MHEC
MARYLAND HIGHER EDUCATION COMMISSION

Low-Productivity Degree Program

Report 2004

October 2004

MARYLAND HIGHER EDUCATION COMMISSION
839 Bestgate Rd. • Suite 400 • Annapolis, MD 21401-3013

MARYLAND HIGHER EDUCATION COMMISSION

John J. Oliver, Jr., Chairman

Donald J. Slowinski, Sr., Vice Chairman

Joann A. Boughman

Anne Osborn Emery

Ilona Modly Hogan

Alicia Coro-Hoffman

Kevin M. O'Keefe

Emmett Paige, Jr.

Sherman L. Ragland, II

Justin M. Towles

Mario VillaSanta

Calvin W. Burnett
Secretary of Higher Education

Robert L. Ehrlich, Jr.
Governor

Michael S. Steele
Lt. Governor

Table of Contents

Background 2

Low-Productivity Evaluation Criteria 3

Exclusion of Programs from the Low-Productivity Degree Program Report 3

Three-Year Exemptions for Identified Programs 3

Permanent Exemptions for Identified Programs 4

Identified Degree Program Summary Table 5

Recommended Action Summary Table 6

Maryland Community Colleges 7

- **Allegany College of Maryland** 7
- **Baltimore City Community College** 8
- **Cecil Community College** 9
- **Chesapeake College** 10
- **Community College of Baltimore County** 11
- **Frederick Community College** 12
- **Hagerstown Community College** 13
- **Howard Community College** 14
- **Montgomery College** 15

University System of Maryland Institutions 16

- **Bowie State University** 16
- **Frostburg State University** 17
- **Towson University** 18
- **University of Maryland, Baltimore** 19
- **University of Maryland, College Park** 20

Morgan State University 22

St. Mary's College of Maryland 23

Individual Institutional Responses 25

- **Allegany College of Maryland** 27
- **Baltimore City Community College** 33
- **Cecil Community College** 57
- **Chesapeake College** 63
- **Community College of Baltimore County** 69
- **Frederick Community College** 75
- **Hagerstown Community College** 79
- **Howard Community College** 83
- **Montgomery College** 87
- **University System of Maryland** 91
  - **Bowie State University** 95
  - **Frostburg State University** 97
  - **Towson University** 101
  - **University of Maryland, Baltimore** 105
  - **University of Maryland, College Park** 109
- **Morgan State University** 119
- **St. Mary's College of Maryland** 127

Low-Productivity Degree Program Report 2004

October 2004

The Low-Productivity Degree Program Report 2004 is the first report using the policies and procedures adopted by the Maryland Higher Education Commission on September 23, 2003. The Report provides a list of academic degree programs that have been identified as low producing based on a single criterion of degree production. The programs are identified by the Maryland Higher Education Commission and forwarded to the public colleges and universities for response. Campuses were asked to review the identified programs to determine the continued viability of these programs, and report back to the Commission.

For the 2004 Report, programs identified as low producing from the Low-Productivity Degree Program Report have been excluded if the programs were determined to be unique, meeting non-duplicative workforce shortage areas, or have had strong three-year student enrollments. Programs meeting these criteria were shared with the institutions and the Commission staff and institutional representatives came to agreement regarding the programs to be excluded from the Report. Programs excluded for strong enrollment included 46 programs for two-year institutions and 21 programs for four-year institutions. In past reports, institutions would have had to justify continuing these programs even though the programs consistently had strong enrollments. Eight teacher education programs were also excluded from this Report as contributing to workforce shortage areas.

In addition, institutions may elect to use two exemption categories to maintain a program if sufficient justification can be provided. The first exemption category is the Three-Year Exemption. Institutions may request a three-year exemption by demonstrating to the Commission why the program should be exempted for a three-year time period. Justifications for a three-year exemption may be that new facilities or laboratories have been built to improve the program; stable external funding has been provided to the institution to help support the program; or that modifications to the program coursework or administration have been made or are in process to improve program enrollment and graduation.

The second exemption that may be requested is the Permanent Exemption category. Permanent exemptions may be requested for programs if the coursework for the major or degree program is drawn exclusively from existing coursework so there are no additional costs to the college or university to offer these majors. In addition to documentation from college catalogs and other official campus publications and announcements, the institution shall substantiate that the program can continue at no additional cost to the institution. A degree program approved for permanent exemption will be excluded from future reports until the institution and governing board supplants it with a new degree program and discontinues the current program, or requests that the Commission remove it from the permanent exemption list.

Last year under the previous identification and reporting process, the Low-Productivity Degree Program Report 2003 identified 41 programs, 26 at public community colleges and 15 at public four-year colleges and universities. In 2003, community colleges requested that 3 programs be discontinued, 13 programs were recommended for exemption, and 10 programs were to be maintained and reviewed or improved in the coming year. The public four-year colleges and universities requested that 3 programs be discontinued, 10 be granted exemptions, and 2 be maintained and reviewed in the coming year.

In this Report 2004, 46 programs were identified, 11 at public community colleges and 35 at public four-year colleges and universities. The number of programs identified is very similar to the number identified in previous years (41 identified in 2003, 34 identified in 2002, and 39 identified in 2001) using the prior criteria and procedures. All programs previously exempted under the prior procedures were placed back into the identification process for the 2004 Report.

Of the 11 programs identified this year for the community colleges, the institutions requested that 3 programs be discontinued, 8 programs were recommended for three-year exemption, and 0 were recommended for permanent exemption. The four-year institutions recommended that 6 programs be discontinued, 16 programs were recommended for three-year exemption, and 13 programs were recommended for permanent exemption.

The Report 2004 is presented in three sections. The first section contains background material and summary information. The second section contains a list of the programs identified by institution and the recommended action for each program. The third section contains, in their entirety, each individual college and university response to the programs identified in this report.

Background

Senate Bill 682, enacted during the 1999 legislative session of the Maryland General Assembly, required that the Maryland Higher Education Commission and the governing boards of the public institutions of higher education jointly develop a definition and accepted criteria for determining low-productivity programs. Consistent with this mandate, representatives of the public sector of higher education and the Commission jointly crafted a definition of what constituted low-productivity programs and the criteria for identifying them. The process and criteria were reviewed and revised during 2003 by a workgroup with representation from all segments of higher education. The Commission on September 23, 2003, approved the revised process and criteria used for this Report.

The overarching philosophy, from the perspective of the Commission and the public colleges and universities, is that institutions of higher education are accountable to the taxpaying citizens of Maryland for an efficient and effective system of higher education. Concomitantly, college and universities need to continually re-examine their curricular offerings to determine program currency in the marketplace. One important measure of this assessment is through the examination of degree production over time.

Low-Productivity Evaluation Criteria

Newly established academic programs will be reviewed for low productivity after five years of program implementation at community colleges and after seven years of program implementation at four-year institutions.

A single criterion, degree production, has been reaffirmed as the most appropriate method for determining low-productivity. Commission staff will identify low-producing programs by compiling a three-year history of degrees conferred and will identify all degree programs that fail to meet the following standards.

> **Associate degree programs** must graduate five (5) students in the most recently reported year or a total of fifteen (15) students in the last three years.
>
> **Baccalaureate degree programs** must graduate five (5) students in the most recently reported year or a total of fifteen (15) students in the last three years.
>
> **Master's degree programs** must graduate two (2) students in the most recently reported year or a total of six (6) students in the last three years.
>
> **Doctoral degree programs** must graduate one (1) student in the most recently reported year or a total of three (3) students in the last three years.

Presidents of institutions should discontinue degree programs that fail to meet the productivity criteria over a three-year period, unless compelling evidence exists that the program should continue.

Exclusion of Programs from the Low-Productivity Degree Program Report

Programs identified as low producing may be excluded from the Low-Productivity Degree Program Report if the programs are determined to be unique, meet non-duplicative workforce shortage areas, or have strong three-year student enrollments. Of those programs identified as low-producing, Commission staff will review these programs with the institutions to determine which programs will be considered unique, meeting a non-duplicative declared workforce shortage area, or having sufficient three-year student enrollments. Excluded programs will not appear in the Low-Productivity Degree Program Report and institutional responses will not be required for excluded programs. Periodically the Commission, in cooperation with the institutions of higher education, will review excluded programs to determine their currency with respect to their uniqueness, meeting of non-duplicative workforce shortage areas, or having strong three-year student enrollments.

Three-Year Exemptions for Identified Programs

Public colleges and universities may request a three-year exemption for an academic program identified as low producing. The institution must demonstrate to the Commission why the program should be exempted for a three-year time period. Examples of this may be that new facilities or laboratories have been built to improve the program; stable external funding has been provided to the

institution to help support the program; or that modifications to the program coursework or administration have been made or are in the process to improve program enrollment.

Permanent Exemptions for Identified Programs

An institution may request that a program receive a permanent exemption from the Commission if the coursework for the major or degree program is drawn exclusively from existing coursework so there are no additional costs to the college or university to offer these majors. In addition to documentation from college catalogs and other official campus publications and announcements, the institution shall substantiate that the program can continue at no additional cost to the institution.

Examples of this are Master degree programs that are in fact subsets of existing doctoral programs. In this situation, the Master's degree is infrequently awarded, and when awarded, it is conferred only on students who, for a variety of reasons, do not complete the requirements for the doctorate. Under this scenario, students are not recruited nor admitted into a Master's degree program, but typically are interested in, and apply for, direct admission into a doctoral degree program.

Once approved by the Commission, a degree program carries the permanent exemption designation until the institution and governing board supplants it with a new degree program and discontinues the current program, or requests that the Commission remove it from the permanent exemption list.

Identified Degree Program Summary Table for 2004 Report

The Number of Degree Programs Identified for the Three-year Period Ending in 2003

Institution	Associate	
Allegany College of Maryland	1	
Anne Arundel Community College	0	
Baltimore City Community College	2	
Carroll Community College	0	
Cecil Community College	1	
Chesapeake College	1	
College of Southern Maryland	0	
Community College of Baltimore County	1	
Frederick Community College	1	
Garrett College	0	
Hagerstown Community College	2	
Harford Community College	0	
Howard Community College	1	
Montgomery College	1	
Prince George's Community College	0	
Wor-Wic Community College	0	
Subtotal	11	11

Institution	Bachelor	Master	Doctorate	Subtotal
Bowie State University	1	0	0	1
Coppin State University	0	0	0	0
Frostburg State University	2	0	0	2
Salisbury University	0	0	0	0
Towson University	1	0	0	1
University of Baltimore	0	0	0	0
University of Maryland, Baltimore	0	7	1	8
University of Maryland Baltimore County	0	0	0	0
University of Maryland, College Park	6	7	0	13
University of Maryland Eastern Shore	0	0	0	0
Morgan State University	3	1	0	4
St. Mary's College of Maryland	6	0	0	6
Subtotal	19	15	1	35
Total Programs Identified				46

Recommended Action Summary Table

Institution	Number of Programs Identified	Recommended to be Discontinued	Recommended Three-Year Exemption	Recommended Permanent Exemption
Allegany College of Maryland	1	0	1	0
Anne Arundel Community College	0	0	0	0
Baltimore City Community College	2	0	2	0
Carroll Community College	0	0	0	0
Cecil Community College	1	0	1	0
Chesapeake College	1	0	1	0
College of Southern Maryland	0	0	0	0
Community College of Baltimore County	1	0	1	0
Frederick Community College	1	1	0	0
Garrett College	0	0	0	0
Hagerstown Community College	2	2	0	0
Harford Community College	0	0	0	0
Howard Community College	1	0	1	0
Montgomery College	1	0	1	0
Prince George's Community College	0	0	0	0
Wor-Wic Community College	0	0	0	0
Subtotal	11	3	8	0
Institution				
Bowie State University	1	0	1	0
Coppin State University	0	0	0	0
Frostburg State University	2	2	0	0
Salisbury University	0	0	0	0
Towson University	1	0	1	0
University of Baltimore	0	0	0	0
University of Maryland, Baltimore	8	0	7	1
University of Maryland Baltimore County	0	0	0	0
University of Maryland, College Park	13	1	2	10
University of Maryland Eastern Shore	0	0	0	0
Morgan State University	4	2	2	0
St. Mary's College of Maryland	6	1	3	2
Subtotal	35	6	16	13
Total	46	9	24	13

Maryland Community Colleges

Allegany College of Maryland

PROGRAMS	2001	2002	2003	Recommended Action
ASSOCIATE				
494001 ENGINEERING TRANSFER				*Three-Year Exemption*
Enrollment	12	13	16	
Degrees/Awards	0	0	0	

Baltimore City Community College

PROGRAMS	2001	2002	2003	Recommended Action
ASSOCIATE				
529901 EMERGENCY MEDICAL SERVICE				*Three-Year Exemption*
Enrollment	17	15	21	
Degrees/Awards	1	2	1	
531701 CONSTRUCTION SUPERVISION				*Three-Year Exemption*
Enrollment	0	3	16	
Degrees/Awards	0	0	0	

Cecil Community College

PROGRAMS	2001	2002	2003	Recommended Action
ASSOCIATE				
531001 ELECTRONICS TECHNOLOGY				*Three-Year Exemption*
Enrollment	12	16	15	
Degrees/Awards	2	2	0	

Chesapeake College

PROGRAMS	2001	2002	2003	Recommended Action
ASSOCIATE				
498001 COMPUTER SCIENCE TRANSFER				*Three-Year Exemption*
Enrollment	9	11	16	
Degrees/Awards	1	0	0	

Community College of Baltimore County

PROGRAMS	2001	2002	2003	Recommended Action
ASSOCIATE				
529906 OCCUP SAFETY & HLTH TECH STATEWIDE				***Three-Year Exemption***
Enrollment	22	14	22	
Degrees/Awards	3	4	3	

Note: The Community College of Baltimore County requested a permanent exemption for this program; however, the justification provided by the College was more consistent with the Three-Year Exemption category. The recommendation is for a Three-Year Exemption and not a Permanent Exemption for this program to give the College time to effect the changes that were recently made to the program and its administration.

Frederick Community College

PROGRAMS	2001	2002	2003	Recommended Action
ASSOCIATE				
500501 OFFICE SYSTEMS MANAGEMENT				***Discontinuation***
Enrollment	4	2	2	
Degrees/Awards	0	1	0	

Hagerstown Community College

PROGRAMS	2001	2002	2003	Recommended Action
ASSOCIATE				
500301 FINANCIAL SERVICES				***Discontinuation***
Enrollment	4	2	1	
Degrees/Awards	0	2	1	
500501 OFFICE TECHNOLOGY				***Discontinuation***
Enrollment	11	4	3	
Degrees/Awards	1	1	2	

Howard Community College

PROGRAMS		2001	2002	2003	Recommended Action
ASSOCIATE					
539902 BIOMEDICAL ENG	STATEWIDE				*Three-Year Exemption*
Enrollment		13	11	11	
Degrees/Awards		0	3	2	

Montgomery College

PROGRAMS	2001	2002	2003	Recommended Action
ASSOCIATE				
500901 PRINTING MANAGEMENT				*Three-Year Exemption*
Enrollment	16	18	14	
Degrees/Awards	1	1	1	

University System of Maryland Institutions

Bowie State University

PROGRAMS	2001	2002	2003	Recommended Action
BACHELORS				
100700 THEATER ARTS				*Three-Year Exemption*
Enrollment	0	0	0	
Degrees/Awards	0	0	0	

Frostburg State University

PROGRAMS	2001	2002	2003	Recommended Action
BACHELORS				
083801 BUSINESS EDUCATION				***Discontinuation***
Enrollment	9	3	5	
Degrees/Awards	2	2	2	
170302 ACTUARIAL SCIENCE				***Discontinuation***
Enrollment	12	9	4	
Degrees/Awards	1	0	4	

Towson University

PROGRAMS	2001	2002	2003	Recommended Action
BACHELORS				
110200 FRENCH				***Three-Year Exemption***
Enrollment	13	16	11	
Degrees/Awards	3	3	4	

University of Maryland, Baltimore

PROGRAMS	2001	2002	2003	Recommended Action
MASTERS				
040930 PHARMACOLOGY & EXPERIMENTAL THERAPEUTIC				*Three-Year Exemption*
Enrollment	5	3	6	
Degrees/Awards	2	2	1	
041230 ANATOMY - MEDICAL PROGRAM				*Three-Year Exemption*
Enrollment	0	0	0	
Degrees/Awards	2	0	0	
041430 BIOLOGICAL CHEMISTRY - MEDICAL PROGRAM				*Three-Year Exemption*
Enrollment	5	5	3	
Degrees/Awards	1	1	0	
041701 MOLECULAR AND CELL BIOLOGY				*Three-Year Exemption*
Enrollment	0	0	1	
Degrees/Awards	0	1	0	
042230 HUMAN GENETICS				*Three-Year Exemption*
Enrollment	1	3	12	
Degrees/Awards	3	2	0	
120511 ORAL PATHOLOGY - DENTAL PROGRAM				*Three-Year Exemption*
Enrollment	0	0	0	
Degrees/Awards	2	0	0	
129955 PHARMACY ADMINISTRATION				*Permanent Exemption*
Enrollment	0	0	1	
Degrees/Awards	0	1	0	
DOCTORAL				
120511 ORAL PATHOLOGY-DENTAL PROGRAM				*Three-Year Exemption*
Enrollment	1	1	4	
Degrees/Awards	0	1	0	

University of Maryland, College Park

PROGRAMS	2001	2002	2003	Recommended Action
BACHELORS				
010100 AGRICULTURE, GENERAL				*Permanent Exemption*
Enrollment	9	9	9	
Degrees/Awards	0	4	3	
030700 CENTRAL EUROPEAN, RUSSIAN & EURASIAN STUD				*Permanent Exemption*
Enrollment	2	3	2	
Degrees/Awards	3	1	1	
110400 ITALIAN LANGUAGE & LITERATURE				*Three-Year Exemption*
Enrollment	4	7	9	
Degrees/Awards	1	2	2	
129905 COMBINED PROGRAM - DENTISTRY				*Permanent Exemption*
Enrollment	0	2	4	
Degrees/Awards	0	0	0	
129906 COMBINED PROGRAM - MEDICINE				*Permanent Exemption*
Enrollment	0	1	1	
Degrees/Awards	0	0	0	
149903 COMBINED PROGRAM - LAW				*Permanent Exemption*
Enrollment	0	0	0	
Degrees/Awards	0	0	0	
MASTERS				
092000 NUCLEAR ENGINEERING				*Discontinuation following the development of a new program in Energy Engineering.*
Enrollment	1	4	4	
Degrees/Awards	3	2	0	
100701 THEATRE (MA)				*Three-Year Exemption*
Enrollment	4	7	8	
Degrees/Awards	2	0	1	
110300 GERMAN LANGUAGE & LITERATURE				*Permanent Exemption*
Enrollment	3	4	9	
Degrees/Awards	2	0	1	
149904 JD/MBA (W/UMAB)				*Permanent Exemption*
Enrollment	9	7	3	
Degrees/Awards	0	0	0	
150500 LINGUISTICS				*Permanent Exemption*
Enrollment	0	0	1	
Degrees/Awards	4	1	0	

University of Maryland, College Park (continued)

PROGRAMS	2001	2002	2003	Recommended Action
MASTERS (continued)				
169902 LIBRARY SCIENCE/GEOGRAPHY				*Permanent Exemption*
Enrollment	3	3	2	
Degrees/Awards	0	0	0	
190800 CHEMICAL PHYSICS				*Permanent Exemption*
Enrollment	1	0	0	
Degrees/Awards	1	0	0	

Morgan State University

PROGRAMS	2001	2002	2003	Recommended Action
BACHELORS				
129908 MENTAL HEALTH TECHNOLOGY				***Discontinuation***
Enrollment	0	0	0	
Degrees/Awards	4	0	0	
190200 PHYSICS				***Three-Year Exemption***
Enrollment	13	22	19	
Degrees/Awards	2	2	1	
190201 ENGINEERING PHYSICS				***Three-Year Exemption***
Enrollment	17	14	19	
Degrees/Awards	2	5	4	
MASTERS				
080200 ELEMENTARY STUDIES & MIDDLE SCHOOL EDUC				***Discontinuation***
Enrollment	1	3	1	
Degrees/Awards	2	0	0	

St. Mary's College of Maryland

PROGRAMS	2001	2002	2003	Recommended Action
BACHELORS				
082200 HUMAN DEVELOPMENT				***Discontinuation***
Enrollment	6	3	0	
Degrees/Awards	4	3	1	
100700 DRAMATIC ARTS				***Three-Year Exemption***
Enrollment	10	11	11	
Degrees/Awards	4	3	4	
110100 FOREIGN LANGUAGE				***Three-Year Exemption***
Enrollment	8	8	13	
Degrees/Awards	4	3	2	
190200 PHYSICS				***Three-Year Exemption***
Enrollment	6	8	7	
Degrees/Awards	1	2	4	
229902 PUBLIC POLICY STUDIES				***Permanent Exemption***
Enrollment	8	8	6	
Degrees/Awards	1	4	0	
490201 NATURAL SCIENCE				***Permanent Exemption***
Enrollment	0	3	4	
Degrees/Awards	0	0	0	

Individual Institutional Responses

The following section of the Report contains the individual institutional responses to the Low-Productivity Degree Program Report 2004 submitted to the Maryland Higher Education Commission.

Allegany College of Maryland

2004 Response

regarding

Low-Productivity Degree Programs

September 30, 2004

Dr. Michael J. Kiphart
Assistant Secretary for Planning and Academic Affairs
Maryland Higher Education Commission
839 Bestgate Road, Suite 400
Annapolis, MD 21401

Dear Dr. Kiphart:

Please find attached our response to the *Low Productivity Degree Program Report 2004*. One program, Engineering Transfer, is so identified because it has produced no graduates during the past three years. The College would like to request a three year exemption for this program. An explanation is attached.

I apologize for the tardiness of this report. If you need any additional information, I may be contacted at (301) 784-5207 or e-mail: trephann@allegany.edu. Thank you.

Sincerely,

Terry Rephann
Director of Institutional Research

Enclosure

cc: Dr. Donald Alexander, President
Dr. Gene Hall, Vice President of Instructional Affairs

301-784-5000
ALLEGANY COLLEGE OF MARYLAND • 12401 WILLOWBROOK ROAD, SE • CUMBERLAND, MARYLAND 21502-2596
http://www.ac.cc.md.us

Engineering Transfer

The Engineering transfer program is a collaborative program with the University of Maryland that allows students interested in Mechanical Engineering to dual enroll at Allegany College of Maryland and Frostburg State University. The curriculum consists of general studies and elective courses that are offered by Allegany College of Maryland and coursework in engineering and physics that is offered by Frostburg State University (Introduction to Engineering Design, Statics, Physics, Mechanics of Materials, and Dynamics). This program requires little additional college resources. It requires no dedicated facilities/lab space and has no full-time or part-time staff connected with it.

Offering this program at the College makes a four year Baccalaureate engineering degree much more accessible and affordable for students in the region. In addition, enrollment figures for the program during the last three years have been climbing. This improves the prospects that the program will graduate more students in the near future.

Fall 01	Spring 02	Fall 02	Spring 03	Fall 03	Spring 04
12	12	13	13	16	16

Finally, since many students transfer their coursework to four-year colleges and universities without obtaining an associate's degree, student success would be more accurately reflected by counting transfers to Baccalaureate granting institutions such as Frostburg State University. The College plans to improve program level transfer success tracking through participation in the National Student clearinghouse Enrollment Search in the near future. This information will be used by the College as part of a revised internal program review system

For these reasons, the College would like to request a 3 year exemption for this program.

Baltimore City Community College

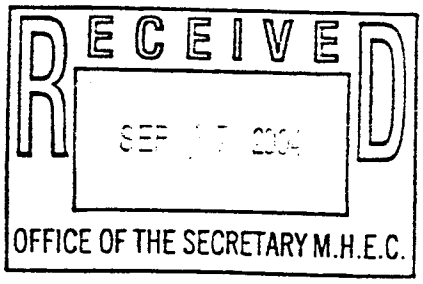
2004 Response

regarding

Low-Productivity Degree Programs

BCCC
Careers Built Here
Baltimore City Community College

LIBERTY CAMPUS
2901 Liberty Heights Avenue
Baltimore, MD 21215-7893



September 16, 2004

Dr. Calvin Burnett
Secretary of Higher Education
Maryland Higher Education Commission
839 Bestgate Road. Suite 400
Annapolis, Maryland 21401

Dear Dr. Burnett:

In accordance with your request of July 16, 2004, I am submitting Baltimore City Community College's response for the low productivity programs identified in the Low Productivity Degree Program Report 2004. Two of our programs have been identified as generating low productivity, Construction Supervision and Emergency Medical Services.

We are conducting revisions to our programs, developing new marketing strategies, and a thorough program review is being conducted to increase enrollments and degree awards.

I am requesting continuation for Construction Supervision and Emergency Medical Services Programs. I hope that the information we have provided is adequate to address concerns relating to our low productivity programs.

If you have any questions or require additional information, please do not hesitate to call me.

Sincerely,

Stan D. Brown
Assistant to the Vice President for Learning
For
Dr. Sarah Garrett
Vice President for Learning

CC: Dr. Richard Turner
John Solomon
Merlene Adair
Dorothea Colvin

BALTIMORE CITY COMMUNITY COLLEGE

MHEC LOW-PRODUCTIVITY DEGREE PROGRAM REPORT 2004 RESPONSE

September 16, 2004

PART 1: Introduction

Baltimore City Community College strives to meet diverse student and community needs with high-quality programs and services. In addition, the college maximizes the effective use of public resources that support the institution. We have prepared an Instructional Program and an Instructional Support Services Review and Evaluation Policy, which are designed to provide evidence of the ongoing review processes that are in place to ensure that high levels of quality and productivity are achieved for programs and services that are of highest priority to the college's mission.

Through program review, the college examines targeted low-productivity programs. The presently identified low-productivity programs at BCCC are the **Construction Supervision** and **Emergency Medical Services programs**. The purpose of identifying these programs is to assess their ability to meet their intended purposes in a cost-effective, high-quality manner. In response to our Program Review Process, the college also assesses the broader functions of the institution as they relate to their contribution to the mission of the college and the resulting priorities.

Through our commitment to excellence, as demonstrated by our ongoing and continuing internal outcome assessment processes, Baltimore City Community College will continue to be an educational bridge and an invaluable community resource to the citizens of Baltimore City.

PART 2: Instructional Program and Instructional Support Services Review and Evaluation Overview

The mission of Baltimore City Community College is *to educate and train a world-class workforce for Baltimore.* In addressing its mission, the College offers a wide array of instructional programs and instructional support services. As part of its effort to achieve the necessary accountability with it instructional programs and services, the College is committed to a continuous review and evaluation process that ensures effective, efficient, and quality instruction and service delivery. The primary purpose of the review and evaluation process is to assess and provide information about the strengths and weaknesses of an instructional program or instructional support service. It is not meant to evaluate the performance of individuals. The results of the review and evaluation may result in actions such as the modification of activities, refocusing of needs, program expansion, program elimination, program consolidation, or reaffirmation of the existing activities of the program or service.

Purpose of Instructional Program Review and Evaluation

In order to achieve its mission of training and educating a world-class workforce, Baltimore City Community College must continuously review and evaluate its instructional programs and services. These reviews and evaluation are also stipulated by the standards of the Middle States Association of College and Schools and by requirements of the Maryland Higher Education Commission. The purpose of the Evaluation and Review process is to provide a structure, guidelines, and timeframe for implementing the College's Review and Evaluation Policy.

The review and evaluation of an instructional program or service will be a disciplined inquiry about the overall effectiveness of the program or service through a systematic collection and analysis of information and its ability to achieve stated objectives/ outcomes. An assessment/evaluation of programs and services will be undertaken periodically to provide information about how well that particular program or service is functioning in relation to the objectives of the program or service, the mission and strategic priorities of the College, and the needs of the community.

Policy Statement

An Instructional Program and Instructional Support Services Review and Evaluation Policy is necessary to ensure effective, efficient, and quality instruction and instructional support service delivery. To this effort, an evaluation of each degree or certificate instructional program and an evaluation of selected instructional support services will be undertaken every four years or sooner when annual monitoring processes reveal difficulty. A new cycle of selected programs and services will be implemented each year. The review and evaluation of an instructional program or service will be a disciplined inquiry about the overall effectiveness of that program or service through a systematic collection and analysis of information. The results of the evaluation should provide information useful in making decisions regarding such matters as:

1. The validity of the program or service
2. The harmony of the program or service with College's goals and strategic priorities
3. Reconsideration and redefinition of goals, purposes, and objectives of the program or service
4. Improving quality of the program or service
5. Allocation of resources
6. Modification of activities
7. Refocusing of activities
8. Expansion of the program or service
9. Consolidation of the program or service
10. Curtailment or elimination of the program or service
11. Maintenance or reaffirmation of the existing program or service.

PART 3: Construction Supervision Program Response

The construction supervision program falls under the three-year exemptions for identified programs as outlined in the Maryland Higher Education Commission Low-Productivity Degree Program Report 2004.

The Construction Supervision Program was initiated and developed at the College in the Spring of 2001. Program Coordinator, Mr. Steve Watson, was hired to enhance and promote the Construction Supervision Program in fall 2001. The first class started with 4 students in Spring 2002 and three (3) of its first Four (4) students graduated in May 2004. The data shows that the success rate is high in this newly created program which is 75%.

The Construction Supervision Program is relatively young and it is growing. Most of the students in this program are taking courses for Developmental and General Education requirements that are outside of the construction offerings. Currently, we have class sizes that are in the double digits. Statistics show that the enrollment rate increased from 13 students (full-time and part-time) in 2003 to 28 students (full-time and part-time) in 2004, which is an increase of 15 students (115.38%). As a technical program, the enrollment will not be as large as a conventional program at the college.

In order to continue the growth of the program, the College needs to support the program in the following areas:

- Dedicated program lab space and dedicated classroom for technical activities
- Dedicated storage space for program equipment
- The development of non-traditional financial aid options to address the needs of a majority working student population that does not receive financial aid.
- Increase in marketing efforts

Action was taken to promote the program and resolve those issues:

- We will set forth the activities that are continuing to build the program successfully
- Perkins Grant was awarded for $5,000.
- Equipment for the future lab has been purchased
- Partnership with State Highway Administration, DCS, and Local Unions was being established
- Articulation Agreement with Baltimore City Public Schools was established
- Program was enhanced by offering short and long term certificate program
- Based on the needs of the community, the Construction Program is expanding and the Property Development Program developed and was approved by CIC

Outcomes Assessment:

We will set forth the outcomes assessment plans in each of the five competency areas related to written and oral communication, scientific and quantitative reasoning, critical analysis and reasoning, technological competency, and information literacy.

Competency 1: Written and Oral Communication

Definition: For written communication, the definition is establishing a clear purpose with adequate and pertinent evidence; adapting a presentation to a range if audiences; and mastering the conventions of standard written American English. For oral communication, competency is the demonstration of the communication process through speaking; and developing proficiency as an oral communicator.

Method of Analyses for Assessment: For written communication, methods include student evaluations, short and long answer quizzes, tests, and essays, and reports. Methods of evaluation also include project, case study, lab work, and assignments.

Level of Assessment: Each course in the program will have its own proficiencies that students must master.

Summary of the Result: Students are evaluated periodically and informed of their standing.

Teaching and Learning Enhancement: This is an ongoing process. Feedback from student surveys and open-ended questions are encouraged. Assessment results are used to identify the faculty's training needs; standardize and revise syllabi; review text books; and invest in software and other resources, including tutorial programs.

Competency 2: Scientific and Quantitative Reasoning:

Definition: Competency is defined as providing current information in the field related to construction issues. Students should be able to interpret the language of the field.

Method of Analyses for Assessment: Methods include assignments given to students to collect data and perform analyses in various construction applications. Students will be evaluated according to the appropriateness, context, depth, effectiveness, and quality of their chosen resources.

Level of Assessment: Assessment occurs at the course and program levels.

Summary of the Result: The results submitted by the students are evaluated. Passing rates in courses are compiled.

Teaching and Learning Enhancement: Assessment results are used to identify the faculty's training needs; standardize and revise syllabi; review text books; and invest in software and other resources, including tutorial programs.

Competency 3: Critical Analysis and Reasoning

Definition: Student competency is defined as the ability to analyze and assess information by using critical thinking to solve problems and participating in strategic planning. Skills in analyzing the strength of various materials and structures using graphing and analytical methods will be developed.

Method of Analyses for Assessment: Reading and analyzing case studies are used. Other measures include the ability to understand the subject to perform well on exams and the ability to use reasoning from the acquired knowledge of the subject to determine the correct treatment of construction problems. Evaluation will be based on the quality and effectiveness of resources chosen.

Level of Assessment: Assessment occurs at the course and program levels.

Summary of the Result: Assignments are evaluated and passing rates for each course are compiled at the end of each semester.

Teaching and Learning Enhancement: Assessment results are used to identify the faculty's training needs; standardize and revise syllabi; review text books; and invest in software and other resources, including tutorial programs.

Competency 4: Technological Competency

Definition: It is to develop the ability to select and apply appropriate technology to advance student's learning and productivity. It is the ability to use the personal computer and the Microsoft Applications, Microsoft Project, and the ability to search the Internet.

Method of Analyses for Assessment: Students will be evaluated according to the effectiveness of using the following technologies: the overhead projector, video tapes/camcorder, audiotapes, PowerPoint, online instructional delivery, 'smart' classrooms, and hybrid courses.

Level of Assessment: Assessment occurs at the course, program, and institutional level.

Summary of the Result: Assignments are evaluated and passing rates for each course are compiled at the end of each semester.

Teaching and Learning Enhancement: Assessment results are used to identify the faculty's training needs; standardize and revise syllabi; review text books; and invest in software and other resources, including tutorial programs.

Competency 5: Information Literacy

Definition: Competency is defined as the ability to express oneself in a coherent manner in writing and verbal expression. It is also the ability to navigate the Internet and to utilize journals and other publications to gain useful information.

Method of Analyses for Assessment: Students will be evaluated according to the appropriateness, context, depth, effectiveness, and quality of their chosen resources for assigned projects. Strict adherence to the appropriate system of documentation will apply.

Level of Assessment: Each course in the program will have its own proficiencies that students must master.

Summary of the Result: Assignments are evaluated and passing rates for each course are compiled at the end of each semester.

Teaching and Learning Enhancement: Assessment results are used to identify the faculty's training needs; standardize and revise syllabi; review text books; and invest in software and other resources, including tutorial programs.

SUMMARY:

Efforts to strengthen graduation rates and enrollment include the implementation of technology, software, and construction equipment that will make the program more current, attractive, and introduces students to today's standards. Funds have been approved and allocated for the purchase of computers, tools, and equipment. The Curriculum has been revised to include more applications and hands on approach. The outcomes assessment plans in each of the five competency areas related to written and oral communication, scientific and quantitative reasoning, critical analysis and reasoning, technological competency, and information literacy will be implemented. The College is also actively pursuing a joint enrollment agreement with the University of Maryland Eastern Shore (the only Construction Management four year program in the State of Maryland) and other secondary education institutions that will strengthen articulation efforts. The Program advisory board has been expanded and is becoming more involved in recruitment and retention efforts. A workforce scholarship of ten thousand dollars ($10,000) was awarded to the Construction Supervision students to assist them in the program.

PART 4: Emergency Medical Services Program Response

The Emergency Medical Services Program falls under the Three-Year Exemptions for Identified Programs Category as outlined in the Maryland Higher Education Commission Low-Productivity Degree Program Report 2004.

The Mission of BCCC is to provide quality, accessible and affordable education to help develop the full potential and productivity of the citizens of Baltimore. As part of this mission BCCC provides technical and career education programs. Assessment of the need for trained EMS personnel in the major metropolitan areas of Maryland has demonstrated that there is an acute shortage of paramedics. The BCCC EMS Program is the only approved, college level, EMS program within Baltimore City providing paramedic education.

In 1998 and 1999 major curriculum changes were disseminated by the U.S. Department of Transportation, National Highway Traffic Safety Administration, and the federal agency responsible for EMS program development. These changes were subsequently adopted by the Maryland Emergency Medical Services Board. During FY 2000 a new BCCC, EMS curriculum was developed and approved within the College and by MHEC. The new curriculum was implemented in 2001 which was a transition year with some students completing courses of the old curriculum while others began the new curriculum.

Changes in the curriculum required addition of new and updated equipment to the EMS Laboratories. The necessary equipment was purchased during FY 01 and 02 using Perkins Grant Funds. During FY 03 a need for additional space was identified and the program moved into better laboratory facilities in January 2004.

During this time the program has created close relationships with the EMT-Basic program within the BCPSS and the Baltimore City Fire Department.

In the last year changes in scheduling have been made to make the offerings more convenient for students while reducing the numbers of sections offered. As a result Program resources are better utilized thus reducing cost to the College. Adjustments in pre-requisites were also made to facilitate entry into the program. As currently structured, the degree program can accept 25 students each year. By adjusting schedules to add evening and weekend classes this could double if enrollment increases. Still, the program faces significant challenges in terms of producing degree awards.

Although the curriculum is designed so that the students can earn both an academic certificate and an AAS degree students often do not complete general education requirements or apply for graduation because the students do not see a need. The EMS profession has not evolved to a level wherein academic awards are required for certification and licensure. The current draft of the EMS Scope of Practice, recently released for comment by the National Highway Traffic Safety Administration, is the first

national guideline recommending the requirement of an AAS degree in order to be certified as a paramedic. This guideline is not to be approved prior to January 2005.

Another issue that affects the number of awards is that many students become employed during their enrollment at the College; often they then drop out of BCCC and complete their training at their employer's academy. This results in a significant reduction in the number of students completing training at BCCC and removes from the program many students who might otherwise receive degrees.

Finally, a large number of the students who enroll in the entry level course (EMT-Basic) are police, firefighters or hospital employees who have no intention of progressing in the field; this fact accounts for the number of students completing EMT-Basic but never entering advanced training.

Considering these facts the following data reflect the value of the EMS program to our students and the City of Baltimore more realistically than the numbers of degrees awards produced.

Emergency Medical Services Program – Enrollment, Completion and Certification FY 01-04

Certification Level	2001			2002			2003			2004		
	E	C	L	E	C	L	E	C	L	E	C	L
Emergency Medical Technician - Basic	61	36	36	56	36	36	56	30	36	73	49	36
Emergency Medical Technician – Intermediate	22	7	*	21	6	#	13	4	2	18	9	NT
Emergency Medical Technician – Paramedic	16	8	5	15	8	3	13	2	2	4	0	0
FY Total	99	51	41	92	50	39	82	36	40	95	58	36

Legend:
E = Fiscal year enrollment
C = Number of students who successfully completed the course
L = Number of completers who became State or Nationally certified
NT = Class has not tested
* = No course this year.
# = Data not available

As is indicated, program enrollment is not an issue; the EMS Program served an average of 92 students in each of the years listed. An average of 39 licenses or certifications was earned by those students each year. However, even though some of them were eligible, few students completed or applied for academic awards.

We expect several factors to change the production of degrees awarded in the future. These include:

> The Program has gained experience with the 2001 curriculum and is developing changes expected to encourage students to remain at/return to BCCC and complete their degree. Part of this restructuring will result in students being eligible for academic degree at the end of each level of the program.

An enlightened approach to advisement has been developed that encourages students to apply for degrees.

The BCFD Academy no longer teaches a paramedic course. We are collaborating with them to provide an EMT-Intermediate to EMT-Paramedic bridge program at BCCC.

Approval of the proposed new Scope of Practice will make an AAS degree a requirement for licensure. When this takes affect, the academies will no longer offer advanced training bring those students back to the community colleges.

Pre-Allied Health Professions Program

The College has received a Fiscal Year (FY) 2004 Title III, Part A Strengthening Institutions Program award for $365,000. BCCC will use a portion of the grant to establish a Pre-Allied Health Professions Program to help students' complete prerequisite courses for admission to a BCCC allied health program (such as Surgical Technology, Dental Hygiene, Physical Therapy Assistant, Nursing, Respiratory Care, and Emergency Medical Services). Many students seeking to enter these professions are "blocked at the door," as they test into developmental courses (which they fail), and/or do not have the academic support services to complete the pre-entry requirements before admission into the allied health major. Through the establishment of the Pre-Allied Health Professions Program, BCCC will enhance its allied health programs admission opportunities and facilitate a student's acceptance and retention in allied health programs at the college.

Part 5: Conclusion

In addition to our degree program evaluations for the **Construction Supervision Program** and the **Emergency Medical Services Programs** (which include measures of productivity, retention and graduation rates, and cost-effectiveness), we will conduct ongoing informal reviews by division deans for each program. For example, the dean and the Office of Institutional Research will monitor course pass rates; a sudden drop automatically raises a flag, triggering a review by the appropriate division dean to see if there has been a change that might provide an explanation (e.g., a different instructor, new textbook, curriculum revision, or a different testing format). Of course, we will monitor the relative strength/ weakness of the students themselves, which can often determine course success rates.

With assistance from the Institutional Research Office, the division deans and the academic vice president for learning will review and modify, as needed, course enrollment, course scheduling, classroom utilization, full-time/part-time faculty utilization, cost studies, and various other indicators of quality, productivity and efficiency. Most of this information is routinely collected and published online in the college's Data Book. Also we will review the results of our Student Survey and Alumni Survey, both of which are used to monitor student satisfaction and to gather valuable

information for assessing the effectiveness of our programs. Using the program review process and program accreditation guidelines, we will institute a strategy for improving each program and reexamining them after one year.

Faced with growing enrollment and declining state funds, Baltimore City Community College has been compelled to tighten its grip on program productivity and instructional efficiency. Fewer low-enrollment courses are being offered and these low-productivity programs will be continually evaluated and enhanced to increase enrollments and graduation rates. Qualitative assessment has not been abandoned; on the contrary, quality is being defined and examined in a broader, more comprehensive and consequential manner at Baltimore City Community College.

ATTACHEMENTS

CONSTRUCTION SUPERVISON PROGRAM

EMERGENCY MEDICAL SERVICES PROGRAM

Emergency Medical Services Programs

Liberty Campus
Health and Human Services Division
Allied Health Department
410-462-7731

? Emergency Medical Services Degree (069)
? Emergency Medical Technician-Basic Certificate Track (212)
? Emergency Medical Technician-Intermediate Certificate Track (230)

BCCC's three Emergency Medical Services (EMS) programs provide students with various levels of preparation for a career in the EMS field: an Associate of Applied Science degree in Emergency Medical Services, an Emergency Medical Technician-Basic Certificate Track, and an Emergency Medical Technician-Intermediate Certificate Track.

The College's EMS programs are career programs preparing students to work in the EMS field and/or to transfer to continue their studies at four-year institutions offering EMS-related coursework. The programs meet or exceed current Maryland State and U.S. Department of Transportation (DOT/NHTSA) guidelines.

To be accepted into the programs, students must take the College's ACCUPLACER Test or show transcript proof of completion of ENG 82, MAT 82, and RDG 82 or their equivalents at another accredited college or university.

documentation of completion of 150 emergency runs and provide documentation of affiliation with a MIEMSS-approved advanced life support provider.

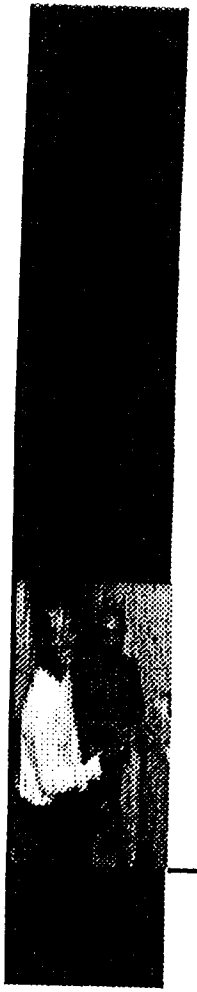
Before enrolling in clinical and fieldwork courses students must show proof of current health status (by physical exam less than six months old) and have up-to-date immunization/titres as required by clinical and field sites. This requirement will be reviewed each time a student enrolls in a clinical or fieldwork course.

Students are required to carry their own personal health insurance and encouraged to obtain medical malpractice insurance. BCCC does not provide either of these for our students.

Students who enter the programs with current Maryland or National Registry EMT-B, EMT-I, or EMT-P certification and complete graduation requirements for the A.A.S. degree or one of the certificate tracks may receive credit by departmental examination for the EMS courses equivalent to their certification level.

To receive approval to take the National Registry of Emergency Medical Technicians certification examinations for Emergency Medical Technician-Intermediate or Emergency Medical Technician-Paramedic students must successfully complete the appropriate national registry examination preparation course.

The College reserves the right to amend course listings and program requirements as changes occur within BCCC, MIEMSS, or DOT guidelines.



Developmental courses may be taken concurrently with EMS 105, EMS 156, and EMS 293; however, all developmental courses must be satisfactorily completed prior to entrance into any other EMS course. EMS students must have written permission of the Program Coordinator to take any EMS course other than EMS 105 and EMS 156.

Students must be aware of the intense commitment of time required for successful completion of the coursework. To enter the Emergency Medical Technician-Basic Certificate Track (EMT-B), a student must be 18 years of age or 16 years of age with written parental permission. Students who enter the Emergency Medical Technician-Intermediate Certificate Track or the AAS in EMS Degree Program must satisfy the current Maryland State requirements for entry into an Advanced Life Support (ALS) program as established by the Maryland Institute for Emergency Medical Services Systems (MIEMSS). These requirements include being a Maryland Certified Emergency Medical Technician-Basic and at least 18 years of age prior to beginning the coursework. To be eligible to take the National Certification and State Licensing examinations after completing the program, students must have been a Maryland Certified Emergency Medical Technician-Basic for at least one full year or provide

Emergency Medical Services Degree (069)

Note: Applicant must be a Maryland certified EMT-B.

Emergency Medical Services Degree (069)
Associate of Applied Science Degree Program
Suggested Sequence of Courses

Prerequisites			Credits
PRE	100	Preparation for Academic Achievement 1	
BIO	101	General Biology	3
		Total	4

1st Semester			
ENG 101		English Writing	3
BIO	107	Anatomy and Physiology	4
EMS	105	Introduction to Emergency Medical Services	1
EMS	110	Traumatic Emergencies	3
EMS	111	Emergency Care Pharmacology	2
EMS	112	IV Therapy and Medication Administration Laboratory	1
SP	101	Fundamentals of Speech Communication	3
		Total	17

2nd Semester

EMS	109	Medical Emergencies I	6
EMS	107	Airway Management and Ventilation Laboratory	1
EMS	108	ECG Interpretation and Electrical Therapy Laboratory	1
EMS	113	Obstetrics/Gynecology/Neonatology	2
EMS	114	Pediatric Emergency Care	2
EMS	115	Patient Assessment	3
		Total	15

Summer Semester

EMS	120	Behavioral and Psychiatric Emergencies	1
EMS	121	ALS Clinical Rotations and Field Internship	2
		Total	3

3rd Semester

EMS	201	Principles of Pathophysiology	2
EMS	202	Medical Emergencies II	6
		General Education Requirements: Mathematics	3
PSY	101	Introduction to Psychology	3
		Total	14

4th Semester

EMS	203	Emergency Medical Services Operations	4
EMS	204	Paramedic Clinical Rotations and Field Internship	3
EMS	210	EMT-Paramedic, National Registry Examination Preparation	2
HLF		Health and Life Fitness	2
SOC	101	Introduction to Sociology	3
		General Education Requirements: Arts and Humanities	3
		Total	17

Emergency Medical Technician-Intermediate Certificate Track (230)

*Applicant must be a Maryland certified EMT-B.

Prerequisites

			Credits
PRE	100	Preparation for Academic Achievement	1
BIO	101	General Biology	3
		Total	4

1st Semester

BIO	107	Anatomy and Physiology	4
EMS	105	Introduction to Emergency Medical Services	1
EMS	110	Traumatic Emergencies	3
EMS	111	Emergency Care Pharmacology	2
EMS	112	IV Therapy and Medication Administration Laboratory	1
		Total	11

2nd Semester

EMS	109	Medical Emergencies I	6
EMS	107	Airway Management and Ventilation Laboratory	1
EMS	108	ECG Interpretation and Electrical Therapy Laboratory	1
EMS	113	Obstetrics/Gynecology/Neonatology	2
EMS	114	Pediatric Emergency Care	2
EMS	115	Patient Assessment	3
		Total	15

Summer Semester

EMS	120	Behavioral and Psychiatric Emergencies	1
EMS	121	ALS Clinical Rotations and Field Internship	2
		Total	3

3rd Semester

		Program Total	**70**

Emergency Medical Technician-Basic Certificate Track (212)

1st Semester

			Credits
PRE	100	Preparation for Academic Achievement	1
EMS	156	Emergency Medical Technician-Basic	7
		Total	8

2nd Semester

BIO	101	General Biology	3
EMS	293	Fieldwork in EMS*	4
		Total	7

3rd Semester

BIO	107	Anatomy and Physiology	4
		Total	4
		Program Total	**19**

*Documented proof of 150 ambulance calls or 1 full year experience as an EMT-B substitutes for EMS 293.

EMS	122	EMT-Intermediate, National Registry Examination Preparation	2
		Total	2
		Certificate Total	**35**

Construction Supervision Program

Liberty and Harbor Campuses
Business and Technology Division
Business and Information Systems Department
410-986-5575 (Harbor)
410-462-7690 (Liberty Campus)

? Construction Supervision Degree (400)
? Construction Supervision Certificate (401)

Construction supervision provides the critical link between project management and skilled workers who perform building tasks. The Construction Supervision program prepares students to step into the position of assistant project manager, supervisor or independent business owner. The program provides experience and instruction in safety (OSHA regulations), blueprint reading, construction methods, estimating, scheduling, operational procedures, effective communication, procurement, fiscal and business management. Graduates are prepared to work as supervisors on both residential and commercial projects.

Construction Supervision Degree (400)

The program is designed to educate students with no prior knowledge of the construction trades and to enhance the understanding of experienced tradespeople.

Construction Supervision
Associate of Applied Science Degree Program
Suggested Sequence of Courses

1st Semester

			Credits
ACCT	201	Accounting Principles I	4
CON	210	Construction Estimating	3
ECO	202	The American Economy II: Microeconomic Theory	3
EGR	212	Surveying	3
MGMT	102	Principles of Supervision	3
		Total	16

4th Semester

CON	222	Scheduling, Planning and Cost Control	3
CON	224	Construction Contracts and Documents	3
CON	250	Construction Internship	3
CON	215	Computer Applications in Construction	1
PHY	101	Fundamentals of Physics I	4
SP	101	Fundamentals of Speech Communications	3
		Total 17	
		Program Total	**67**

Construction Supervision Certificate (401)

The certificate track is oriented toward workers who wish to sharpen their existing skills or move up to supervisor, or the small business owner who wishes to brush up in a specific area.

Courses

			Credits
BUAD	112	Computers for Business Management	3
CON	101	Introduction to Construction	3
CON	104	Construction Methods and Materials	3
CON	107	Blueprint Reading	3
CON	210	Construction Estimating	3
CON	215	Computer Application in Construction	1
CON	222	Scheduling, Planning, and Cost Control	3
CON	224	Construction Contracts and Documents	3

PRE	100	Preparation for Academic Achievement I	
BUAD	112	Computers for Business Management	3
CON	101	Introduction to Construction	3
CON	104	Construction Methods and Materials	3
CON	107	Blueprint Reading	3
ENG	101	English Writing	3
		Total	16

2nd Semester

CON	111	Occupational Safety and Loss Prevention	3
ECO	201	The American Economy I: Macroeconomic Theory	3
ENG	102	Introduction to Term Paper and Research Methods	3
MAT	128	Precalculus I: College Algebra	4
SOC	102	Social Problems	3
		Total	16

Summer

HLF	210	Physical Fitness and Health	2
		Total 2	

ENG	101	English Writing	3
ENG	102	Introduction to Term Paper and Research Methods	3
EGR	212	Surveying	3
MGMT	102	Principles of Supervision	3
MAT	128	Precalculus I: College Algebra	4
		Certificate Total	**38**

Cecil Community College

2004 Response

regarding

Low-Productivity Degree Programs

CECIL
COMMUNITY
COLLEGE

September 15, 2004

Dr. Calvin Burnett
Maryland Higher Education Commission
839 Bestgate Road
Annapolis, MD 21401-1781

Dear Dr. Burnett:

Enclosed please find the 2004 Low-Productivity Degree Program Report for Cecil Community College. The information for maintaining a program that has been targeted for discontinuance is complete.

If I can be of further assistance, please contact me at (410) 287-6060, Ext. 351 or by email, mbolt@cecilcc.edu

Sincerely,

Mary Way Bolt

Mary Way Bolt, EdD
Interim Vice President for Academic Programs

One Seahawk Drive / North East MD, 21901 / 410-287-6060 / Fax: 410-287-1026 / www.cecilcc.edu

Cecil Community College

Institutional Response
MHEC Low Productivity Report 2004

The College has received the Commission's low productivity program notification for the Associate degree Electronics program. At this time the College is requesting the Commission to grant exemption status to the Electronics program.

Electronics Technology Program

The Electronics Technology Program is currently being reviewed at the College to examine its viability as a major for students. During this review process the College identified Cecil County Public Schools as a potential partner to help meet the College's concern regarding low enrollment and help meet the public school career cluster outcomes. The program aligns with the College's career mission component and the Cecil County Public School career cluster. Beginning January 2005, the College and Cecil County Public Schools is creating a day-time program whereby public school students attend the College for the College based Electronics program. These efforts will create a client base for the Electronic Programs and promote a curriculum designed with embedded certification. Additionally, the Labor Department identifies the Electronics career area as being among the fastest growing career areas through 2008 and the College is supporting efforts to increase enrollment in this program. The College respectfully requests that the Commission grant a Three-Year Exemption status to the Electronics Program and allow the College sufficient time to complete its review and restructure.

DRAFT – FOR DISCUSSION PURPOSES

PROGRAM DIAGRAM
Computer & Electronics
Career Preparation Program
Cecil County Public Schools & Cecil Community College Partnership

COMPUTER & ELECTRONICS
Web Design
January 2006

CCPS Subject Area	CCC Coursework
Intro to Web Design I (2)	Advanced HTML and DHTML (3)
Intro to Web Design II (2)	Filmmaking (4)
Network Essentials (2)	Multimedia Production I (4)
Digital Imaging I&II (2ea.)	Digital Imaging III,IV,V (4ea.)
Scripting Languages (3)	Adv. Scripting Languages (3)

A+ CERTIFICATION
Applied Technology (Hardware)
January 2005

CCPS Subject Area	CCC Coursework
AC Theory (2)	A+ Certification (4)
DC Theory (2)	Soldering II (1)
Soldering I (1)	Semiconductor Devices (3)
Schematic Reading (2)	Electronics Circuits (3)
PC Maint. & Repair (4)	Instrumentation and Control (4)
A+ Certification (4)	Programmable Logic Controllers I & II (4ea.)

NETWORK ENGINEERING
Applied Technology (Software)
TBS

CCPS Subject Area	CCC Coursework
Intro to Data Communications (3)	Intro to Networking (3)
Networking Essentials (2)	Windows Server (4)
Network Infrastructure and Design (3)	Computer Network Security Fundamentals (3)
Operating Systems (Windows XP Pro) (4)	Seminar in Information Systems I, II (1ea.)

Chesapeake College

2004 Response

regarding

Low-Productivity Degree Programs

Chesapeake College

September 14, 2004

Dr. Michael J. Kiphart
Assistant Secretary for Planning and Academic Affairs
Maryland Higher Education Commission
839 Bestgate Road, Suite 400
Annapolis, MD 21401-1781

Dear Dr. Kiphart:

In accordance with your request, I am submitting Chesapeake College's response to the Low Productivity Degree Program Report for 2004. One of our programs has been identified as generating low productivity – Computer Science. In this program, the graduation rate, as a single reporting indicator, does not present a comprehensive perspective of the vitality of the program.

In our report last year, we indicated we had discontinued a cooperative program with Howard and Anne Arundel Community Colleges, revamped our program, and initiated articulation with local four-year institutions. In addition, computer science had been identified as a possible baccalaureate program to be offered through the Eastern Shore Higher Education Center located on Chesapeake's campus. It was our hope that targeted marketing, increased articulation options, and outreach to local high schools would result in a viable program for our service region and, therefore, requested continuation of the program. In addition, the Computer Studies Department conducted a detailed program review as part of our institutional internal program review process. (The internal review resulted in an 81-page document recommending program continuance and initiatives to enhance the computer science transfer program.)

The Computer Science Transfer Program has graduated one student over the past three years. According to the College's analysis; the program generated 6.8 FTE in fall 03 and 5.5 FTE in spring 04.

It may helpful to look at trends in graduation rates among Maryland's community college Computer Science Transfer programs (www.mhec.state.md.us/publications/research). Colleges that are not listed do not have programs.

A Comprehensive Regional Community College

P.O. Box 8 • Wye Mills • MD 21679 • 410-822-5400 • 410-758-1537 • 410-228-4360 • Fax: 410-827-5875

GRADUATION RATES

Community College	1998	1999	2000	2001	2002	2003	Inc/Dec 00-03
Allegany	2	0	4	4	3	NA	DEC
AACC	28	19	21	24	20	NA	DEC
BCCC	4	0	4	2	2	NA	DEC
Chesapeake	0	0	0	1	0	0	No Change
CCBC (Catonsville)	3	3	1	0	0	NA	DEC
CCBC (Essex)	6	6	8	0	0	0	DEC
Frederick	3	1	6	2	5	NA	DEC
Hagerstown	1	3	1	5	5	NA	INC
Harford	2	4	4	4	7	NA	INC
Howard	3	7	3	4	8	NA	INC
Montgomery (Rockville)	3	0	0	0	0	NA	No Change
Montgomery (Takoma Park)	10	7	15	0	0	NA	DEC
Mongtomery (Germantown)	5	3	7	0	0	NA	DEC
Prince George's	17	21	27	20	14	NA	DEC
Wor-Wic	0	0	0	0	1	NA	INC

Note: NA means that the data are not available at this time.

The data in the two tables below are from the College's IR Databook, Spring 2004.

FTE by Major, Fall 1999-2003

Program	Degree	1999	2000	2001	2002	2003	% Change 2001-2003	% Change 99-03
Computer Science	AS	7.1	5.3	3.3	3.7	6.8	+ 106%	- 4%

Number of Computer Science Majors, Fall 1999-2003

Program	Degree	1999	2000	2001	2002	2003	% Chg, 2001-2003	% Chg, 99-03
Computer Science	AS	21	18	9	11	16	+ 78%	- 29%

The graduation data through 2002 indicate the following:

- Chesapeake College is among the 40% of Maryland's community colleges that had no Computer Science graduates in 2002.
- 72% of Maryland's community colleges have suffered a decline in graduation rates in Computer Science Transfer programs from 2000 to 2002.
- 47% of the colleges have had five (5) or fewer graduates in Computer Science from 2000 to 2002.

Associate degree trends in enrollment by major for Maryland's community colleges indicate that, although there was a 52% increase in Computer Science majors from 1992 to 2002, the 2001 to 2002 data indicate a 13% *decrease*. The data seem to speak to a recent trend across the state, a trend that is likely due to the economic downturn and the high unemployment in the technical sector that has taken center stage over the past couple of years. In spite of the occupational outlook in the long term, students may fear entering professions for which so many people have been laid off. Chesapeake College's data indicate that the number of computer science majors has increased 78% from 2001 to 2003. Although the current numbers do not compete with pre-2000 enrollments, the trend is positive.

The College's Computer Science Transfer program was dramatically revised from the previous program for 2001-2002. Last May we completed program articulation with Salisbury University's computer science program. The College's Web site now has a link on the page for "Academic Programs" to information about the CS major. Recent articles in IT journals indicate dissatisfaction with IT outsourcing to other countries like India[1]. More American companies are returning IT support activities back to the United States, which in turn will result in a more positive employment outlook in the long term. The computer studies department is working toward increasing CS enrollment by 1) creating a brochure for high school and other prospective students; 2) creating its own departmental Web page within the College's Web site to increase visibility of the major; 3) ensuring that ARTSYS correctly reflects the transferability of our courses and program; and 4) continuing to perform outreach to the schools, including outreach to students who excel in mathematics.

The enrollments and graduation rates in Computer Science in Maryland's community colleges have been low and somewhat static over the past few years. The Maryland Council of Community College Chief Academic Officers is reviewing community college computer science programs with an eye for a potential statewide program approach designed to reduce program costs and ensure access to computer science courses. We believe targeted marketing, coupled with articulation agreements, outreach to high schools, and an improved economy over the next year or two will lead to an increase in enrollment and graduation rates in a viable Computer Science Transfer Program at Chesapeake College. Therefore, the College recommends that the Computer Science Transfer Program continue.

I hope that the information we have provided is adequate to address concerns relating to low productivity programs. If you have any questions or require additional information, please do not hesitate to call me.

Sincerely,

Maurice B. Hickey
Vice President for Academic Services

[1] Chabrow, Eric. "By the Book," *InformationWeek*. August 16, 2004
URL: http://www.informationweek.com/story/showArticle.jhtml?articleID=29100069

Community College of Baltimore County

2004 Response

regarding

Low-Productivity Degree Programs

CCBC
Office of the Chancellor

The Community College
of Baltimore County

800 South Rolling Road
Baltimore
Maryland 21228-5317

Telephone: 410-869-1212
Facsimile: 410-869-1265

RECEIVED
SEP 1 2004
OFFICE OF THE SECRETARY M.H.E.C.

September 13, 2004

Dr. Calvin W. Burnett
Secretary of Higher Education
Maryland Higher Education Commission
839 Bestgate Road, Suite 400
Annapolis, MD 21401-3013

Dear Secretary Burnett:

In response to the July 16, 2004 memorandum regarding the Low Productivity Program Report, the Board of Trustees of The Community College of Baltimore County, at its September 8, 2004 meeting, approved a recommendation from the college administration that the Occupational Safety and Health Technology Program be awarded the status of "Permanent Exemption" as outlined on the attached form.

We appreciate your consideration in this matter and look forward to your response. Please let me know if you have any questions.

Sincerely,

Dr. Al Starr
Interim Vice Chancellor for Learning and Student Development

cc: I. McPhail, Chancellor
A. Jones, Catonsville Campus
G. Proulx, Dundalk Campus
M. Netzer
B. Ebersole
D. McConochie

THE COMMUNITY COLLEGE OF BALTIMORE COUNTY

MHEC LOW PRODUCTIVITY REPORT

2004-2005

Academic Program: Occupational Safety and Health Technology

Summary: The Occupational Safety and Health Technology (OSHT) program was identified by MHEC as having low degree production. Until July 1, 2004, the OSHT program was under the direction of the School of Business, Social Sciences, Wellness, and Education where it received limited direction primarily because an adjunct instructor had responsibility for its overall success. As part of the College's reorganization efforts and the low enrollment of students, CCBC moved the program on July 1st, 2004 to the School of Applied and Information Technology. The organizational change was to address the program's lack of full-time attention and also align it better with the School's current programs. Under the new structure, a full-time faculty member has assumed the coordinator duties along with his other coordination and teaching duties. In an effort to further support the OSHT program, the School of Applied and Information Technology has applied for a five-year grant from the National Institute of Occupational Safety and Health (NIOSH), which will assist in building for the future. The CCBC OSHT program has statewide designation, and a marketing strategy for expanded marketing is in the planning stages. Further, CCBC is creating articulation partnerships with four-year institutions which offer a bachelor's degree in this field in order to provide students a transfer option. Finally, it should be noted that courses from the OSHT program are required by other degree options.

The Occupational Safety and Health Technology program enrolls students who are working for a variety of companies and State agencies providing them the opportunity to become trained safety professionals. It is the one program in the state that can meet this industry need. Plans for a revitalized program advisory council should provide the overall direction to assure this program meets the current safety and health needs of Maryland workforce.

Recommended Action Based Upon MHEC Criteria: The Occupational Safety and Health Program is a statewide program that is of low cost to the institution, and meets an identified industry need. Plans for expanding the program are being implemented. CCBC requests that this program receive a Permanent Exemption status based on MHEC criteria.

Date: August 18, 2004

Signature of Campus President _____

Frederick Community College

2004 Response

regarding

Low-Productivity Degree Programs

Frederick Community College

RECEIVED
AUG 13 2004
OFFICE OF THE SECRETARY M.H.E.C.

August 6, 2004

Dr. Calvin W. Burnett
Secretary of Higher Education
Maryland Higher Education Commission
839 Bestgate Rd., Suite 400
Annapolis, MD 21401-3013

RE: Discontinuance of Office Systems Management Program

Dear Dr. Burnett,

Frederick Community College (FCC) is requesting that the Office Systems Management Program be removed from the MHEC Academic Program Inventory. The decision was made in the fall of 1999 to move Office Systems Management to an option under the Information Processing Program.

Sincerely,

Patricia Stanley

Dr. Patricia Stanley
President
Frederick Community College

mcs
pc: Dr. Michael Kiphart, MHEC
F. E. Porter, MHEC
Dr. Elizabeth Zoltan, FCC

7932 Opossumtown Pike ■ Frederick, Maryland 21702 ■ 301.846.2400 ■ Fax 301.846.2498 ■ www.frederick.edu

Hagerstown Community College

2004 Response

regarding

Low-Productivity Degree Programs

HAGERSTOWN
COMMUNITY
COLLEGE

11400 Robinwood Drive • Hagerstown, Maryland 21742-6590 • 301-790-2800 • www.hagerstowncc.edu

Office of the Dean of Academic Affairs

October 1, 2004

Dr. Michael J. Kiphart
Senior Education Policy Analyst
Division of Planning and Academic Affairs
Maryland Higher Education Commission
839 Bestgate Road, Suite 400
Annapolis, Maryland 21401-3013

Dear Dr. Kiphart:

Hagerstown Community College has closed and terminated its Office Technology and Financial Services programs as of January 1, 2004. Both of these programs had low enrollment, and it was in the best interests of the college and the community that we closed these programs.

We have admitted no new students to either of these programs for over one academic year. Therefore, there should be no students hoping to complete either of these programs.

Thank you for processing this programmatic information.

Sincerely,

Julian J. Sidlowski, Ph.D.
Dean of Academic Affairs

JJS:slk

Howard Community College

2004 Response

regarding

Low-Productivity Degree Programs

HOWARD
COMMUNITY COLLEGE
You Can Get There From Here.

10901 Little Patuxent Parkway
Columbia, MD 21044-3197
410-772-4800
TDD: 410-772-4822
www.howardcc.edu

RECEIVED
SEP 7 2004
OFFICE OF THE SECRETARY M.H.E.C.

DATE: September 3, 2004

TO: Dr. Calvin Burnett, Secretary
The Maryland Higher Education Commission

FROM: The Board of Trustees, Howard Community College

Report to the Maryland Higher Education Commission on Low Productivity Programs

In its June 18, 2002 Report to the Maryland Higher Education Commission on Low Productivity Programs, the Board of Trustees of Howard Community College requested that the Biomedical Engineering Technology program be exempted from deletion because of its centrality to our mission as a comprehensive community college to respond to the needs of a diverse and dynamic community. The following is a direct quote from the June 18, 2002 report:

> Like the Photonics program, which will have low enrollments until the industry recovers from the economic downturn, we consider the Biomedical Engineering Technology program to be of strategic importance to Howard County. Currently the number of students graduating in this area is small, but interest in the program has been consistent. Three students graduated with degrees in Biomedical Engineering Technology in May of 2002. In addition, the program provides a service to workers from the industry—who take individual courses to update their skills. Most importantly, it is not clear at this point what impact new Health Insurance Portability and Accountability Act (HIPAA) regulations will have on the Biomedical Engineering Technology field and whether a new type of technician may evolve out of the HIPAA implementation process. We should be cautious about deleting programs that have the potential of being invigorated by technological advances, important regulatory changes, or new businesses situating themselves in Howard County.

The Board of Trustees of Howard Community College reaffirms its support for the Biomedical Engineering Technology program and its intent that the program be continued.

Sincerely,

Roberta E. Dillow

Roberta Dillow, Chair
Board of Trustees
Howard Community College

Montgomery College

2004 Response

regarding

Low-Productivity Degree Programs

Montgomery
College

August 4, 2004

RECEIVED
AUG - 5 2004
OFFICE OF THE SECRETARY M.H.E.C.

Dr. Calvin W. Burnett, Secretary
Maryland Higher Education Commission
839 Bestgate Road
Suite 400
Annapolis, MD 21401

Dear Dr. Burnett:

Montgomery College was notified that our Printing Management program was identified as a low-productivity degree program this year. We are requesting a "Three-Year Exemption" for this program because it is undergoing a very comprehensive review during the 2004-2005 academic year as part of the College's Academic Area Review process. Via this process, begun two years ago, every program and discipline at the College is thoroughly reviewed on a five-year cycle, and this year, Printing Management will be examined in great detail. As a result of that review, the College will identify actions that must be taken for program improvement, or will recommend program elimination. We will forward to the Commission the results of this program review and either the plan for improvement of the program or a recommendation for deletion of the program from the College's inventory.

Thank you for your consideration of our request. By permitting us to conduct this formal, year-long review of the program, you will enable us to be much more thorough and reasoned in our deliberations over the program's future.

Sincerely,

Charlene R. Nunley, Ph.D.
President

CRN:rl/mm

Central Administration
900 Hungerford Drive
Rockville, MD 20850
(301) 279-5000

Germantown Campus
20200 Observation Drive
Germantown, MD 20876
(301) 353-7700

Rockville Campus
51 Mannakee Street
Rockville, MD 20850
(301) 279-5000

Takoma Park Campus
7600 Takoma Avenue
Takoma Park, MD 20912
(301) 650-1300

Continuing Education
51 Mannakee Street
Rockville, MD 20850
(301) 279-5188

University System of Maryland

Bowie State University
Frostburg State University
Towson University
University of Maryland, Baltimore
University of Maryland, College Park

2004 Response

regarding

Low-Productivity Degree Programs

UNIVERSITY SYSTEM OF MARYLAND

CELEBRATING A DECADE OF LEARNING, LEADERSHIP, OPPORTUNITY

OFFICE OF ACADEMIC AFFAIRS

September 17, 2004

Dr. Michael J. Kiphart
Assistant Secretary for Planning and Academic Affairs
Maryland Higher Education Commission
839 Bestgate Road, Suite 400
Annapolis, MD 21401-3013

Dear Dr. Kiphart:

I am pleased to forward for your consideration reports from, Frostburg State University, Towson University, University of Maryland, Baltimore, and University of Maryland, College Park on programs that MHEC has identified as "low productivity." Included are:

Frostburg State University:

Bachelors	083801	Business Education
	170302	Actuarial Science

Towson University:

Bachelors	110200	French

University of Maryland, Baltimore:

Masters	040930	Pharmacology & Experimental Therapeutic
	041230	Anatomy
	041430	Biological Chemistry
	041701	Molecular and Cell Biology
	042230	Human Genetics
	120511	Oral Pathology
	129955	Pharmacy Administration
Doctoral	120511	Oral Pathology

University of Maryland, College Park

Bachelors	010100	Agriculture, General
	030700	Central European, Russian & Eurasian Stud
	110400	Italian Language & Literature
	129905	Combined Program – Dentistry
	129906	Combined Program - Medicine
	149903	Combined Program – Law

3300 METZEROTT ROAD • ADELPHI MARYLAND 20783-1690 • VOICE: 301.445.1992 • FAX: 301.445.1914 • WEB: WWW.USMD.EDU

UNIVERSITY OF MARYLAND, BALTIMORE 1807 • UNIVERSITY OF MARYLAND, COLLEGE PARK 1856 • BOWIE STATE UNIVERSITY 1865 • TOWSON UNIVERSITY 1866
UNIVERSITY OF MARYLAND EASTERN SHORE 1886 • FROSTBURG STATE UNIVERSITY 1898 • COPPIN STATE COLLEGE 1900 • SALISBURY STATE UNIVERSITY 1925
UNIVERSITY OF BALTIMORE 1925 • UNIVERSITY OF MARYLAND CENTER FOR ENVIRONMENTAL SCIENCE 1925 • UNIVERSITY OF MARYLAND UNIVERSITY COLLEGE 1947
UNIVERSITY OF MARYLAND, BALTIMORE COUNTY 1966 • UNIVERSITY OF MARYLAND BIOTECHNOLOGY INSTITUTE 1985

Masters	092000	Nuclear Engineering
	100701	Theatre
	110300	German Language & Literature
	149904	JD/MBA (W/UMAB)
	150500	Linguistics
	169902	Library Science/Geography
	190800	Chemical Physics

If you have any questions about institutional evaluations and recommendations, please contact Dr. Gertrude Eaton, who will work with the institutions to resolve your concerns.

Sincerely yours,

Irwin L. Goldstein
Vice Chancellor for Academic Affairs

Attachments

cc: Stephen J. Simpson
James Brennan
Malinda B. Orlin
William Destler
Gertrude Eaton

BOWIE
STATE UNIVERSITY

Prepare for Life

Office of the President

September 28, 2004

Dr. Michael Kiphart
Assistant Secretary for Planning & Academic Affairs
Maryland Higher Education Commission
839 Bestgate Road, Suite 400
Annapolis, Maryland 21401-3013

Dear Dr. Kiphart:

Bowie State University requests for the program in Theater Arts, a three year exemption from the low productivity reporting requirement. The program has not had any graduates in excess of three years. However, the program's lack of productivity in graduating students resulted from the mandated directive in the early nineties for the University to terminate identified programs in the Department of Humanities and Fine Arts, and during the reconfiguration, the Department of Fine and Performing Arts inadvertently terminated the Theater Arts Degree Program along with the Music and Art Education Degree Programs. Upon its recent recognition of this error, the University has accelerated the marketing of the Theater Arts Program and hired two new Assistant Professors for FY04 to assist in facilitating the fast tracking of this major.

Currently, the program has 10 students enrolled, and is looking to increase that enrollment with the fall 2004 class. The requested exemption will provide sufficient time to validate the productivity of this program.

Sincerely,

William P Marable

William P. Marable
Chief of Staff

14000 Jericho Park Road, Bowie, Maryland 20715 p 301 860-3555 f 301 860.3510
www.bowiestate.edu

Frostburg State University
W.02

PROPOSAL TO DISCONTINUE AN EXISTING ACADEMIC PROGRAM

Program Name BS/BA in Actuarial Science

Department Mathematics

College College of Liberal Arts and Sciences

1. **What are the primary reasons for this discontinuance request?**
   In spite of increased recruitment efforts, the actuarial science program continues to appear on MHEC's Low Productivity List. This may be an area of interest that is too specialized for an undergraduate program.

2. **Is the discontinuance of this program consistent with the University mission?**
   We are reluctant to discontinue a program that originally was designed to attract banking and insurance firms to Western Maryland as an economic development initiative. However, without graduates, the program is not meeting this objective. We appreciate the strong support we have received from area employers, who have sponsored a scholarship and provided internships and employment for students.

3. **Can the discontinuance of this program be accomplished within the existing program resources of the institution?**
   There will be no additional costs incurred in discontinuing this program.

4. **What is the proposed date for discontinuing new admissions to this program?**
   We will discontinue recruitment and admission to this program immediately, so Fall 2004 will be the last date of admission.

5. **How will currently enrolled students be accommodated so they can realize their degree objectives?**
   There are four declared actuarial science majors enrolled in Fall 2004, ranging from a new freshman to seniors. One of these students will complete his actuarial mathematics course work in Fall 2004. In the past, many students have changed their majors from actuarial science to mathematics. If the current students choose to continue in actuarial science, the necessary mathematics courses will be provided through Spring 2008 – as independent studies if necessary or by substituting other available courses. Required courses outside the department are regularly offered to serve other degree programs and will be easily accessible to actuarial science students.

6. **What effect will program discontinuance have on tenured and non-tenured faculty and other staff in the program?**
   There is only one faculty member assigned to this program on a part-time (less than 25 percent) basis. This position will be assigned full time to mathematics, which is the department in which the faculty member holds tenure. Since the faculty member is a Fellow of the Society of Actuaries (a rare certification), we would like to continue to take advantage of her special expertise. The Department of Mathematics is considering several options for insuring that the actuarial mathematics courses will continue to be offered when there are enough interested students. There is no staff support specifically assigned to this program

7. **How will program budget funds be reallocated?**
   Other than a portion (less than 25 percent) of the salary and benefits for the one faculty member who teaches actuarial mathematics, there are no funds specifically budgeted for this program. Since that faculty member will continue to be a full time instructor in mathematics, there are no funds to reallocate.

8. **Are there other programs in existence at Maryland public institutions in which students interested in this type of program might enroll?**
   - There is no other actuarial science major at any Maryland public institution or in the immediate region.
   - Towson State University offers a concentration in actuarial science.
   - The University of Maryland Baltimore County offers a concentration in actuarial science.
   - The University of Maryland College Park offers a certificate in actuarial science.

Frostburg State University
W.02

PROPOSAL TO DISCONTINUE AN EXISTING ACADEMIC PROGRAM

Program Name BS/BA in Business Education

Department Educational Professions

College College of Education

1. **What are the primary reasons for this discontinuance request?**
The business education program is on the 2004 MHEC Low Productivity List. The program no longer attracts a critical mass of students.

2. **Is the discontinuance of this program consistent with the University mission?**
We are sorry to discontinue an education program in these times of teacher shortages. Also, this is our oldest partnership program with Allegany College of Maryland. However, the upturn in enrollments we experienced in Fall 2000 (which led us to request program continuation in Fall 2001) has not resulted in the expected increases in the number of graduates. In 2004, there were no graduates.

3. **Can the discontinuance of this program be accomplished within the existing program resources of the institution?**
There will be no additional costs incurred in discontinuing this program.

4. **What is the proposed date for discontinuing new admissions to this program?**
We plan to discontinue recruitment and admission to this program immediately, so Fall 2004 will be the last date of admission.

5. **How will currently enrolled students be accommodated so they can realize their degree objectives?**
Pre-census data for Fall 2004 indicate there are five enrolled students with declared majors in business education. One of these students will complete her program in December 2004, and another just transferred here from Allegany College of Maryland with the appropriate background. Three additional students have not transferred the required office technology courses that must be completed at ACM and will be advised to select another program. The one remaining student will need education and business courses that also serve other programs. When she is ready to take her methods and student teaching internship courses, we will hire an adjunct faculty member to supervise her.

6. **What effect will program discontinuance have on tenured and non-tenured faculty and other staff in the program?**
There are no full time tenured or non-tenured FSU faculty teaching exclusively in this program, and no staff support assigned to it. Advising is provided by a tenured faculty member in the Department of Educational Professions who will add advisees in other education programs to his load as this program is discontinued. The teaching methods course and internship supervision are offered by an adjunct faculty member who will no longer be hired once all students have completed the program. We are sorry to end this relationship and hope we may use her expertise in other courses.

7. **How will program budget funds be reallocated?**
The only funds currently expended are $2,400 per year to pay an adjunct faculty member to teach the methods course and supervise the teaching internship. These funds will be reallocated to areas where adjunct faculty are more urgently needed.

8. **Are there other programs in existence at Maryland public institutions in which students interested in this type of program might enroll?**
The University of Maryland Eastern Shore has a baccalaureate program in business education that the Maryland Higher Education Commission has selected for continuation due to the enrollment of 15 students in 2003, which is better than Frostburg's enrollment of five students.

TOWSON
UNIVERSITY

September 17, 2004

Dr. Gertrude Eaton
Associate Vice-Chancellor for Academic Affairs
University System of Maryland
3300 Metzerott Road
Adelphi, Md. 20783

Office of the Provost
Towson University
8000 York Road
Towson, MD 21252-0001

FRENCH: LOW CREDIT HOUR PRODUCTIVITY 2004 FOR TOWSON UNIVERSITY

The number of French majors enrolled at Towson University from 1993 through 2003 has not varied significantly. The numbers have ranged from a high of 20 majors in 1999 to 10 in 1996. The number of graduates also corresponds to this range with only 1 graduate recorded in 2001, and 7 graduates in 2000. It should be noted that French is one of three majors (German and Spanish are the others) offered by the Department of Modern Languages at Towson University. All three are majors are essential to our liberal arts core.

The low number of French majors may be attributed to several factors, ranging from an overall decline in student interest in modern languages during the last decade, to French no longer being emphasized as an international language, to a significant increase in Spanish majors as societal demands and workforce needs for bilingual employees with English-Spanish language skills grew. However, with the deeper commitment by our university and our student population to be more attentive to a global perspective, there is again more interest in all foreign languages.

The chart below provides data on Modern Language majors at Towson University compared with the number of graduates over a 10 year period.

TOWSON
UNIVERSITY

TOWSON UNIVERSITY
Modern Language majors and graduates 1993-2003

No. of Majors	No. of Graduates
FRENCH--- 157	41
GERMAN---118	34
SPANISH--- 514	116

These figures suggest that a number of students who officially declared a modern language as their major, either changed their minds, or selected it only as a second major which would not be recorded in the statistical data base as the degree of record.

Further, we believe that a number of students use French to fulfill language requirements for other majors. For example, during this 10-year span of time, Towson University also began to offer more sections of other modern foreign languages – Chinese, Italian, and Japanese – in order to accommodate a more diverse student body. In addition, courses in classical languages – Greek, Hebrew and Latin – were also offered to meet the demands of students in other academic programs namely, International Studies, Cultural Studies, Asian Studies and Classical Studies. We believe that this outlook on languages, French being one, in our general education portfolio is just as important as the status as a major.

As is the case at other colleges and universities, lower level courses in French and other languages, primarily those at the introductory or intermediate levels fulfill General Education requirements. The lower level courses also support Towson University's requirements for the Bachelor of Arts degree.

Although the emphasis in recent years has been to develop and enhance academic programs in applied majors, especially in computer technologies and applied sciences, Towson's curriculum is still grounded in a strong liberal arts core. We strongly support the statement found in Senate Bill 812 dealing with procedures for new programs in which the Maryland Higher Education Commission declares:

> [T]he Commission recognizes and supports the tradition of liberal arts education and the need for higher education programs which offer individual and societal benefits that are independent of manpower and market demand considerations. These programs provide immeasurable returns to the state in part by instilling in citizens a capacity for advanced learning and an undertaking of the fundamentals of civilization....

TOWSON
UNIVERSITY

We believe the French program at Towson University, through its varied course offerings, serves to provide one of the foundations of the liberal arts tradition, services general education and other degree requirements, and services other majors. Its numbers, both in terms of majors and graduates, will not be overwhelming in the near future, but the role of the program will provide one of the critical elements of a strong liberal arts education at Towson University. We ask for its continuation.

Sincerely,

Deborah J. Leather

Deborah J. Leather
Associate Provost

cc: Dr. James Brennan
Dr. Rita Marinho
Dr. Sal Zumbo
Mr. William Reuling

MALINDA B. ORLIN, Ph.D.
Vice President and
Dean, Graduate School

ACADEMIC AFFAIRS

UNIVERSITY OF MARYLAND

TO: Irving Goldstein, Vice Chancellor for Academic Affairs

FROM: Malinda Orlin, Vice President for Academic Affairs

RE: UMB Low Productivity Program Report Response

September 8, 2004

I write to explain the individual situations of UMB programs listed by MHEC as low productivity using the criterion of degree production and to request exemptions for the programs. All programs on the list are graduate programs offered by UMB's Schools of Dentistry, Medicine, and Pharmacy in collaboration with the UMB Graduate School. I will explain the justification behind our request for exemption by School.

Dental School

The Dental School's Masters and Doctoral programs in Oral Pathology were included on the list. We are requesting a three-year exemption on the grounds that the Dental School's new strategic direction with greater emphasis on oral cancer treatment and diagnosis has produced a renewed commitment to and investment of new resources in Oral Pathology. We are in the concluding phase of recruiting 2-3 new faculty, a clear indication of the level of commitment which the Dental School, with the support of the campus, has made to this graduate program.

During the last two years the Dental School has considered merging the program with the graduate program in Pathology in the School of Medicine and as a result resources have not been invested in Oral Pathology. We also delayed the external program review in anticipation of that proposed merger. However, after careful consideration the Dental School and the UMB Graduate School have decided not to pursue this merger, but to move forward with an expansion of the Oral Pathology - Dental School program. This expansion includes an external program review scheduled for this academic year.

Oral Pathology is an important part of a new School initiative focusing on increasing research, teaching and service in the subject of oropharyngeal cancer. Maryland, unfortunately, ranks 6th in the nation in mortality linked to the consequences of these devastating conditions. To lose the graduate program at this time would have serious consequences for the initiative.

515 West Lombard Street, 4th Floor • Baltimore, Maryland 21201-1602 • 410 706 1850 • 410 706 0234 *fax* • mborlin@umaryland.edu *e-mail*

We are confident that UMB's investment in the graduate program and the strategic direction is responsive to increased national attention on oral pathology. The National Institute of Dental and Cranial Research (NICDR) of the NIH has established an Oral and Pharyngeal Cancer branch which is to address the basic and translational needs of resolving oral diseases and cancer.

We request a three year exemption for the Oral Pathology graduate program. We believe that by that time as a result of increased investment in the program, continuation of strong senior leadership in cancerbiology, congruence with enhanced UMB-wide initiative in cancer research and treatment, and a comprehensive external review to provide specific guidance, that we will have an outstanding, appropriately enrolled program.

School of Medicine

Five Masters degree programs from the School of Medicine (SOM) are included in the low producing program list. They are Pharmacology & Experimental Therapeutics, Anatomy, Biological Chemistry, Molecular and Cell Biology, and Human Genetics.

UMB is requesting a three year exemption for these programs based on the fact that the SOM and the Graduate School are mid-way through a comprehensive review of the SOM graduate programs with the intention of reducing the number of independent programs and reordering tracks to respond to changes in national graduate biomedical education and efficiency and effectiveness. The dominant theme nationally and in the UMB review is how to structure educational programs to foster the interdisciplinary collaboration among faculty and students that is the hallmark and fundamental requirement of 21st century biomedical research and graduate education.

At present the SOM is approved by MHEC to offer 13[1] Doctoral programs, most, but not all of which are departmentally based. The five Masters programs identified as low producing are "infrequently awarded" subsets of these Doctoral programs. However, rather than request permanent exemption for these Masters programs, we believe a better approach, because of the comprehensive review of biomedical graduate education, is a three-year exemption. All biomedical graduate education offered by the SOM will be effected by this review. The landscape will change significantly in the next few years.

We anticipate one of the outcomes to be a smaller number of free-standing interdisciplinary Doctoral programs which are not departmentally based. We further anticipate that most, if not all of the Masters programs which are subsets of Doctoral programs, such as those listed, will be merged into a single Masters program which will serve all SOM Doctoral programs. This will not include the "free standing" masters programs which do recruit and admit students.

---

[1] Anatomy, Biological Chemistry, Epidemiology, Gerontology, Human Genetics, Microbiology, Molecular and Cell Biology, Neuroscience and Cognitive Science, Pathology, Pharmacology and Experimental Therapeutics, Physical Rehabilitation Science, Physiology, and Toxicology.

When this review is complete, UMB will, of course, present the restructuring to the USM BOR and MHEC. Recommendations on the Masters programs will be included. Consequently, we are requesting a three-year exemption so that our description of Masters education in the SOM graduate programs will reflect our most forward thinking.

Pharmacy School

The Pharmacy School program cited in the MHEC low productivity program report is the Masters in Pharmacy Administration (since renamed Pharmaceutical Health Services Research ((PHSR))). We are requesting a permanent exemption for this program because the MS is a subset of the existing doctoral program in Pharmaceutical Health Services Research. Consequently the coursework for the program is drawn exclusively from existing coursework. There is no additional cost to the university. The MS is infrequently awarded and when awarded is conferred only on students who do not complete the requirements for the doctorate. Students are not recruited or admitted directly into the Masters program. This accounts for the low productivity of the Masters program.

The PHSR PhD program has healthy enrollment – 18 in 2002 and 23 in 2003. This appears to be a clear application of the category of Permanent Exemption as permitted by MHEC.

Thank you very much for your consideration of our requests for Three-Year Exemptions for the Dental and Medicine graduate programs; and our request for Permanent Exemption for the Pharmaceutical Health Services Research masters program. I will be happy to provide any further information.

Cc: Dr. Gertrude Eaton

University of Maryland, College Park
Response to the Low Productivity Program Report; Summer 2004

BACHELOR'S PROGRAMS

HEGIS 0101.00 Agriculture, General

This program is designed for students who are interested in a broad education in the field of Agriculture. It provides an overview of both plant and animal agriculture by including required courses from Animal Sciences, Agricultural and Resource Economics, Biological Resources Engineering, and Natural Resource Sciences, the latter including courses concerning both plants and soils. Structured as a selection of courses from other disciplines, the program does not have any courses or faculty specifically devoted to it. It is a no-cost means of providing high quality and significant training to the small numbers of students who prefer a broad training in agriculture to the more concentrated study of the other majors. The attached excerpt from the 2004-05 Undergraduate Catalog describes the program.

In Spring 2000 we asked for and were given an exemption for this program. We again request a permanent exemption for the Bachelor's program in General Agriculture.

HEGIS 1299.05 Combined Program - Dentistry
HEGIS 1299.06 Combined Program - Medicine
HEGIS 1499.03 Combined Program - Law
***HEGIS 1299.04 Combined Program - Veterinary Science

These programs exist for the convenience of students who are able to enter a professional school in Dentistry, Medicine, or Law after having completed at least 90 credits, but fewer than the number required to earn a bachelor's degree. Under certain circumstances, these students are able to count the first year's work in the professional school as 30 credits towards a bachelor's degree at the University of Maryland. A successful student receives a degree in the appropriate one of the three programs listed above. The student will not have completed the required work for any other program, so these are the only options available.

There are no courses and no other resources devoted to these degree programs. Advisement is done by the regular pre-dentistry, pre-medicine, and pre-law advisors at the University. While students rarely take these paths, providing them is a no-cost means of encouraging the rare student who is able to take advantage of one of them and thereby move more quickly to and through his or her professional training.

In Spring 2000 we asked for and were given an exemption for these programs (as well as for the combined program in Veterinary Medicine). We again request a permanent exemption for these three combined bachelor's/professional degree programs.

*** The Combined Program in Veterinary Sciences, HEGIS 1299.04 was excluded from our official list because it enjoys high enrollments. However, the same arguments apply to that program as they do to the three programs listed above. We request that a permanent exemption be given for the Combined Program - Veterinary Science.

HEGIS 0307.00 Central European, Russian, and Eurasian Studies

This is a small, academically demanding, interdisciplinary program whose requirements

are met entirely through existing courses in Russian or German Language and Literature and in seven other programs. Demand for this program will fluctuate according to current political events. There are no faculty members devoted to this program nor courses taught specifically for it. This is an additional opportunity for students at no additional resource cost.

Attached are pages from the 2004-05 Undergraduate Catalog showing the departmental affiliation of all the faculty associated with the program, and also the distribution of curricular elements among the participating departments and programs.

In Spring 2000 we asked for and received an exemption for this program, then known as Russian Area Studies. We again ask for a permanent exemption for the Central European, Russian, and Eurasian Studies program.

HEGIS 1104.00 Italian Language and Literature

The bachelor's program in Italian Language and Literature recently made two important structural changes that are already showing results in terms of increased student enrollment and graduation rate. In May, 2002 the program received approval to add a "business option" in which several upper division courses devoted to Italian civilization and culture are replaced with courses in Commercial Italian, and internships with relevant businesses are encouraged. In May, 2003 a modified track of the language, culture, and literature option was created that articulates well as a double major with our Foreign Language Education program. This double major satisfies the requirements for modern language teacher certification in Maryland. It was established with the strong encouragement of the Maryland State Department of Education.

While these changes do not show up in the graduation rates through 2003, we are already seeing their effects in increased enrollment and will show already some real improvement in 2004 graduations. In fact, we will have 4 Italian graduates in 2004, as compared with five total in 2001-2003. One of these is the first to complete the new business option. As for enrollment, the number went from 4 in Fall 01 to 7 in Fall 02 to 9 in Fall 2003 (11 counting students with a double major, secondary in Italian) to 11 in Fall 04 (13 counting double majors). It is significant that the number of students in the business option increased from two in Fall 03 to five in Fall 04. Clearly the recent curriculum changes are having the desired effect in increasing the productivity of this program. We anticipate that it will reach or exceed five graduates in 2005 and remain at this level thereafter.

Based on this information and the Commission policy on low productivity program review, we request a three-year exemption for the bachelor's program in Italian Language and Literature.

MASTER'S PROGRAMS

HEGIS 0920.00 Nuclear Engineering

The University recognizes that its graduate programs in Nuclear Engineering are not productive in their current configuration. A loss of faculty and evolution in the interests of the remaining faculty towards other disciplinary areas have undermined Nuclear Engineering's ability to offer a comprehensive set of graduate courses and limited its ability to respond effectively to recent opportunities in research funding.

On the other hand, the broader issue of the development, availability, and diversification of energy resources is of vital importance nationally, and is getting substantially more attention lately, as our dependence on an insecure oil supply and limited natural gas supplies becomes clearer to the general public and elected officials.

To build on the still-strong reputation of Nuclear Engineering at Maryland, to capitalize on the broad range of energy-related efforts underway on this campus, and to help propel the University to a leadership position in an area of emerging public interest, the Clark School has begun a process of reconceptualizing the Nuclear Engineering program as one in Energy Engineering. The Energy Engineering curriculum will include emphases on optimizing the use of fossil fuel resources (e.g. coal, natural gas), effectively using renewable resources (e.g. wind, solar, biomass, hydrothermal), identifying the role to be played by conventional and advanced nuclear reactors, and developing energy-efficient manufacturing as well as combined heat and power systems for homes and industrial parks. This new program will attract the participation of many additional faculty whose interests include, but go well beyond, nuclear energy. We anticipate that a new concentrated effort in this direction, to be hosted and administered by the Mechanical Engineering Department, will attract substantial sponsored research funding and a large cohort of students who will want to be trained in a field that will be so important to our collective future.

To facilitate this transition from Nuclear Engineering to Energy Engineering, we propose to do the following:

1. Immediately suspend admission of any additional students to our Nuclear Engineering masters or doctoral program, directing them instead to Mechanical Engineering or other suitable departments in the Clark School.

2. Appoint an interim Nuclear Engineering DGS who will work with our already enrolled students to establish degree plans that will enable each of them to complete degree requirements in Nuclear Engineering, Mechanical Engineering - with a specialization in Energy Engineering, or another suitable department in the Clark School.

3. Draw together interested faculty from the Clark School and other academic units to articulate the mission, define the scope, and develop the curriculum for a new graduate program

in Energy Engineering.

4. Carry this recommendation, to replace the current Nuclear Engineering programs with Energy Engineering M.S. and Ph.D. programs, through the institutional shared governance processes required for this kind of action.

5. Once the recommended program replacement is endorsed by the institutional processes, submit the proposal to discontinue the Nuclear Engineering programs and to replace them with a graduate program in Energy Engineering to the Board of Regents and the Maryland Higher Education Commission for final approval.

We expect this process to be completed late in the 2004-05 academic year.

HEGIS 1007.01 Theatre (MA)

In 1998 the graduate programs in theatre began to be restructured. The Ph.D. program was expanded and renamed in 1999 to Theatre and Performance Studies. No new students were admitted to the M.A. program between 1998 and 2000 while changes were being decided upon and put into place. Both the masters and the doctoral program began steady growth soon thereafter. One of the 2001 degrees and the single 2003 degree were awarded to the two students admitted in Fall 2000, the first ones admitted after the hiatus. We have already awarded three degrees in 2004 and a fourth degree that will be posted in 2005. An additional two degrees are anticipated for later in 2005. Changes specifically in the M.A. program that will enhance its attractiveness and allow faster degree completion are about to be submitted for approval. The program is growing in numbers and quality, and we expect the graduation rate to continue to hold at a healthy level.

Based on the fact that recent program modifications are demonstrably beginning to bear fruit in increasing numbers of graduates, and on the Commission policy on low productivity program review, we request a three year exemption for the M.A. program in Theatre.

HEGIS 1103.00 German Language and Literature

According to the Commission's inventory, this is only master's program in German in a public institution in the State of Maryland. As such, it uniquely serves the needs of, among others, teachers of the German language in the middle schools and high schools of the state. A very incomplete count shows at least 20 schools where German is taught. Currently four teachers of German are enrolled in the program, of whom two are quite close to completing it. We believe that the program should have been excluded from the low productivity report because it is unique and meets a non-duplicative workforce shortage need.

It is also the case that maintaining the M.A. program does not require teaching additional courses, since the courses taken by master's students are also needed both for the Ph.D. program and for the German Area of Concentration in the Second Language Acquisition and Application

(SLAA) master's program. Thus the program can be maintained at no cost additional to that required to offer the Ph.D. and the SLAA masters and should receive a permanent exemption on that basis.

HEGIS 1499.04 JD/MBA (W/UMB)

This is a program wherein students enroll simultaneously at the Smith School of Business and the UMB Law School, each program allowing some overlap of courses with the other, so that both the JD and the MBA can be earned with fewer than the sum of the usual number of credits for the two programs. Students who complete the program in fact do receive both the JD and the MBA degrees, so there cannot ever be any degrees awarded specifically through the joint program. The program is maintained in order to have a means of reporting student enrollment; reporting students in both the JD and the MBA programs would double the actual student headcount numbers.

The following excerpt from the R.H. Smith School of Business website describes the program:

"MBA/JD Degree
Linking legal and business skills

The MBA/JD degree prepares students for administrative or managerial positions in industry, commerce, or government, where an understanding of both business and law is necessary. In addition to meeting each school's admission criteria, students must take the Law School Admission Test (LSAT) and the Graduate Admission Test (GMAT). Under the dual-degree program, 75 credits in law school courses and 33 credits in business courses are required for graduation. The School of Law at the University of Maryland, Baltimore allows nine credit hours of business courses toward the JD, and the Smith School of Business allows 21 credit hours of law school courses toward the MBA. The program typically takes four years to complete."

This program can continue at no added cost to the institution. There are no faculty or course resources associated with this program. Advisement is given by the regular MBA and JD advisors. In Spring 2000 we asked for and were given an exemption for the program. We again request a permanent exemption for the JD/MBA program.

HEGIS 1505.00 Linguistics

In Fall 2003 we requested and were granted an exemption for this program because it is a Master's degree program that is in fact a subset of an existing doctoral programs. The Master's degree is infrequently awarded and, when awarded, it is conferred only on students who, for a variety of reasons, do not complete the requirements for the doctorate. Students are not recruited nor admitted into the Master's degree program but must apply for direct admission into the doctoral degree program. This program can continue at no added cost to the institution.

The following excerpt from the Departmental website describes entry to the program:

"The Department does not offer admission to students who intend to pursue a terminal MA degree. Although technically we can award MA degrees, we only do this in cases when a student decides not to complete the PhD degree."

We again request a permanent exemption for the Master's degree program in Linguistics.

HEGIS 1699.02 Library Science/Geography
***HEGIS 1699.01 Library Science/History

Library Science/Geography is a program wherein students enroll simultaneously for the Master of Library Science (MLS) and the MA in Geography degrees, each program allowing some overlap of courses with the other, so that both the MLS and the MA can be earned with fewer than the sum of the usual number of credits for the two degrees. Students who complete the program in fact do receive both the MA and the MLS degrees, so there cannot ever be any degrees awarded specifically through the joint program. The program is maintained in order to have a means of reporting student enrollment; reporting students in both the Geography and the Library Science programs would double the actual student headcount numbers.

The following excerpt from the Graduate Catalog further describes the program:

"Master of Library Science and Master of Arts (M.A./M.L.S.)

This is a joint program of the College of Information Studies and the Department of Geography in computer-based spatial analysis and information management. It results in two Master's degrees: the Master of Library Science (MLS) and the Master of Arts in Geography. The dual-degree program requires a minimum of 54 graduate credit hours and is normally completed by a full-time student in two years of study plus one summer term. Students must apply separately, and be admitted to both the College of Information Studies and to the Geography Department."

This program can continue at no added cost to the institution. There are no faculty or course resources associated with this program. Advisement is given by the regular MLS and Geography advisors. In Spring 2000 we asked for and were given an exemption for the program. We again request a permanent exemption for the Library Science/Geography program.

*** The joint Library Science/History program, HEGIS 1699.01 was excluded from our official list because it enjoys high enrollments. However, the same arguments apply to that program as they do to the program listed above. We request that a permanent exemption be given for the Library Science/History program.

HEGIS 1908.00 Chemical Physics

In Fall 2003 we requested and were granted an exemption for this program because it is a Master's degree program that is in fact a subset of an existing doctoral programs. The Master's degree is infrequently awarded and, when awarded, it is conferred only on students who, for a variety of reasons, do not complete the requirements for the doctorate. Students generally are not recruited nor admitted into the Master's degree program but must apply for direct admission into the doctoral degree program.

The following excerpt from the Graduate Catalog describes entry to the program:

"Admission to the program is generally limited to Ph.D. students. Students can earn a non-thesis M.S. degree while working towards the Ph.D. degree. In order to earn this M.S. degree in Chemical Physics, a student must complete 30 credit hours, including CHEM 684 or ENCH 610, CHEM 687, CHEM 691, PHYS 604, PHYS 622, PHYS 623, and an advanced laboratory course. A one-credit seminar in statistical physics and a one-credit seminar in chemical physics are also required along with a scholarly paper. The Ph.D. qualifying examination must be passed at the M.S. degree level."

In addition to being integral parts of the doctoral program in Chemical Physics, all the courses required for this master's program are already taught as parts of our very strong graduate programs in Chemistry, Physics, and Chemical Engineering. Thus this program can continue at no added cost to the institution. We again request a permanent exemption for the Master's degree program in Chemical Physics.

The Major

The Department of Natural Resource Sciences and Landscape Architecture offers three undergraduate majors. Two lead to the Bachelor of Science (B.S.) degree; one in Natural Resource Sciences and the other in General Agriculture Sciences. The third major leads to a Bachelor of Landscape Architecture (B.L.A.) degree.

Agriculture is a complex subject, encompassing a range of scientific disciplines and professional fields. Majoring in General Agricultural Sciences does not require an agricultural background, as the curriculum gives students a broad overview of both plant and animal agriculture. This major is designed for students who are interested in a broad education in the field of agriculture. It is ideal for students who would like to survey agriculture before specializing, or for those who prefer to design their own program. To supplement classroom work, students in this major are encouraged to obtain summer positions that will provide technical laboratory or field experience in their chosen area. This program is administered by the Department of Natural Resource Sciences and Landscape Architecture.

Curriculum in General Agricultural Sciences

GNAS Major

Requirements for Degree	Semester Credit Hours
ANSC 101—Principles of Animal Science	3
ANSC or NRSC**	3
ANSC 314—Comparative Animal Nutrition	3
AREC 250—Elements of Agricultural and Resource Economics	3
AREC—**	3
BSCI 105—Principles of Biology I	4
BSCI 106—Principles of Biology II	4
BSCI—**Insect Pest Type Course	3
CHEM 103—General Chemistry I	4
CHEM 104—Fundamentals of Organic and Biochemistry, or CHEM 113—General Chemistry II and CHEM 233-Organic Chemistry I	4-8
ENBE 100—Basic Biological Resources Engineering Technology	3
ENBE 200—Fundamentals of Agricultural Mechanics	3
MATH 110 or higher (MATH 115 recommended)	3
NRSC 200—Fundamentals of Soil Science	4
PLSC 420—Principles of Plant Pathology or ANSC 412—Introduction to Diseases of Animals	4
PLSC 101—Introductory Crop Science	4
PLSC—**	3
SOCY 305—Scarcity and Modern Society	3
Community Development Related, Non-Agricultural Life Science, Biometrics, Computer, or Accounting	6
CORE and General Agricultural Program Requirements*	91-100
Electives (18 credit hours at 300-level or above)	20-29

**Student may select any course(s) having required hours in the area indicated

The Plant Biology specialization area is designed with a diverse range of career possibilities for students in plant biology and plant protection. The department offers instruction in the fields of physiology, molecular biology, pathology, ecology, taxonomy, genetics, mycology, nematology, virology, and evolutionary plant biology.

Cell, Molecular Biology, and Genetics are combined into one specialization are due to their inter-relatedness and overlap. The combined areas will allow focus on the internal working of the cell and the interactions between cells, as well as the techniques used to understand processes at the molecular level.

These areas of the biological sciences program will allow students to find opportunities in academia, industry, government, medicine, law, biotechnology, and public health.

Requirements for the Specialization Areas

See the Biological Sciences entry in this catalog or contact an adviser for specific program requirements.

Advising

Advising is mandatory. Students are assigned to faculty advisers based upon their area of specialization. The Department of Cell Biology and Molecular Genetics faculty coordinate and advise students who specialize in Microbiology (MICB), Plant Biology (PLNT), and Cell, Molecular Biology, and Genetics (CMBG). Contact the undergraduate program for information. Advising web page: **www.life.umd.edu/advising.**
1219 HJ Patterson Bldg., Phone 301-405-2766.

Research Experience and Internships

Students may gain research experience in off-campus laboratories or in on-campus faculty laboratories. Contact the undergraduate program office, 301-405-2766, for more information.

Honors and Awards

The Departmental Honors Program involves an independent research undertaken with a faculty adviser. For information, contact the Honors Co-ordinator, S. Hutcheson, 3123 Microbiology Building. The P. Arne Hansen Award may be awarded to an outstanding departmental honors student. The Sigma Alpha Omicron Award is given annually to the graduating senior selected by the faculty as the outstanding student in Microbiology.

Student Organizations

All students interested in microbiology are encouraged to join the University of Maryland student chapter of the American Society for Microbiology, the professional scientific society for microbiologists. Information on this organization may be obtained from the ASM website, **www.asmusa.org**.

CENTRAL EUROPEAN, RUSSIAN, AND EURASIAN STUDIES (CERE)
(FORMERLY RUSSIAN AREAS STUDIES PROGRAM)

College of Arts and Humanities
2115 Francis Scott Key Hall, 301-405-4295
www.ceres.umd.edu

Director: Michael David-Fox
Professors: Herf (History), Mansbach (Art History and Archaeology), Brecht (Asian and East European), Tismaneanu (Government and Politics), Lampe (History), Murrell (Economics), Robinson (Sociology), Ruzenblit (History)
Associate Professors: Gor, Hitchcock, Lekic, and Martin (Asian and East European), Kaminski (Government and Politics), M. David-Fox (History), Schuler (Theatre)
Assistant Professors: Papazian (Asian and East European), K. David-Fox (History)

Departmental advising is mandatory for second-semester sophomores

The Major

CERE offers courses leading to a Bachelor of Arts degree. Students in the program study Russian, Eurasian, and Central/East European culture as broadly as possible, striving to comprehend it in all its aspects rather than focusing their attention on a single element of human behavior. It is hoped that insights into the region's ways of life will be valuable not only as such but as a means to deepen students' awareness of their own society and of themselves.

Course offerings are in a range of departments, including Asian and East European Languages and Cultures, Government and Politics, History, Economics, Geography, Philosophy, Sociology, Theatre, and Germanic Studies.

Requirements for the CERES major include the College of Arts and Humanities requirement of 45 upper-level credits completed. The College's foreign-language requirement will be automatically fulfilled in the process of fulfilling the CERE requirement of taking either Russian, German, or a Central/East European language (including Czech, Polish, Hungarian, Serbian and Croatian, Bulgarian, and Romanian). The language requirement can also be fulfilled by a Eurasian language (i.e. a language from a country formerly part of the Soviet Union). Those interested in fulfilling the CERE language requirement through a Central/East European or Eurasian language should consult the Director upon entering the program.

Students on the Russian language track must complete a minimum of 24 credit hours in the Russian language and literature courses selected among the following equivalent courses: RUSS 101,102, 201, 202, 301, 302, 303, 321, 322, 401, 402, 403, 404. Students interested in specializing primarily on Central/Eastern Europe have the option of the German language track, and must complete a minimum of 24 credit hours in the Department of Germanic Studies selected among the following equivalent courses: GERM 101, 102, 201, 202, 301, 302. Students on the Central/East European language track must complete the equivalent of 24 credits hours of language study. Also accepted will be 16 credit hours of Russian or German and the equivalent of 8 credit hours of a Central/East European language. Fulfilling the language requirement through a Eurasian language (a language of a country of the former Soviet Union, such as Ukrainian, a Central Asian or Transcaucasian language) will be decided on a case-by-case basis in consultation with the director.

The student's advisor will be the program director or the designate. The student must receive a grade of C or better in all the above-mentioned required courses.

In addition to language courses, the following CERES courses are offered. Students must complete 24 hours in CERES courses at the 300-level or above. These 24 hours must be taken in at least four different departments (with the School of Languages, Literatures and Cultures counting as a single department), and may include language-literature courses beyond the required 24 hours. Of the 24 hours, at least 9 hours must be in those CERES courses with substantial and specific focus on Central/East Europe (ARTH 488C, GVPT 359,409, 4**, HIST 319, 340, 443 and other special courses offered in the CERE area with the approval of the director) and at least 9 hours must be in those CERE courses with substantial and specific Russian/Eurasian focus (GEOG 325, GVPT 445, 451, 459A, 481, HIST 344, 424, 425, 442, SOCY 474, THET 499, and other special courses offered in the CERE area with the approval of the director).

GERM 349I—Germanic Literatures in Translation: Literatures of the Holocaust
GERM 339—German Literature in Translation: Kafka and Film
GERM 439F—Germanic Literatures in Translation: Berlin und Wien um1900
GVPT 359*—East European Politics and Societies
GVPT 359*—Rise and Fall of Communism
GVPT 4**—Communism, Fascism, and Liberal Democracy in 20th-Century Europe
HIST 307/JWST 345—The Holocaust of European Jewry
HIST 419: Empire and Nations—The Habsburg Monarchy, 1740-1918
HIST 419*/JWST 419L—History of East European and Russian Jewry
THET 499/HIST 4**—History of Performance and Theatre in Russia

The various cooperating departments also offer special (i.e. non-permanent) seminars and courses in the Russian, East European, and Eurasian field. HIST 237, Russian Civilization, is recommended as a general introduction to the program but does not count toward the fulfillment of the programs' requirements.

Examples of advanced Russian literature and culture courses that can also count for CERES credit:

Morgan State University

2004 Response

regarding

Low-Productivity Degree Programs

Office of the President

September 10, 2004

Dr. Michael J. Kiphart
The Maryland Higher Education Commission
839 Bestgate Road, Suite 400
Annapolis, Maryland 21401

Dear Dr. Kiphart:

As indicated in the letter that was sent to you dated December 15, 2003, the low-productivity program report was reviewed by the Morgan State University Board of Regents. One of the five programs cited has been discontinued; a second program has been identified to be discontinued.

Program Discontinuances

Mental Health Technology

In 1997, the University announced plans to discontinue the Mental Health Technology major in lieu of a concentration in the Social Work major. Students were not admitted after 1997, and the program was phased out over the next four years to permit students in the pipeline to complete degree requirements. The final four students exited the program in 2001.

Elementary and Middle School Education

Local school districts are generally looking for persons with a degree in another certification area. Hence, most elementary and middle school teachers now pursue graduate degrees in areas such as reading, counseling and special education. For this reason, our Elementary and Middle School Education program is not attracting students currently; and, it will be discontinued. Plans to discontinue this program will be announced, and preparation will be made to phase it out.

1700 E. Cold Spring Lane • Truth Hall, Rm. 403 • Baltimore, MD 21251
(410) 319-3200 • Fax (410) 319-3107

We are requesting that we be allowed to continue to offer the remaining three programs. These programs support our mission and expressed program emphases; and, in each case, efforts/strategies to improve program productivity are underway.

Undergraduate Program

Philosophy

Since 2001, the undergraduate program in Philosophy has experienced substantial enrollment growth. The impact of this enrollment increase should begin to be reflected in a similar increase in graduation rates in another year or two.

Graduate Programs

Music

The new Murphy Fine Arts Center – with its excellent state-of-the-art training facilities – has resulted already in increased enrollment in the undergraduate program in Music. We are anticipating similar impact on the graduate program enrollment.

International Studies

The International Studies Program has been redesigned to make it more interdisciplinary. Broadening the scope of the program in this way also increases the faculty resources available to the program. In the past, the small number of faculty available for thesis advisement created a bottleneck. The program redesign should correct this problem.

I am also attaching the justification for the undergraduate program in Physics and Engineering Physics. If you have any additional questions, please do not hesitate to contact me.

Sincerely

Earl S. Richardson
President

cc: Dr. T. Joan Robinson
Provost/Vice President for Academic Affairs

Attachments

Morgan State University

Rationale for Undergraduate Programs in Physics and Engineering Physics

The Department of Physics currently offers programs leading to the BS in physics and engineering physics. These areas are of importance to the state and the nation in the training of a highly skilled technical workforce in a discipline in which there are very few graduates.

This year, as has been the case in the past, all of our graduates were accepted into graduate programs or found employment. Nationally, over 50% of the students in physics in graduate programs are foreign, a figure that helps to emphasize the importance of producing as many U.S. citizens as possible at the undergraduate level. Morgan physics majors are highly recruited by graduate programs in physics and by laboratories seeking summer interns.

In comparison to physics departments at most other campuses, the department at Morgan is very productive.

- In 2003, Morgan ranked fifth among all Maryland campuses in the total number of undergraduate degrees awarded in physics.
- That same year, Morgan ranked ***first*** among all Maryland campuses in the number of awards in physics to African American.
- Over the past ten years, Morgan has accounted for ***over half*** of all the bachelor's degrees awarded to African Americans by Maryland campuses. During this period its share of the degrees awarded by black students ranged from 33% to 100%.
- Data compiled by the American Institute of Physics (AIP) indicates that between 1999 and 2001 Morgan ranked 8th nationally in the number of African-American physics graduates.

Morgan offers the only engineering physics program in the state. It is offered without any additional cost to the general physics program because the additional courses that an engineering physics major is required to take are outside of the department, in engineering and computer sciences.

The number of students majoring in physics and engineering physics is over twice as high as ten years ago and substantially higher than just five years ago. Next year the department is expected to award the largest number of degrees since its establishment. The increases are due to the number of factors.

- Continuation by the department of a summer pre-college program funded for the past five years by the Department of Energy. The grant is intended to address the critical national shortage of minority scientists and engineering.

- Designation of a physics faculty member as a recruiter to assist the physics chairperson with student recruitment.

- The department serves as a physics resource center for high school physics teachers. The department also participates and interacts with many of the area schools and physics teachers to make them aware of the opportunities available for physics graduates.

- The establishment of new state-of-the-art physics research laboratories in the recently-completed Dixon Research Center at the University. These laboratories greatly increase the visibility and capability of the department and make it more competitive for outside funding for research and student support.

Bachelor's Awarded in Physics by Maryland Institutions: 1994-2003

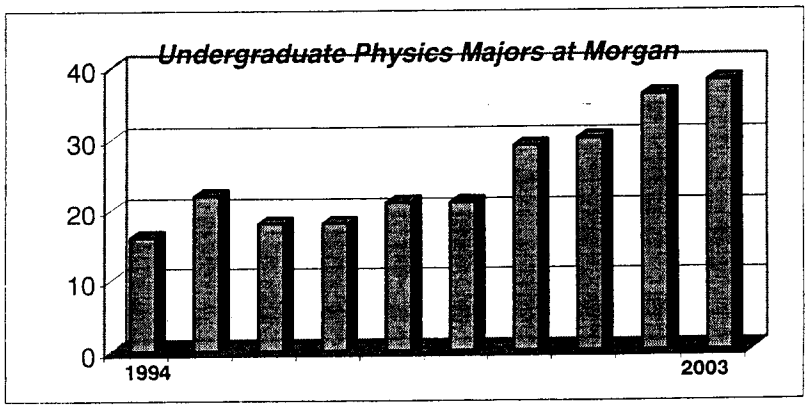
	Statewide		Morgan		Morgan's Share of Physics Degrees Awarded to Blacks
	Total	African American	Total	African American	
1994	117	10	7	5	50.0%
1995	66	7	5	5	71.4%
1996	71	6	3	2	33.3%
1997	66	3	3	2	66.7%
1998	54	2	2	2	100.0%
1999	58	6	4	2	33.3%
2000	78	2	3	2	100.0%
2001	66	5	7	3	60.0%
2002	86	5	7	3	60.0%
2003	84	12	5	5	41.7%
10 Year Total	746	58	46	31	53.4%

Maryland Campuses Awarding Degrees in Physics in 2003

	All Races	Black
Morgan	5	5
Frostburg	3	0
Salisbury	13	3
Towson	2	0
UMBC	7	1
College P	28	0
St. Mary's	4	0
J. Hopkins	10	2
Loyola	3	0
Notre Dame	2	1
Wash C	3	0
West MD	4	0
Statewide	**84**	**12**

Physics Majors Enrolled at Morgan: Fall 1994 - Fall 2003

1994	16
1995	22
1996	18
1997	18
1998	21
1999	21
2000	29
2001	30
2002	36
2003	38



Note: All figures for Morgan include both general physics and engineering physics .

St. Mary's College of Maryland

2004 Response

regarding

Low-Productivity Degree Programs

St. Mary's College of Maryland
at Historic St. Mary's City

Office of the Provost

RECEIVED
SEP 16 2004
OFFICE OF THE SECRETARY M.H.E.C.

September 14, 2004

Dr. Calvin W. Burnett
Secretary of Higher Education
Maryland Higher Education Commission
839 Bestgate Road
Suite 400
Annapolis, MD 21401-3013

Subject: St. Mary's College Response to Low-Productivity Degree Program Report 2004

Dear Dr. Burnett:

Enclosed you will find St. Mary's College's Response to its Low-Productivity Degree Program Report for 2004. That report identified six degree programs at St. Mary's College of Maryland as having low-productivity: In its response, St. Mary's will discontinue one program (Human Development), will request a permanent exemption for two programs (Public Policy Studies and Natural Science), and will request three-year exemptions for three programs (Dramatic Arts, Foreign Language/International Culture, and Physics).

Please know that Maggie O'Brien and I will be happy to discuss with you the programs identified in the report as well as our institutional response to the report. Let us know if we need to take any additional action.

Sincerely,

Larry Vote
Provost

18952 E. Fisher Road St. Mary's City, Maryland 20686-3001
TEL: 240-895-4389 • www.smcm.edu • FAX: 240-895-4443

Institutional Response to Low-Productivity Degree Program Report, 2004
St. Mary's College of Maryland

The Low-Productivity Degree Program Report for 2004 identified six degree programs at St. Mary's College of Maryland as having low-productivity: Human Development, Dramatic Arts, Foreign Language/International Culture, Physics, Public Policy Studies, and Natural Science. In this response, St. Mary's will discontinue one program (Human Development), will request a permanent exemption for two programs (Public Policy Studies and Natural Science), and will request three-year exemptions for three programs (Dramatic Arts, Foreign Language/International Culture, and Physics).

Discontinued Program: The Human Development major was originally intended as an interdisciplinary major with components drawn from education, psychology, and philosophy. The establishment of separate majors in Psychology, Philosophy, and Human Studies has drawn off students who formerly majored in Human Development. Consequently, St. Mary's College of Maryland discontinued the Human Development major with the 1996 catalog. The majors listed in the low-productivity report are students who started at the College under catalogs that still included the Human Studies major.

Permanent Exemption: St. Mary's College of Maryland requests a permanent exemption for the Public Policy Studies major and the Natural Science major on the basis that the coursework in these majors is drawn exclusively from existing coursework in other programs and there are no additional costs to the College in offering these majors.

As can be seen from its catalog description (see attachment), the Public Policy Studies major consists of coursework drawn from existing courses in Anthropology, Economics, Political Science, and Sociology. Courses specifically listed with a PPOL code are cross-listed in one of the other disciplines. The major has been offered on this basis for about twenty years with the existing staff in those other disciplines, and the College has no intention of changing this approach. In addition, because of the problem of not counting double majors, the Public Policy Studies major has had more majors than the Low-Productivity Degree Program Report for 2004 identified. The correct numbers are 2001, 7; 2002, 9; 2003, 8. The number remained at 8 for 2004 as well.

As can be seen from its catalog description (see attachment), the Natural Science major consists of coursework drawn from existing courses in Biology, Chemistry, Computer Science, Mathematics, and Physics. There are no courses specifically listed with a Natural Science code. The major has been offered on this basis for about twenty years with the existing staff in those other disciplines, and the College has no intention of changing this approach. Three students completed this major in 2004.

Three-Year Exemptions: St. Mary's College requests three-year exemptions for its majors in Dramatic Arts, Foreign Language/International Culture, and Physics. To some extent, the low-productivity numbers in the report reflect the impact of two small classes that the College experienced for the graduation years of 2002 and 2003. Enrollments in

two of these majors increased in 2004, and the departments in charge of them have made changes to attract more students.

The Dramatic Arts major increased its productivity to six graduates in 2004. In addition, the Theatre Department recently completed an extensive overhaul of its curriculum and has initiated a viable two-track program in Theatre and in Film and Media Studies. In the fall of 2005, the Department of Dramatic Arts will formally become the Department of Theatre, Film, and Media Studies, and will offer students the opportunity to seek a BA degree in Theatre and/or in Film and Media Studies. Courses for the Film and Media Studies track have already been approved and are at maximum enrollment. New programs take a little time to build majors, and we are very confident that in the next few years we will experience a lot of growth.

Though the Department has graduated few majors in the last few years, it experiences high enrollments, enrolling for practicum credit approximately 40.8 students per semester and an accumulated average of 81.6 per year in our main stage production activities. (These figures do not account for numbers of students participating annually in production activities who do not seek practicum credit.) Apart from some of the required studio classes, Introduction to Dramatic Literature, Movement I and Movement II, Acting I, Introduction to Performance, Shakespeare, Introduction to Film and Media—to name a few—are always fully enrolled. Finally, the Department's production activities provide an essential cultural service to students and the college and wider community.

The Foreign Language/International Cultures major increased its productivity to seven graduates in 2004. The major within the program has offered concentrations in Chinese, French, German, and Spanish languages with a goal of having students attain mastery of the language they undertake to qualify them for graduate study. Starting in Fall 2004, the major will offer a concentration in Latin American Studies to allow students to study this region through a multidisciplinary approach. The expectation is that students in this concentration will have fluency in Spanish combined with an interest in the culture of the Latin American region. This concentration will appeal to students who do not want to focus on language study and should increase the number of graduates in the program. In addition, the department offers an upper-level certificate for students who want to gain fluency in a language but not major in it. Finally, St. Mary's has a requirement that students must pass foreign language at the second semester level of competency; given the staffing needs of this requirement, the ILC majors are offered with a lower additional cost than would be the case with most programs.

The Physics major has had an average of four graduates for the past three years. Physics will never be a significantly larger major at St. Mary's College, although based on current enrollments in the upper-level courses, we expect to have five or more graduates for the next two years (2005 and 2006). The physics program has had significant growth in key laboratory facilities for its upper-level students; it received an NSF RUI grant during the period 2001-2004 which provided about $50,000 for new laboratory equipment for undergraduate research. There is also collaboration in place with the Patuxent River Naval Air Station, which has provided summer internships for several physics majors,

and funding for research equipment in atomic physics. Added to this is a proposal submitted to Research Corporation for the future funding of undergraduate research. This growth in facilities represents an attempt to improve the breadth and depth of the education being offered to the physics majors. The department is attracting additional students through the dual-degree program between St. Mary's and the A. James Clark School of Engineering at the University of Maryland, College Park.

Physics is a key ingredient in the liberal arts curriculum. The need to offer physics courses to students in the other sciences means that physics faculty teaches a large number of students in a variety of courses. Because these courses must be staffed, the cost associated with offering the courses that only physics majors take is small.

In addition to the above justifications, these three programs are consistent with the philosophy of education expressed in COMAR 13B.01.03.08: "The Commission recognizes and supports the tradition of liberal arts education and the need for higher education programs which offer individual and societal benefits that are independent of manpower or market demand considerations. These programs provide immeasurable returns to the State in part by instilling in citizens a capacity for advanced learning and an understanding of the fundamentals of civilization."

MUSC 398, 498. Off-Campus Internship (4-16E)
A variety of off-campus experiential learning opportunities can be arranged through the director of internships. The off-campus internship is an individually designed experience that allows the student to explore the relationship between learning in the classroom and the practical application of knowledge in everyday work situations. *Prerequisites: Admission to the Internship Program and approval of the department chair. (See "Internships" under "Academic Policies" sections.) Credit/No credit grading.*

MUSC 199, 299, 399, 499. Independent Study (1-4E)
This course consists of an independent creative or research project designed by the student and supervised by a music faculty member. The nature of the project, the schedule for accomplishment, and the means of evaluation must be formalized in a learning contract prior to registration. (See "Independent Study" under "Academic Policies" section.)

THE NATURAL SCIENCE MAJOR

The major in natural science is intended for the science-oriented student who wishes to acquire a broad background in the fundamentals of science and mathematics while concentrating in one of the specific disciplines. The program is particularly well-suited for students who desire preparation for graduate work or careers in interdisciplinary sciences such as biostatistics and biophysics. Examples of other students who might find this program suited to their needs: (1) those preparing for further study in the philosophy of science, (2) those interested in a career as a scientific or technical librarian, (3) students oriented towards a business career in a science-oriented industry, and (4) those with a general interest and ability in science who have not clearly determined in which area or discipline they wish to specialize. Students interested in graduate studies should arrange their programs toward this end with the help of their advisers.

DEGREE REQUIREMENTS

To earn a bachelor of arts degree with a major

1. General College Requirements (see "Curriculum" section and the paragraph titled "St. Mary's Projects" below).
2. Core Requirements:
   a. MATH 151, 152: Calculus I and II
   b. Two of the following three sequences:
      * BIOL 105, 106: Principles of Biology I and II
      * CHEM 105, 106: General Chemistry I and II
      * PHYS 131, 132: General Physics I and II
3. Concentration Requirements:

   Primary Area:
   20 semester-hours in one of the five disciplines of biology, chemistry, computer science, mathematics, physics.

   Secondary Area:
   8 semester-hours in another one of the disciplines above. Note: All concentration courses except COSC 120 and COSC 130 must be at the 200-level or higher.
4. Every natural science major must complete a St. Mary's Project. This project may be in the discipline of primary concentration or in another major discipline or a study area. The guidelines established in the selected area apply. The project must be proposed to a mentor and to the head of the division of natural science and mathematics at least three weeks before the last day of classes of the second semester of the student's junior year, and it must be approved by the mentor and the division head.
5. Students must earn a grade of C- or better in all courses listed in items 2-4 above.

DECLARING A MAJOR IN NATURAL SCIENCE/NS MAJOR COMMITTEE

The program is directed by the division head and a committee composed of faculty members from the division's disciplines. A student may either elect one of the eleven approved standard programs listed below or, in cooperation with the adviser, design an individual program. Students electing a standard program must indicate the selected option when the major is declared with the associate provost for aca-

proposal and submit it to the division head. All such programs need to be approved by the natural science major committee described above.

Standard Programs

The standard approved programs are the following:

Biology: Computer Science
Biology: Mathematics
Chemistry: Biology
Chemistry: Computer Science
Chemistry: Mathematics
Chemistry: Physics
Computer Science: Physics
Mathematics: Biology
Mathematics: Physics
Physics: Computer Science
Physics: Mathematics

Information containing the course requirements for the standard programs is available in the office of the Division of Natural Science and Mathematics.

Double Majors

Due to the interdisciplinary nature of the natural science major, it can be part of a double major only if the concentration in the natural science major does not overlap with the requirements for the other major.

NATURAL SCIENCE COURSES

Discipline Areas

Biology (BIOL) courses and descriptions are listed under the biology major.

Chemistry (CHEM) courses and descriptions are listed under the chemistry major.

Mathematics (MATH) and computer science (COSC) courses and descriptions are listed under the mathematics major.

Physics (PHYS) courses and descriptions are listed under the physics major.

ASTR 151. Astronomy (4)
An introduction to modern astronomy, including its historical development, study of the earth's place in the universe, the solar system, the characteristics of the stars and galaxies, and cosmology. This course satisfies the General Education Requirement in physica science.

GEOL 130. Introduction to Geology (4)
This course will explore the world of geology, both physical and historical, with emphasis on its relevance to other major disciplines. Basic principles of the geosciences will be examined and used to illustrate some of the important contributions geology has made to our knowledge and understanding of the world today. Lecture and laboratory. This course satisfies th General Education Requirement in physical science and the General Education Laboratory Requirement. *Prerequisite: Successful completion of the General Education Requirement in mathematics.*

PHSC 398, 498. Off-Campus Internship (4-16E)
A variety of off-campus learning opportunities can be arranged through the director of intern ships. The off-campus internship is an individu ally designed experience that allows the student to explore the relationship between learning in the classroom and the practical application of knowledge in everyday work sitn ations. *Prerequisites: Admission to the Internship Program and approval of the academic adviser an division head. (See "Internships" under "Academi Policies" section.) Credit/No credit grading.*

PHSC 199, 299, 399, 499. Independent Study (1-4E)
This course consists of an independent creati or research project designed by the student an supervised by a physical science faculty member. The nature of the project, the schedule for accomplishment, and the means evaluation must be formalized in a learning contract prior to registration. (See "Independent Study" under "Academic Policies" section.)

OTHER SCIENCE COURSES

The science program serves the needs of both science and non-science majors. Many of the courses are interdisciplinary in nature and oft designed to address specific current topics of general interest.

SCIE 316. Nutrition (4A)
A general examination of nutritional science which will include the detailed study of carbc hydrates, fats, proteins, water, vitamins and minerals, and their importance in human development. Important nutritional problems

and methods of assessing nutritional status will be presented. Individual papers will be assigned. *Prerequisites: BIOL 106 and CHEM 106.*

SCIE 420. Philosophy of Science (4AF)
An introduction to the philosophy of science, attempting to bridge the gap between philosophy and science by considering scientific ideas in the context of history and philosophy. It will trace scientific thought from the pre-Socratics to the theories of quantum physics. Cross-listed as PHIL 420. Students may receive credit for either course but not both. *Prerequisites: Two courses in philosophy or consent of the instructor.*

SCIE 398, 498. Off-Campus Internship (4-16E)
A variety of off-campus learning opportunities can be arranged through the director of internships. The off-campus internship is an individually designed experience that allows the student to explore the relationship between learning in the classroom and the practical application of knowledge in everyday work situations. *Prerequisites: Admission to the Internship Program and approval of the academic adviser and division head. (See "Internships" under "Academic Policies" section.) Credit/No credit grading.*

SCIE 199, 299, 399, 499. Independent Study (1-4E)
This course consists of an independent creative or research project designed by the student and supervised by a science faculty member. The nature of the project, the schedule for accomplishment, and the means of evaluation must be formalized in a learning contract prior to registration. (See "Independent Study" under "Academic Policies" section.)

THE NEUROSCIENCES

A CROSS-DISCIPLINARY STUDY AREA DESIGNED TO SUPPLEMENT A CHOSEN MAJOR.

The neurosciences investigate the molecular, cellular, and genetic aspects of nervous system functioning as well as their influences on behavior. The study area in the neurosciences will allow the exploration of the brain from a biological, chemical, and psychological perspective. The understanding of the neurosciences requires knowledge about the function of neurons, the function of various brain regions and their relation to behavior, as well as a grasp of the methodology behind neuroscientific research, including development, analysis, and interpretation of experimental studies.

The goal of the neuroscience study area is to create a cross-disciplinary approach to the neurosciences with each student gaining experience and perspectives from the disciplines of biology, chemistry, and psychology. The study area places a strong emphasis on direct research experience within the neurosciences. In addition, the neuroscience study area creates an environment where faculty and students work collaboratively and discuss issues of neuroscience.

Any student with an interest in pursuing the cross-disciplinary study area in the neurosciences should consult with the study area coordinator. Students are encouraged to declare their participation in their sophomore year but no later than the end of the junior year. Students also should seek an adviser, whether formal or informal, from participating faculty.

STUDY AREA REQUIREMENTS

To successfully complete the cross-disciplinary study area in the neurosciences, a student must satisfy the following requirements designed to establish breadth and depth of knowledge consistent with the goals of the neuroscience study area.

1. General College requirements (see "Curriculum" section)
   a. Must include either CHEM 105 or CHEM 112. CHEM 105 is strongly recommended. (Meets Physical Science General Education Requirement with a laboratory.)
   b. Must take PSYC 101 (Meets Behavioral Science General Education Requirement.)
2. All requirements in a major discipline of study.
3. At least 18 semester-hours in courses approved for the neurosciences, with a grade of C or above, including:
   a. Required courses: 10 semester-hours:

      NEUR 201. Introduction to the Neurosciences (4S) (Meets Biological Science General Education Requirement)

the statistical and research methods used in the field. Lab will include demonstrations and the execution of independent research projects. Focus is on the scientist-practitioner model and on the synthesis of the scholarly and applied aspects of psychotherapy and counseling-related topics. *Co-requisites: PSYC 102 and 202; or PSYC 203.*

PSYC 491. Special Topics Seminar in Psychology (1-4)
Intensive study of a theme, process, or problem in psychology or human development. A maximum of four semester-hours of special topics seminar credit may be applied to major requirements in psychology. May be repeated for credit. *Prerequisite: Consent of the instructor.*

PSYC 493/494. St. Mary's Project (1-8E)
The project, which may take many forms, draws on and extends knowledge, skills of analysis, and creative achievement developed through previous academic work. The student initiates the project, identifies an area to be explored, and proposes a method of inquiry appropriate to the topic. The project should include a reflection on the social context, the body of literature, or the conceptual framework to which it is a contribution. It must be shared with the College community through posters, presentations, or other means. With the approval of the department, this requirement may be satisfied by completing eight semester-hours of the St. Mary's Project in any discipline or cross-disciplinary study area. The project is supervised by a faculty mentor, appointed by the department chair. This course is repeatable for up to a total of 8 semester-hours. *Prerequisite: Approval of faculty mentor and department chair of the student's major(s). Consult faculty mentor for project guidelines.*

PSYC 197, 297, 397, 497. Directed Research in Psychology (1-4E)
Under the direct supervision of a faculty member, a student participates in laboratory or field research. A learning contract that specifies the research goals and methodology must be filed with the Office of the Registrar. A maximum of four semester-hours of directed research in psychology (397 or 497 only) may be applied to major requirements in psychology. May be repeated for credit. *Prerequisite: Learning contract filed in the Office of the Registrar.*

PSYC 398, 498. Off-campus Internship (4-16E)
A variety of off-campus experiential learning opportunities can be arranged through the director of internships. The off-campus internship is an individually designed experience that allows the student to explore the relationship between learning in the classroom and the practical application of knowledge in everyday work situations. All interns are required to maintain regular contact with the faculty supervisor. *Prerequisite: Admission to the Internship Program. (See "Internships" under "Academic Policies" section.) Credit/No credit grading. May not be used to fulfill requirements for the psychology and human studies majors. Consult with the director of internships.*

PSYC 199, 299, 399, 499. Independent Study (1-4E)
This course consists of an independent creative or research project designed by the student and supervised by a psychology faculty member. The nature of the project, the schedule for accomplishment, and the means of evaluation must be formalized in a learning contract prior to registration. (See "Independent Study" under "Academic Policies" section.)

THE PUBLIC POLICY STUDIES MAJOR

The public policy studies major is interdisciplinary in character. It involves the integration of knowledge from several disciplines for the application to policy problems. Knowledge usually available only in separate majors such as economics, sociology, anthropology, and political science is combined in a single sequence of courses related to one another. The interdisciplinary major provides factual, analytical, and theoretical skills for improving the quality of policy-making.

The purpose of the major is to equip students with sufficient competence in analytical skills supported by social science theory to qualify them for graduate or professional study. Majors should also be sufficiently prepared to seek positions in organizations which deal with public policy issues. They are business firms, trade associations, private or public research organizations, lobbying organizations, and government agencies. Students who have questions about the public policy major should consult with the public policy coordinator,

Nancy Paige Smith, or the head of the Division of History and Social Science, Ho Nguyen.

Degree Requirements

To earn a bachelor of arts degree with a major in public policy studies, a student must satisfy the following minimum requirements:

1. General College Requirements (see "Curriculum" section), including the following requirements to satisfy the major:
2. Twelve (12) semester-hours of introductory courses in the social sciences consisting of:

   ECON 101: Introduction to Economics
   POSC 201: American Politics
   SOAN 101: Culture and the Social Experience
3. Core Requirement (24) semester-hours):

   SOCS 311: Public Policy (cross-listed POSC 311)
   ECON 252: Intermediate Microeconomics
   ECON 253: Economic Statistics
   or
   SOAN 201: Social Statistics
   or
   POSC 300: Political Analysis I
   ECON 359: Public sector Economics
   or
   ANTH 306: Practicing Anthropology: Principles of Applied Anthropology
   or
   POSC 312: State and Community Politics
   POSC 367: Public Administration
   or
   SOCI 330: Sociology of Organizations
   SOCS 315: Policy Evaluation (cross-listed POSC 315)
4. Senior Experience (8) semester-hours:

   a. Students may choose to do eight (8) semester-hours of a St. Mary's Project (PPOL 494)
   or
   b. four (4) semester-hours of PPOL 408 "Studies in Public Policy" (cross-listed POSC 408) with a senior experience paper and four (4) semester-hours of electives chosen from the list below. (see Senior Experience below for more details).

List of Elective Courses by Area:

1. Management and Policy

   ECON 352: Principles of Management
   PSYC 352: Human Behavior in Organizations
2. International Policy Studies

   ECON 354: Natural Resource Economics
   ECON 356: International Economics
   ECON 360: Comparative Economic Systems
   ECON 372: Economics of Developing Countries
   HIST 435: Topics in European History
   POSC 252: Comparative Politics
   POSC 269: International Politics
   POSC 462: Studies in Comparative Politics*
   POSC 468: Studies in International Relations*
3. Policy Applications

   ECON 401: Economics of Social Problems
   ECON 350: Environmental Economics
   ECON 351: Industrial Organization & Regulation
   ECON 355: Labor Economics
   ECON 357: Money and Banking
   HIST 301: Immigrant and Family Life in 20th-Century America
   HIST 315: U.S. Diplomatic History to 1900
   HIST 415: Topics in American History
   POSC 352: Constitutional Law II: Civil Liberties
   POSC 364: 20th-Century U.S. Foreign Policy
   POSC 461: Studies in American Politics
   PSYC 337: Social Gerontology
   PSYC 338: Mental Retardation
   PSYC 491: Special Topics Seminar*
   SOCI 332: Sociology of Law
   SOCI 347: Minorities
   SOCI 351: Crime and Deviance
4. Theory and Public Policy

   ECON 251: Intermediate Macroeconomics
   ECON 459: Senior Seminar in Economics*
   POSC 301: Political Analysis II
   POSC 469: Political Theory
   PSYC 491: Special Topics Seminar*

   *Where the topic of the seminar is appropriate. (Appropriateness of the topic will be determined by the division head.)

Senior Experience.
Each student must complete an 8-credit St. Mary's Project in Public Policy or write a senior experience paper for the course PPOL 408, "Studies in Public Policy" (cross-listed POSC

408). (Please see the course descriptions for PPOL 494 for St. Mary's Projects and PPOL 408. "Studies in Public Policy.") The student who chooses to write a senior experience paper instead of a St. Mary's Project will file a declaration of intent with the course instructor and the public policy coordinator by the end of the sixth week during the semester the student enrolls in "Studies in Public Policy." Guidelines for the senior experience paper will be given to the student by the instructor. Successful completion of the course shall constitute completion of the Senior Experience requirement. (This course also meets the Senior Experience requirement for political science.) Double majors should consult with their adviser for additional information.

PPOL 408. Studies in Public Policy (4S)
This 400-level seminar represents a capstone experience for students majoring or taking courses in public policy. Its focus may change depending upon the instructor or students' interests. Topics may include federal, state, or local public policy, comparative public policy, international policy as well as specific areas such as the environment, money, food, agricultural, social welfare, or taxation policy. Students majoring in public policy may fulfill the senior experience requirement with this course. This course is cross-listed as POSC 408. "Studies in Public Policy" and may be used to meet the Senior Experience requirement in political science as well.

PPOL 494. St. Mary's Project in Public Policy (1-8E)
The St. Mary's Project in public policy is a two-semester experience. The project, which may take many forms, draws on and extends knowledge, skills of analysis, and creative achievement developed through previous academic work. During the first semester a student initiates his or her project, identifies an area to be explored, and proposes a method of inquiry appropriate to the topic. A faculty mentor supervises the project research. Students will complete the project in the second semester under the direction of the faculty mentor. The project should demonstrate the student's ability to undertake research in an area of public policy, to analyze the patterns of interaction among the political actors as appropriate, and to present the results of the research to the College community in a cogent and meaningful manner. Eight semester-hours of this course satisfy the requirement for a St. Mary's Project. With the approval of the public policy coordinator and the division head, this requirement may be satisfied by completing eight semester-hours of the St. Mary's Project in any discipline or cross-disciplinary study area.

THE RELIGIOUS STUDIES MAJOR

Religious Studies is committed to the academic study of religion as an integral dimension of the human experience. In one form or another, a religious tradition is at the heart of every culture, and no liberal arts education can afford to neglect this vital aspect of human life. One cannot understand the nature of the Western world without some familiarity with Judaism, Christianity, and Islam, or the cultures of Asia without knowing something about Hinduism, Buddhism, Confucianism, Daoism, or other indigenous traditions.

Religious Studies offers a comprehensive program of introductory and advanced courses that help students assess their own religious tradition critically and acquaint them with other religious orientations. All courses in religious studies are designed to achieve certain goals: 1) to provide an accurate, sympathetic account of religions as they have been and continue to be practiced; 2) to develop critical skills in analyzing religious beliefs, symbolic systems, practices, theologies, and philosophies; 3) to raise fundamental questions about the nature of human beings and their place in the cosmos; 4) to discuss questions of meaning and value and help students take moral dilemmas seriously; and 5) to delineate the social functions of religion(s) in human cultures. Some courses focus on particular problems, such as the reality of the sacred, the problem of evil, death and dying, visions of liberation and salvation, or the problem of patriarchy in the world's religions. Other courses cover the fundamentals of particular religious traditions, their sacred scriptures and visions of ultimate reality, their doctrines and world views, as well as their communities, institutions, ritual practices, and cultural expressions. In both cases, ultimate questions such as the meaning of life, and the nature of morality will be addressed that are of concern to students preparing for adult lives and careers.

Because of its multi-disciplinary approaches and its broad perspectives, the major in reli-