des gâteaux
- fait trop d'exercice

QUESTION 3 1 points Save Answer

L'amie d'Hélène est qu'elle aime

- les biscottes
- le poisson
- les céréales
- les fruits
- les boissons

QUESTION 4 1 points Save Answer

Le régime fantastique suggéré par Hélène est à base de

- poisson
- céréales
- fruits
- fromage
- pain

QUESTION 5 1 points Save Answer

L'amie d'Hélène lui demande

- comment perdre deux kilos
- pourquoi elle est trop grosse
- si elle est trop grosse
- comment perdre dix kilos
- quel sport elle doit faire

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

---German Placement

German Placement Examination: Part 1 (General)

80 Questions.

German Placement Exam: Part 2 (Listening Comprehension)

10 Questions.

You recently left the test 'French Placement Examination: Part 3 (Listening Comprehension B)' without submitting it. Return to the test and click Save and Submit or contact your instructor for assistance.

Begin: German Placement Examination: Part 1 (General)

INSTRUCTIONS

Timed Test	This test has a time limit of 1 hour and 15 minutes.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.
Multiple Attempts	This test allows multiple attempts.

Click **Begin** to start: German Placement Examination: Part 1 (General). Click **Cancel** to go back. You will be previewing this assessment and your results will not be recorded.

Click Begin to start. Click Cancel to quit.

Cancel Begin

Preview Test: German Placement Examination: Part 1 (General)

Test Information

Description	80 Questions.
Instructions	This portion of the exam has 80 multiple choice questions. Select the best answer for each. PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK. After you have submitted part one, you will need to go back into the exam section and take part two.
Timed Test	This test has a time limit of 1 hour and 15 minutes.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	This test allows 3 attempts. This is attempt number 1.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.

Question Completion Status

QUESTION 1 1 points Save Answer

Ihr Pass ist ja gar nicht mehr gültig! Den müssen Sie unbedingt _____.

- erfüllen
- gelten
- verlängern
- versichern

QUESTION 2 1 points Save Answer

Das Wetter ist im Winter in Kanada sehr kalt. _____ regent und schneit sehr viel.

- Er
- Es
- Sie
- Ich

QUESTION 3 1 points Save Answer

Das Mädchen freut _____ auf ihren Freund. Er kommt am Samstag.

- dich
- mich
- sich
- uns

QUESTION 4 1 points Save Answer

Unsere Fußball-Mannschaft _____ am Samstag _____.

- hat..verloren
- ist ..verloren
- hat ..geverloren
- ist..vergeloren

QUESTION 5 1 points Save Answer

Frau Müller, wo wohnen _____ ?

- ihr
- du
- Sie
- er

QUESTION 6 1 points Save Answer

Kann ich bei dir wohnen? -Ja, du kannst bei _____ wohnen.

- mir
- ihr
- ihm
- mich

QUESTION 7 1 points Save Answer

Willst du _____ ein neues Haus kaufen?

- dich
- dir
- dein
- sich

QUESTION 8 1 points Save Answer

Im Sommer sind _____ Bäume sehr grün.

- alle
- alles
- allen
- allem

QUESTION 9 1 points Save Answer

Ich kann dich nicht verstehen! Sprich doch bitte _____!

- deutlicher
- höflicher
- nötiger
- stärker

QUESTION 10 1 points Save Answer

_____ gibst du das Buch? Ich gebe das Buch dem Kind.

- Wem
- Wen
- Wer
- Wessen

QUESTION 11 1 points Save Answer

Die Frau hat _____ Kinder.

- keine
- kein
- keinen
- keinem

QUESTION 12 1 points Save Answer

Wir fragen _____ Freund.

- die
- das
- den
- der

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

Rudolf freut sich schon sehr _____ seinen Urlaub im nächsten Sommer.
- für
- über
- um
- auf

QUESTION 14 1 points Save Answer

Ich habe nur einen 10-Mark-Schein. Können Sie mir _____ Kleingeld geben?
- davon
- damit
- darüber
- dafür

QUESTION 15 1 points Save Answer

Erinnerst du dich an Herrn Meier? - Oh ja, ich denke oft _____.
- an ihm
- an ihn
- daran
- davon

QUESTION 16 1 points Save Answer

Trotz _____ bummle ich gern durch die Stadt.
- des Wetter
- des Wetters
- der Wetter
- dem Wetter

QUESTION 17 1 points Save Answer

Was hat dir denn der Arzt gegen Grippe gegeben? Er hat mir Tabletten _____.
- beschrieben
- geschrieben
- unterschrieben
- verschrieben

QUESTION 18 1 points Save Answer

Wohin soll ich das Buch legen? _____.
- auf das Bett
- auf dem Bett
- auf des Bettes
- auf den Bett

QUESTION 19 1 points Save Answer

Der Rhein ist _____ Fluss in Deutschland.
- längst
- der längste
- am längsten
- länge

QUESTION 20 1 points Save Answer

Wo sitzt Jürgen? _____
- Er sitzt an den Tisch.
- Er sitzt an dem Tisch
- Er sitzt an des Tisches
- Er sitzt an der Tisch

QUESTION 21 1 points Save Answer

Die Zimmer _____ sind sehr klein.
- den Studenten
- der Student
- der Studenten
- dem Studenten

QUESTION 22 1 points Save Answer

Der Junge schreibt seine Hausarbeit mit _____ Farbe.
- rote
- roten
- rotem
- roter

QUESTION 23 1 points Save Answer

Der Name _____ Mutter ist Ursula.
- meiner
- meines
- mein
- meinem

QUESTION 24 1 points Save Answer

Mein Vater ist 46 und meine Mutter ist 44 Jahre alt. Meine Mutter ist _____ mein Vater.
- so jung wie
- jünger als
- am jüngsten
- die jüngste

QUESTION 25 1 points Save Answer

Wir besuchen die Eltern _____ .
- des Junges
- den Jungen
- des Jungen
- dem Jungen

QUESTION 26 1 points Save Answer

Hast du das Geld _____?
- mitbracht
- mitgebringt
- mitgebracht
- gemitbringt

QUESTION 27 1 points Save Answer

_____ heißt Thomas.
- Andreas Freund
- Andrea Freunds
- Andreas Freunds
- Andrea Freund

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

1 points Save Answer

Save All Answers Save and Submit

Wenn du immer so gut kochst, _____!
- bald komme ich wieder zum Essen
- ich bald wieder zum Essen komme
- komme ich bald wieder zum Essen
- ich komme bald wieder zum Essen

QUESTION 29 1 points Save Answer

Konntest du mir nicht früher sagen, dass _____?
- diese Prüfung ist so schwer
- so ist diese Prüfung schwer
- so schwer ist diese Prüfung
- diese Prüfung so schwer ist

QUESTION 30 1 points Save Answer

Ich komme zu deiner Party, _____ ich Zeit habe.
- dass
- ob
- wenn
- und

QUESTION 31 1 points Save Answer

Ich frage die Studenten, _____ sie viel gelernt haben.
- weil
- ob
- wenn
- dass

QUESTION 32 1 points Save Answer

Nick sagt, _____ alle Studenten ein "A" in der Prüfung bekommen sollen.
- dass
- ob
- weil
- wenn

QUESTION 33 1 points Save Answer

Ich denke, _____ ich die Fragen beantworte.
- bevor
- ob
- als
- wann

QUESTION 34 1 points Save Answer

Das hier ist mein _____ Buch. Das erste ist in der Bibliothek.
- zweites
- zweiter
- zweite
- zweiten

QUESTION 35 1 points Save Answer

Das Auto ist nicht teuer _____ preiswert.
- oder
- sondern
- aber
- und

QUESTION 36 1 points Save Answer

Wir wohnen in Amerika _____ August 1992.
- nach
- von
- seit
- für

QUESTION 37 1 points Save Answer

Sie kommt _____ Mexiko.
- nach
- aus
- zu
- in

QUESTION 38 1 points Save Answer

_____ mehr Übungen ich mache, _____ schwerer finde ich sie.
- Entweder. . . oder
- Je . . . um so
- Weder . . . noch
- Zwar . . . aber

QUESTION 39 1 points Save Answer

Nach dem Test gehen alle Studenten _____ Hause.
- zu
- nach
- in
- bei

QUESTION 40 1 points Save Answer

Morgen sehe ich Ihren Bekannten, Herrn Schulz. Oh, _____ Sie ihn bitte von mir grüßen.
- müssten
- könnten
- sollten
- wollten

QUESTION 41 1 points Save Answer

Frau Thomas kann heute nicht zur Arbeit kommen, ihr ist schon wieder _____.
- krank
- schlecht
- schlimm
- schwach

QUESTION 42 1 points Save Answer

Die Studenten _____ dem Lehrer nicht immer zu.
- sprechen
- antworten
- sehen
- hören

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

1 points Save Answer

Save All Answers Save and Submit

Weißt du, wo man hier in Westminster _____ Hose kaufen kann?
- eine schöne
- ein schönes
- einen schönen
- ein schöner

QUESTION 44 1 points Save Answer

Hast du etwas von Bärbel _____?
- gehören
- hören
- gehört
- hört

QUESTION 45 1 points Save Answer

Die Touristen _____ 100 US Dollar in deutsche Marken um.
- wechseln
- kaufen
- bringen
- verkaufen

QUESTION 46 1 points Save Answer

Hans! _____ du, wo die Kennedy Straße ist.
- kennst
- wisst
- weißt
- kennt

QUESTION 47 1 points Save Answer

Hallo Klaus and Sabine! Grüßt euch! Sagt mal, _____ ihr Petra?
- weisst
- kennt
- wisst
- kennen

QUESTION 48 1 points Save Answer

Die Frau _____ nicht gut tanzen.
- kannst
- könnt
- kann
- können

QUESTION 49 1 points Save Answer

_____ du mit uns nach Deutschland fahren?
- Wollst
- Wollt
- Willst
- Wollen

QUESTION 50 1 points Save Answer

Herr Schmidt _____ das Buch.
- lesen
- liest
- lest
- lese

QUESTION 51 1 points Save Answer

Maria! Wo _____ die Hauptstraße?
- sein
- bist
- ist
- sind

QUESTION 52 1 points Save Answer

Wer hat denn hier das Fenster _____?
- aufgemachen
- aufmachen
- aufgemacht
- aufmacht

QUESTION 53 1 points Save Answer

Wie lange unsere Reise dauert, hängt _____ ab.
- an dem Wetter
- durch das Wetter
- von dem Wetter
- nach dem Wetter

QUESTION 54 1 points Save Answer

Ich fahre nach Mexiko und mein Bruder _____ an den Atlantik.
- fährt
- fahrt
- fahrst
- fahren

QUESTION 55 1 points Save Answer

Guten Tag, Otto! Wie geht es dir heute morgen?
- Ja, vielleicht morgen.
- Viele Grüße an deine Mutter.
- Danke, nicht schlecht.
- Ich gratuliere!

QUESTION 56 1 points Save Answer

Becky hat ein kaputtes Knie. - _____!
- Ach das tut mir aber leid!
- Das ist ja prima!
- Das ist aber nett!!
- Herzlichen Glückwunsch!

QUESTION 57 1 points Save Answer

_____ Auto ist das?
- Wer
- Wen
- Wessen
- Wem

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

1 points Save Answer

Save All Answers Save and Submit

Wo ist denn der Brief? -Der _____.
- hat gerade neu geschrieben
- schreibt gerade neu
- soll gerade neu geschrieben
- wird gerade neu geschrieben

QUESTION 59 1 points Save Answer

Gibt es hier in der Innenstadt eigentlich keine _____ Restaurants?
- billigen
- billige
- billig
- billiges

QUESTION 60 1 points Save Answer

Du hättest mich doch _____!
- angerufen warden sollen
- anrufen zu wollen
- sollen anrufen
- anrufen sollen

QUESTION 61 1 points Save Answer

Münchhausens Reise nach Rußland.

Meine Reise nach Rußland began im Winter. Ich ____(61)_____ (reisen) zu Pferde, weil das am bequemsten ____(62)_____ (sein). Leider ___(63)____ (tragen) ich nur leichte Kleidung, und ich ____(64)_____ (frieren) sehr. Da ___(65)____ (sehen) ich einen alten Mann im Schnee. Ich __(66)___ (geben) ihm meinen Reisemantel und ___(67)____ (reiten) weiter.
- reitete
- ritt
- riet
- reitet

QUESTION 62 1 points Save Answer

Münchhausens Reise nach Rußland.

Meine Reise nach Rußland began im Winter. Ich ____(61)_____ (reisen) zu Pferde, weil das am bequemsten ____(62)_____ (sein). Leider ___(63)____ (tragen) ich nur leichte Kleidung, und ich ____(64)_____ (frieren) sehr. Da ___(65)____ (sehen) ich einen alten Mann im Schnee. Ich __(66)___ (geben) ihm meinen Reisemantel und ___(67)____ (reiten) weiter.
- sein
- gewesen
- war
- ist

QUESTION 63 1 points Save Answer

Münchhausens Reise nach Rußland.

Meine Reise nach Rußland began im Winter. Ich ____(61)_____ (reisen) zu Pferde, weil das am bequemsten ____(62)_____ (sein). Leider ___(63)____ (tragen) ich nur leichte Kleidung, und ich ____(64)_____ (frieren) sehr. Da ___(65)____ (sehen) ich einen alten Mann im Schnee. Ich __(66)___ (geben) ihm meinen Reisemantel und ___(67)____ (reiten) weiter.
- trug
- tragte
- trugte
- tragt

QUESTION 64 1 points Save Answer

Münchhausens Reise nach Rußland.

Meine Reise nach Rußland began im Winter. Ich ____(61)_____ (reisen) zu Pferde, weil das am bequemsten ____(62)_____ (sein). Leider ___(63)____ (tragen) ich nur leichte Kleidung, und ich ____(64)_____ (frieren) sehr. Da ___(65)____ (sehen) ich einen alten Mann im Schnee. Ich __(66)___ (geben) ihm meinen Reisemantel und ___(67)____ (reiten) weiter.
- fror
- frierte
- frorte
- friert

QUESTION 65 1 points Save Answer

Münchhausens Reise nach Rußland.

Meine Reise nach Rußland began im Winter. Ich ____(61)_____ (reisen) zu Pferde, weil das am bequemsten ____(62)_____ (sein). Leider ___(63)____ (tragen) ich nur leichte Kleidung, und ich ____(64)_____ (frieren) sehr. Da ___(65)____ (sehen) ich einen alten Mann im Schnee. Ich __(66)___ (geben) ihm meinen Reisemantel und ___(67)____ (reiten) weiter.
- sehte
- sahte
- sah
- sieht

QUESTION 66 1 points Save Answer

Münchhausens Reise nach Rußland.

Meine Reise nach Rußland began im Winter. Ich ____(61)_____ (reisen) zu Pferde, weil das am bequemsten ____(62)_____ (sein). Leider ___(63)____ (tragen) ich nur leichte Kleidung, und ich ____(64)_____ (frieren) sehr. Da ___(65)____ (sehen) ich einen alten Mann im Schnee. Ich __(66)___ (geben) ihm meinen Reisemantel und ___(67)____ (reiten) weiter.
- gibte
- gabte
- gab
- gibt

QUESTION 67 1 points Save Answer

Münchhausens Reise nach Rußland.

Meine Reise nach Rußland began im Winter. Ich ____(61)_____ (reisen) zu Pferde, weil das am bequemsten ____(62)_____ (sein). Leider ___(63)____ (tragen) ich nur leichte Kleidung, und ich ____(64)_____ (frieren) sehr. Da ___(65)____ (sehen) ich einen alten Mann im Schnee. Ich __(66)___ (geben) ihm meinen Reisemantel und ___(67)____ (reiten) weiter.
- reisen
- reiste
- gereist
- reist

QUESTION 68 1 points Save Answer

Read the following text and answer questions 68-75
Das A ist blau - Die Welt der Synästhetiker

Frau Schmidt-Wehr ist Synästhetikerin. Sie hört ein Wort und sieht gleichzeitig Farben. Jeder Buchstabe hat eine Farbe. Der Vokal A" hat die Farbe blau, ein O" ist gelb. Manche Buchstaben können auch Formen haben. Frau Schmidt-Wehr liest die Zahl 4 und sieht eine rote quadratische Flache. Das A" ist normalerweise blau. Aber in dem Wort Name" ist das A" ganz dunkelblau, fast schwarz, in dem Wort Stadt" ist das A" dunkelblaugrau. Synästhetiker sehen bis zu 2000 verschiedene Farbtöne.

Von 100 000 ist ein Mensch Synästhetiker. Wenige sprechen über ihre Wahrnehmungen. Ein Synästhetiker sieht, hört, liest, schmeckt, riecht nicht nur etwas. Der Synästhetiker hört etwas und sieht zur gleichen Zeit etwas. Oder er liest ein Wort und sieht Farben und Formen.

Heute arbeiten Wissenschaftler in vielen Ländern an diesem Thema. Am folgenden Wochenende treffen sie sich zu einem Kongress in Frankfurt am Main.

Question: Für Frau Schmidt-Wehr hat jeder Buchstabe _____.
- einen Namen
- einen Klang
- eine Farbe oder eine Form
- eine Farbe

QUESTION 69 1 points Save Answer

Read the following text and answer questions 68-75
Das A ist blau - Die Welt der Synästhetiker

Frau Schmidt-Wehr ist Synästhetikerin. Sie hört ein Wort und sieht gleichzeitig Farben. Jeder Buchstabe hat eine Farbe. Der Vokal A hat die Farbe blau, ein O" ist gelb. Manche Buchstaben können auch Formen haben. Frau Schmidt-Wehr liest die Zahl 4 und sieht eine rote quadratische Flache. Das A" ist normalerweise blau. Aber in dem Wort Name" ist das A" ganz dunkelblau, fast schwarz, in dem Wort Stadt" ist das A" dunkelblaugrau. Synästhetiker sehen bis zu 2000 verschiedene Farbtöne.

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Question: Was ist richtig?
- Viele Wissenschaftler arbeiten am Thema.
- Wissenschaftler arbeiten am Thema in vielen Ländern.
- In Frankfurt arbeiten Studenten am Thema.
- Am letzten Wochenende trafen sich viele Wissenschaftler in Frankfurt.

QUESTION 70

1 points Save Answer

Read the following text and answer questions 68-75
Das A ist blau - Die Welt der Synästhetiker

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Question: Ein Synästhetiker _____.
- mag bunte Farben.
- sieht beim Hören Farben.
- mag schöne Dinge.
- malt mit bunten Farben.

QUESTION 71

1 points Save Answer

Read the following text and answer questions 68-75
Das A ist blau - Die Welt der Synästhetiker

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Heute arbeiten Wissenschaftler in vielen Ländern an diesem Thema. Am folgenden Wochenende treffen sie sich zu einem Kongress in Frankfurt am Main.

Question: Synästhetiker sehen _____.
- etwa 200 verschiedene Farben
- etwa 20 verschiedene Farben
- etwa 2000 verschiedene Farben
- etwa 2 verschiedene Farben

QUESTION 72

1 points Save Answer

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Heute arbeiten Wissenschaftler in vielen Ländern an diesem Thema. Am folgenden Wochenende treffen sie sich zu einem Kongress in Frankfurt am Main.

Question: Die Synästhetiker _____.
- sprechen nie über ihre Wahrnehmungen.
- sprechen immer über iher Wahrnehmungen.
- sprechen oft über ihre Wahrnehmngen.
- sprechen nicht oft über ihre Wahrnehmungen.

QUESTION 73

1 points Save Answer

Read the following text and answer questions 68-75
Das A ist blau - Die Welt der Synästhetiker

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Heute arbeiten Wissenschaftler in vielen Ländern an diesem Thema. Am folgenden Wochenende treffen sie sich zu einem Kongress in Frankfurt am Main.

Question: Fur Frau Schmidt-Wehr hat der Buchtstabe O _____
- die Farbe Blau
- die Farbe Dunkelblau
- die Farbe Gelb
- die Farbe Rot

QUESTION 74

1 points Save Answer

Read the following text and answer questions 68-75
Das A ist blau - Die Welt der Synästhetiker

Frau Schmidt-Wehr ist Synästhetikerin. Sie hört ein Wort und sieht gleichzeitig Farben. Jeder Buchstabe hat eine Farbe. Der Vokal A" hat die Farbe blau, ein O" ist gelb. Manche Buchstaben können auch Formen haben. Frau Schmidt-Wehr liest die Zahl 4 und sieht eine rote quadratische Flache. Das A" ist normalerweise blau. Aber in dem Wort Name" ist das A" ganz dunkelblau, fast schwarz, in dem Wort Stadt" ist das A" dunkelblaugrau. Synästhetiker sehen bis zu 2000 verschiedene Farbtöne.

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Heute arbeiten Wissenschaftler in vielen Ländern an diesem Thema. Am folgenden Wochenende treffen sie sich zu einem Kongress in Frankfurt am Main.

Question: In dem Wort Name" ist das A" _____.
- blau
- dunkelblau
- schwarz
- graublau

QUESTION 75

1 points Save Answer

Read the following text and answer questions 68-75
Das A ist blau - Die Welt der Synästhetiker

Frau Schmidt-Wehr ist Synästhetikerin. Sie hört ein Wort und sieht gleichzeitig Farben. Jeder Buchstabe hat eine Farbe. Der Vokal A" hat die Farbe blau, ein O" ist gelb. Manche Buchstaben können auch Formen haben. Frau Schmidt-Wehr liest die Zahl 4 und sieht eine rote quadratische Flache. Das A" ist normalerweise blau. Aber in dem Wort Name" ist das A" ganz dunkelblau, fast schwarz, in dem Wort Stadt" ist das A" dunkelblaugrau. Synästhetiker sehen bis zu 2000 verschiedene Farbtöne.

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Heute arbeiten Wissenschaftler in vielen Ländern an diesem Thema. Am folgenden Wochenende treffen sie sich zu einem Kongress in Frankfurt am Main.

Question: Was Frau Schmidt-Wehr kann, können _____.
- alle Menschen
- sehr viele Menschen
- nicht wenige Menschen
- nur wenige Menschen

QUESTION 76

1 points Save Answer

Passage Two
Read the following text and answer questions 76-80
Beim Arzt

Fritz: Guten Morgen. Darf ich bitte den Herrn Doktor sprechen?

Fräulein: Der Herr Doktor hat jetzt einen Patienten. Geben Sie mir bitte Ihren Namen.

Fritz: Fritz Weber.

Fräulein: Ach, Sie sind Herr Weber, der schon vor einer Woche hier war, nicht?

Fritz: Richtig. Letzte Woche waren Sie auf Urlaub und ich habe mit der Frau vom Herrn Doktor gesprochen. Wie war Ihre Urlaubsreise?

Fräulein: Danke, sehr schön, aber auch etwas anstrengend und ein bisschen zu viel für mich. Ich freue mich, dass ich wieder zurück bin.

Question: Nach ihrer Urlaubsreise fühlte sich das Fräulein _____.
- müde
- frisch
- krank
- traurig

QUESTION 77 1 points Save Answer

Passage Two
Read the following text and answer questions 76-80
Beim Arzt

Fritz: Guten Morgen. Darf ich bitte den Herrn Doktor sprechen?

Fräulein: Der Herr Doktor hat jetzt einen Patienten. Geben Sie mir bitte Ihren Namen.

Fritz: Fritz Weber.

Fräulein: Ach, Sie sind Herr Weber, der schon vor einer Woche hier war, nicht?

Fritz: Richtig. Letzte Woche waren Sie auf Urlaub und ich habe mit der Frau vom Herrn Doktor gesprochen. Wie war Ihre Urlaubsreise?

Fräulein: Danke, sehr schön, aber auch etwas anstrengend und ein bisschen zu viel fur mich. Ich freue mich, dass ich wieder zurück bin.

Question: Fritz, weiß, dass das Fräulein auf Urlaub war, _____.
- denn der Doktor hat es ihm gesagt.
- denn er hat es ihr gesagt.
- denn ein Patient hat es ihm gesagt.
- denn die Frau des Doktors hat es ihm gesagt.

QUESTION 78 1 points Save Answer

Passage Two
Read the following text and answer questions 76-80
Beim Arzt

Fritz: Guten Morgen. Darf ich bitte den Herrn Doktor sprechen?

Fräulein: Der Herr Doktor hat jetzt einen Patienten. Geben Sie mir bitte Ihren Namen.

Fritz: Fritz Weber.

Fräulein: Ach, Sie sind Herr Weber, der schon vor einer Woche hier war, nicht?

Fritz: Richtig. Letzte Woche waren Sie auf Urlaub und ich habe mit der Frau vom Herrn Doktor gesprochen. Wie war Ihre Urlaubsreise?

Fräulein: Danke, sehr schön, aber auch etwas anstrengend und ein bisschen zu viel für mich. Ich freue mich, dass ich wieder zurück bin.

Question: Im Augenblick ist der Arzt _____.
- zu Hause mit seiner Frau.
- nicht zu sprechen.
- auf Urlaub.
- bei dem Patienten Fritz.

QUESTION 79 1 points Save Answer

Passage Two
Read the following text and answer questions 76-80
Beim Arzt

Fritz: Guten Morgen. Darf ich bitte den Herrn Doktor sprechen?

Fräulein: Der Herr Doktor hat jetzt einen Patienten. Geben Sie mir bitte Ihren Namen.

Fritz: Fritz Weber.

Fräulein: Ach, Sie sind Herr Weber, der schon vor einer Woche hier war, nicht?

Fritz: Richtig. Letzte Woche waren Sie auf Urlaub und ich habe mit der Frau vom Herrn Doktor gesprochen. Wie war Ihre Urlaubsreise?

Fräulein: Danke, sehr schön, aber auch etwas anstrengend und ein bisschen zu viel fur mich. Ich freue mich, dass ich wieder zurück bin.

Question: Das Fräulein _____.
- ist die Frau von Fritz.
- ist immer noch auf Uralaub.
- ist bei dem Herrn Doktor angestellt.
- ist die Freundin des Doktors.

QUESTION 80 1 points Save Answer

Passage Two
Read the following text and answer questions 76-80
Beim Arzt

Fritz: Guten Morgen. Darf ich bitte den Herrn Doktor sprechen?

Fräulein: Der Herr Doktor hat jetzt einen Patienten. Geben Sie mir bitte Ihren Namen.

Fritz: Fritz Weber.

Fräulein: Ach, Sie sind Herr Weber, der schon vor einer Woche hier war, nicht?

Fritz: Richtig. Letzte Woche waren Sie auf Urlaub und ich habe mit der Frau vom Herrn Doktor gesprochen. Wie war Ihre Urlaubsreise?

Fräulein: Danke, sehr schön, aber auch etwas anstrengend und ein bisschen zu viel für mich. Ich freue mich, dass ich wieder zurück bin.

Question: Herr Weber _____.
- spricht mit einer Dame.
- möchte den Patienten sprechen.
- spricht gern von seiner Urlaubsreise.
- war letzte Woche auf Urlaub.

Begin: German Placement Exam: Part 2 (Listening Comprehension)

INSTRUCTIONS

Timed Test	This test has a time limit of 30 minutes.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	This test can be saved and resumed later. The timer will continue to run if you leave the test.
Multiple Attempts	This test allows multiple attempts.

Click **Begin** to start: German Placement Exam: Part 2 (Listening Comprehension). Click **Cancel** to go back.
You will be previewing this assessment and your results will not be recorded.

Click Begin to start. Click Cancel to quit.

Cancel **Begin**

Preview Test: German Placement Exam: Part 2 (Listening Comprehension)

Test Information

Description 10 Questions

Instructions Listen to the media clip below. Then answer the following questions based upon what you heard.

German Listening Comprehension

Please take this placement exam only once. Although technically you are allowed to take it multiple times, only your first submission will be considered.

PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.

Timed Test This test has a time limit of 30 minutes. You will be notified when time expires, and you may continue or submit.
Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*

Multiple Attempts This test allows 3 attempts. This is attempt number 1.

Force Completion This test can be saved and resumed later. The timer will continue to run if you leave the test.

QUESTION 1 1 points Save Answer

Der Name des Hotels ist

- Pekinghotel
- Schlosshotel
- Hotel am See
- Parkhotel

QUESTION 2 1 points Save Answer

Wann nehmen sie einen Hausschlüssel vom Hotel mit?

- wenn sie abfahren
- wenn sie lange schlafen
- wenn sie um 22 Uhr nach Hause kommen
- wenn sie nach Mitternacht zurückkommen

QUESTION 3 1 points Save Answer

Warum frühstücken sie im Hotel nicht so früh?

- Sie können nicht lange schlafen
- Das Frühstück schmeckt nicht
- Sie schlafen gern lange
- Sie gehen zuerst joggen

QUESTION 4 1 points Save Answer

Die Familie steht zu Hause _____ auf?

- spät
- um fünf Uhr
- um vier Uhr
- früh

QUESTION 5 1 points Save Answer

Wann macht das Restaurant mittwochs auf?

- um sechs Uhr
- um sechszehn Uhr
- um sechs Uhr dreißig
- um sechszehn Uhr dreißig

QUESTION 6 1 points Save Answer

Wann essen sie Frühstück?

- um acht Uhr dreißig
- um neunzehn Uhr dreißig
- um neun Uhr dreißig
- um zehn Uhr dreißig

QUESTION 7 1 points Save Answer

Es gibt ein Ressaurant im

- Parterre
- ersten Stock
- Garten
- Erdgeschoss

QUESTION 8 1 points Save Answer

Was für ein Zimmer haben die Eltern?

- ein Dreibettzimmer
- ein Einzelzimmer
- ein Doppelzimmer
- eine Suite

QUESTION 9 1 points Save Answer

Das Zimmer der Frau liegt im

- Parterre
- ersten Stock
- zweiten Stock
- Erdgeschoss

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

QUESTION 10

1 points Save Answer

Wie ist das Hotel?

- teuer und laut
- klein und schmutzig
- elegant und groß
- ruhig und elegant

Click Save and Submit to save and submit. Click Save All Answers to save all answers.

Save All Answers Save and Submit

III. Math Instructions

Math

NOTE 1: Please take these placements using a desktop or laptop computer. Phones, Kindles, and even iPads are not able to display the Blackboard scripts. Students have found that Mozilla Firefox to be the best browser.

NOTE 2: Remember: you will NOT see your Math scores in Blackboard. Course placement results will be in Archway under "test summary" by the first week of July. You can check your completion status of the Math placements in your checklist.

The Mathematics Placement Test is designed to assist the Mathematics Department of the College in placing you in the proper mathematics course. You may **NOT** use a calculator or any outside help for this test. **To do so is a violation of the McDaniel College Honor Code**.

The placement contains four parts:

- **Part One**--Arithmetic (32 questions; 75 minutes time limit)
- **Part Two**--Algebra 1 (25 questions; 60 minutes time limit)
- **Part Three**--Algebra 2 (10 questions; 30 minutes time limit)
- **Part Four**--Elementary Calculus (15 questions; 45 minutes time limit)

You must pass both Parts One and Two to place into a credit mathematics course.

If you would like to review before taking the tests, there are review tests for both arithmetic and algebra in the attachments. ArithmeticSampleTest.pdf

AlgebraSampleTest(2).pdf

In addition, the web site www.purplemath.com contains free help in mathematics. Look at "Preliminary Topics" for arithmetic and "Beginning Algebra Topics" for algebra.

WHAT TO DO

1. Take the Preliminary Mathematics Background Questionaire (Opens New Window)
2. Click on the "Math Placement" link on the main course menu.
3. Take Part 1 first (Arithmetic).
4. Next, take Parts 2 and 3 (Algebra 1 and 2).
5. You should attempt Part 4 only if you have already studied calculus.

You may take each part at a different time. Once you start a part, you must complete that test in the time allotted.

Test Questions: There is one correct answer to each question.

1. $867 + 42 + 208 =$

(a) 1116 (b) 1117 (c) 1016 (d) 1017

2. $274 \times 37 =$

(a) 311 (b) 11,138 (c) 10,131 (d) 10,138

3. $5.89 + 7.064 =$

(a) 12.95 (b) 12.954 (c) 1.295 (d) 7.653

4. $\left(\frac{3}{4}\right)\left(\frac{3}{8}\right) =$

(a) $\frac{9}{32}$ (b) $\frac{3}{16}$ (c) 2 (d) $2\frac{1}{4}$

5. $\frac{4+3}{4-6} =$

(a) -1 (b) $-\frac{7}{2}$ (c) $-\frac{1}{2}$ (d) 3

6. 

What fraction names the shaded part of the whole rectangle?

(a) $\frac{5}{3}$ (b) $\frac{3}{5}$ (c) $\frac{5}{8}$ (d) $\frac{3}{8}$

7. $8 - 2\frac{5}{9} =$

(a) $5\frac{2}{5}$ (b) $5\frac{4}{9}$ (c) $6\frac{2}{9}$ (d) $6\frac{4}{9}$

8. The decimal representation of $\frac{3}{8}$ is

(a) 3.8 (b) 2.33 (c) 0.375 (d) 0.0375

9. $4.301 \times 0.62 =$

(a) 26.62 (b) 26.6662 (c) 4.921 (d) 2.66662 (e) .2662

10. $-5[4-2(-3)] =$

(a) - 70 (b) -50 (c) - 10 (d) 5 (e) 10

11. Which is smallest?

(a) 0.67 (b) $\frac{2}{3}$ (c) $\frac{3}{5}$ (d) 0.7 (e) 0.61

12. $(\frac{2}{3}+1)^2 =$

(a) $\frac{25}{9}$ (b) $\frac{13}{9}$ (c) $\frac{5}{3}$ (d) $\frac{4}{9}$ (e) $\frac{10}{3}$

13. What is the area in square inches of the region between two concentric circles of radii 5 inches and 3 inches? See figure.

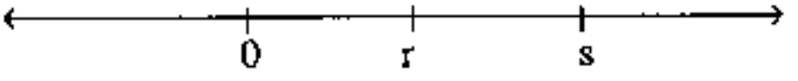
(a) 2π (b) 4π (c) 9π

(d) 16π (e) 25π

14. An article usually sells for \$8.00 but is on sale at 20% off. If there is a sales tax of 5%, the total cost of the article to the buyer is

(a) \$6.00 (b) \$6.08 (c) \$6.40 (d) \$6.72 (e) \$6.80

15. Let two numbers r and s be located on a number line as shown below. Which one of the following is true?



(a) $r > s > 0$ (b) $s < 0 < r$ (c) $0 > s > r$

(d) $0 > r > s$ (e) $0 < r < s$

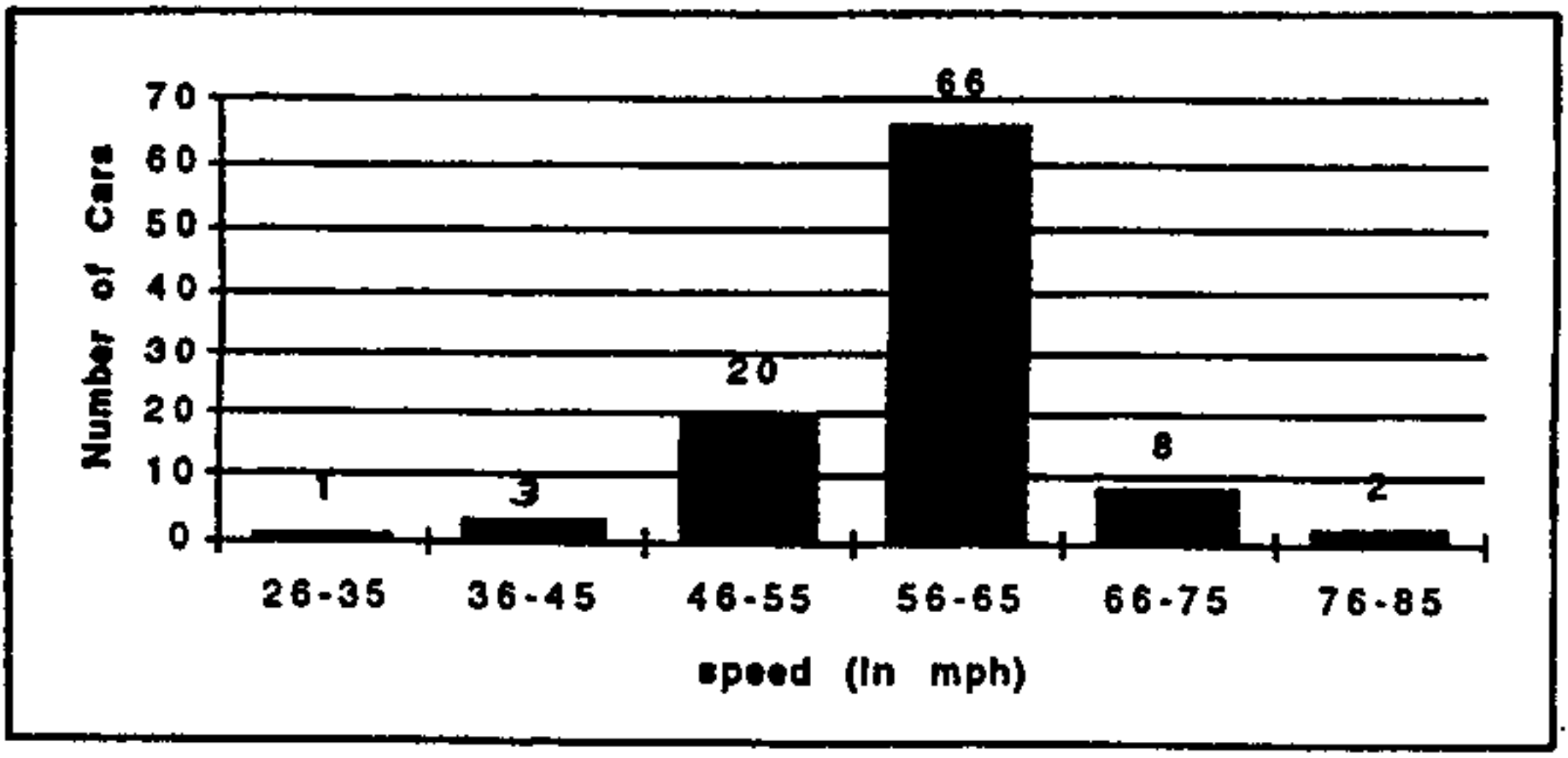
16. If $\frac{4}{3}x - \frac{1}{2} = 0$, then $x =$

(a) $\frac{3}{8}$ (b) $\frac{2}{3}$ (c) $\frac{3}{2}$ (d) $\frac{11}{6}$ (e) $\frac{8}{3}$

17. If it takes 200 gallons of sap to make 5 gallons of maple syrup, how many gallons of sap are needed to make 32 gallons of maple syrup?

(a) 800 (b) 1280 (c) 312.5 (d) 1320

18. In a recent traffic survey the speed of cars traveling on a interstate highway was clocked by radar. Below is a bar graph showing the speed categories used and the number of cars that were in each category. Use the graph to find how many drivers exceeded the speed limit of 65 mph.



(a) 76 (b) 24 (c) 10 (d) 8

19. Rachel saw a dress priced at $75. A sign above the rack said that every dress was marked down an additional 25% from the price on the sticker. If Rachel decides to buy the dress, how much will it cost her?

(a) $18.75 (b) $50.00 (c) $56.25 (d) $72.50

20. If $\frac{x}{6} = \frac{18}{54}$ then x =

(a) 3 (b) 2 (c) 4 (d) 9

Arithmetic Sample Test Answers:

1. b	11. c
2. d	12. a
3. b	13. d
4. a	14. d
5. b	15. e
6. c	16. a
7. b	17. b
8. c	18. c
9. d	19. c
10. b	20. b

1. $8x + 5(x - 2y) + y =$

(a) $13x - 9y$ (b) $9x - y + 5$ (c) $13x - y$ (d) $8x^2 - 16xy - 9y$

2. If $\frac{4}{x} = \frac{5}{3}$, then $x =$

(a) 3 (b) $\frac{20}{3}$ (c) $\frac{12}{5}$ (d) $\frac{4}{5}$

3. If $a = -3$ and $b = -5$, $2a - (3a - 4b) =$

(a) -17 (b) 5 (c) 37 (d) -3

4. $\frac{4}{x} - \frac{7}{y} =$

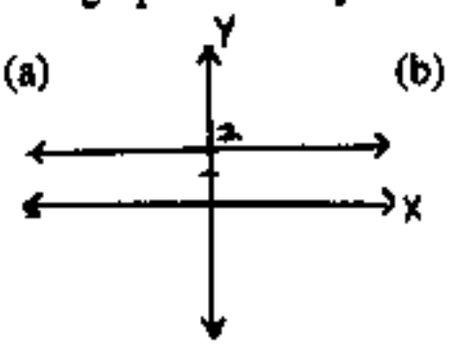
(a) $\frac{-3}{x - y}$ (b) $\frac{-3}{xy}$ (c) $\frac{4y - 7x}{xy}$ (d) $\frac{-3}{x + y}$

5. The graph of $5x - 6y + 30 = 0$ crosses the y-axis at $y =$

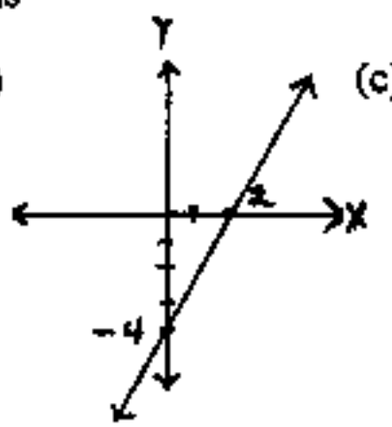
(a) -5 (b) 5 (c) -6 (d) 6

6. The graph of $2x + y = 4$ is

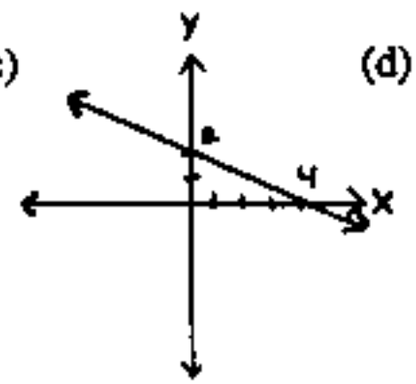
(a)



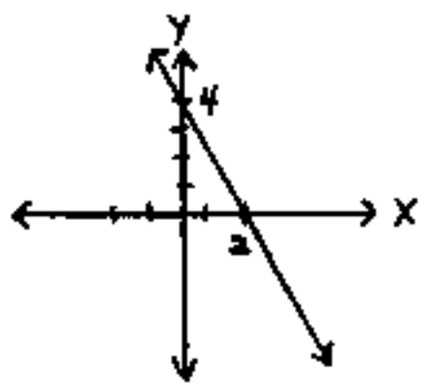
(b)



(c)



(d)



7. If $3x - 7 = 3 - x$, $x =$

(a) 1 (b) $\frac{10}{3}$ (c) $\frac{5}{2}$ (d) -1

8. The x-coordinate of the solution of this system of equations is:

$3x - 4y = 12$

$5x + 2y = -6$

(a) 4 (b) $\frac{-6}{5}$ (c) 0 (d) $\frac{3}{4}$

9. If $a = -12$ and $b = 8$, then $|2a - 3b| =$

(a) 48 (b) 0 (c) −48 (d) 52

10. The solutions of $x^2 - 5x + 6 = 0$ are

(a) 6, −1 (b) −3, −2 (c) 3, 2 (d) 1, 6

11. $14^0 \cdot 3^2 =$

(a) 126 (b) 42 (c) 9 (d) 3

12. $(-4x^5y^3)(2x^2y) =$

(a) $-8x^7y^4$ (b) $-8x^{10}y^3$ (c) $-2x^{-3}y^{-2}$ (d) $-2x^{10}y^3$

13. $\dfrac{9x^2 + 6x}{3x} =$

(a) $9x^2 + 2$ (b) $3x + 2$ (c) $2x$ (d) $3x + 6x$

14. $\dfrac{30x^2 + 15}{24x^2 + 12} =$

(a) $\dfrac{5}{2}$ (b) $\dfrac{5}{4}x + \dfrac{5}{4}$ (c) $\dfrac{5}{4}$ (d) 12

15. $\dfrac{x^2 - 9}{5x^3} \cdot \dfrac{20}{12x + 36} =$

(a) $\dfrac{x - 3}{3x^3}$ (b) $4(x - 3)$ (c) $\dfrac{4}{x^3}$ (d) $\dfrac{4(x + 3)}{x^2}$

16. Solve for x: $5x + 7 \leq 8x - 4$

(a) $x \geq 11$ (b) $x \geq \dfrac{11}{3}$ (c) $x \leq \dfrac{11}{3}$ (d) $x \geq -11$

17. $\dfrac{2}{\sqrt{6}} =$

(a) $\sqrt{\dfrac{1}{3}}$ (b) $\dfrac{\sqrt{6}}{2}$ (c) $\dfrac{2}{\sqrt{3}}$ (d) $\dfrac{\sqrt{6}}{3}$

18. $\sqrt{45x^6y^7} =$

(a) $9x^3y^3$ (b) $3x^3y^3$ (c) $3x^3y^3\sqrt{5y}$ (d) $\sqrt[576]{5y}$

19. $8x - 3(x + 2) + 7(x - 3) =$

(a) $12x^3 - 32$ (b) $12x - 27$ (c) $10x + 3$ (d) $16x - 22$

20. If $\frac{1}{x-5} + 10 = \frac{x}{x-5}$, then $x =$

(a) $\frac{-15}{10}$ (b) 5 (c) $\frac{-1}{5}$ (d) $\frac{49}{9}$

Basic Algebra Sample Test Answers:

1. a	11. c
2. c	12. a
3. a	13. b
4. c	14. c
5. b	15. a
6. d	16. b
7. c	17. d
8. c	18. c
9. a	19. b
10. c	20. d

Mathematics Placement
Background Questionnaire

After filling out the form, make certain you click on **Submit** *at the bottom of the page.*

email address:

Last Name:

First Name: **Phone**

Please answer the following preliminary questions concerning your mathematical background.
Include courses taken in either high school or college.

1	**Have you satisfactorily completed one or two semesters of Calculus?**	○ Yes. Two semesters. ○ Yes. One semester. ○ No
2	**Was this an AP Calculus course?**	○ Yes. ○ No.
3	**What grade did you receive in the course?**	○ A ○ B ○ C ○ D ○ Didn't take the course
4	**Have you taken the College Entrance Examination Board's AP Calculus Exam for advanced placement in Calculus? (If you have, your answer to this question will alert your advisor so that when your score becomes available it can be used to update your placement recommendation.)**	○ Yes. ○ No.
5	**Are you applying for any transfer credit for mathematics courses taken at other colleges?**	○ Yes. ○ No.

Submit

You recently left the test 'German Placement Exam: Part 2 (Listening Comprehension)' without submitting it. Return to the test and click Save and Submit or contact your instructor for assistance.

----Math Placement

.

NOTE: **You should take the exam only once.** If you have a connection problem during the exam and get kicked off the system, the software will allow you to go back in. But this will be recorded as an error, and we will need to go in and manually get the score.

PLEASE:

- Do not hit the back button (that will kick you out of the exam)
- Do not begin until you have the full amount of time required to complete the placement.

Mathematics Placement Part 1 (Arithmetic)

Mathematics Placement Part 2 (Algebra 1)

Mathematics Placement Part 3 (Algebra 2)

Mathematics Placement Part 4 (optional) Calculus

Begin: Mathematics Placement Part 1 (Arithmetic)

INSTRUCTIONS

Timed Test	This test has a time limit of 1 hour and 15 minutes.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submit**.

Click **Begin** to start: Mathematics Placement Part 1 (Arithmetic). Click **Cancel** to go back.
You will be previewing this assessment and your results will not be recorded.

Click Begin to start. Click Cancel to quit.

Cancel Begin

Preview Test: Mathematics Placement Part 1 (Arithmetic)

Test Information

Description	
Instructions	**PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.** Although technically you can take the placement more than once, only your first attempt will be counted.
Timed Test	This test has a time limit of 1 hour and 15 minutes.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submit**. This test does not allow backtracking. Changes to the answer after submission are prohibited.

Question Completion Status

Moving to the next question prevents changes to this answer.

Question **1** of **32**

Question 1

1 points Save Answer

The shaded region shown in the figure below represents what fraction of the whole rectangle?

- 1/6
- 3/8
- 3/5
- 5/8
- 5/6

Moving to the next question prevents changes to this answer.

Question **1** of **32**

Begin: Mathematics Placement Part 2 (Algebra 1)

INSTRUCTIONS

Timed Test	This test has a time limit of 1 hour.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submit**.

Click **Begin** to start: Mathematics Placement Part 2 (Algebra 1). Click **Cancel** to go back.
You will be previewing this assessment and your results will not be recorded.

Click Begin to start. Click Cancel to quit.

Cancel Begin

Preview Test: Mathematics Placement Part 2 (Algebra 1)

Test Information

Description	
Instructions	**PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.** Although technically you can take the placement more than once, only your first attempt will be counted.
Timed Test	This test has a time limit of 1 hour.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submit**. This test does not allow backtracking. Changes to the answer after submission are prohibited.

Moving to the next question prevents changes to this answer.

Question **1** of **25**

Question 1

1 points Save Answer

If $\frac{x}{2} = \frac{3}{4}$, then x =

- $\frac{3}{8}$
- $\frac{3}{4}$
- $\frac{4}{3}$
- $\frac{8}{3}$
- 12

Moving to the next question prevents changes to this answer.

Question **1** of **25**

You recently left the test 'Mathematics Placement Part 2 (Algebra 1)' without submitting it. It was automatically submitted for you. Contact your instructor for assistance if you did not mean to leave and submit your test.

Begin: Mathematics Placement Part 3 (Algebra 2)

INSTRUCTIONS

Timed Test	This test has a time limit of 30 minutes.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submit**.

Click **Begin** to start: Mathematics Placement Part 3 (Algebra 2). Click **Cancel** to go back.
You will be previewing this assessment and your results will not be recorded.

Click Begin to start. Click Cancel to quit.

Cancel Begin

Preview Test: Mathematics Placement Part 3 (Algebra 2)

Test Information

Description	
Instructions	**PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.** Although technically you can take the placement more than once, only your first attempt will be counted.
Timed Test	This test has a time limit of 30 minutes.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submit**. This test does not allow backtracking. Changes to the answer after submission are prohibited.

Moving to the next question prevents changes to this answer.

Question **1** of **10**

Question 1

1 points Save Answer

$$\frac{(x+4)^2-(x+6)}{x+2}=$$

- $x-2$
- $\frac{x^2+7x+22}{x+2}$
- $\frac{x^2-x+10}{x+2}$
- $x+2$
- $x+5$

Moving to the next question prevents changes to this answer.

Question **1** of **10**

Begin: Mathematics Placement Part 4 (optional) Calculus

INSTRUCTIONS

Timed Test	This test has a time limit of 45 minutes.
Timer Setting	You will be notified when time expires, and you may continue or submit.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submit**.

Click **Begin** to start: Mathematics Placement Part 4 (optional) Calculus. Click **Cancel** to go back. You will be previewing this assessment and your results will not be recorded.

Click Begin to start. Click Cancel to quit.

Cancel Begin

Preview Test: Mathematics Placement Part 4 (optional) Calculus

Test Information

Description	
Instructions	PLEASE DO NOT GUESS. IF YOU DO NOT KNOW THE ANSWER, LEAVE IT BLANK.
Timed Test	This test has a time limit of 45 minutes.You will be notified when time expires, and you may continue or submit. Warnings appear when **half the time**, **5 minutes**, **1 minute**, and **30 seconds** remain.*[The timer does not appear when previewing this test]*
Multiple Attempts	Not allowed. This test can only be taken once.
Force Completion	Once started, this test must be completed in one sitting. Do not leave the test before clicking **Save and Submit**. This test does not allow backtracking. Changes to the answer after submission are prohibited.

Question Completion Status

Moving to the next question prevents changes to this answer.

Question 1 of 15

Question 1

1 points Save Answer

The slope of the tangent line to the curve $4x^2y = 16$ at the point $(2,1)$ is:

- -2
- -1
- $-1/2$
- 1
- $7/4$

Moving to the next question prevents changes to this answer.

Question 1 of 15

My Grades

All | Graded | Upcoming | Submitted | Order by: Course Order

ITEM	LAST ACTIVITY	GRADE
English STEP TWO: Click Here (then click WRITE SUBMISSION button) to Compose and Submit Essay Assignment	UPCOMING	- /100
Spanish Placement Examination: Part 1 (General) Test	Mar 23, 2018 9:08 AM UPCOMING	-
Spanish Placement Examination: Part 2 (Listening Comprehension A) Test	Mar 23, 2018 9:08 AM UPCOMING	-
Spanish Placement Examination: Part 3 (Listening Comprehension B) Test	Mar 23, 2018 9:09 AM UPCOMING	-
French Placement Examination: Part 1 (General) New Test	Mar 23, 2018 9:10 AM UPCOMING	-
French Placement Examination: Part 2 (Listening Comprehension A) Test	Mar 23, 2018 9:15 AM UPCOMING	-
French Placement Examination: Part 3 (Listening Comprehension B) Test	Mar 23, 2018 9:15 AM UPCOMING	-
German Placement Examination: Part 1 (General) Test	Mar 23, 2018 9:16 AM UPCOMING	-
German Placement Exam: Part 2 (Listening Comprehension) Test	Mar 23, 2018 9:16 AM UPCOMING	-

OPINION SURVEYS – Faculty/Staff and Students.

Surveys were created for the purpose of receiving feedback on the Placement Exam process. Two different ones were created, or for Faculty/Staff and one for Students. Samples of the surveys are included in this packet.

The surveys were run using Qualtrics. They opened on 1/30/2018 closed on 2/12/18. Below are examples of the emails that invited each group to participate.

FACULTY EMAIL

Dear, Colleagues,

We hope that the first few weeks of the Spring semester are going well for you, all.

We are reaching out, today, to ask for your assistance in an important process.

As shared by Julia Jasken, and the Academic Affairs Office, the College is beginning a full review and comprehensive institutional evaluation of the placement exam process at McDaniel. The First Year Team is assisting in the coordination of this process.

We value your input and expertise as faculty and staff who work with students, and appreciate your willingness to assist with this important process.

The goals for the College, in collecting feedback on the placement exam process, are as follows:

- To identify the successes and challenges related to our existing practices for various stakeholders (e.g., departments, students, advisors, staff offices)
- To consider recent literature on best practices related to placement processes;
- To make recommendations designed to streamline processes, ensure appropriate and accurate placements, and, when possible, enhance the student experience

Please click on the link below to complete the survey:

https://mcdaniel.az1.qualtrics.com/jfe/form/SV_6gKlvfsoYKat5U9

Responses on this survey will not be shared in individual form but used in summary evaluations.

The survey will remain open through Monday, 2/12/18.

Thank you, in advance, for your feedback, and please let us know if you have any questions.

With my best,
Karen

STUDENT EMAIL

Dear, Students,

We hope that the first few weeks of the Spring semester are going well for you, all.

We are reaching out, today, to ask for your assistance in an important process.

The College is beginning a full review and comprehensive evaluation of the placement exam process at McDaniel. The First Year Team (which I am a member) is assisting in the coordination of this process.

Most of you (some of you more recently than others), as McDaniel students, have completed placement exams in English, Math and/or Second Language. We value your input, as students, as we are always looking for ways to improve the student experience.

The goals for the College, in collecting feedback on the placement exam process, are as follows:

· To identify the successes and challenges related to our existing practices for various stakeholders (e.g., departments, students, advisors, staff offices)
· To consider recent literature on best practices related to placement processes;
· To make recommendations designed to streamline processes, ensure appropriate and accurate placements, and, when possible, enhance the student experience

Please click on the link below to complete the survey:

https://mcdaniel.az1.qualtrics.com/jfe/form/SV_4GzPkBGAb0xhqJf

Responses on this survey will not be shared in individual form but used in summary evaluations. A raffle prize for a $15.00 bookstore purchase will be drawn at the end of survey period for students who wish to submit their name at the end of the survey (optional).

The survey will remain open through Monday, 2/12/18.

Thank you, in advance, for your feedback, and please let us know if you have any questions.

Best,
Dean Violanti

We received responses as detailed below. This feedback helped to inform the Executive Summaries of Survey Results, found later in this document.

46 responses – Faculty & Staff

#	Answer	%	Count
1	Faculty Member	86.96%	40
2	Staff Member	13.04%	6
	Total	100%	46

71 Responses – Students

#	START TERM	%	Count
1	FALL 2017	30.99%	22
2	FALL 2016	16.90%	12
3	FALL 2015	25.35%	18
4	FALL 2014	25.35%	18
5	OTHER	1.41%	1
	Total	100%	71

Default Question Block

Thank you for your time in completing this survey. Each section of the survey should take approximately 5 minutes to complete and respondents may save and come back at a later time if that is more convenient.

The request for this survey has gone out to faculty and to staff/offices who are directly involved in the placement exam process.

As shared, building off the discussion from the November faculty meeting, one of the College's first initiatives, this Spring, involves establishing the plan for a comprehensive institutional evaluation of our placement processes.

The goals for this evaluation are as follows:

- To identify the successes and challenges related to our existing practices for various stakeholders (e.g., departments, students, advisors, staff offices);
- To consider recent literature on best practices related to placement processes;
- To make recommendations designed to streamline processes, ensure appropriate and accurate placements, and, when possible, enhance the student experience

We value the input and expertise of all key stakeholders in the community as it pertains to this important discussion.

Responses on this survey will not be shared in individual form but used in summary evaluations.

Thank you, in advance, for your feedback!

I am a:

- ○ Faculty Member
- ○ Staff Member

I am a member of the following department or office:

The following summary gives an overview of current placement exam processes in place at McDaniel College. Please use this information as feedback and suggestions are shared.

1. The English placement exam (created internally) is given online in Blackboard starting in March of the spring prior to the new student's arrival. The first deadline is typically in early June. The student submits an essay for review. The essay is reviewed by the English department and the student can place into: ENG 1002 (Pre-Req to 1101: 4 credits), ENG 1101 (4 credits) or participate in Directed Self Placement (DSP) in which the student is given a choice between ENG 1002 and ENG 1101.

2. The Math placement exam (created internally) is given online in Blackboard starting in March of the spring prior to the new student's arrival. The first deadline is typically in early June. The placement exam consists of four sections; arithmetic, algebra 1, algebra 2 and calculus (optional). Students can place into: MAT 1001 (zero credits), MAT 1002 (zero credits), MAT 1106/1107, MAT 1117, MAT 1118. There is also an online "math retake" option in July prior to FY/FYS advising if the student did not feel as if they did well enough on the first round. Students are given the option to meet with any additional questions or concerns, once on campus, for a

mathematics placement discussion.

3. The Second Language exam (created internally) varies by language. French, German and Spanish are given online in Blackboard starting in March of the spring prior to the new student's arrival. The first deadline is typically in early June. If students place above the 2000 level in the online portion of French, German or Spanish, students are required to also take an in person exam (aural and online components) during the August new student orientation. Prior to the on campus advanced exam, AP/IB scores and information is reviewed as applicable to students affected. ASL, Latin, Arabic and Chinese placement exams are given in person during the August new student orientation.

Given the diversity of our student population, what is the extent to which you believe students can access a computer/internet to complete placement exams (in Blackboard) in English, Math & Second Language?

- ○ Able to access
- ○ Not able to access
- ○ Unsure

Do you have any additional comments regarding accessibility of the English placement exam?

Do you have any additional comments regarding the accessibility of the Math placement exam?

Do you have any additional comments regarding the accessibility of the Second Language placement exams on Blackboard or in person during orientation?

Currently, our placement exams do not include a review of **all** student placement exams with additional measures. However, departments do review student placement exam results, on a case to case basis, including measures such as high school transcripts (GPA, etc.), AP scores, and other.

What is true for you in terms of the following (check all that apply):

- [ ] The internal placement exam should be the only determinant of the student's course placement for English
- [ ] The College should review SAT and ACT scores to aide in determining student's course placement for English
- [ ] The College should review high school transcripts (GPA, course grades) to aide in determining student's course placement for English
- [ ] The College should review AP and/or IB scores to aide in determining student's course placement for English
- [ ] The internal placement exam should be the only determinant of the student's course placement for Math
- [ ] The College should review SAT and ACT scores to aide in determining student's course placement for Math
- [ ] The College should review high school transcripts (GPA, course grades) to aide in determining student's course placement for Math
- [ ] The College should review AP and/or IB scores to aide in determining student's course placement for Math
- [ ] The internal placement exam should be the only determinant of the student's course placement for Second Language
- [ ] The College should review SAT and ACT scores to aide in determining student's course placement for Second Language
- [ ] The College should review high school transcripts (GPA, course grades) to aide in determining student's course placement for Second Language
- [ ] The College should review AP and/or IB scores to aide in determining student's course placement for Second Language

Placement exams are used as pre-requisites for certain courses available to students. Which is true for you regarding the English placement exam?

- ○ None of the courses in my department require the English placement exam
- ○ The English exam is required for courses in my department and are effective
- ○ The English exam is required for courses in my department and are not effective

Placement exams are used as pre-requisites for certain courses available to students. Which is true for you regarding the Math placement exam?

- ○ None of the courses in my department require the Math placement exam
- ○ The Math exam is required for courses in my department and are effective
- ○ The Math exam is required for courses in my department and are not effective

Placement exams are used as pre-requisites for certain courses available to students. Which is true for you regarding the Second Language placement exams online in Blackboard for French, German and Spanish?

- ○ None of the courses in my department require the Second Language placement exam online in Blackboard (French, German and Spanish)
- ○ The Second Language placement exam online in Blackboard (French, German and Spanish)is required for courses in my department and is effective
- ○ The Second Language placement exam online in Blackboard (French, German and Spanish) is required for courses in my department and is not effective

Placement exams are used as pre-requisites for certain courses available to students. Which is true for you regarding the Second Language ADVANCED (second round) placement exam in person during orientation for French, German and Spanish?

- ○ None of the courses in my department require the Second Language ADVANCED (second round) placement exam in person during orientation for French, German and Spanish?
- ○ The Second Language ADVANCED (second round) placement exam in person during orientation for French, German and Spanish is required for courses in my department and is effective
- ○ The Second Language ADVANCED (second round) placement exam in person during orientation for French, German and Spanish is required for courses in my department and is not effective

Placement exams are used as pre-requisites for certain courses available to students. Which is true for you regarding the Second Language placement exam in person during orientation for ASL, Latin, Arabic and Chinese?

- ○ None of the courses in my department require the Second Language placement exam in person during orientation for ASL, Latin, Arabic and Chinese?
- ○ The Second Language placement exam in person during orientation for ASL, Latin, Arabic and Chinese is required for courses in my department and is effective
- ○ The Second Language placement exam in person during orientation for ASL, Latin, Arabic and Chinese is required for courses in my department and is not effective

How easy is it for you to interpret the results of the English placement exam for students?

- ○ Extremely easy
- ○ Moderately easy
- ○ Slightly easy
- ○ Neither easy or difficult
- ○ Slightly difficult
- ○ Moderately difficult
- ○ Extremely difficult

How easy is it for you to interpret the results of the Second Language placement exam for students?

- ○ Extremely easy
- ○ Moderately easy
- ○ Slightly easy
- ○ Neither easy nor difficult
- ○ Slightly difficult
- ○ Moderately difficult
- ○ Extremely difficult

How easy is it for you to interpret the results of the Math placement exam for students?

- ○ Extremely easy
- ○ Moderately easy
- ○ Slightly easy
- ○ Neither easy nor difficult
- ○ Slightly difficult
- ○ Moderately difficult
- ○ Extremely difficult

What feedback have you heard from students, if any, about the English placement exam?

What feedback and/or suggestions have you heard from students, if any, about the Second Language exam that occurs in Blackboard online (Spanish, German and French)?

What feedback and/or suggestions have you heard from students, if any, about the ADVANCED Second Language exam that occurs for students during the August orientation (Spanish, German and French)?

What feedback and/or suggestions have you heard from students, if any, about the Second Language exam that occurs for students during the August orientation (ASL, Latin, Arabic and Chinese)?

What feedback and/or suggestions have you heard from students, if any, about the Math placement exam?

Please share any general suggestions you have for changes to the English

placement exam:

Please share any general suggestions you have for changes to the Second Language exam that occurs in Blackboard online (Spanish, German and French)?

Please share any general suggestions you have for changes to the ADVANCED Second Language exam that occurs for students during the August orientation (Spanish, German and French)?

Please share any general suggestions you have for changes to the ADVANCED Second Language exam that occurs for students during the August orientation (ASL, Latin, Arabic and Chinese)?

Please share any general suggestions you have for changes to the Math Placement exam?

Below is an overview of courses students can be placed into for the English placement exam:

ENGLISH: ENG 1002 (Pre-Req to 1101: 4 credits), ENG 1101 (4 credits) or participate in Directed Self Placement (DSP) in which the student is given a choice between ENG 1002 and ENG 1101.

How do students feel about course placements in English?

Below is an overview of courses students can be placed into for the Second Language placement exam:

SECOND LANGUAGE: 1000 level, 2000 level or 3000 level, varies pending language (all 4 credits)

How do students feel about course placements in Second Language?

Below is an overview of courses students can be placed into for the Math placement exam:

MATH: MAT 1001 (ZERO CREDITS), MAT 1002 (ZERO CREDITS), MAT 1106/1107, 1117, 1118 (all 4 credits)

How do students feel about course placements in Math?

Please share any additional comments you may have for consideration in this review:

Default Question Block

Thank you for your time in completing this survey.

The goals for the College, in collecting feedback on the placement exam process, are as follows:

To identify the successes and challenges related to our existing practices for various stakeholders (e.g., departments, students, advisors, staff offices)

To consider recent literature on best practices related to placement processes;

To make recommendations designed to streamline processes, ensure appropriate and accurate placements, and, when possible, enhance the student experience

We value your input, as students, as we are always looking for ways to improve student experience.

Responses on this survey will not be shared in individual form but used in summary evaluations.

Thank you, in advance, for your feedback!

My start term (the semester I started) at the College is as follows:

- ○ FALL 2017
- ○ FALL 2016
- ○ FALL 2015
- ○ FALL 2014
- ○ OTHER

My major (if declared) is as follows:

The following summary gives an overview of current placement exam processes in place at McDaniel College. Please use this information as feedback and suggestions are shared.

1. The English placement exam (created internally) is given online in Blackboard starting in March of the spring prior to the new student's arrival. The first deadline is typically in early June. The student submits an essay for review. The essay is reviewed by the English department and the student can place into: ENG 1002 (Pre-Req to 1101: 4 credits), ENG 1101 (4 credits) or participate in Directed Self Placement (DSP) in which the student is given a choice between ENG 1002 and ENG 1101.

2. The Math placement exam (created internally) is given online in Blackboard starting in March of the spring prior to the new student's arrival. The first deadline is typically in early June. The placement exam consists of four sections; arithmetic, algebra 1, algebra 2 and calculus (optional). Students can place into: MAT 1001 (zero credits), MAT 1002 (zero credits), MAT 1106/1107, MAT 1117, MAT 1118. There is also an online "math retake" option in July prior to FY/FYS advising if the student did not feel as if they did well enough on the first round. Students are given the option

to meet with any additional questions or concerns, once on campus, for a mathematics placement discussion.

3. The Second Language exam (created internally) varies by language. French, German and Spanish are given online in Blackboard starting in March of the spring prior to the new student's arrival. The first deadline is typically in early June. If students place above the 2000 level in the online portion of French, German or Spanish, students are required to also take an in person exam (aural and online components) during the August new student orientation. Prior to the on campus advanced exam, AP/IB scores and information is reviewed as applicable to students affected. ASL, Latin, Arabic and Chinese placement exams are given in person during the August new student orientation.

In thinking about the ENGLISH placement exam, please rate your experience:

	Clear	Neutral	Confusing
Use of Blackboard to take the exam	○	○	○
Understanding results of the placement exam	○	○	○

In thinking about the SECOND LANGUAGE online placement exam in French, German or Spanish, please rate your experience:

	Clear	Neutral	Confusing
Use of Blackboard to take the exam	○	○	○
Understanding results of the placement exam	○	○	○

In thinking about the ADVANCED SECOND LANGUAGE placement exam in French, German or Spanish (The second round that took place in orientation), please rate your experience:

	Clear	Neutral	Confusing
Meeting with department to take the exam in person (during orientation)	○	○	○
Understanding the results of the placement exam	○	○	○

In thinking about the SECOND LANGUAGE in person placement exam in ASL, Latin, Arabic or Chinese, please rate your experience:

	Clear	Neutral	Confusing
Meeting with department to take the exam in person (during orientation)	○	○	○
Understanding the results of the placement exam	○	○	○

In thinking about the online MATH placement exam, please rate your experience:

	Clear	Neutral	Confusing
Use of Blackboard to take the exam	○	○	○
Understanding the results of the placement exam	○	○	○

How accurate do you feel your placement exam results were for the ENGLISH placement exam?

- ○ I believe I was placed in the right course
- ○ I believe I was placed in the wrong course
- ○ I would have liked to make my own decision about my course placement

How accurate do you feel your placement exam results were for the MATH placement exam?

- ○ I believe I was placed in the right course
- ○ I believe I was placed in the wrong course
- ○ I would have liked to make my own decision about my course placement

How accurate do you feel your placement exam results were for the SECOND LANGUAGE placement exam?

- ○ I believe I was placed in the right course
- ○ I believe I was placed in the wrong course
- ○ I would have liked to make my own decision about my course placement

Currently, our placement exams do not include a review of **all** student placement exams with additional measures. However, departments do review student placement exam results, on a case to case basis, including measures such as high school transcripts (GPA, etc.), AP scores, and other.

What is true for you in terms of the following (check all that apply):

- ☐ The internal placement exam should be the only determinant of my course placement for English
- ☐ The College should review SAT and ACT scores to aide in determining my course placement in English
- ☐ The College should review high school transcripts (GPA, grades, etc.) to aide in determining my course placement in English
- ☐ The College should review AP and/or IB scores to aide in determining my course placement in English
- ☐ The internal placement exam should be the only determinant of my course placement for Math
- ☐ The College should review SAT and ACT scores to aide in determining my course placement in Math
- ☐ The College should review high school transcripts (GPA, grades, etc.) to aide in determining my course placement in Math
- ☐ The College should review AP and/or IB scores to aide in determining my course placement in Math
- ☐ The internal placement exam should be the only determinant of my course placement for Second Language
- ☐ The College should review SAT and ACT scores to aide in determining my course placement in Second Language
- ☐ The College should review high school transcripts (GPA, grades, etc.) to aide in determining my course placement in Second Language
- ☐ The College should review AP and/or IB scores to aide in determining my course placement in Second Language

What suggestions do you have , if any, for changes in the ENGLISH placement exam

process?

What suggestions do you have , if any, for changes in the SECOND LANGUAGE placement exam process that occurs online for French, German and Spanish?

What suggestions do you have, if any, for changes in the SECOND LANGUAGE placement exam process that occurs in person during orientation for ASL, Latin, Arabic and Chinese?

What suggestions do you have, if any, for changes in the ADVANCED SECOND

LANGUAGE placement exam process that occurs in person during orientation for French, German and Spanish?

What suggestions do you have , if any, for changes in the MATH placement exam process?

How did the overall placement exam process make you feel about your new student experience at McDaniel?

What options below (mark all that apply) would you like the College to explore for changes in the placement exam process?

- [ ] Offering credited courses at the arithmetic and algebra levels for Math
- [ ] Considering additional assessment measures (AP, SAT, etc.) when determining course placements
- [ ] Hybrid course placements for tutorial and credited level coursework
- [ ] Offering varied formats for students to take placement exams (online, face to face, etc.)
- [ ] Other, please share suggestion:

Please comment, in terms of the overall experience, with any additional feedback you would like to share regarding the English, Second Language and/or Math Placement exams.

I wish to be included in the raffle drawing for a $15.00 bookstore purchase. I am sharing my name voluntarily, below.

ENGLISH PLACEMENT EXAM EXECUTIVE SUMMARY

In general, both faculty/staff and students seem generally satisfied with the current English Placement Exam process. Comments expressed about the exam reflected the following trends described in further detail below.

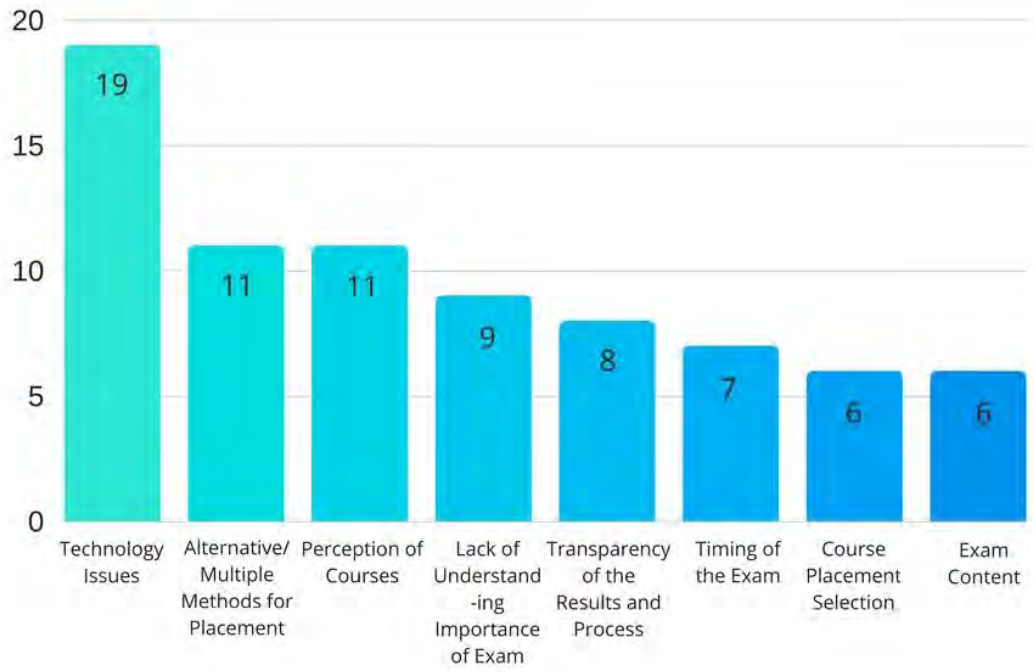
One major trend involved repeated calls for multiple or alternative methods for placement in the English courses (e.g., SAT/ACT scores, high school transcripts, or directed self-placement). It should be noted that McDaniel College already weighs many of these factors in consideration for student placement in English, so this is indicative of a need for greater awareness of the placement process and requirements for placement rather than a change in the placement process itself.

RATIONALE/METHODOLOGY

Faculty/staff and student free responses were coded and grouped according to themes. Each mention of a topic/theme was counted; therefore, the numbers below reflect the number of mentions of each topic rather than the total number of responses or individuals to each question.

TOTAL MENTIONS

 # OF MENTIONS vs. THEME



CODED THEMES

- **Technology Issues:** Concerns regarding technology issues referenced students who may not have extended time available on a computer or who may have limited access to a computer in order to complete the exam. It should be noted that many of these comments came with the caveat that it was only a very limited number of students that are or may be affected by limited computer access. Responses also included references to concerns about potential technology "glitches" due to the online format of the exam. This theme also includes responses which suggests that the exam be offered in a paper form as an alternative from the online format.

- **Alternative/Multiple Methods for Placement:** Many respondents (both faculty/staff and students) questioned the use of placement exams as a single measure of student proficiency. There were numerous requests for alternative measures of the use of multiple measures (e.g., SAT/ACT scores, high school transcripts, or directed self-placement).

- **Perception of Courses:** These responses were largely negative and emotional in content, regarding the negative perception of the English 1002 course as "remedial," or of the student feeling "stupid" due to being placed in a particular course via the exam.

- **Lack of Understanding Importance of Exam:** Both faculty/staff and students expressed concerns that students do not understand the importance of the exam or any potential impact or consequences of not performing well. This may be correlated with the timing of the exam (see below), or due to a lack of adequate communication about the importance of the exam and its consequences.

- **Transparency of Results and Process:** There were suggestions regarding confusion about the process of scoring and by which placement is ultimately determined. This theme also includes the suggestion that students be permitted to view their ultimate score on the exam as well as the criteria by which their score was determined.

- **Timing of the Exam:** Faculty/staff and students alike expressed concerns that the timing of when the placement exam was offered was when students were "focused on finishing high school." The divided student attention could then lead to the student not taking the exam seriously or preparing for it adequately, negatively affecting their placement results. A repeated suggestion included under this theme recommended that the exam be offered in a way that would allow students to see the question and prompt ahead of time, reflect, and then return to the exam to compose their response, instead of completing the exam in one sitting.

- **Course Placement Selection:** These included comments regarding a student's ability to self-select their own placement, or concerns regarding the ultimate English course placement of a student.

- **Exam Content:** These responses included a range of topics, including the suggestion that students be able to submit writing they have previously composed for a high school course, statements that the students did not enjoy the prompt they were given to respond to, and a concern that essays may potentially be ghostwritten due to the online and un-proctored format of the exam. This final concern was determined to be separate from the "Technology Issues" theme above due to the emphasis on content (i.e., cheating) over medium.

- **No Changes:** These responses indicated a feeling of general satisfaction with the current English placement exam process and suggested no changes be made.

FACULTY/STAFF THEMES from Q3

Do you have any additional comments regarding accessibility of the English placement exam?

- 10 – Technology Issues
- 2 – Lack of Understanding Importance of Exam
- 2 – Timing of the Exam

FACULTY/STAFF THEMES from Q9

What feedback have you heard from students, if any, about the English placement exam?

- 2 – Lack of Understanding Importance of Exam
- 2 – Technology Issues
- 1 – Alternative/Multiple Methods for Placement
- 1 – Course Placement Selection

FACULTY/STAFF THEMES from Q10

Please share any general suggestions you have for changes to the English placement exam.

- 5 – No Changes
- 2 – Transparency of Process and Results
- 1 – Alternative/Multiple Methods for Placement
- 1 – Course Placement Selection
- 1 – Exam Content
- 1 – Lack of Understanding Importance of Exam

FACULTY/STAFF THEMES from Q11

How do students feel about course placements in English?

- 13 – No Changes
- 2 – Perception of Courses
- 1 – Alternative/Multiple Methods for Placement

FACULTY/STAFF THEMES from Q12

Please share any additional comments you may have for consideration in this review.

- 3 – Lack of Understanding of Importance of Exam
- 3 – Technology Issues
- 2 – Alternative/Multiple Methods for Placement
- 1 – Perception of Courses
- 1 – Timing of the Exam
- 1 – Transparency of Process and Results

STUDENT THEMES from Q10

What suggestions do you have, if any, for changes in the English placement exam process?

- 38 – No Changes
- 4 – Exam Content
- 3 – Course Placement Selection
- 3 – Transparency of Process and Results
- 2 – Timing of the Exam
- 1 – Alternative/Multiple Methods of Placement
- 1 – Perception of Courses
- 1 – Technology Issues

STUDENT THEMES from Q15

What options below (mark all that apply) would you like the College to explore for changes in the placement exam process? (or OTHER, please share suggestion)

****responses taken from the "OTHER, please share suggestion" submissions***

- 2 – Alternative/Multiple Methods of Placement
- 1 – Course Placement Selection
- 1 – Technology Issues

STUDENT THEMES from Q27

How did the overall placement exam process make you feel about your new student experience at McDaniel?

- 7 – Perception of Courses
- 3 – Alternative/Multiple Methods of Placement
- 2 – Technology Issues
- 2 – Timing of the Exam
- 2 – Transparency Of Results and Process
- 1 – Exam Content
- 1 – Lack of Understanding of Importance of Exam

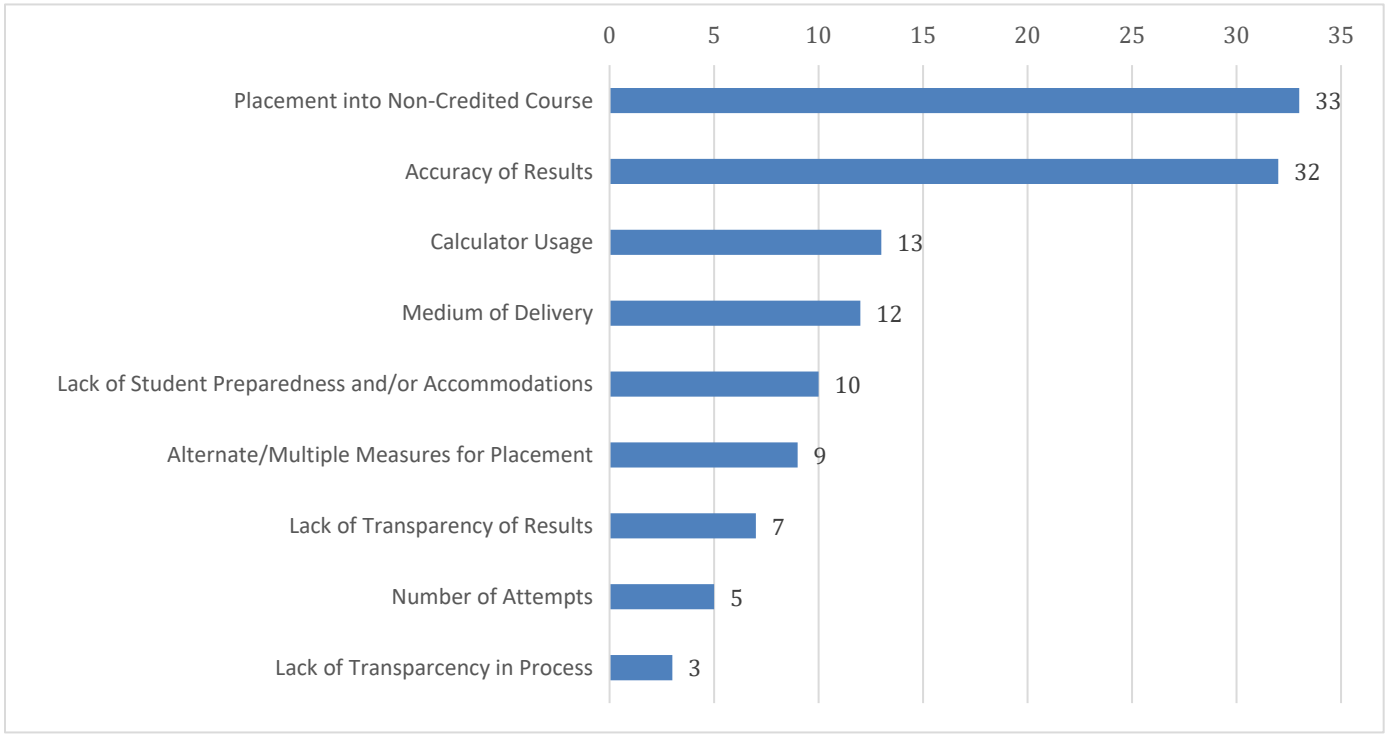
Math Placement Executive Summary

In general, both faculty/staff and students are dissatisfied with the current Math Placement Exam process. Their concerns can be grouped according to the following trends 1) a sense that a non-credit bearing course prevents students from making progress to graduation while simultaneously demanding equivalent time, energy, and resources to credit-bearing courses, 2) a sense that the current exam process does not produce an accurate assessment of student proficiency, 3) a desire for greater student preparation, either in the form of preparation materials, more time to study for the exam, and/or a clearer sense of the significance and timeline of the placement exam, 4) a desire for a more accessible placement exam process, either in terms of its delivery or the frequency at which it is offered, 5) a desire to allow students to use a calculator during the exam, 6) a desire for more transparency in both the process of taking the exam, results of the exam, and use of the exam for placement, and 7) a desire for more than one measure or alternative ways to demonstrate proficiency.

RATIONALE/METHODOLOGY

Faculty/Staff and Student free responses were open coded and grouped according to themes. Each mention of a topic/theme was counted and only those that came up more than once are included in the lists below. The numbers below reflect the number of mentions of each topic rather than the number of responses or individuals providing those responses.

TOTAL MENTIONS OF EACH CONCERN



DESCRIPTION OF OPEN-CODED THEMES

Placement into Non-Credited Course: Many respondents (both faculty/staff and students) questioned the value of non-credit bearing courses as well as demonstrated concern with delayed progress towards degree caused by these courses. Furthermore, there were concerns about the structure of the current non-credited courses and the academic support resources available to students enrolled in those courses (e.g., math tutoring).

Accuracy of Results: Many respondents (both faculty/staff and students) questioned whether the exam gave an accurate assessment of students' preparedness for MAT 1106 or any credit-bearing QR class, like Accounting. Students commented that they did not feel the test accurately measured their mathematical readiness because the items on the test were irrelevant to their fields of study (e.g., adding fractions with unlike denominators or multiplying decimals without a calculator).

Lack of Student Preparedness and/or Accommodations: Many respondents (both faculty/staff and students) described factors that led to a lack of student preparedness to take the exam. Of these factors, multiple mentions of the need for student accommodations were made as well as requests for preparation or study materials for students and a sense that students did not have enough time to prepare themselves for the placement exam once. Moreover, based on these concerns, there were also numerous requests for the option to take the exam multiple times/retake the exam during clearly announced, regularly scheduled times.

Calculator Usage: Many respondents (both faculty/staff and students) questioned the appropriateness of testing student math proficiency without the use of a calculator. Others questioned the ability to enforce such a restriction. In general, all mentioned of calculator usage were in support of allowing students to use calculators during the placement exam.

Lack of Transparency in Process: Many respondents (both faculty/staff and students) described confusion surrounding the significance of the placement exam, the schedule for taking the placement exam, and the content being assessed on the placement exam. In particular, there seemed to be a sense that students were receiving contradictory messages about whether or not the math placement exam was suggested or required.

Lack of Transparency in Results: Many respondents (both faculty/staff and students) described confusion surrounding the results of the placement exam, both in terms of specific areas in which a student would need to improve and the significance of those gaps in knowledge. There were repeated expressions of a desire to be able to use the placement exam as a diagnostic

tool that would allow students to improve only those areas in which they were lacking proficiency.

Medium of Delivery: Many respondents (both faculty/staff and students) questioned the medium of delivery of the exam, although those concerns were not uniform. Some expressed concerns about students' ability to access computers in order to take placement exams as well as concerns about students who might take the exam on their mobile phones. Others expressed a desire for the exam to be taken on paper, in-person, where students could use calculators, paper, and pencils to solve mathematical problems by hand.

Alternative/Multiple Measures for Placement: Many respondents (both faculty/staff and students) questioned the use of placement exams as a single measure of student proficiency. There were numerous requests for alternative measures of the use of multiple measures (e.g., SAT/ACT scores, high school transcripts, or directed self-placement).

FACULTY/STAFF THEMES from Q12

- 4 - Placement into Non-Credited Course
- 3 - Lack of Student Preparedness and/or Accommodations
- 2 - Accuracy of Results
- 2 - Lack of Transparency in Process
- 1 - Medium of Delivery
- 1 - Alternative/Multiple Measures for Placement

FACULTY/STAFF THEMES from Q15 (Accessibility)

- 7 - Medium of Delivery
- 3 - Number of Attempts
- 3 - Lack of Student Preparedness and/or Accommodations
- 2 - Placement into Non-Credited Course
- 1 - Lack of Transparency in Process

FACULTY/STAFF THEMES from Q25

- 8 - Accuracy of Results
- 5 - Lack of Transparency of Results
- 3 - Calculator Usage
- 2 - Number of Attempts
- 2 - Placement into Non-Credited Course
- 2 - Lack of Student Preparedness and/or Accommodations
- 1 - Lack of Transparency in Process

FACULTY/STAFF THEMES from Q32

- 4 - Accuracy of Results
- 4 - Placement into Non-Credited Course
- 2 - Lack of Student Preparedness and/or Accommodations
- 2 - Calculator Usage
- 1 - Alternative/Multiple Measures for Placement
- 1 - Lack of Transparency in Process

FACULTY/STAFF THEMES from Q34

- 9 - Placement into Non-Credited Course
- 4 - Accuracy of Results
- 1 - Calculator Usage

STUDENT THEMES from Q12

- 7 - Alternative/Multiple Measures for Placement
- 6 - Accuracy of Results
- 6 - Calculator Usage
- 4 - Placement into Non-Credited Course
- 3 - Medium of Delivery
- 3 - Lack of Transparency in Process
- 2 - Lack of Transparency of Results

STUDENT THEMES from Q15

- 2 - Placement into Non-Credited Course
- 1 - Calculator Usage

STUDENT THEMES from Q27

- 8 - Accuracy of Results
- 6 - Placement into Non-Credited Course
- 1 - Medium of Delivery

SECOND LANGUAGE PLACEMENT EXAM EXECUTIVE SUMMARY

After careful review, faculty, staff and students seem generally satisfied with the second language placement exam in its current form. The data reflects that most community members find it effective and appropriate.

Data collected from campus surveys (taken by Faculty/Staff and students) was reviewed and summarized. The team also reviewed processes from peer institutions.

The following are summary statements/comments from the campus surveys:

- The majority of students and faculty stated that the placement exam was effective and appropriate.
- A small group of students stated they had been placed in the incorrect course level
- It was shared with students that, if they are placed into an incorrect level, they could work with the department to move to a lower level course.
- Questions were asked about how skills measured on the written test; translate into assessment of spoken communication.
- Since the advanced language portion of the exam is taken in August (during orientation), there is little time to adjust student schedules if the placement changes. It is difficult for students to change or add a language course in late August.

To gather additional clarification of survey comments, these next steps occurred:

- The team spoke to faculty in the World Language, Literatures, and Cultures department regarding the survey comments. The faculty members stated that, due to faculty contracts ending in May, summer work for placement exams (proctoring and review) would require compensation. The sense was that an additional budget cost was not within the institution's plans at this time.
- According to the faculty members, the placement exams are accurate indicators of student capabilities in language. If a student needs to be moved into another language course, it is not a regular occurrence.
- The team contacted institutions (with current and previous professional colleagues) to gather additional comparative information. The institutions shared student language skills are assessed through a placement exam process (similar to McDaniel).

Comparative Data from Peer Institutions

For the purposes of benchmarking, McDaniel College has identified a group of 19 other institutions against which we will often compare ourselves. Using publically available data, we compiled the table below that details if an institution does use placement exams (yes), if they do not (no), or if no data was available (ND). Specific details on the schools can be found in the subsequent pages of this document.

	Math	English	Foreign Language	Notes
Allegheny	Yes	No	Yes	
Dickinson	Yes	No	Yes	
Eckerd	ND	ND	ND	
Gettysburg	No	No	Yes	
Goucher	No	No	Yes	Math and writing placements are self-assessed
High Point	Yes	Yes	Yes	Only tests reading, not composition
Hood	Yes	Yes	Yes	
Juniata	ND	ND	Yes	
Loyola	Yes	No	Yes	
Mt. St. Mary's	ND	ND	Yes	
Muhlenberg	Yes	No	Yes	
Ohio Wesleyan	ND	ND	Yes	Also considers AP scores for foreign language placement
Presbyterian	ND	ND	ND	
Stevenson	Yes	Yes	No	Foreign language not required for most degrees
Susquehanna	No	ND	ND	For math, a standard placement form used, self-assessed by student
Ursinus	Yes	No	Yes	
Wash & Jeff	Yes	No	Yes	
Washington	ND	ND	Yes	
Westminster	ND	ND	ND	

Allegheny College

Each incoming student is asked to take a Placement Test for the following subject areas: Mathematics, Foreign Languages, and Music. All Placement Tests are taken at home during the summer and responses are entered online. Performance on the Math Placement Exam also affects Chemistry placements due to prerequisites.

LANGUAGE PLACEMENT INFORMATION: All entering students who have studied a foreign language prior to enrollment at Allegheny must take the language placement examination unless they qualify for an exemption. Language placement tests are available for Chinese, French, German, Latin, and Spanish.

MATHEMATICS PLACEMENT INFORMATION: All entering students are required to take the math placement exam, with the following exceptions:

- Students who transfer in college credit for Math 159 (Precalculus), 160 (Calculus I), 170 (Calculus II), or 210 (Calculus III);
- Students who score 4 or 5 on the Advanced Placement AB calculus exam, and who report their score to Allegheny;
- Students who score 4 or 5 on the Advanced Placement BC calculus exam, and who report their score to Allegheny;
- Students who score 3 on the Advanced Placement BC calculus exam with a 4 or 5 on the AB subscore of this exam, and who report their score to Allegheny.

Those students who are not required to take the math placement exam will consult with their summer entrance advisor about an appropriate math course. There will also be time during Fall Orientation for the student to consult with a member of the mathematics department about their math placement.

Beginning May 15, students can take the placement test online. The student then takes the test in compliance with the college's Honor Code. This means that the student is expected to complete the test in the allotted time without outside assistance or resources of any kind and *without the aid of a calculator*. The results of the placement test will be displayed immediately after the test.

You must take the Math Placement Test on a computer or tablet device. *Please do not try to take the Math Placement Test on a mobile phone.*

CHEMISTRY INFORMATION: Chemistry does not have a placement exam, but reminds all entering students to take the Math Placement Exam. Any path that may include Chemistry is based on initial Math Placement.

MUSIC PLACEMENT INFORMATION: Students interested in taking courses in music should take the music diagnostic exam, audition for applied lesson courses, and audition for ensembles.

Dickinson

Language Placement Exam: Chinese, Italian, French, German and Spanish, all available online. Other languages contact the department.

Mathematics Placement Exam: Available online, 25 question, pre-calculus concepts. All students are required to take the placement exam before you matriculate at the college, *even if you do not plan to take a mathematics class at Dickinson*. The only exceptions are listed below.

- Students who scored 3, 4, or 5 on the AB Advanced Placement Calculus exam
- Students who scored 4, or 5 on the BC Advanced Placement Calculus exam
- Students who scored a 1, 2 or 3 on the BC Advanced Placement Calculus exam, but received an AB subscore of 3, 4, or 5
- Students who scored an A or B on the British Mathematics A Level Exam
- Students who scored a 5 or higher on one of the International Baccalaureate exams in mathematics

The Chemistry Placement Exam: Available online; 63-question, 75-minute exam assembled by Dickinson's chemistry department. Its purpose is to allow the department to determine your readiness for college-level chemistry by assessing your comprehension in three basic areas: General Mathematics, General Chemistry Knowledge and Specific Chemistry Knowledge. All students who plan to take chemistry courses must take the exam. Many majors (including biology, biochemistry and molecular biology, neuroscience, and geology) require chemistry courses, and all pre-health students must take chemistry courses regardless of major. All students planning to take chemistry must take the math placement exam, even if otherwise excepted.

Music Theory Placement Exam: Available online; Any student who is interested in taking music theory courses should take this exam.

Eckerd College

Not available

Gettysburg College

Language placement exams: Any incoming student who has taken more than one year of ancient Greek, Arabic, Chinese, French, German, Italian, Japanese, and/or Spanish at the high school level is required to take a placement exam in that language. This is true whether you plan to continue your study of these languages at Gettysburg or not. Language departments use data from these placement exams to help decide how many, and what levels of each language to offer. Students of Latin who have completed three or more years of Latin at the high school level — and wish to continue language study in Latin — are required to take the Latin placement exam.

Students who grew up bilingual in a language that Gettysburg College offers, and completed high school studies taught in English, will need to take the language placement exam for that foreign language if they plan to study their heritage language here.

Students who have earned a 4 or 5 on an AP language test will still need to take the language placement exam for that language.

Students who have never studied a foreign language do not need to take a placement exam. These students will automatically be placed in a true-beginner’s level when they start language study at Gettysburg.

Students who have studied a particular language for one year or less do not have to take a placement exam for that language; however, they may wish to take the exam to see how well they do.

Students who have had any number of years of Latin at the high school level and who do not wish to study Latin at Gettysburg College, do not have to take the placement exam.

Students who have studied languages in high school that Gettysburg College does not offer for credit (e.g., Urdu, Polish, and Swahili), cannot take a placement exam in these languages because we do not offer one.

Students who have studied French, German, Italian, Latin, and Spanish will take their exam online. Online placement exams will be available during a three-week period between the end of May and early June.
Students who have studied ancient Greek, Arabic, Chinese, and Japanese will take the placement test during the on-campus orientation period in August.

Math Placement Exams: There is no formal math requirement at Gettysburg College. Math is self-placement based upon the following chart: https://www.gettysburg.edu/dotAsset/7f4ee6d5-7246-4713-b25a-05dbb05555a9.pdf

Goucher

Mathematics Placement Exams: All incoming students are required to do a math self-assessment, which is available online. This assessment is purely for advisory purposes and is used only to determine placement into your first mathematics course.

Writing Proficiency: All incoming students are required to do a writing self-assessment, which is available online. Because Goucher courses require strong writing skills, all first-year students are required to take 4 -5 credits of writing instruction.

Foreign Language: French, German, Italian, Spanish are available online. Hebrew is printed and mailed. Russian is taken after arrival on campus.

High Point

Foreign Language: 2-step process. Step 1 is the Foreign Language Road Map Survey where you indicate which languages you have studied (if any), and the language you wish to study while at High Point University. Step 2 is the specific language test. These tests are required only for those that receive language test placements after completing their road map. Exams are online.

Mathematics: No specific information found

Reading: No specific information found

Hood College

Hood offers three separate placements to determine the starting level for first-year students in English composition, mathematics and global language. Students are not be able to register for classes until they have taken the placements in each area or have provided the registrar's office with qualifying documentation for an exemption, such as AP or IB credit or an official transcript showing equivalent coursework at the college level.

English Composition Placement: Students will write an essay in response to one of the two topics offered on the test. The response will be evaluated by English department faculty. Students who have completed a composition course with a grade of C- or higher at another accredited college or university or who have received a score of 4 or 5 on the AP language or composition test can be exempted from taking an English composition course.

The Mathematics Placement: Students are required to take this mathematics placement unless they have an AP calculus score of a 4 or higher or have completed a college-level mathematics course with a grade of C- or higher from an accredited college. This placement consists of up to three separate tests, with each test unlocking the next level if the score is high enough. If the next level test does not appear after pressing the "grade" button, the placement process is finished. Test one is 45 minutes long, test two is 40 minutes long and test three is 30 minutes long. Calculators are permitted in all sections of the placement.

The Global Language Placement: This placement is not required for students interested in learning a new language or who have previously earned credit through either college-level coursework or the AP examination.

The global language placement test is available online for French, German, Spanish and Russian. Hebrew placement must be taken on campus.

Juniata College

Foreign Language: Online placement assessment for those students who wish to continue studying the same language as high school. Outside of this very little information is given – unknown if there are math and/or English assessments.

Loyola

Foreign Language Placement Tests: exams are available online for Chinese, French, German, Italian, Latin, and Spanish. Arabic students need to schedule an individual placement exam.

Math Placement Tests: All students are required to take at least one course in mathematics or statistics. Two tests are given, algebra and pre-calculus. Placement results will be discussed by the student's advisor on the second day of summer orientation.

Mount St. Mary's

Foreign Language Placement: Online for French, German, Spanish, Italian and Latin. Chinese (mandarin) and Japanese are only offered at the elementary level, even to those with prior experience.

No information on Mathematics or English placement.

Muhlenberg College

Foreign Language Placement Exam: two stage, questionnaire then if appropriate an exam. Exams are offered in French, German, Hebrew, Italian, Russian and Spanish; and are online

Math Placement exam: Available online – no other information found.

In subjects other than mathematics and foreign language, you will be placed in the introductory level unless you are extremely proficient (advanced levels of History or English, for example, if you've done well on the A.P. or I.B. exams).

Ohio Wesleyan

Uses Foreign Language placement testing and AP scores for placements. Very little information available outside of this.

Presbyterian

No information found

Stevenson

FYI: Stevenson does NOT require a foreign language for graduation.

Stevenson University utilizes the College Board's computerized ACCUPLACER® testing system for English, reading, and/or mathematics course(s) for incoming students. Online, multiple-choice, untimed, the mathematics test provides an on-screen calculator, test question difficulty is adaptive to responses in order to provide a more tailored measure of individual ability.

English Testing Requirements:

Incoming students with the following SAT and/or ACT scores are required to complete the English placement test:

- **Old SAT**: Scores below a 500 on the Critical Reading section
- **New SAT**: Scores below a 550 on the Evidence-Based Reading and Writing section
- **ACT**: Scores below a 44 combined on the English and Reading sub-scores

English Testing Exemptions

- Taken an English ACCUPLACER® placement test at another institution within the past year
- Taken a credit-bearing English course or an equivalent college-level composition course with a grade of a "C" or better at another college/university
- Earned an Advanced Placement (AP) score of a 4 or 5 on either the English Language or English-Literature exam before May 201

Mathematics Testing Requirements: All incoming students are required to complete the Mathematics placement test, unless they meet any one of the exemptions listed below:

Mathematics Testing Exemptions

- Taken a mathematics ACCUPLACER® placement test at another institution within the past year
- Taken a credit-bearing mathematics course(s) at another college/university equivalent to or higher than Stevenson's foundational MATH 005 course and earned a grade of a "C" or better
- Earned an Advanced Placement (AP) score of a 4 or 5 on one of the following mathematics exams before May 2017: AP Statistics, AP Calculus AB or BC

Testing in online and must be completed at Stevenson, a pre-approved, local testing center if located more than 100 miles from campus, or as a last resort during orientation.

Susquehanna

Mathematics placement form is used. No tests/information otherwise. Can't access form, it is behind a firewall.

Ursinus

Please complete placements by Wednesday, May 16, 2018. Missing the deadline for online placements will delay course registration.

If you are having technical difficulties, please contact Tech Support at 610-409-3789. ALL first-year students must complete the Foreign Language and Math Placements regardless of course selection.

You can log into the Placements using the links below:

Chemistry Placement (Only necessary if you plan to take Chemistry while at Ursinus.)

Math Placement

Foreign Language Placement

Plan to spend 30-60 minutes on each subject area. The modern language placement has an audio component so please plan accordingly.

Washington and Jefferson

Mathematics Placement Exam: 30 multiple-choice questions; online, no calculator allowed.

Language Placement: No indication of HOW students are placed. Students must complete a language requirement of one year at the introductory level (105 and 106; 106 and 207), or one term at the intermediate level (207). Students may start at 105 in any language in which they have no experience. Currently, W&J offers six languages: Arabic, Chinese, French, German, Russian, and Spanish. Students may also transfer in courses to fulfill the language requirement with pre-approval according to college guidelines.

Washington College

Language Placement: Each student must take the language placement test (available online). Placements are never increased, only lowered, if a student is uncomfortable with the placement. Students who have achieved a score of 4 or 5 on the Advanced Placement test have satisfied the foreign language requirement.

No information available on other placements.

Westminster College

No online information available

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McDaniel College Placement Exams External Evaluation Documents Supplemental Materials

First Year Team

McDaniel College

April 11, 2018

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Should I Take ENG 1002 or ENG 1101?:
Assessing Yourself as a Writer

Remember: In order to complete the first-year writing requirement, you MUST receive a final grade of C or better in English 1101. If you do not meet this requirement, you will have to retake the course.

Option 1: English 1002: College Composition

English 1002 is designed to ensure that students develop the writing skills they need to successfully complete the English composition requirement and succeed at McDaniel College. In English 1002, you will:

- Practice the forms of writing that will be expected of you in English 1101.
- Learn the writing and reading skills that help you gain confidence in your ability to communicate your ideas clearly; and
- Usually write about subjects familiar to you.

If most of these characteristics describe you, consider enrolling in English 1002:

- Generally, I don't read when I don't have to.
- In high school, I did not do much writing.
- I often struggle with the rules of grammar and punctuation.
- I've used computers, but not for writing and revising.
- My SAT was below 530.
- I don't think of myself as a strong writer.
- I'm not sure that I could earn a C or better in English 1101.

Option 2: English 1101: Introduction to College Writing: the Argument

Generally speaking, you are well prepared for English 1101 if you have done quite a bit of reading and writing in high school. English 1101 instructors will assume that you:

- Can summarize and analyze published material from magazines, newspapers, books, and scholarly journals; and
- Have written a variety of essays in a variety of forms, including persuasive and analytical writing.

If most of the following statements describe you, you should feel comfortable taking 1101:

- I enjoy reading newspapers, magazines, and books.
- In high school, I wrote several essays per year.
- My high school GPA placed me in the top third of my class.
- I have used computers for drafting and revising essays.
- I consider myself a good reader and writer.
- I use grammar and punctuation correctly most of the time.
- I'm pretty sure that I could earn a C or better in English 1101.

Email your decision to Suzanne Nida at snida@mcdaniel.edu, making sure to include your full name. You must indicate your preference by this Thursday June 29th.

ENGLISH PLACEMENT FAQs

1. I took the AP test. Do I have to take this writing placement essay as well?

Yes. You will need a 4 or a 5 on the AP Language test or a 5 on the AP Literature test to place out of English 1101. Since you most likely will not have the results of your AP test until after your fall schedule is determined, you must still take the writing placement essay.

However, if you do have your scores and they have been sent to and received by the McDaniel College registrar, you do not have to take the placement test if the scores exempt you from English 1101.

2. Why can't I wait to get my AP scores and THEN take the writing placement essay?

Because placement for your fall courses will be made before you get your AP test results back, you must take the writing test by the deadline. If, when your AP scores arrive (usually early July), you score high enough to place out of composition, you may then drop the composition course for which you registered and, after consulting with your advisor, replace it with an alternate course.

3. What happens if I don't take the English placement essay by the deadline?

If you do not take the test by the deadline, you will only be allowed to register for your first-year seminar course. You will have to wait to register for you other courses in late August. This means that your selection of courses may be limited.

4. I received a 4 or 5 on the AP language test. What does that place me out of?

A score of 4 or 5 on the AP language test places you out of English 1101.

5. I received a 4 on the AP literature test. What does that place me out of?

This does not place you out of a course. You must register for English 1101.

6. I received a 5 on the AP language test and/or the AP literature test. What does that place me out of?

A score of 5 on the AP literature test places you out of English 1101

7. Do I have to take the test if I took a composition class at another college?

If you've already taken a college-level composition course, you need to contact the McDaniel College registrar at sgclark@mcdaniel.edu prior to the deadline. She can tell you whether your course will satisfy the McDaniel College composition requirement. If you are still waiting for a response from the registrar when the writing placement deadline arrives, you should take the placement test anyway. If your class transfers, your essay will be disregarded.

8. I almost scored a 710 on the Evidenced-based Reading and Writing portion of my SAT test and am a really good writer who got As in all my writing classes. Do I still have to take the test?

Yes, you must take the test unless you scored a 710 or higher.

9. If I place into English 1002, can I make the decision to skip it and register for 1101 anyway?

Unless you have been notified by the placement readers that you may choose between 1002 and 1101, you will only be allowed to register for the class you place into.

10. I don't want to take composition the first semester. Do I have to? If not, do I have to take the placement test now?

You may choose to take English 1101 in either the first or second semester. You must take English 1002 your first semester if you place into that course. However, you must take the placement test now, regardless of which semester you plan to take 1101.

If you have questions about the test itself, or if you have been notified that you may select which course is appropriate for you, and you have questions or need help deciding, contact Suzanne Nida at sseibert@mcdaniel.edu.

If you have technology-related concerns or questions, contact Steve Kerby at skerby@mcdaniel.edu.

June 22, 2017

Student's Name
Address
City, State, Zip Code

Dear _____,

On behalf of the English Department, welcome to McDaniel College!

Recently, you wrote an essay using McDaniel's online Blackboard website. That essay, like the essays of all other entering freshmen, was read by professors in the English Department. Our goal was to identify the writing course that would be the best starting point for you.

After reading your essay, we believe you could benefit from enrolling in either English 1002: College Composition or English 1101: The Argument. In the attached document, you will find a description of both classes along with a survey to help you choose the class you feel best suits your skill level and preparation. The goal, ultimately, is to provide you with the opportunity to be the best writer possible, which is essential to your success at the college.

The choice is one you should make thoughtfully. Whichever course you choose, you must eventually take English 1101 in your first year. (Most students who choose to take English 1002 in the fall find themselves well prepared to take English 1101 in the spring.)

Please be aware that you must receive a C or better in your English 1101 class to satisfy the first-year writing requirement. If you do not receive this grade, you will be required to take the course again. If you feel that receiving a C or better could be a challenge, we strongly recommend taking English 1002 in the fall semester.

After you have taken the survey and chosen the appropriate course, send your name and course preference to Suzanne Nida at snida@mcdaniel.edu. If, after taking the survey, you still have questions about which of the courses to choose, feel free to contact Professor Nida at the email address above. You must have **submitted your preference by Thursday, June 29.**

Again, welcome to McDaniel College. We hope your experience in the first-year writing course – whichever one you choose to take – is productive and invigorating.

Sincerely,

The McDaniel College English Department

Overall data for the entirety of the incoming class

Year	Number of Students	Placed in 1101	Placed in 1002
2017	404	303	101
2016	359	275	84
2015	413	317	96
2014	386	319	67
2013	445	369	76

Subset of data for those students who participated in Directed Self-Placement (DSP). When "we placed" is indicated, this means the students did not respond with a class choice by the deadline indicated in the welcome letter, so the department needed to choose an appropriate placement.

Total DSP's	We placed in 1101	We placed in 1002	Student self-placed in 1101	Student self-placed in 1002	DSP's in 1101	DSP's in 1002
63	18	13	20	12	38	25
55	29	18	4	4	33	22
58					35	23
36	16	7	7	6	23	13
50	20	12	9	9	29	21

This table provides information on:

Latin, Arabic, and Chinese - results of student placements after the on-campus, in-person placement testing.

French, German, and Spanish - Online placement testing takes place over the summer. After the student arrives on campus for First Year orientation, in-person placement testing will occur. This testing will reaffirm the initial placement from the online test score, or show cause to change the placement to a higher or lower level class.

ASL - not represented in this data.

Placement Test Data results (2013 - 2017) World Languages Department

Students Tested	2013	2014	2015	2016	2017
Arabic	2	1	1	0	1
Chinese	6	3	2	4	3
Latin	report missing	18	report missing	15	12

Revised Second Language Requirement as of 2016

Advanced Placement Test Data results (2013 - 2017) World Languages Department

(Number of Students Placement)

2017	Unchange	Lower	Higher	No show	Total
French	2	1	1	1	5
German	6		1		7
Spanish	13	59		4	76

2016	Unchange	Lower	Higher	No show	Total
French	3	1	6		10
German	8		2		10
Spanish	27	40	0	8	75

Revised Second Language Requirement as of 2016

2015	Unchange	Lower	Higher	No show	Total
French	2	3	2		7
German	3				3
Spanish	33	16	1	11	61

2014	Unchange	Lower	Higher	No show	Total
French	5	2	2	1	10
German	0	0	1		1
Spanish	21	9	4	2	36

2013	Unchange	Lower	Higher	No show	Total
French	7			2	9
German	1				1
Spanish	24	20	6	1	51

	Math 1001 - Basic Mathematics			Math 1002 - Basic Algebra			Math 1106/07 - Mathematical Excursions/College Algebra and Trigonometry			Math 1117 - Calculus I		
	Attempted	**Passed**	**% Passing**	**Attempted**	**Passed**	**% Passing**	**Attempted**	**Passed**	**% Passing**	**Attempted**	**Passed**	**% Passing**
2017	377	185	49.1%	366	106	29.0%	355	84	23.7%	100	25	25.0%
2016	338	184	54.4%	335	123	36.7%	322	89	27.6%	86	23	26.7%
2015	401	208	51.9%	391	138	35.3%	380	94	24.7%	102	23	22.5%
2014	410	233	56.8%	406	154	37.9%	397	107	27.0%	109	28	25.7%

Summary of Responses from Focus Groups about Placement Exams
April 4, 2018

Student Focus Group

5 students attended – 1 FY, 0 Soph, 3 JR, 1 SR.
Majors represented: Accounting, Biology, English, & Social Work (2)

A. Do you believe course placements, resulting from placement exams, should be required placements or recommended placements for students in math, English or second language?

- 4 thought placements should be recommended and 1 thought they should be required.
- Tests may not be indicative of success. The fact that the tests are timed and online could impact the scores.
- Students from different high schools have different levels of preparation.
- It is a problem if you place too high in a 2nd language course – leads to anxiety and you can be lost during the speaking portion of class because not prepared enough.
- First year students are under the false assumption that they must take a college-level course in the same language that they took their placement exam in. They think they are not allowed to start a new language. It should be made clear that this isn't true – they can start a new language.

B. Is there a place for the use of additional assessment markers (ACT, SATs, High School transcripts, etc.) as factors in determining course placement in math, English or second language?

- High school transcript
- AP scores of 4+ (not just 5)
- SAT/ACT
- Have conversations in 2nd language
- Depending on major, students may not need the math placement test at all if they will take a QR course in their major which doesn't require the math placements as a prerequisite.
- Placement exams can be affected by test anxiety.

C. If you have placed into a course you didn't feel was right, do you feel as if it was a positive, neutral, or negative experience? Why?

- 1 student placed into a lower level of French than expected because she had a 2 year gap between taking high school French and taking the placement test. She felt like the year of French classes was a waste of time because she already knew it.
- 1 student placed into a lower level of a 2nd language due to test anxiety and because there was no conversational component of the exam which was the student's strength. The class experience was neutral for him.
- 1 student placed too high in Spanish because she was good with written language but was very poor in conversation (and the test didn't measure her conversational skills). She found her

course very stressful because she couldn't follow the conversations. She recommended that students be allowed to drop down a level if they place higher than they are comfortable.
- The math placement test was more complex than the no-credit workshops. The placement tests may not matter in later courses.

D. Would it be helpful for students to have an option to choose their course placement (if given a choice between two course placements) based on what they feel is best for their success?
- They all agreed that this would be helpful.
- When students are given the option between 2 courses, they should be sent the course descriptions as well.
- More choices for students will reduce anxiety.

E. Are there overall recommendations for change you may have for placement exams in math, English or second language?
- 2nd language exam should be conversational, on campus during orientation.
- 2nd language - Don't schedule the in-person conversational testing during the same time that many other important events are happening at orientation, events which the same students who place high in 2nd language would want to attend (e.g., honors reception, global bridge reception, global fellows reception). Do the conversational follow-up testing over skype during the summer or pick a time during orientation that doesn't conflict with other relevant events.
- 2nd language - Could make the conversational follow-up testing optional for any students who are not comfortable with their placement.
- English exam is fine online
- Some majors don't need to take math placement at all if they will get a QR course within their major without pre-reqs needed.
- On the math exam – let us explain our answers. Show work to see the steps taken. Maybe we just made a minor error but we knew how to do the problem.

Faculty Focus Group

Only 2 faculty members were present and 1 of them was the Chair of the Math & Computer Science Department.

A. What are your thoughts about when and how placement exams are offered? Current practice is hybrid of online in Blackboard (math, English & language during summer before arrival) and in person during orientation (second round of testing for language). Math also offers the placement exam for returning students two times per semester in person during the semester.

- Students are still just finishing high school in June and it is not a good time for them to take the exams or take the exams seriously. They are not really thinking about college yet.

B. Is there a place for the use of additional assessment markers (ACT, SATs, High School transcripts, etc.) as factors in determining course placement in math, English or second language?

- Do we have data indicating that placement tests predict college success once they get here? Some people may have taken AP courses but still not pass the math placements. May not be predictive. English may be more predictive (but because it is done online, it could be plagiarized).
- How do you use additional markers without an immense increase in workload? Right now, we use additional markers on a case by case basis in math when students appeal their placement.

C. Is it your opinion that course placements are successful and accurate in the current model of testing, why? And if placement results are not accurate, what do you feel are the biggest challenges arising from course placements of students?

- Probably not accurate if someone who has taken AP math can't pass math placements.
- Students get upset with their placements - too low or too challenged in course. English is better because students have a choice with the directed self-placements.

D. Does the College need to be looking at additional solutions (summer bridge programming, online classes in summer, co-requisites lab classes to offer support, etc.) for students not meeting the academic standards for course placements available?

- At the University of Maryland at some point, students who didn't pass placements had to come earlier the summer before first year to do some class(es).
- Most of the proposed solutions in this question don't seem to work (summer bridge programs may help with retention but not success in courses). Co-reqs don't help either
- It would be great to offer 1001 & 1002 over the summer but it is a staffing issue.

E. Other general recommendations regarding placement exam processes in math, English or second language?

- Why do students get credit for developmental English but not developmental Math?
- 2nd language - native speaker students have a hard time getting credit for it but it may just be that they aren't reading the email communications available to them.
- Do all students really need to take the math placement tests if there are QR courses they can take which don't require the placement as a pre-requisite? English & 2nd language placement tests should be taken by all students because those classes are graduation requirements.
- All faculty may not buy into the math placement process and this can cause problems with students. Because advisors don't totally understand the process, they may not be giving students the best advice. Would like to improve communication regarding the math placement exams.
- Maybe offer a combined arithmetic & algebra course (1001/1002)
- Maybe offer compressed math workshops during the semester

Remedial Education and Placement Testing
Presentation to Cabinet
06/04/2018

Background/Timeline

Spring 2016

- Office of Academic Support Transitioned to Office of Student Success and began implementing the university's "Retention Plan"
- Staff in the Office of Student Success, Office of Academic Affairs, Admissions, the Registrar's Office, as well as in the Math and English Departments met to review institutional data on placement testing results, course placements, and developmental studies
- Recommendations of this work group included:
    - Change the Accuplacer cut score for ENG 151
        - SAT cut score of a 500 (instead of 520)
        - ACT cut score of 44 (instead of 45)
    - Decouple ENG 148 and Developmental Reading (DEVR) 106#
    - Dissolve distinction between science and non-science majors in mathematics placement testing (all students be evaluated for highest level of math for which they are eligible to enroll)
    - Review content of developmental courses
- Developmental Studies moved back to the respective academic units, English and Math
    - DEVM 105#, General College Mathematics, was redesigned
        - DEVM 105# prepared students for MATH 137: College Algebra. Under SEE, students have a choice of taking MATH 135: Introduction to Quantitative Reasoning "Math in the Real World", MATH 136: Introduction to Statistics, and MATH 137, College Algebra.
    - To support all of our students, a course proposal was submitted for MATH 005#, Foundations of Quantitative Reasoning, which focuses on foundational quantitative reasoning instead of fundamental algebra

Fall 2016

- Implementation of the above, while further research was conducted, analyses were performed, and discussions held on remedial education and placement testing
- MATH 005# was offered for the first time

Spring 2017

- Course proposals submitted to replace ENG 148 with ENG 150
- Course proposal submitted to add a co-remediation model to MATH 136, with the additional support class of MATH 036#
- Work group reviews College Board's concordance tables and institutional data and subsequently proposes that for the new SAT, Stevenson establishes 550 on the EBRW section as the cut-score for incoming students to be exempt for English placement testing (equivalent to score of 500 on previous SAT's Critical Reading section)

Fall 2017

- Implementation of the above; Courses offered in Fall 2017:
    - ENG 150
    - MATH 136/036#

Remedial Education and Placement Testing
Presentation to Cabinet
06/04/2018

Spring 2018

- Review data and success rates
- Course proposals submitted to expand co-remediation model to MATH 135 and MATH 137 (MATH 035# and MATH 037#, respectively)
- Additional efforts have been made in the area of placement testing, such as the:
    - Communication and promotion of earlier placement testing (prior to Mustang Days)
    - Proliferation of 'remote testing'
    - Integration of Accuplacer and SIS for score reports; Score reports display eligibility
    - Revision of the Placement Testing Results guide (Action-Oriented)
    - Encouragement of completing developmental requirements prior to matriculation at Stevenson
- Further research conducted, analyses performed, and discussions held on the topics of remedial education and placement testing

Review of Data – Overall

The following table (Table 1) depicts the developmental (DEVM) course enrollment figures for incoming traditional students during the fall 2015, 2016, and 2017 semesters. Course enrollment data was provided by the Registrar's Office and sorted specifically for enrollments in non-developmental and DEVM courses.

Table 1. Developmental Course Enrollments

Term	Student Total	Students not in a DEVM Course	Students in **1** DEVM Course	Students in **2** DEVM Courses	Students in **3** DEVM Courses	Students in DEVM Course(s)
FA'15	734	477 (65%)	144 (20%)	40 (5%)	73 (10%)	257 (35%)
FA'16	783	505 (64%)	194 (25%)	53 (7%)	31 (4%)	278 (36%)
FA'17	688	506 (74%)	146 (21%)	36 (5%)	0 (0%)	182 (26%)

Note. Fall 2015 – DEVR 106# and ENG 148 (coupled), DEVM 105#
Fall 2016 - DEVR 106#, ENG 148 (decoupled), MATH 005#
Fall 2017 – ENG 006#, MATH 005# (ENG 150 – degree credits)

The decoupling of DEVR 106# and ENG 148 significantly reduced the number of students enrolled in three developmental courses, i.e. DEVR 106, ENG 148, and DEVM 105# (MATH 005#) between the Fall 2015 and Fall 2016 semesters. In addition, the replacement of ENG 148 with ENG 150 between the Fall 2016 and Fall 2017 semesters effectively eliminated student enrollment in three developmental courses going forward.

Remedial Education and Placement Testing:
Math Data

Math

In Fall 2017, a co-remediation model was developed for a small group of students that previously would have placed into the developmental MATH course (MATH 005#) based on their Accuplacer scores to immediately take Introduction to Statistics (MATH 136) with an assistance course. The students selected were those whose Accuplacer scores were just below the cutoff for taking college level math courses. This co-remediation model allowed for these higher performing remedial students to take the full MATH 136 course with students who had placed directly into the MATH 136, meaning that a separate section was not created for students who placed into this "co-remediation" category. Instead, students would add an additional "remedial course" that included two (2) additional hours in the classroom to provide additional practice and assistance for the material that was presented in the MATH 136 course. For students who were eligible for co-remediation, this meant that they would be eligible to immediately take the credit bearing course in their first semester and reduce the number of developmental credits from four (4) to two (2). This also allowed them to get college credit for math in their first semester instead of taking two semesters (Figure 1).

Figure 1. Math Pathway

Developmental Introduction to Statistics Pathway prior to Fall 2017
MATH 005# → MATH 136
2 semesters; 4 developmental credits

Introduction to Statistics Pathway revised
MATH 136 + MATH 036#
1 semester; 2 developmental credits

Review of Data - MATH 136 + MATH 036# Success

The following table (Table 1) displays the pass and fails rates of students who were enrolled in MATH 005# first and then took MATH 136 the following semester versus students who were enrolled in a co-remediation model. Data was provided by the Math Department, specifically the Associate Dean and Chair of Math and the Director of Academic Advising.

Table 1. MATH Developmental versus Co-Remediation Course Success in MATH 136 Summary

Course	Failed MATH 136 (C-, D+, D, F)		Passed MATH 136 (A, B, C grades)		Total Students
MATH 005# → MATH 136*	19.5%	16	80.5%	66	82
MATH 136 + MATH 036#**	20.0%	5	80.0%	20	25

**This group indicates students who enrolled in MATH 005# followed by MATH 136 between Fall 2016 and Fall 2017*
***This group indicates the group of students who participated in the co-remediation MATH 136 + MATH 036# option in Fall 2017*

Due to the initial success of the co-remediation model, the Math Department will expand co-remediation to MATH 135 and MATH 137 (MATH 035 and MATH 037, respectively) in Fall 2018. In addition, MATH 137 was certified to fulfill S.E.E. Requirements. Efforts to monitor and assess these courses are ongoing.

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EXCERPTS FROM ANNUAL REPORTS (2017-2020)

Academic Link Annual Report; FA'16-SP'17

(excerpt from 07/07/2017)

Placement Testing:

On April 12, 2017 representatives from the Office of Academic Affairs, the Office of Student Success, the Admissions Office, the Registrar's Office, and the English department met to debrief on current placement testing practices and procedures, including a thorough data-driven review and analysis of the SAT scores submitted by last year's admitted students, their placement testing scores, subsequent placements, and course success rates. A review of this data from the class of 2020 revealed the following:

1. The 2016 placement testing model that was created to inform the implementation of updated ACCUPLACER Reading Comprehension and Sentence Skills cut-scores and subsequent English course placements provided very accurate predictions of incoming students' English course registration needs.
2. Newly adopted ACCUPLACER Reading Comprehension and Sentence Skills cut-scores facilitated appropriate, academically responsible first-semester English course placements for freshmen students.
3. Positive correlations exist between SAT performance and performance on the ACCUPLACER in both English and mathematics for the class of 2020.
4. The co-remediation model adopted in 2016 for English courses, i.e. the decoupling of DEVR 106 and ENG 148, improved assessment efforts to accurately match individual, freshmen student academic preparedness and need with the appropriately corresponding English course(s).

In addition, positive feedback from the Associate Dean of Chemistry, Math and Physical Sciences, Dr. Ellen Roskes, as well as the Associate Registrar, Ms. Erica Gryctz, affirmed the decision to remove the 2015 mathematics placement testing distinction made between non-science and science majors, and instead evaluate all students regardless of intended major for their highest math course eligibility.

The intent of this debriefing was also to discuss College Board's New SAT and its anticipated impact on placement testing, specifically the minimum score required on the Evidence Based Reading and Writing (EBRW) section to exempt admitted students from English placement testing. Following a discussion and analysis of the data presented, including concordance resources from the College Board, the members present unanimously decided to maintain the current English test exemption score of 500 or better for the Old SAT Critical Reading section, and establish scores of 550 or better on the New SAT EBRW section as the cut-score admitted students must achieve to be considered exempt from English placement testing requirements; the reasons for this determination are as follows:

1. Scores of or about 500 on the Old SAT's Critical Reading section are comparable to scores of or about 550 on the New SAT's EBRW test.

2. Requiring students with New SAT EBRW scores below 550 maintains a consistent percentage (~44%) of admitted students expected to complete English placement testing requirements for the purposes of determining course placement.
3. A large majority (~93%) of students who achieved a 500 or better on the Old SAT's Critical Reading section, and enrolled in ENG 151 their first semester, were adequately prepared (achieved a passing grade) for the academic rigor this course's curriculum presents.

Also discussed at this meeting was the placement testing schedule for 2017, specifically the dates, times and options for placement testing starting in May and continuing through orientation. In an effort to increase the number of students testing before the June Mustang Days, the number of available on-campus placement testing dates was increased from 16 to 19, testing hours each day were adjusted from 11 a.m.-2:00 p.m. to anytime between 1-4:00 p.m., and two starting times (8:00 a.m. or 11:00 a.m.) were offered on each of the Saturday testing dates. In addition, an online rsvp system was developed to further facilitate remote testing requests from students residing 100 miles or more from the Stevenson University campus. Thanks in-part to these efforts the number of freshmen students completing placement testing the morning of their June Mustang Day was reduced by 22% (249 down to 194), and the number of students testing remotely increased by 165% (from 26 to 69 appointments).

Academic Link Annual Report 2018-2019 (excerpt)

Placement testing

This year the Academic Link, in collaboration with other members of the Office of Student Success and the math and English departments, spearheaded an initiative to reimagine the placement testing process. In alignment with the Stevenson University Initiative to "increase the number of developmental students who earn credits in co-remediation courses in math and English," changes were made to increase access to credit bearing courses. For more a more detailed description of the updated protocols and procedures, see the memorandums submitted and approved by Dr. Susan Gorman regarding math and English placement testing.

Academic Link Annual Report (excerpt from 2019-2020)

PLACEMENT TESTING

In conjunction with the English department, ENG-006# was placed on a temporary hold to re-evaluated for future semesters as we were unable to develop a reasonable plan to assess students' ability without in-person placement testing.
There were no significant changes to math placement (including the process and cut off scores).

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Memorandum

To: Susan T. Gorman, Ph.D., Senior Associate Vice President, Academic Affairs
From: Christine E. Moran, Ph.D., Dean, Student Success
Date: March 25, 2016
Re: Proposed Changes to Developmental Education at Stevenson University
Attachments: Data to Support Recommendations; Analysis of English Placement Scores

On February 16, 2016, representatives from the Office of Academic Affairs, Office of Student Success, Admissions, the Registrar's Office, the Math Department, and the English Department met to discuss the future of Stevenson's Summer Month of Success (SMOS), which has traditionally offered incoming freshman the opportunity to complete developmental coursework in the summer before their first semester at Stevenson.

Questions and concerns about SMOS and related developmental placement practices and criteria could not be fully addressed in this single meeting. Consequently, a small workgroup was convened to determine the future of SMOS and to analyze current placement practice. This workgroup was convened by me and consisted of Bridget Brennan, Academic Affairs; Kelly Farmer, Admissions; Terra Hall, Student Success; Ellen Roskes, Chair, Math Department; and Laura Smith, Chair, English Department.

As described in detail on the following pages, the workgroup engaged in research, discussion, and careful deliberation of matters related to SMOS and placement practices. Based on its findings, we are making the following **recommendations** related to developmental education:

1. Discontinue the Summer Month of Success.

2. Change the Accuplacer® cut scores for English151 as follows:
   - SAT cut score of 500 (instead of 520)
   - ACT cut score of 44 (instead of 45).

3. Decouple English 148 & Developmental Reading (DEVR) 106#, so that students can be placed in one or both courses, and allow students who test into DEVR 106# to take English 151 simultaneously.

We believe that these changes will, (1) benefit student success at Stevenson, (2) provide more appropriate facilitation of student learning, and (3) permit a reallocation of funds to support more cost-effective student success initiatives.

Thank you for your review and consideration.

Approved 03/26/16

Data to Support Recommendations

Summer Month of Success

Recommendation 1: ***Discontinue Summer Month of Success***

Rationale
Although the SMOS provided some students with the opportunity to take developmental courses before they began attending class in the fall, the workgroup identified two important problems that led the group to recommend the discontinuation of SMOS:

- Both the Math and English Departments feel that the compact format of SMOS (4-week courses) is not pedagogically sound and does not provide developmental students—who are often most in need of assistance—with adequate preparation for credit-bearing courses.
- Because Stevenson will not offer housing to students during SMOS, SMOS is really only available to local students. Offering a program that is only available to local students does not promote equity and is not conducive to a cohesive environment.

Recognizing that some parents and students will be disappointed that students will not have the opportunity to complete developmental requirements before they begin classes in the fall, the workgroup further recommends that Stevenson encourage students to take equivalent courses at their local community college. The committee suggested contacting Maryland community colleges to determine course equivalencies, so Stevenson can help inform students about their options.

Developmental Reading and English Placement

English Department Research
In preparation for the workgroup meeting, the English department researched developmental English and reading offerings at other 4-year institutions (both inside and outside Maryland) and found the following:

- Stevenson's ratio of developmental courses to its standard course required for graduation is quite high. SU runs one developmental course for every 3.5 sections of its required, college-level course. Frostburg State runs 2 developmental sections compared to 29 college-level sections; Marymount Manhattan runs 3 developmental sections compared to 26 college-level sections; Towson runs 7 sections of a co-requisite reading class for 2,900 incoming students.

The department then investigated whether Stevenson's placement policies and practices were in line with other schools and discovered that:

- Stevenson is unique among the institutions studied in requiring two developmental/remedial courses before students can enter the standard course required for graduation.
- Of the 16 colleges studied, seven have no developmental or remedial writing courses. Of the nine that require such courses, at least four use a co-remediation, lab, or stretch model.
- Stevenson is using an SAT cut score (below which a student must take the placement test) that is above the score used by a majority of local institutions and above the College Board's recommendations.

The department, with the help of Admissions, further researched our own student's success and discovered the following (see table on page 4 below):

- Over the last three years, 84% of students with a 500 or 510 Critical Reading tested into ENG151. Last year was the highest rate at 92.5%
- 87% of students with a 500 or 510 who tested into ENG151 and took the course in 15/FA earned a grade of C or better
- 100% of students with a 500 or 510 who tested into ENG148 and took that course in 15/FA earned a grade of B or better
- Many Stevenson students did not place college-ready in Reading; however, they did place "college-ready" in English. Nonetheless, under Stevenson's current system, these students might have to take both developmental English and developmental reading.

The English Department presented their findings to the workgroup, which, in turn, put forward the second and third recommendations for consideration.

Recommendation 2: Change the English 151 SAT placement cut score from 520 to 500 and the ACT placement cut score from 45 to 44

Rationale:
Changing the placement cut score will be beneficial in several ways:

- A score of 500 puts us in line with the College Board's recommendation and aligns our practice with a majority of local schools.
- It will potentially shorten the time to completion for some students who may have been previously placed into developmental English.
- Students who would most likely test into college-level English based on the Accuplacer® would be spared the time and energy it takes to arrange for and take the placement test.
- It will lower costs, as it would keep Stevenson from unnecessarily testing 80 or more students for English placement.

Recommendation 3: Decouple English 148 and Developmental Reading (DEVR) 106#, so students can be placed in one or both courses, and allow students who test into DEVR 106# to take English 151 simultaneously.

Rationale:

- This change will help students progress toward graduation more quickly, as it would allow students with strong writing skills but weaker reading scores to enroll in English151 and Developmental Reading106 simultaneously in their first semester. This would allow them to stay on track with their "college-ready" peers as they will not have to wait until their second semester to begin 151, which is also a prerequisite for many courses that they may wish to take in their first semester.
- This change would also put us more in line with our peers.

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ANALYSIS OF ENGLISH PLACEMENT FOR STUDENTS WITH CRITICAL READING SCORES OF 500 or 510

Start Term	Critical Reading 500-510	Class Size*	% of Class	# Testing into 151	% Testing into 151	# Testing into 148	% Testing into 148
Fall 2013*	85	765	11.11%	71	83.53%	12	14.12%
Fall 2014	79	694	11.38%	60	75.95%	19	24.05%
Fall 2015**	80	735	10.88%	74	92.50%	4	5.00%

*In Fall 2013 1 student with a 500 transferred in an English class that allowed student to start in ENG151. 1 student with a 510 transferred in credit for ENG151.
**In Fall 2015 1 students with a 500 failed to test and was autoplaced into ENG148. 1 student with a 510 transferred in credit for ENG151.

Start Term	Critical Reading < 500	Class Size*	% of Class	# Testing into 151	% Testing into 151	# Testing into 148	% Testing into 148
Fall 2013*	306	765	40.00%	161	52.61%	130	42.48%
Fall 2014**	321	694	46.25%	201	62.62%	116	36.14%
Fall 2015***	315	735	42.86%	190	60.32%	112	35.56%

*In Fall 2013 15 students with under a 500 Critical Reading failed to test and were autoplaced into ENG148
**In Fall 2014 5 students with under a 500 Critical Reading failed to test and were autoplaced into ENG148
***In Fall 2015 7 students with under a 500 Critical Reading transferred in credit for ENG151. 6 students failed to test and were autoplaced into ENG148.

GRADE DISTRIBUTION IN ENGLISH COURSES FOR FALL 2015 FRESHMEN WITH 500 OR 510 CRITICAL READING

Grades	ENG 151	ENG 148
A	7	3
A-	7	1
B+	12	
B	17	1
B-	6	
C+	3	
C	9	
C-	1	
D	2	
F	5	
WF	1	
Taking 16/SP	1	
Did not Enroll at SU	1	
Transferred in 151	2	
Total	74	5
Total in Class 15/FA	70	5
Total C or above	61 - 87%	5 - 100%

657

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Approved 04/21/17

Memorandum

To: Susan T. Gorman, Ph.D., Executive Vice President and Provost, Academic Affairs
From: Philip M. Gillett, Manager, Academic Link;
Christine E. Moran, Ph.D., Dean, Student Success
Date: April 20, 2017
Re: New SAT Evidence-Based Reading and Writing Cut-Score for Exemption from English Placement Testing Requirements
Attachments: College Board (Concordance Tables), English Placement Testing Bracket Analysis

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Background

In March 2016, the College Board began administering the newest version of the SAT. The redesigned SAT, among other changes, returned the total point scale to 1600, as it was before the writing test was added in 2005, and combined scores on the Reading and Writing sections into a single Evidence-Based Reading and Writing (EBRW) score between 200-800 points. In contrast to the previous verbal sections of the SAT, and their focus on vocabulary, often in limited contexts, the new EBRW section places greater emphasis on the meaning of words in extended contexts, including how word choice shapes meaning, tone, and impact. This modification has shifted the SAT's focal point of verbal assessment from more general reasoning, to the knowledge, skills, and understandings that research has identified as most important for college and career readiness and success.

Currently, the SAT cut-score exempting incoming Stevenson University students from English placement testing requirements is a 500 or better on the Old SAT's Critical Reading section. In anticipation of this year's proliferation of New SAT EBRW scores from the incoming class of 2021, a thorough data-driven analysis was conducted. The overall analysis included: SAT scores of last year's admitted students, as well as placement testing results, subsequent placements, and course success rates, along with College Board concordance resources, and further consultation with the Admissions Office, Registrar's Office, and English faculty leadership. The intent of this analysis was two-fold: to determine and understand what score on the New SAT's EBRW section is equivalent to a 500 on the Old SAT's Critical Reading test, and to establish a consistent cut-score for the New SAT's EBRW section that appropriately exempts incoming students from English placement testing requirements.

On April 12, 2017, representatives from the Office of Academic Affairs, the Office of Student Success, the Admissions Office, the Registrar's Office, and the English department met to debrief on current placement testing practices and results, and to collectively review the aforementioned analysis together. The staff present at this debriefing included: Susan T. Gorman, Ph.D., Executive Vice President and Provost, Academic Affairs; Dr. Bridget Brennan, Academic Affairs; Dr. Christine Moran, Student Success; Kelly Farmer, Admissions; Marty Schmidt, Admissions; Erica Gryctz, Registrar's Office; and Dr. Laura Smith, Chair, English Department. Following discussion and analysis of the data presented, the group unanimously decided to support the following recommendation:

Recommendation

1. For the New SAT, establish 550 on the EBRW section as the cut-score incoming students must achieve to be considered exempt from English placement testing requirements.

It is believed that scores of or about 550 on the New SAT's EBRW section are equivalent to scores of or about 500 on the Old SAT's Critical Reading section, and consequently the adoption of this new cut-score is consistent with the academically sound practices and policies currently guiding Stevenson's placement testing expectations for incoming students.

Data to Support Recommendation

Placement Testing: New SAT Evidence-Based Reading and Writing Cut-Score

Recommendation: *For the New SAT, establish 550 on the EBRW section as the cut-score incoming students must achieve to be considered exempt from English placement testing requirements.*

Rationale

A thorough review of the College Board's available concordance tools and tables, as well as SAT scores submitted by last year's accepted students, and placement testing results, subsequent placements and course success rates confirms:

- Scores of or about 500 on the Old SAT's Critical Reading section are comparable to scores of or about 550 on the New SAT's EBRW test.
- Requiring students with New SAT EBRW scores below 550 maintains a consistent percentage (~44%) of admitted students expected to complete English placement testing requirements for the purposes of determining course placement.
- A large majority (~93%) of students who achieved a 500 or better on the Old SAT's Critical Reading section, and enrolled in ENG 151 their first semester, were adequately prepared (achieved a passing grade) for the academic rigor this course's curriculum presents.

Therefore the adoption of this recommendation is:

- Consistent with the University's current expectations and policies governing English placement testing exemption for incoming students.
- Appropriate for the admissions profile of students accepted to the University.
- Academically responsible with regard to the University's commitment to fostering student success and learning.

Thank you for your review and consideration.

Concordance Tables

Released: May 9, 2016

Instructions for Concording New SAT Scores to Old SAT Scores

Note: Two sets of tables are available: one to concord scores from the old SAT to the new SAT, and one from the new SAT to the old SAT. Be sure to use the appropriate direction — if you are starting with scores on the old SAT and need to concord to the new SAT, please see page 8 of this document: Instructions for Concording Old SAT scores to New SAT Scores.

YOU HAVE: NEW SAT SCORES Start with your scores on the new SAT:	YOU WANT: OLD SAT SCORES Find the related score(s) on the old SAT:	BY USING CONCORDANCE TABLE:
Total Score (ERW+M) (400-1600)	**Total 2400** (CR+W+M) (600-2400)	**Table 1: NEW SAT TO OLD SAT (TOTAL 2400)** Use this table to concord new SAT 1600 (Evidence-Based Reading and Writing + Math) to old SAT 2400 (Critical Reading + Writing + Math)
Total Score (ERW+M) (400-1600)	**Total 1600** (CR+M) (400-1600)	**Table 2: NEW SAT TO OLD SAT (TOTAL 1600)** Use this table to concord new SAT 1600 (Evidence-Based Reading and Writing + Math) to old SAT 1600 (Critical Reading + Math)
Math Section (M) (200-800)	**Math Section** (M) (200-800)	**Table 3: NEW SAT MATH SECTION TO OLD SAT MATH SECTION (M TO M)** Use this table to concord new SAT Math Section to old SAT Math Section
Writing and Language Test (WL) (10-40)	**Writing Section** (W) (200-800)	**Table 4: NEW SAT WRITING AND LANGUAGE TEST TO OLD SAT WRITING SECTION (WL TO W)** Use this table to concord new SAT Writing and Language Test to old SAT Writing Section
Reading Test (R) (10-40)	**Critical Reading Section** (CR) (200-800)	**Table 5: NEW SAT READING TEST TO OLD SAT CRITICAL READING SECTION (R TO CR)** Use this table to concord new SAT Reading Test to old SAT Critical Reading Section
Evidence-Based Reading and Writing Section (ERW) (200-800)	**Writing + Critical Reading Sections** (W+CR) (400-1600)	**Table 6: NEW SAT EVIDENCE-BASED READING AND WRITING SECTION TO OLD SAT WRITING PLUS CRITICAL READING SECTIONS (ERW TO W+CR)** Use this table to concord New SAT Evidence-Based Reading and Writing Section to old SAT Writing plus Critical Reading Sections

For more resources on concordance for Higher Education Professionals,
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For K-12 Professionals,
▶ Click Here

Concordance Tables

Released: May 9, 2016

Instructions For Concording New SAT Scores to ACT Scores

Start with your score on the new SAT and find the related score on the ACT by using these concordance tables.

YOU HAVE: NEW SAT SCORES Start with your score on the New SAT	YOU WANT ACT SCORES Find the related score on the ACT	BY USING CONCORDANCE TABLE:
Total Score (ERW+M) (400-1600)	**ACT Composite**	**Table 7:** NEW SAT TOTAL TO ACT COMPOSITE (NEW SATWL TO ACTW) Use this table to concord New SAT scores to ACT Composite Scores
Writing and Language (WL) (10-40)	**ACT English/Writing** (before 2015 Fall)	**Table 8:** NEW SAT WRITING AND LANGUAGE TEST TO ACT ENGLISH/WRITING (PRE-2015) (NEW SATWL TO ACTW) Use this table to concord New SAT Writing and Language Test scores to ACT writing scores

For more resources on concordance for Higher Education Professionals,
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Concordance Tables

Released: May 9, 2016

New SAT to Old SAT Concordance Table (2400 Scale)

Table 1

New SAT Total Score (400-1600)	Old SAT Total Score (600-2400)
400	600
410	610
420	620
430	630
440	640
450	650
460	660
470	670
480	680
490	690
500	700
510	710
520	720
530	730
540	730
550	740
560	750
570	760
580	770
590	780
600	790
610	800
620	810
630	820
640	830
650	840
660	850
670	860
680	870
690	880
700	900
710	910
720	930
730	950
740	960
750	980
760	990
770	1010
780	1030
790	1040
800	1060
810	1070
820	1090
830	1110
840	1120
850	1140
860	1150
870	1170
880	1180
890	1200
900	1210
910	1220
920	1240
930	1250
940	1270
950	1280
960	1300
970	1310
980	1330
990	1340
1000	1360
1010	1370
1020	1390
1030	1400
1040	1420
1050	1430
1060	1450
1070	1460
1080	1480
1090	1490
1100	1510
1110	1530
1120	1540
1130	1560
1140	1570
1150	1590
1160	1610
1170	1620
1180	1640
1190	1650
1200	1670
1210	1680
1220	1700
1230	1710
1240	1730
1250	1750
1260	1760
1270	1780
1280	1790
1290	1810
1300	1820
1310	1840
1320	1850
1330	1870
1340	1880
1350	1900
1360	1920
1370	1930
1380	1950
1390	1970
1400	1990
1410	2000
1420	2020
1430	2040
1440	2060
1450	2080
1460	2090
1470	2110
1480	2130
1490	2150
1500	2170
1510	2190
1520	2210
1530	2230
1540	2260
1550	2280
1560	2300
1570	2330
1580	2350
1590	2370
1600	2390

Concordance Tables

Released: May 9, 2016

New SAT to Old SAT Concordance Table (1600 Scale)

Table 2

New SAT Total Score (400-1600)	Old SAT Total Score (400-1600)	New SAT Total Score (400-1600)	Old SAT Total Score (400-1600)	New SAT Total Score (400-1600)	Old SAT Total Score (400-1600)	New SAT Total Score (400-1600)	Old SAT Total Score (400-1600)
400	400	720	620	1040	960	1360	1300
410	410	730	630	1050	970	1370	1310
420	410	740	640	1060	980	1380	1320
430	420	750	660	1070	990	1390	1330
440	430	760	670	1080	1000	1400	1340
450	430	770	680	1090	1010	1410	1350
460	440	780	690	1100	1020	1420	1370
470	450	790	700	1110	1030	1430	1380
480	450	800	710	1120	1040	1440	1390
490	460	810	720	1130	1060	1450	1400
500	470	820	730	1140	1070	1460	1410
510	470	830	740	1150	1080	1470	1420
520	480	840	750	1160	1090	1480	1430
530	490	850	760	1170	1100	1490	1450
540	490	860	780	1180	1110	1500	1460
550	500	870	790	1190	1120	1510	1470
560	510	880	800	1200	1130	1520	1490
570	510	890	810	1210	1140	1530	1500
580	520	900	820	1220	1150	1540	1510
590	530	910	830	1230	1160	1550	1530
600	540	920	840	1240	1170	1560	1540
610	540	930	850	1250	1180	1570	1560
620	550	940	860	1260	1190	1580	1570
630	560	950	870	1270	1200	1590	1580
640	560	960	880	1280	1210	1600	1600
650	570	970	890	1290	1220		
660	580	980	900	1300	1230		
670	580	990	910	1310	1250		
680	590	1000	920	1320	1260		
690	600	1010	930	1330	1270		
700	600	1020	940	1340	1280		
710	610	1030	950	1350	1290		

Concordance Tables

Released: May 9, 2016

New SAT Math Section to Old SAT Math Section Concordance Table

Table 3

New SAT Math Section (200-800)	Old SAT Math Section (200-800)	New SAT Math Section (200-800)	Old SAT Math Section (200-800)	New SAT Math Section (200-800)	Old SAT Math Section (200-800)	New SAT Math Section (200-800)	Old SAT Math Section (200-800)
200	200	360	310	520	490	680	650
210	200	370	330	530	500	690	660
220	210	380	340	540	510	700	670
230	220	390	350	550	520	710	680
240	220	400	360	560	530	720	690
250	230	410	370	570	550	730	700
260	240	420	380	580	560	740	710
270	240	430	390	590	570	750	720
280	250	440	400	600	580	760	740
290	260	450	410	610	590	770	750
300	260	460	420	620	600	780	760
310	270	470	430	630	610	790	780
320	280	480	440	640	620	800	800
330	280	490	450	650	630		
340	290	500	460	660	640		
350	300	510	470	670	650		

New SAT Writing and Language Test to Old SAT Writing Section Concordance Table

Table 4

New SAT Writing and Language Test (10-40)	Old SAT Writing Section (200-800)	New SAT Writing and Language Test (10-40)	Old SAT Writing Section (200-800)	New SAT Writing and Language Test (10-40)	Old SAT Writing Section (200-800)	New SAT Writing and Language Test (10-40)	Old SAT Writing Section (200-800)
10	200	18	320	26	450	34	630
11	220	19	340	27	470	35	650
12	230	20	350	28	490	36	680
13	240	21	370	29	510	37	710
14	260	22	380	30	530	38	740
15	270	23	400	31	550	39	760
16	280	24	420	32	570	40	790
17	300	25	430	33	600		

Concordance Tables

Released: May 9, 2016

New SAT Reading Test to Old SAT Critical Reading Section Concordance Table

Table 5

New SAT Reading Test (10-40)	Old SAT Critical Reading Section (200-800)	New SAT Reading Test (10-40)	Old SAT Critical Reading Section (200-800)	New SAT Reading Test (10-40)	Old SAT Critical Reading Section (200-800)	New SAT Reading Test (10-40)	Old SAT Critical Reading Section (200-800)
10	200	18	310	26	480	34	640
11	210	19	340	27	500	35	660
12	220	20	370	28	520	36	680
13	240	21	380	29	530	37	700
14	250	22	400	30	550	38	720
15	260	23	420	31	570	39	760
16	270	24	440	32	590	40	790
17	280	25	460	33	610		

New SAT Evidence-Based Reading and Writing Section to Old SAT Writing plus Critical Reading Sections Concordance Table

Table 6

New SAT Evidence-Based Reading and Writing Section (200-800)	Old SAT Writing plus Critical Reading Sections (400-1600)	New SAT Evidence-Based Reading and Writing Section (200-800)	Old SAT Writing plus Critical Reading Sections (400-1600)	New SAT Evidence-Based Reading and Writing Section (200-800)	Old SAT Writing plus Critical Reading Sections (400-1600)	New SAT Evidence-Based Reading and Writing Section (200-800)	Old SAT Writing plus Critical Reading Sections (400-1600)
200	400	360	620	520	930	680	1260
210	410	370	640	530	950	690	1290
220	420	380	660	540	970	700	1310
230	430	390	690	550	990	710	1340
240	440	400	710	560	1010	720	1370
250	440	410	730	570	1020	730	1390
260	450	420	750	580	1040	740	1420
270	460	430	770	590	1060	750	1450
280	470	440	790	600	1080	760	1480
290	480	450	800	610	1100	770	1510
300	490	460	820	620	1120	780	1540
310	500	470	840	630	1150	790	1560
320	520	480	860	640	1170	800	1590
330	550	490	880	650	1190		
340	570	500	890	660	1210		
350	600	510	910	670	1240		

Concordance Tables

Released: May 9, 2016

New SAT to ACT Concordance Table

Table 7

New SAT Total (400-1600)	ACT Composite Score	New SAT Total (400-1600)	ACT Composite Score	New SAT Total (400-1600)	ACT Composite Score	New SAT Total (400-1600)	ACT Composite Score
1600	36	1330	28	1060	21	790	14
1590	35	1320	28	1050	20	780	14
1580	35	1310	28	1040	20	770	14
1570	35	1300	27	1030	20	760	14
1560	35	1290	27	1020	20	750	13
1550	34	1280	27	1010	19	740	13
1540	34	1270	26	1000	19	730	13
1530	34	1260	26	990	19	720	13
1520	34	1250	26	980	19	710	12
1510	33	1240	26	970	18	700	12
1500	33	1230	25	960	18	690	12
1490	33	1220	25	950	18	680	12
1480	32	1210	25	940	18	670	12
1470	32	1200	25	930	17	660	12
1460	32	1190	24	920	17	650	12
1450	32	1180	24	910	17	640	12
1440	31	1170	24	900	17	630	12
1430	31	1160	24	890	16	620	11
1420	31	1150	23	880	16	610	11
1410	30	1140	23	870	16	600	11
1400	30	1130	23	860	16	590	11
1390	30	1120	22	850	15	580	11
1380	29	1110	22	840	15	570	11
1370	29	1100	22	830	15	560	11
1360	29	1090	21	820	15		
1350	29	1080	21	810	15		
1340	28	1070	21	800	14		

For lower score points, there is not enough data to produce a valid concordance between the new SAT and ACT.

New SAT Writing and Language to ACT English/Writing Concordance Table

Table 8

New SAT Writing and Language (10-40)	ACT English/ Writing Score	New SAT Writing and Language (10-40)	ACT English/ Writing Score	New SAT Writing and Language (10-40)	ACT English/ Writing Score	New SAT Writing and Language (10-40)	ACT English/ Writing Score
40	34	34	28	28	21	22	15
39	33	33	26	27	20	21	14
38	33	32	25	26	19	20	13
37	32	31	24	25	18	19	13
36	30	30	23	24	17	18	12
35	29	29	22	23	16	17	11

Because of changes to the ACT writing test introduced in 2015, the concorded score for the ACT Combined English/Writing is only applicable if you took the ACT prior to Septemeber 2015.
For lower score points, there is not enough data to produce a valid concordance between the new SAT and ACT.

Concordance Tables

Released: May 9, 2016

Instructions for Concording Old SAT Scores to New SAT Scores

Note: Two sets of tables are available: one to concord scores from the old SAT to the new SAT, and one from the new SAT to the old SAT. Be sure to use the appropriate direction — If you are starting with scores on the new SAT and need to concord to the old SAT, please see page 1 of this document: Instructions for Concording New SAT Scores to Old SAT Scores.

YOU HAVE: OLD SAT SCORES Start with your score on the old SAT:	YOU WANT: NEW SAT SCORES Find the related score(s) on the new SAT:	BY USING CONCORDANCE TABLE:
Total 2400 (CR+W+M) (600-2400)	**Total Score** (ERW+M) (400-1600)	**Table 9: OLD SAT TO NEW SAT (TOTAL 2400)** Use this table to concord old SAT 2400 (Critical Reading + Writing + Math) to New SAT 1600 (Evidence-Based Reading and Writing + Math)
Total 1600 (CR+M) (400-1600)	**Total Score** (ERW+M) (400-1600)	**Table 10: OLD SAT TO NEW SAT (TOTAL 1600)** Use this table to concord old SAT 1600 (Critical Reading + Math) to New SAT 1600 (Evidence-Based Reading and Writing + Math)
Writing plus Critical Reading Sections (W+CR) (400-1600)	**Evidence-Based Reading and Writing Section** (ERW) (200-800)	**Table 11: OLD SAT WRITING PLUS CRITICAL READING SECTIONS TO NEW SAT EVIDENCE-BASED READING AND WRITING SECTION (W+CR TO ERW)** Use this table to concord Old SAT Writing plus Critical Reading Sections to New SAT Evidence-Based Reading and Writing Section
Math Section (M) (200-800)	**Math Section** (M) **and Math Test** (MT) (200-800 and 10-40)	**Table 12: OLD SAT MATH SECTION TO NEW SAT MATH SECTION TO NEW SAT MATH TEST (M TO M TO MT)** Use this table to concord old SAT Math Section to New SAT Math Section, and to concord the old SAT Math Section to the new SAT Math Test
Writing Section (W) (200-800)	**Writing and Language Test** (WL) (10-40)	**Table 13: OLD SAT WRITING SECTION TO NEW SAT WRITING AND LANGUAGE TEST (W TO WL)** Use this table to concord old SAT Writing Section to new SAT Writing and Language Test
Critical Reading Section (CR) (200-800)	**Reading Test** (R) (10-40)	**Table 14: OLD SAT CRITICAL READING SECTION TO NEW SAT READING TEST (CR TO R)** Use this table to concord old SAT Critical Reading Section to New SAT Reading Test

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Concordance Tables

Released: May 9, 2016

Instructions For Concording ACT Scores to New SAT Scores

Start with your score on the ACT and find the related score on the new SAT by using these concordance tables.

YOU HAVE: ACT SCORES Start with your score on the ACT	YOU WANT: NEW SAT SCORES Find the related score on the new SAT	BY USING CONCORDANCE TABLE:
ACT Composite	**Total Score** (ERW+M) (400-1600)	**Table 15: ACT COMPOSITE TO NEW SAT TOTAL (ACT TO NEW SAT)** Use this table to concord ACT scores to new SAT scores
ACT English/ Writing (before 2015 Fall)	**Writing and Language** (WL) (10-40)	**Table 16: ACT ENGLISH/WRITING (PRE-2015) TO NEW SAT WRITING AND LANGUAGE (ACTW TO SAT WL)** Use this table to concord ACT writing scores to new SAT Writing and Language scores

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For K-12 Professionals,
▶ Click Here

Concordance Tables

Released: May 9, 2016

Old SAT to New SAT Concordance Table (2400 Scale)

Table 9

Old SAT Total Score (600-2400)	New SAT Total Score (400-1600)	Old SAT Total Score (600-2400)	New SAT Total Score (400-1600)	Old SAT Total Score (600-2400)	New SAT Total Score (400-1600)	Old SAT Total Score (600-2400)	New SAT Total Score (400-1600)
600	400	1060	800	1520	1110	1980	1400
610	410	1070	810	1530	1110	1990	1400
620	420	1080	810	1540	1120	2000	1410
630	430	1090	820	1550	1120	2010	1410
640	440	1100	830	1560	1130	2020	1420
650	450	1110	830	1570	1140	2030	1430
660	460	1120	840	1580	1140	2040	1430
670	470	1130	850	1590	1150	2050	1440
680	480	1140	850	1600	1160	2060	1440
690	490	1150	860	1610	1160	2070	1450
700	500	1160	870	1620	1170	2080	1450
710	510	1170	870	1630	1180	2090	1460
720	520	1180	880	1640	1180	2100	1470
730	530	1190	890	1650	1190	2110	1470
740	540	1200	890	1660	1200	2120	1480
750	550	1210	900	1670	1200	2130	1480
760	560	1220	910	1680	1210	2140	1490
770	580	1230	910	1690	1210	2150	1490
780	590	1240	920	1700	1220	2160	1500
790	600	1250	930	1710	1230	2170	1500
800	610	1260	930	1720	1230	2180	1510
810	620	1270	940	1730	1240	2190	1510
820	630	1280	950	1740	1250	2200	1510
830	640	1290	950	1750	1250	2210	1520
840	650	1300	960	1760	1260	2220	1520
850	660	1310	970	1770	1270	2230	1530
860	670	1320	980	1780	1270	2240	1530
870	680	1330	980	1790	1280	2250	1540
880	690	1340	990	1800	1290	2260	1540
890	690	1350	1000	1810	1290	2270	1550
900	700	1360	1000	1820	1300	2280	1550
910	710	1370	1010	1830	1300	2290	1550
920	710	1380	1020	1840	1310	2300	1560
930	720	1390	1020	1850	1320	2310	1560
940	730	1400	1030	1860	1320	2320	1570
950	730	1410	1030	1870	1330	2330	1570
960	740	1420	1040	1880	1340	2340	1580
970	740	1430	1050	1890	1340	2350	1580
980	750	1440	1050	1900	1350	2360	1590
990	760	1450	1060	1910	1350	2370	1590
1000	760	1460	1070	1920	1360	2380	1590
1010	770	1470	1070	1930	1370	2390	1600
1020	780	1480	1080	1940	1370	2400	1600
1030	780	1490	1090	1950	1380		
1040	790	1500	1090	1960	1380		
1050	800	1510	1100	1970	1390		

Concordance Tables

Released: May 9, 2016

Old SAT to New SAT Concordance Table (1600 Scale)

Table 10

Old SAT Total Score (400-1600)	New SAT Total Score (400-1600)	Old SAT Total Score (400-1600)	New SAT Total Score (400-1600)	Old SAT Total Score (400-1600)	New SAT Total Score (400-1600)	Old SAT Total Score (400-1600)	New SAT Total Score (400-1600)
400	400	710	800	1020	1100	1330	1390
410	420	720	810	1030	1110	1340	1400
420	430	730	820	1040	1120	1350	1410
430	450	740	830	1050	1130	1360	1420
440	460	750	840	1060	1130	1370	1420
450	480	760	850	1070	1140	1380	1430
460	490	770	860	1080	1150	1390	1440
470	510	780	860	1090	1160	1400	1450
480	520	790	870	1100	1170	1410	1460
490	530	800	880	1110	1180	1420	1470
500	550	810	890	1120	1190	1430	1480
510	560	820	900	1130	1200	1440	1480
520	580	830	910	1140	1210	1450	1490
530	590	840	920	1150	1220	1460	1500
540	610	850	930	1160	1230	1470	1510
550	620	860	940	1170	1240	1480	1510
560	640	870	950	1180	1250	1490	1520
570	650	880	960	1190	1260	1500	1530
580	670	890	970	1200	1270	1510	1540
590	680	900	980	1210	1280	1520	1540
600	700	910	990	1220	1290	1530	1550
610	710	920	1000	1230	1300	1540	1560
620	720	930	1010	1240	1310	1550	1560
630	730	940	1020	1250	1310	1560	1570
640	740	950	1030	1260	1320	1570	1580
650	750	960	1040	1270	1330	1580	1590
660	750	970	1050	1280	1340	1590	1590
670	760	980	1060	1290	1350	1600	1600
680	770	990	1070	1300	1360		
690	780	1000	1080	1310	1370		
700	790	1010	1090	1320	1380		

Concordance Tables

Released: May 9, 2016

Old SAT Writing plus Critical Reading Sections to New SAT Evidence-Based Reading and Writing Section Concordance Table

Table 11

Old SAT Writing plus Critical Reading Sections (400-1600)	New SAT Evidence-Based Reading and Writing Section (200-800)	Old SAT Writing plus Critical Reading Sections (400-1600)	New SAT Evidence-Based Reading and Writing Section (200-800)	Old SAT Writing plus Critical Reading Sections (400-1600)	New SAT Evidence-Based Reading and Writing Section (200-800)	Old SAT Writing plus Critical Reading Sections (400-1600)	New SAT Evidence-Based Reading and Writing Section (200-800)
400	200	710	400	1020	570	1330	710
410	210	720	410	1030	570	1340	710
420	220	730	410	1040	580	1350	710
430	230	740	420	1050	580	1360	720
440	240	750	420	1060	590	1370	720
450	260	760	430	1070	590	1380	730
460	270	770	430	1080	600	1390	730
470	280	780	440	1090	600	1400	730
480	290	790	440	1100	610	1410	740
490	300	800	450	1110	610	1420	740
500	310	810	450	1120	620	1430	740
510	310	820	460	1130	620	1440	750
520	320	830	460	1140	630	1450	750
530	320	840	470	1150	630	1460	750
540	330	850	480	1160	640	1470	760
550	330	860	480	1170	640	1480	760
560	330	870	490	1180	650	1490	760
570	340	880	490	1190	650	1500	770
580	340	890	500	1200	650	1510	770
590	350	900	500	1210	660	1520	770
600	350	910	510	1220	660	1530	780
610	360	920	510	1230	670	1540	780
620	360	930	520	1240	670	1550	780
630	360	940	530	1250	680	1560	790
640	370	950	530	1260	680	1570	790
650	370	960	540	1270	680	1580	800
660	380	970	540	1280	690	1590	800
670	380	980	550	1290	690	1600	800
680	390	990	550	1300	700		
690	390	1000	560	1310	700		
700	400	1010	560	1320	700		

Concordance Tables

Released: May 9, 2016

Old SAT Math Section to New SAT Math Section to New SAT Math Test Concordance Table

Table 12

Old SAT Math Section (200-800)	New SAT Math Section (200-800)	New SAT Math Test (10-40)
200	200	10
210	220	11
220	230	11.5
230	250	12.5
240	260	13
250	280	14
260	300	15
270	310	15.5
280	330	16.5
290	340	17
300	350	17.5
310	360	18
320	360	18
330	370	18.5
340	380	19
350	390	19.5
360	400	20
370	410	20.5
380	420	21
390	430	21.5
400	440	22
410	450	22.5
420	460	23
430	470	23.5
440	480	24
450	490	24.5
460	500	25
470	510	25.5
480	510	25.5
490	520	26
500	530	26.5
510	540	27
520	550	27.5
530	560	28
540	570	28.5
550	570	28.5
560	580	29
570	590	29.5
580	600	30
590	610	30.5
600	620	31
610	630	31.5
620	640	32
630	650	32.5
640	660	33
650	670	33.5
660	690	34.5
670	700	35
680	710	35.5
690	720	36
700	730	36.5
710	740	37
720	750	37.5
730	760	38
740	760	38
750	770	38.5
760	780	39
770	780	39
780	790	39.5
790	800	40
800	800	40

Concordance Tables

Released: May 9, 2016

Old SAT Writing Section to New SAT Writing and Language Test Concordance Table

Table 13

Old SAT Writing Section Score (200-800)	New SAT Writing and Language Test Score (10-40)	Old SAT Writing Section Score (200-800)	New SAT Writing and Language Test Score (10-40)	Old SAT Writing Section Score (200-800)	New SAT Writing and Language Test Score (10-40)	Old SAT Writing Section Score (200-800)	New SAT Writing and Language Test Score (10-40)
200	10	360	21	520	29	680	36
210	11	370	21	530	30	690	36
220	11	380	22	540	30	700	37
230	12	390	22	550	31	710	37
240	13	400	23	560	31	720	37
250	14	410	24	570	32	730	38
260	14	420	24	580	32	740	38
270	15	430	25	590	33	750	38
280	16	440	25	600	33	760	39
290	17	450	26	610	33	770	39
300	17	460	27	620	34	780	40
310	18	470	27	630	34	790	40
320	18	480	28	640	35	800	40
330	19	490	28	650	35		
340	19	500	28	660	35		
350	20	510	29	670	36		

Old SAT Critical Reading Section to New SAT Reading Test Concordance Table

Table 14

Old SAT Critical Reading Section Score (200-800)	New SAT Reading Test Score (10-40)	Old SAT Critical Reading Section Score (200-800)	New SAT Reading Test Score (10-40)	Old SAT Critical Reading Section Score (200-800)	New SAT Reading Test Score (10-40)	Old SAT Critical Reading Section Score (200-800)	New SAT Reading Test Score (10-40)
200	10	360	20	520	28	680	36
210	11	370	20	530	29	690	37
220	12	380	21	540	29	700	37
230	13	390	21	550	30	710	37
240	13	400	22	560	30	720	38
250	14	410	22	570	31	730	38
260	15	420	23	580	31	740	38
270	16	430	24	590	32	750	39
280	17	440	24	600	32	760	39
290	17	450	25	610	33	770	39
300	18	460	25	620	33	780	40
310	18	470	26	630	34	790	40
320	18	480	26	640	34	800	40
330	19	490	27	650	35		
340	19	500	27	660	35		
350	19	510	28	670	36		

Concordance Tables

Released: May 9, 2016

ACT to New SAT Concordance Table

Table 15

ACT Composite Score	New SAT Total (400-1600)	ACT Composite Score	New SAT Total (400-1600)	ACT Composite Score	New SAT Total (400-1600)	ACT Composite Score	New SAT Total (400-1600)
36	1600	29	1360	22	1110	15	830
35	1570	28	1320	21	1070	14	780
34	1540	27	1290	20	1030	13	740
33	1500	26	1260	19	990	12	680
32	1470	25	1220	18	950	11	590
31	1430	24	1180	17	910		
30	1400	23	1140	16	870		

For lower score points, there is not enough data to produce a valid concordance between the new SAT and ACT.

ACT English/Writing to New SAT Writing and Language Concordance Table

Table 16

ACT English/ Writing Score	New SAT Writing and Language (10-40)	ACT English/ Writing Score	New SAT Writing and Language (10-40)	ACT English/ Writing Score	New SAT Writing and Language (10-40)	ACT English/ Writing Score	New SAT Writing and Language (10-40)
36	40	29	35	22	29	15	22
35	40	28	34	21	28	14	21
34	39	27	33	20	27	13	19
33	38	26	33	19	26	12	19
32	37	25	32	18	25	11	18
31	36	24	31	17	24		
30	36	23	30	16	23		

Because of changes to the ACT writing test introduced in 2015, the concorded score for the ACT Combined English/Writing is only applicable if you took the ACT prior to September 2015.
For lower score points, there is not enough data to produce a valid concordance between the new SAT and ACT.

00492-003
674

I. English Placement Testing Bracket Analysis

Reading Comprehension→

←Sentence Skills	0-60	61-70	71-90	91-120
0-76	**A1** — *DEVR 106/ENG 148* Predict. Plcmts.: 36 / Actual Plcmts.: 35 # Enrolled: 34 / Passing (≥C): 97% Avg. SAT (verbal): 403	**B1** — *DEVR 106/ENG 148* Predict. Plcmts.: 7 / Actual Plcmts.: 17 # Enrolled: 16 / Passing (≥C): 100% Avg. SAT (verbal): 438	**C1** — *ENG 148* Predict. Plcmts.: 31 / Actual Plcmts.: 28 # Enrolled: 24 / Passing (≥C): 92% Avg. SAT (verbal): 440	**D1** — *ENG 151* Predict. Plcmts.: 9 / Actual Plcmts.: 4 # Enrolled: 4 / Passing (≥C): 75% Avg. SAT (verbal): 433
77-90	**A2** — *DEVR 106/ENG 151* Predict. Plcmts.: 7 / Actual Plcmts.: 9 # Enrolled: 9 / Passing (≥C): 100% Avg. SAT (verbal): 414	**B2** — *DEVR 106/ENG 151* Predict. Plcmts.: 18 / Actual Plcmts.: 25 # Enrolled: 25 / Passing (≥C): 88% Avg. SAT (verbal): 445	**C2** — *ENG 151* Predict. Plcmts.: 73 / Actual Plcmts.: 63 # Enrolled: 63 / Passing (≥C): 89% Avg. SAT (verbal): 453	**D2** — *ENG 151* Predict. Plcmts.: 19 / Actual Plcmts.: 14 # Enrolled: 14 / Passing (≥C): 79% Avg. SAT (verbal): 453
91-120	**A3** — *DEVR 106/ENG 151* Predict. Plcmts.: 6 / Actual Plcmts.: 3 # Enrolled: 2 / Passing (≥C): 100% Avg. SAT (verbal): 463	**B3** — *ENG 151* Predict. Plcmts.: 18 / Actual Plcmts.: 21 # Enrolled: 21 / Passing (≥C): 100% Avg. SAT (verbal): 451	**C3** — *ENG 151* Predict. Plcmts.: 106 / Actual Plcmts.: 83 # Enrolled: 79 / Passing (≥C): 96% Avg. SAT (verbal): 460	**D3** — *ENG 151* Predict. Plcmts.: 71 / Actual Plcmts.: 43 # Enrolled: 39 / Passing (≥C): 92% Avg. SAT (verbal): 470

1. A1: Figures include 14 auto-placed (≤399 SAT critical reading) students, who did not take the English placement test.
2. A-B1, A-B2, A3: Percentage passing figures indicate the total number of students with a passing grade (≥C) in both classes.
3. A1-D3: Number of enrolled student figures indicate the total number of students, whose English course registration matched their course placement.
4. A1-D3: SAT CR averages do not include the SAT CR scores of English test exempt (≥500) students.

Course	**Predicted** Placement Totals	**Actual** Placement Totals
DEVR 106/ENG 148	43	52
ENG 148 (Only)	31	28
DEVR 106/ENG 151	31	37
ENG 151 (Only)	296	228
English test exempt	377	438
ENG 151 + exempt	673	666

Table 1. Comparison of predicted and actual course placements for the incoming class of 2020
Note: 363 of test exempt students enrolled in ENG 151; Passing rate (≥C) was 93%

5. English 152 or ↑: A total of 48 incoming students registered for ENG 152, and 1 student registered for ENG 281; these students are included in the placement totals, predominantly (92%) in the English test exempt category.

II. Mathematics Placement Testing Bracket Analysis

←College Level Math	Elementary Algebra Skills→ 0-59	60-70	71-95	96-120 or NA
0-62 or NA	**A1** MATH 005 Placements: 196 # Enrolled: 232 — Passing (≥C): 84% Avg. SAT (math): 453	**B1** MATH 133 Placements: 107 # Enrolled: 59 — Passing (≥C): 92% Avg. SAT (math): 483	**C1** MATH 135,6,7 Placements: 169 Course: 135 / 136 / 137 # Enrolled: 103 / 111 / 35 Passing (≥C): 86% / 84% / 86% Avg. SAT (math): 502	**D1** MATH 147 Placements: 213 # Enrolled: 39 — Passing (≥C): 77% Avg. SAT (math): 552
63-85	**A2** MATH 005 No placements	**B2** MATH 133 No placements	**C2** MATH 147 No placements	**D2** MATH 147 Placements: 63 # Enrolled: 11 — Passing (≥C): 100% Avg. SAT (math): 608
86-120	**A3** MATH 005 No placements	**B3** MATH 133 No placements	**C3** MATH 220 No placements	**D3** MATH 220 Placements: 9 # Enrolled: 3 — Passing (≥C): 100% Avg. SAT (math): 665

1. Background questions determine the starting exam (Arithmetic, Elementary Algebra, or College Level Math)
   Arithmetic score ≥64 & ≤120→Elementary Algebra score ≥74 & ≤120→College Level Math score ≥43→Finished
   Elementary Algebra score ≤31→Arithmetic/College Level Math score ≤42→Elementary Algebra

2. A1, C1: Math course advising is determined by eligibility, as established by placement testing and/or previous coursework credit, as well as intended major. Therefore enrollment figures sometimes surpass placement testing totals.

3. A1, B1: Students in majors with math course sequences that do not require MATH 135, but who placed into MATH 133 (B1), were directed to register for MATH 005 (A1) so that they could potentially enroll in MATH 136 or 7 in the spring and complete the required math course sequence for their major sooner.

4. B1, D1-D3: Enrollment figures for these brackets are derived from the placement totals; i.e. of the 213 students who placed into bracket D1, 39 of those students enrolled in the math course for that bracket: MATH 147. The remainder either enrolled in another math course, or did not take one during the fall 2016 semester.

5. A1-D3: A total of 26 students were considered exempt from mathematics placement testing. These students are included in the enrollment figures, as well as table 2, but are not included in the placement figures – no testing scores.

Course	Placement Totals
No MATH Course	184
MATH 005	232
MATH 133	59
MATH 135	103
MATH 136	111
MATH 137	35
MATH 147	52
MATH 220	4
Alt. MATH Course	3
MATH test exempt	26

Table 2. Math course placements for class of 2020.

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Approved SDG 04/17/19

Memorandum

To: Susan T. Gorman, Ph.D., Executive Vice President and Provost, Academic Affairs
From: Christine E. Moran, Ph.D., AVP, Student Success
Kevin Knudsen, Director, Academic Link
Ellen Roskes, Ph.D., Associate Dean of Chemistry, Math, and Physical Sciences
Date: February 28, 2019
Re: Math Placement Testing Procedures
Attachments: Email communication from Admissions regarding funding

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Background
Stevenson University has utilized the College Board's Accuplacer exams to determine math and English eligibility and placement for incoming students for the past several years. However, Accuplacer informed users that they would be converting all of its exams to the *Next Generation*, which will require a comprehensive examination of all existing procedures, cut-scores, and rules. In addition, the College Board is unable to provide complete concordance tables for math due to the differences in the versions of the exam and the lack of sufficient data. Additionally, no guidance has been provided from them regarding scores or placements. In an effort, to be proactive, representatives from the Office of Student Success (OSS), the Academic Link, and the Math department met in November 2018 to discuss current placement testing practices and results, and review the upcoming changes to Accuplacer tests. In addition, Kevin Knudsen, spoke with a representative of McGraw-Hill to discuss their ALEKS PPL program, which will help diagnose incoming students' math eligibility and determine placement. Members of OSS and the Math Department then attended a webinar on the system and further reviewed the product. Following discussions and analysis of the data presented, the group unanimously decided to support the following recommendation:

Recommendation
1. Discontinue the use of the Accuplacer Exam and replace Accuplacer with ALEKS PPL for Math eligibility and placement.

Data to Support Recommendation

Overview of ALEKS PPL

ALEKS Placement, Preparation and Learning (ALEKS PPL) offers colleges and universities a solution for math placement and course preparedness. ALEKS PPL is a program that uses adaptive, open-response questioning to rapidly and accurately assess each student from Basic Math into Calculus 1 in 30 questions or less. Students are correctly placed and given the opportunity to improve their placement, which dramatically improves drop, failure, and withdrawal rates.

- Assessments: Students receive up to 5 assessments over a 12-month period of time. All students have the opportunity for multiple assessment attempts to improve their scores.
    - 100% open ended questioning using the artificial intelligence and adaptive questioning of the ALEKS engine to determine where a student should be placed.
    - Competing programs provide multiple choice (multiple guessing) options, which inherently lead to inaccurate placement.
- Study plan: If a student is not happy with his/her/their placement score, the student has the option of remediating on lost knowledge. Significant increases in course placement by students who took advantage of the remediation was shown in a study (750,000 placement tests). Students who spent 5-6 hours in the learning module, 50% of them improved 1 course level in placement.
    - The study plan is available to students for 1 year.
- Reports: The institution receives detailed diagnostics outlining each and every student's strengths and weaknesses. This data could be used to provide a more directed remediation, and also could be used to evaluate topics emphasized in the classroom.
- Single Sign-on and data transfer: ALEKS PPL works hand-in-hand to provide a complete integration into institutions student information system. In addition to single sign and data transfer, they will work with institutions regarding administrator, advisor and proctor training.
- Flexibility: The institution can determine if the assessments will be taken on campus in a proctored environment or at home.

Comparison of ALEKS PPL and Accuplacer

System	ALEKS PPL	Accuplacer
Pros	• Personalized module for students to work through upon completion of test • Independent from College Board/SAT • More clear and thorough results for students • Open-answer responses (no multiple choice) • Being used by several institutions in MD (UMBC, Towson, Howard, Montgomery, Wor-Wic, PG)	• While adjustments would need to be made due to the Next-Gen conversion, we already have a system in place • More affordable • English and math tests available
System	ALEKS PPL	Accuplacer
Cons	• New system to be implemented • More expensive • No English test	• Multiple choice responses (students can guess) • Limited research to support predictive power • Results not clear to students • Limited concordance tables for Next-Gen conversion • Placement retest on older version displayed concerns of accurate placement

Benefits of Implementing ALEKS PPL

Over the last few year, Stevenson University has experienced the following problems with Accuplacer:

- Students do not always take the placement test seriously.
- Students do not know what to expect on the placement test and thus, are not prepared for the timing or rigor.
- Many students do not take math in their last year of high school. As a result, their math knowledge is not fresh in their minds and often they have forgotten mathematical concepts and ways to solve problems. This, in turn, often causes them to be place into lower classes than they should be placed based on their completed high school math coursework and grades.
- Accuplacer requires Stevenson to determine what cut scores to use to place our students in courses. This has involved quite a bit of guesswork on our part.
- Accuplacer does not always accurately place students into Pre-calculus and Calculus. Their tests are more specific to distinguishing between remedial math and Stevenson's SEE-courses (MATH 135/136/137). In addition, the *Next-Gen* Accuplacer is focusing more heavily on quantitative reasoning and less on algebra skills and the calculus sequence.

ALEKS PPL addresses these problems:

- ALEKS PPL gives the students multiple attempts for the test. Students will be able to take a practice test at home, which will help them understand the level of the exam and what to expect. Also, they will see the results of their math placement test, so they realize they must take the placement test more seriously.
- Once students complete their practice test, ALEKS PPL provides them with adaptive modules to practice their skills based on their abilities and also gives them a chance to improve their scores. By completing these modules, they will practiced and refreshed their skills and therefore, will be better equipped when they take the actual placement exam.
- ALEKS PPL allows universities to send them syllabi and their experts determine our unique cut scores for placement testing.
- ALEKS PPL places students from remedial math through Calculus I.

Budget Implications

- Pricing: ALEKS PPL is $25.00 per student which includes up to 5 Placement exams and 1 year of access to one prep module. A student account is valid for 1 year.
    - The University System of Maryland is currently in an agreement with ALEKS PPL where they receive a reduced rate **($15.00)** per student so long as they share their respective institutions' aggregate data.
    - Stevenson has received approval to join this study and receive the reduced rate if we choose to move forward with implementation.
- Number of Students/Total Costs: Last summer, we had 631 freshmen/transfer students take the math placement test and an additional 36 transfer students in January completed math testing for a total of 667. Assuming the amount of students taking the placement test is similar, but accounting for an additional 100 students (Admissions goal of 700 freshmen), the following is the breakdown of anticipated costs:
    - 767 students x $15 ALEKS PPL price = **$11,505** costs for math placement testing
- Budget: Currently, OSS has $3,000 allocated for placement testing. OSS has typically covered the cost the Mustang 101 printed program that Admissions sends out to deposited students and Mustang folders used during Mustang Days. Please see the associated costs for the past two years listed below:

Printing/Publications	Cost in 2018	Cost in 2017
Mustang 101 Program	$5695.00	$6178.00
Mustang Folders	$2805.00	$3000.00
Total	$8500.00	$9178.00

OSS requested that Admissions cover the above costs ($8500.00) so those funds could be put toward ALEKS PPL and cover math placement testing. Admissions agreed as per their email (see appendix).
Therefore, the current budget of $3,000, plus the additional $8500 totals $11,500 and thus, will cover the costs of ALEKS PPL, placement testing for math.

Thank you for your review and consideration.

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Approved SDG 04/17/19

Memorandum

To: Susan Gorman, Ph.D., Provost and Executive Vice President for Academic Affairs

From: Anissa Sorokin, Ph.D., Assistant Professor and Writing Coordinator, English

Date: April 11, 2019

Re: English Placement Testing Procedures

cc: Christine Moran, Ph.D., AVP for Student Success; Cheryl Wilson, Ph.D., Dean, School of Humanities & Social Sciences

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Background:
Stevenson University has utilized the College Board's Accuplacer exams to determine math and English eligibility and placement for incoming students for the past several years. However, Accuplacer informed users that they would be converting all of its exams to the *Next-Generation*, which will require a comprehensive examination of all existing procedures, cut-scores, and rules. In addition, the College Board is unable to provide complete concordance tables for Reading and Writing due to the differences in the versions of the exam and the lack of sufficient data. In an effort, to be proactive, the English Placement Testing Committee with representatives from the Office of Student Success (OSS), the Academic Link, and the English department met to discuss current placement testing practices and results, review the upcoming changes to Accuplacer tests, and explore options to best place our students The Committee found that the *Next-Generation* Accuplacer test has data and concordance tables for the *Next-Generation Reading* component, but not for the *Next-Generation Writing* section of the test. Therefore, the Committee felt it would be in the best interest of the students to decouple writing and reading placement. Following numerous discussions and analyses of the data, the English Placement Testing Committee unanimously decided to support the following recommendations, effective May 15, 2019:

1) Establish SAT/ACT cut scores to determine students' placement into English 150, 151, and 006, and
2) Provide students who place into English 006 the opportunity to challenge their placement by allowing them to complete the Accuplacer *Next-Generation* Reading test.

Recommendation 1: Establish SAT Cut Scores
The Placement Testing committee has determined that it is best to place students into English 150 or 151 by establishing new SAT/ACT cut scores. Currently, the university is using a cut score of 550 on the verbal portion of the SAT to determine if students should "take the Accuplacer exam"; however, because we cannot effectively use the *Next-Generation Writing* portion, we need to now place based on the SAT. Using data from the Office of Student Success about students' SAT verbal scores and grades in their composition courses, the Committee recommends establishing a cut score to place students into 151. The committee recommends that the following cut scores be used to place a student into English 151:

- A 500 or higher on the verbal portion of the SAT
- A 37 or higher combined English and reading sub-score on the ACT

Students that have a SAT score lower than 500 would be placed into ENG 150.

The table below demonstrates the expected placement of students based on this cut score:

Course	"Actual" # of students enrolled in Fall 2018	"Proposed" # of students that would have been enrolled if placed by changed cut score
ENG 150	74	80
ENG 151	434	428

The "Actual" column represents the number of students who were enrolled in the respective courses for fall 2018. The "Proposed" column represents the number of students that would have been enrolled in each course if the university had used the cut scores recommended above. (It is important to note, however, that several students who placed into 151 would, under the "proposed" cut-off, place into 150—and vice versa). Nonetheless, because students are maintaining the same progression, the committee affirms that this is the best option.

Recommendation 2: Reading Placement Challenge

The Placement Testing Committee recommends establishing a SAT cut score of 500/37 for placement into English 006, as well. Because placement into English 006 would require students to take a non-credit bearing class, all students who place into English 006 will be advised that they may challenge their placement by taking a proctored reading test on campus. Earlier this spring, the English Placement Testing Committee had discussed developing an in-house reading test. However, because there is no opportunity to pilot an in-house critical reading test in order to establish a cut score, and because the stakes are high for students—ENG 006 is both non-credit bearing and closely tied to retention—the English Placement Testing Committee recommends that, for the incoming Fall 2019 cohort, the Accuplacer *Next-Generation* Reading test should be adopted. In keeping with the concordance tables offered by Accuplacer and previous cut scores used at Stevenson University, the committee recommends that students who score a 236 or lower on the Accuplacer *Next-Generation* Reading test be required to enroll in English 006. Students unsatisfied with their first Accuplacer *Next-Generation* Reading test score will have one additional opportunity to attempt to improve it before their placement into English 006 is final.

Cost of Implementation

The cost of the Accuplacer NextGen Reading test is $2.15 per test. The Office of Student Success (OSS) estimates that we will need up to 150 tests. The OSS already has 8 tests; thus, if we purchase an additional 142 tests, the estimated cost of the implementation of this test will be $305.30. The funds for the implementation will be drawn from the operating budget of the OSS.

SAT Score Incoming Fall 2018	Modules Needed for Challenging Test	Cost of Accuplacer Next-Generation Reading Test
SAT verbal score 500 or below	150 modules – 8 (already purchased) = 142	142 modules x $2.15 = $305.30

Thank you for your consideration of these recommendations.

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Memorandum

To: Dr. Susan Gorman, Executive Vice President of Academic Affairs and Provost

From: Dr. Christine Moran, Vice Provost of Student Success and Dean of the School of Education; Dr. Cheryl Wilson, Dean of the School of Humanities and Social Sciences, Interim Dean of the School of Business and Leadership and Vice Provost for Academic Affairs; Dr. Laura Smith, Associate Professor of English and Department Chair; Mr. Marty Schmidt, Director of First Year Experience; and Dr. Anissa Sorokin, Assistant Professor of English and Writing Coordinator

Date: October 12, 2020

Re: Test-Optional Admission English Placement Testing Procedures

Approved 10/13/2020

Summary

Due to COVID-19, Stevenson University will not require students to submit standardized test scores as part of their application packages for the 2021-2022 school year. Currently, Stevenson University uses students' SAT/ACT scores to determine their placement into the most appropriate English composition and reading course; therefore, a new process for determining first-year writing placement will need to be implemented. The Placement Testing Committee has reviewed multiple options, including Accuplacer, Directed Self Placement (DSP) and high school GPA or English grades. **Due to the impacts of COVID-19 on academic operations, the committee recommends the following actions for AY 2021-2022: 1) extend the temporary discontinuation of ENG 006, and 2) develop and implement a Directed Self-Placement (DSP) instrument.**

Extending the Temporary Discontinuation of ENG 006

ENG 006 was temporarily removed from Stevenson's course offerings in Fall 2020. Given that ENG 006 is a non-credit bearing course and given the continued impact of COVID-19 on academic operations, the Placement Testing Committee recommends extending the course's discontinuation at least through Fall 2021. The Committee recognizes that students entering college during the next few semesters may be coming to the university in need of obtaining critical reading skills; however, placing students in a non-credit bearing course presents risks to satisfactory academic progress and retention that the Committee would prefer to mitigate. To address the need for explicit reading instruction, faculty teaching both ENG 150, ENG 151, and ENG 152 have been working to incorporate more critical reading practice into these courses. (In fact, a new course outcome adopted in Fall 2020 specifically states that students will practice critical reading skills.) It is the committee's hope that the additional instruction offered in first-year writing will allow students to develop the reading skills they might otherwise have developed in ENG 006. While it may make sense to revisit ENG 006 in the future, at the moment, the Committee agrees that the benefits of extending the discontinuation outweigh the risks.

Assessing the Feasibility of Accuplacer

In 2019-2020, Stevenson University discontinued using the Accuplacer exam due to cost and concerns about the release of a new version of the exam without concordance tables or guidance about score relative to appropriate placement. The new Accuplacer exam continues to lack concordance with previous versions, though guidance about score relative to writing skills is now available. Though there are some benefits to using the Accuplacer (e.g., the exam has been tested for reliability and validity, and it could be

consistently used for all students, much like a standardized test), there are significant disadvantages. First, there is no way to know precisely what cut score would be appropriate for placement purposes, given the lack of a concordance table that references the previous iteration of the exam. Cost is another potential drawback: requiring 750 students to take the writing exam would cost the university $1,612.00 or potentially more ($3,225 for both the reading and writing exams). Finally, the Accuplacer must be proctored, which could be difficult to organize in the current climate, could add to student cost if proctoring were done via an online service such as Examity or ProctorU, or could create departmental inefficiencies if staff members were asked to proctor. Thus, the Placement Testing Committee does not recommend the university adopt the Accuplacer test.

Implementing Directed Self-Placement

Hundreds of institutions across the country, including community colleges, small liberal arts colleges, and large public universities, currently utilize a Directed Self-Placement model to determine student placements for first-year composition courses. DSP as a practice is underpinned by two tenets: expert guidance and student choice. A DSP instrument offers students information about the courses available to them and allows them to engage in directed self-assessment and reflection to determine which course is the best fit for them. Implementing DSP at Stevenson would allow students to learn about and choose between ENG 150 or ENG 151, both of which are credit-bearing courses whose successful completion allows progress to ENG 152.

Admittedly, moving to a DSP model does present some challenges; for example, it will be difficult to know at first if students are placing themselves into the appropriate course, and we will likely need to make adjustments to the initial first-year writing course schedule over the summer of 2021 as students make their selections. However, there are a number of benefits to consider. First, two decades of DSP research demonstrate that, on average, institutions that implement DSP models see comparable or higher course completion and course grades when compared to previously used placement models (Toth, 2019). Additionally, students report higher satisfaction with their placement and courses (Toth, 2019). That's likely because a well-designed DSP instrument allows students to engage with the type of content they will encounter in their first-year composition class and make an informed decision about which class they would be most comfortable in, which is not an option afforded to students when placement is determined by SAT/ACT. Furthermore, a DSP model aligns well to the university's current initiatives related to diversity, inclusion, and anti-racist pedagogy—it has been well-documented that standardized test scores demonstrate racial and economic bias[1] (Elsesser, 2019), and a DSP model may help to eliminate disparity in students' first-year writing placement due to factors like race or economic standing. Finally, a DSP model is free—it can be developed in-house and administered with no cost. For these reasons, and precipitated by the university's decision to not require standardized test scores from incoming students due to the COVID-19 pandemic, the Committee recommends the development and implementation of a DSP model beginning for students entering in Fall 2021.

Assessment and Evaluation of Directed Self-Placement

Although only intended for AY 2021-2022, the Placement Testing Committee fully intends to assess the implementation of the DSP model at both the conclusion of the Fall 2021 and Spring 2022 semesters. The following areas will be evaluated:

1. Number of sections offered of ENG 150 and ENG 151 in Fall 2021 compared to Fall 2020 for cost implications (Note. ENG 150 is paid as a 4-credit course)
2. D/F/W rates in ENG 150 and ENG 151 in Fall 2021 compared to Fall 2020

[1] The University of California's recent decision to eliminate SAT/ACT scores as an admission criterion was due in large part to concerns about educational equity and opportunity.

3. D/F/W rates in ENG 152 for students in the 2021-2022 cohort compared to students in the 2020-2021 **and** 2019-2020 cohorts (with special attention paid to students who were enrolled in ENG 006 in 2019-2020)

Data from this assessment will be used to make future determinations regarding English placement should COVID-19 continue to impact academic operations, or the university continues to remain test optional after the 2020-2021 application cycle.

Other Options Considered

The Committee considered two additional options for first-year writing placement: high school GPA, and grades in students' eleventh- grade English classes. The Committee was concerned that, since assessment practices at high schools are so varied (and since assessment even varies widely among individual instructors), neither of these data points would reliably help to determine an appropriate placement for students entering the university.

Sources

Elsesser, Kimberly. "Lawsuit Claims SAT and ACT Are Biased—Here's What Research Says." *Forbes.* December 11, 2019.

Toth, Christie. "Directed Self-Placement at Two-Year Colleges: A Kairotic Moment." *Journal of Writing Assessment* 12.1 (2019).

Segment	Institution	Assesses for Course Placement
Community College	Allegany College of Maryland	Yes
Community College	Anne Arundel Community College	Yes
Community College	Baltimore City Community College	Yes
Community College	Carroll Community College	Yes
Community College	Cecil College	Yes
Community College	Chesapeake College	Yes
Community College	College of Southern Maryland	Yes
Community College	Community College of Baltimore County	Yes
Community College	Frederick Community College	Yes
Community College	Garrett College	Yes
Community College	Hagerstown Community College	Yes
Community College	Harford Community College	Yes
Community College	Howard Community College	Yes
Community College	Montgomery College	Yes
Community College	Prince George's Community College	Yes
Community College	Wor-Wic Community College	Yes
Public Four-Year Institution	Bowie State University	Yes
Public Four-Year Institution	Coppin State University	Yes
Public Four-Year Institution	Frostburg State University	Yes
Public Four-Year Institution	Salisbury University	No
Public Four-Year Institution	Towson University	Yes
Public Four-Year Institution	University of Baltimore	Yes
Public Four-Year Institution	University of Maryland, Baltimore	No
Public Four-Year Institution	University of Maryland, Baltimore County	Yes
Public Four-Year Institution	University of Maryland, College Park	Yes
Public Four-Year Institution	University of Maryland Eastern Shore	Yes
Public Four-Year Institution	University of Maryland Global Campus	No
Public Four-Year Institution	Morgan State University	Yes
Public Four-Year Institution	St. Mary's College of Maryland	No
MICUA	Capitol Technology University	Yes
MICUA	Goucher College	No
MICUA	Hood College	Yes
MICUA	Johns Hopkins University	No
MICUA	Loyola University Maryland	No
MICUA	Maryland Institute College of Art	No

Segment	Institution	Assesses for Course Placement
MICUA	McDaniel College	Yes
MICUA	Mount St. Mary's University	No
MICUA	Notre Dame of Maryland University	No
MICUA	St. John's College	No
MICUA	Stevenson University	Yes
MICUA	Washington Adventist University	Yes
MICUA	Washington College	No
Private	Bais HaMedrash and Mesivta of Baltimore	No
Private	Collegium sanctorum angelorum	No
Private	Lincoln College of Technology	Yes
Private	Maryland University of Integrative Health	No
Private	Ner Israel Rabbinical College	No
Private	Reid Temple Bible College	No
Private	SANS Technology Institute	No
Private	St. Mary's Seminary and University	No
Private	Women's Institute of Torah Seminary	No
Private	Yeshiva College of the Nation's Capital	No

Assessment Survey

The 2021 Joint Chairmen's Report requires the Maryland Higher Education Commission to prepare a report on assessment tools and remedial/developmental education. Please take a moment to complete this brief survey. ALL INSTITUTIONS must complete the survey.

Institutions that use one or more forms of assessment to place undergraduate students in remedial/developmental courses are required to answer a few additional questions and provide a narrative report and may upload relevant materials on validity studies at the end of the survey. Due no later than September 1, 2021.

* Required

1. Email *

2. First Name *

3. Last Name *

4. Job Title *

5. Institution (please select) *

Mark only one oval.

- Allegany College of Maryland
- Anne Arundel Community College
- Bais HaMedrash and Mesivta of Baltimore
- Baltimore City Community College
- Bowie State University
- Capitol Technology University
- Carroll Community College
- Cecil College
- Chesapeake College
- College of Southern Maryland
- Community College of Baltimore County
- Coppin State University
- Faith Theological Seminary
- Frederick Community College
- Frostburg State University
- Garrett College
- Goucher College
- Hagerstown Community College
- Harford Community College
- Hood College
- Howard Community College
- Johns Hopkins University
- Lincoln College of Technology
- Loyola University Maryland
- Maryland Institute College of Art
- Maryland University of Integrative Health
- McDaniel College
- Montgomery College
- Morgan State University
- Mount St. Mary's University

- [ ] Mount St. Mary's University
- [ ] Ner Israel Rabbinical College
- [ ] Notre Dame of Maryland University
- [ ] Prince George's Community College
- [ ] Reid Temple Bible College
- [ ] Salisbury University
- [ ] SANS Technology Institute
- [ ] St. John's College
- [ ] St. Mary's College of Maryland
- [ ] St. Mary's Seminary and University
- [ ] Stevenson University
- [ ] Talmudical Academy
- [ ] Towson University
- [ ] University of Baltimore
- [ ] University of Maryland Eastern Shore
- [ ] University of Maryland Global Campus
- [ ] University of Maryland, Baltimore
- [ ] University of Maryland, Baltimore County
- [ ] University of Maryland, College Park
- [ ] Washington Adventist University
- [ ] Washington College
- [ ] Women's Institute of Torah Seminary
- [ ] Wor-Wic Community College
- [ ] Yeshiva College of the Nation's Capital

6. Does your institution assess undergraduate students for placement in remedial/developmental courses? Note: "Assess" is defined as the use of standardized test scores (e.g., Accuplacer) and/or other measures (course grades, HS GPA, SAT scores, etc.) to determine college readiness of the student. "Remedial/developmental courses" are defined as courses, either co-requisite or pre-requisite, that provide students the support and instruction needed for college-level work. *

   Mark only one oval.

   - ◯ Yes *Skip to question 7*
   - ◯ No *Skip to question 13*

Yes

7. What assessment tools are used to determine if an undergraduate student is ready for college level work? Please select all that apply. *

   Check all that apply.

   - ☐ SAT/ACT
   - ☐ High School GPA
   - ☐ Accuplacer
   - ☐ MCAP
   - ☐ AP
   - ☐ IB
   - ☐ Dual Enrollment
   - ☐ Transition Course(s)
   - Other: ☐ _____

8. How is the accuracy of remedial/development course PLACEMENT assessed, and how often does this assessment take place? *

Check all that apply.

	Regularly, on a semester basis	Regularly, on an annual basis	Regularly, biennially	Periodically	This method of assessment is not used	Other
Student success in remedial coursework	☐	☐	☐	☐	☐	☐
Student success in credit-bearing coursework	☐	☐	☐	☐	☐	☐
Instructor evaluation	☐	☐	☐	☐	☐	☐
Overall academic progression	☐	☐	☐	☐	☐	☐
Student evaluation	☐	☐	☐	☐	☐	☐
Other	☐	☐	☐	☐	☐	☐

9. Please upload the Narrative report. PDF format only. Narrative report should be no longer than 1000 words and summarizes the process and procedures used to select your institution's current assessment tools. See June 2021 memo from Secretary Fielder for more. *

Files submitted:

10. Has your institution performed validity studies (formal or informal) on the effectiveness of assessment tools and/or the accuracy of assessment tools in course placement in the past 10 years? *

Mark only one oval.

- ◯ Yes *Skip to question 11*
- ◯ No *Skip to question 12*

Have performed studies.

11. Please upload the results of any validity studies completed in the past 10 years. These can be the result of formal or informal work completed for internal and external audiences. See June 2021 memo from Secretary Fielder for requirements and guidance. *

Files submitted:

Skip to section 6 (Thank you.)

Institution has not performed studies.

12. Why has your institution not performed validity studies in the past 10 years? *

_____

Skip to section 6 (Thank you.)

No assessment.

13. Why does your institution not assess undergraduate students for placement in remedial/developmental courses. Select all that apply. *

Check all that apply.

- [ ] The institution does not offer remedial courses or developmental courses (either co-requisite or pre-requisite)
- [ ] The institution uses admission criteria to screen for college readiness (i.e., all admitted students are considered college ready)
- [ ] The populations of students served at the institution do not require remediation (e.g., graduate students)
- [ ] Other: _____

Skip to section 6 (Thank you.)

Thank you.

Thanks for completing the survey.

Appendix E: Information on Assessment Tools

ACCUPLACER (College Board)
https://accuplacer.collegeboard.org/

Subjects: Math, Reading, Writing

ACCUPLACER is a series of tests that evaluate students' skills in reading, writing, and math to help college administrators place them in courses that match their skills. ACCUPLACER tests were redesigned in 2016 to better align with the content on the SAT Suite of Assessments and the skills that research shows students need to be ready for college.

The tests include texts and tasks students will likely encounter in first-year college courses, and the math content is more aligned to state college and career readiness standards. Subject tests include: math, reading, writing,

The Next Generation ACCUPLACER test launched in 2016. This redesigned content is aligned to states' college and career readiness standards. The topics assessed are connected to instruction in the classroom.

Advanced Placement (College Board)
https://apstudents.collegeboard.org/

Subjects: Ten subjects, including Math, Computer Science, History and English

Advanced Placement (AP) is a cooperative educational endeavor created by the American College Board, which offers college-level curricula and examinations to high school students. Colleges and universities may grant placement and course credit to students who obtain high scores on the examinations. The AP curriculum for each of the various subjects is created for the College Board by a panel of experts and college-level educators in that field of study. For a high school course to have the designation, the course must be audited by the College Board to ascertain that it satisfies the AP curriculum. Institutions can choose whether they will accept AP test scores as a course equivalency, but for those that do, they establish a minimum required score

ALEKS (Assessment and Learning in Knowledge Spaces) and ALEKS PPL (Placement, Preparation, and Learning) McGraw Hill
https://www.aleks.com/

Subjects: Math, Business and Science

ALEKS is an online tutoring and assessment program that includes course material in mathematics, science and business. Rather than being based on numerical test scores, ALEKS uses artificial intelligence to assess the set of topics a student does or doesn't understand from the answers to its test questions. Based on this assessment, it determines the topics that the student is ready to learn and allows the student to choose from interactive learning modules for these topics. ALEKS was initially developed at UC Irvine starting in 1994 with support from a large National Science Foundation grant.

College Level Examination Program (CLEP) (College Board)
https://clep.collegeboard.org/

Subjects: 34 tests in multiple subjects

CLEP test stands for *College-Level Examination Program*. A CLEP is a test that measures content knowledge in certain academic subjects such as Composition and Literature, World Languages, History and Social Sciences, Science and Mathematics, and Business. There are 34 tests in five subject areas. Maryland colleges and universities can grant college credit to students with passing CLEP scores.

General Educational Development Test (GED) (Pearson)
https://ged.com/
Subjects: Math, Science, Social Studies, and Language Arts
The General Educational Development (GED) tests are a group of four subject tests which, when passed, provide certification that the test taker has United States or Canadian high school-level academic skills. It is an alternative to the US high school diploma, HiSET, and TASC test.

International Baccalaureate Program (IB)
https://www.ibo.org/
Subjects: Six subjects, including Math, Science and Language Arts
The International Baccalaureate Diploma Program (IB) is a two-year international program for Grade 11 and 12 students and leads to a qualification that is recognized by colleges and universities. To earn an IB diploma, high school students must take a liberal arts course of studies and pass examinations in six academic subjects. In addition, students are required to take the Theory of Knowledge (TOK) course that investigates the nature of knowledge in various disciplines; participate in Creativity, Action, Service (CAS) to achieve eight learning outcomes, undertake original research, and write an Extended Essay of 4,000 words. Students take IB examinations and, if they meet or exceed the score threshold established by the institution, they can earn college credit.

PARCC (Partnership for Assessment of Readiness for College and Careers) and MCAP (Maryland Comprehensive Assessment Program) (Pearson)
https://support.mdassessments.com/
Subjects: Math and English
The Partnership for Assessment of Readiness for College and Careers (PARCC) is a consortium of states developing assessments to measure student achievement in English Language Arts (ELA)/ Literacy and Mathematics for grades 3-8 and high school. The primary purpose of PARCC is to provide high quality assessments of students' progression toward postsecondary readiness and success. The PARCC tests are designed to match the Maryland College and Career-Ready Standards and assess whether students are meeting grade-level expectations.

Currently the PARCC has been replaced by the Maryland Comprehensive Assessment Program (MCAP). This began in Spring 2019. The MCAP assessments are part of the state instructional program and students are required to participate. MCAP is overseen by Pearson.

SAT Test (College Board)
https://collegereadiness.collegeboard.org/sat
Subjects: Math, Reading, Writing
First administered in 1926, the SAT was created to democratize access to higher education for all students and ensure that all students had a chance to go to college. As an achievement test, the SAT allows students to demonstrate the knowledge and skills they've learned in high school in core academic areas such as reading, writing, and mathematics. Research shows that using the SAT in conjunction with high school GPA (HSGPA) is the most powerful way to predict future academic performance. This same research demonstrates that the SAT is strongly predictive of college success; students with higher SAT scores are more likely to have higher grades in college.

The SAT is part of the SAT Suite of Assessments and is taken by roughly two million high school graduates a year. It's accepted or required at nearly all four-year colleges and universities in the U.S. Developed with input from high school teachers, college faculty, and enrollment professionals, the SAT covers core content areas deemed essential for success in college.

Attachment 2

2021 – 2022
Revisions to the Memorandum of Understanding Between Maryland Association of Community Colleges and Public-School Superintendents Association of Maryland

1. College and Career Readiness and Assessment. A high school junior and senior student to be deemed as college and career ready must meet one of the following criteria:

11th Grade								
	MCAP	SAT	ACT	AP	IB	Next-Generation ACCUPLACER	Dual Enroll.	GPA
English Language Arts (ELA)	**English 10 score of 750 satisfies the CCR determination	Old SAT Score of 500 or greater Evidence-based Reading & Writing (EBRW) Section New SAT Evidence Based Reading/Writing Score of 480	Score of 21 or greater Average of English Test & Reading Test scores	English Language & Composition n Or English Literature & Composition Exam Score of 3, 4, or 5	Lang. A: Lit SL or HL Or Lang. A: Lang. & Lit. SL or HL Grade 4 or above on one or more	Writing score of 263 Reading score of 263	Admission to and enrollment in a Maryland IHE's appropriate ELA college credit-bearing course. Existing local agreements between LEAS and community colleges or CCR are accepted.	• The verified, cumulative, unweighted high school GPA of 3.0 or better be used to signify the college-readiness of the applicant; the GPA will have an expiration date of no less than 5 years, regarding its utility as a metric for college-readiness. As such, the applicant would not have to take the Accuplacer exam, or otherwise be restricted from registering for credit classes.
Math*	Algebra II Score of 750	Old SAT Score of 500 or greater Mathematics Section New SAT Score of 530	Score of 21 or greater on Mathematics Test	Calculus AB Calculus BC Statistics Exam Score of 3, 4, or 5	Math Studies Math SL Math HL Further Math Grade 4 or above on one or more	Score of 263 on Next-Generation Quantitative Reasoning Algebra, and Statistics (QAS) assessment for Intermediate Algebra; Liberal Arts Math; Topics in Math Literacy; First or only Statistics Course; Finite Math. Score of 272 on Next-Generation QAS for College Algebra; Concepts for Elementary Teachers I, II &III; AND ALSO: Intermediate Algebra; Liberal Arts Math; Topics in Math Literacy; First or only Statistics Course; Finite Math.	Admission to and enrollment in a Maryland IHE's appropriate math college credit bearing course. Existing local agreements between LEAs and community colleges or CCR are accepted.	• This measure does not apply to grades earned in English as a Second Language (ESL) courses. • The use of the recommended 3.0 or higher high school GPA, after junior year, as an alternative measure for College-Readiness at all Maryland community colleges will be in place by Fall 2019. • A review of the metric will occur within three years of the implementation of the new alternative measure.

**This satisfies the CCR designation for school year 2021-2022. Further research is being done to determine if additional years will be approved.

There are several college majors or pathways that may require a score higher than the minimal college readiness scores identified in the above chart. These majors are in the Science and Math fields, for example, an Associates of Science and Engineering degree requires a strong Math background. The minimally accepted indicated scores for those majors are as follows:

Next-Generation Accuplacer	SAT (new)	ACT
Score of 263 on Next-Generation Quantitative Reasoning Algebra, and Statistics (QAS) assessment for Intermediate Algebra; Liberal Arts Math; Topics in Math Literacy; First or only Statistics Course; Finite Math. Score of 272 on Next-Generation QAS for College Algebra; Concepts for Elementary Teachers I, II &III; AND ALSO: Intermediate Algebra; Liberal Arts Math; Topics in Math Literacy; First or only Statistics Course; Finite Math.	570	24

In the case where a student achieves a score in any of the above instruments that meets minimal college readiness levels but falls below the recognized readiness levels for specific majors as describe above, that student may be required to take credit- bearing, pre-requisite coursework.

Numerous LEAs have long standing local agreements with their community colleges that move students to credit-bearing coursework at their community colleges. These local agreements vary in scope based on past experiences ranging from acceptance of a certain level GPA with coursework review, to academic performance on a specific level of high schoolcoursework.

This MOU recognizes the validity of these local agreements without specification of each individual agreement. Local agreements can be extended at the discretion of the community college and the LEA.

2. Ineligible. If a student is deemed not college and/or career ready (hereafter "CCR") at the end of 11th grade, the student is required to meet the criteria as established in the chart below in order to be eligible for dual enrollment:

Senior Coursework

English Language Arts (ELA)	Complete an ELA transition course or an additional ELA "instructional opportunity" (online, hybrid, module, etc.) in preparation for re-assessment OR Enroll in a transition course articulated with a community college. These articulated college courses include, but are not limited to, Developmental English, courses approved by the community college as sufficient preparation for college, or courses that are taught by community college faculty.
MATH	Complete a math transition course or an additional math "instructional opportunity" (online, hybrid, module, etc.) in preparation for re-assessment OR Enroll in a transition course articulated with a community college

3. Reassessment. Reassessment criteria are identified below:

Re- Assessment

English Language Arts **(ELA)**	Summative Course Assessment (externally validated by local community college) OR English 10 OR SAT/ACT OR Accuplacer OR AP Test OR IB Test
MATH	Summative Course Assessment (externally validated by local community college) OR MCAP Algebra II OR SAT/ACT OR Accuplacer OR AP Test OR IB Test

4. Exception. If a student is determined to be college- ready in mathematics prior to 11th grade, all CCR requirements have been met for mathematics. However, students entering 9th grade class of 2014-2015 school year shall enroll in a mathematics course in each year of high school that the student attends, up to a maximum of four years of attendance, unless in the 5th or 6th year a mathematics course is needed to meet a graduation requirement.

5. Career and Technology Programs. For students enrolled in Career and Technology Programs to be deemed as college and career ready they must meet the following criteria:

Senior Year Coursework - An appropriate transition course or other instructional opportunity consistent with the completion of a State Approved Career and Technology Education Program of Study.

Reassessment- Technical Skill Assessment recognized by MSDE leading to a license or an industry certification.

This MOU expires June 30, 2022. The parties agree to annually review this MOU to provide modifications as may be deemed relevant in accordance with changes in the law.

Maryland Association of
Community Colleges

Dr. Brad Phillips,
Executive Director

Public-School Superintendents
Association of Maryland

Dr. Patricia Saelens.
President