

MARYLAND HIGHER EDUCATION COMMISSION
ACADEMIC PROGRAM PROPOSAL

PROPOSAL FOR:

- NEW INSTRUCTIONAL PROGRAM
 SUBSTANTIAL EXPANSION/MAJOR MODIFICATION
 COOPERATIVE DEGREE PROGRAM
 WITHIN EXISTING RESOURCES or REQUIRING NEW RESOURCES

Cecil College
Institution Submitting Proposal

Spring 2017
Projected Implementation Date

Associate of Science
Award to be Offered

Civil Engineering
Title of Proposed Program

0908.00
Suggested HEGIS Code

14.0801
Suggested CIP Code

Sciences
Department of Proposed Program

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Mary Way Boelt 12/1/16 President/Chief Executive Approval
Signature and Date

June 25, 2015 Date Endorsed/Approved by Governing Board

A. Centrality to institutional mission statement and planning priorities:

Founded in 1968, Cecil College is an open-admission, learner-centered institution located in a rural community in Maryland's most northeastern county. The College's mission includes career, transfer, and continuing education coursework and programs that anticipate and meet the dynamic intellectual, cultural, and economic development challenges of Cecil County and the surrounding region. Through its programs and support services, the College strives to provide comprehensive programs of study to prepare individuals for enriched and productive participation in society. The College enrolls approximately 8,500 students in credit and non-credit programs.

The curriculum is designed to meet the needs of students who plan to transfer to a college or a university that grants a Baccalaureate degree. Given the high cost of attending a four-year university, the proposed program can save students a significant amount of money by giving them the opportunity to complete the first two years of study at a community college. The chart below compares the tuition for the three, four-year institutions in the state that offer a Bachelor's program in Civil Engineering with Cecil College's tuition:

Institution	Cost per 3 cr. Undergraduate Course
Johns Hopkins University	\$1,050
Morgan State University	\$903
Univ. of Maryland, College Park	\$1,038
Cecil College	\$321

B. Adequacy of curriculum design and delivery to related learning outcomes consistent with Regulation .10 of this chapter:

The Associate of Science Civil Engineering program prepares students to transfer to a four-year institution for civil engineering. Civil engineers design and supervise the construction of roads, buildings, airports, tunnels, dams, bridges, and water supply and sewage systems. They must consider many factors in the design process, from the construction costs and expected lifetime of a project to government regulations and potential environmental hazards such as earthquakes. Students with a bachelor's degree in civil engineering may continue their education in graduate school, while others may enter industry.

The computer literacy requirement will be met throughout the coursework in the degree program.

Student Learning Outcomes:

- Demonstrate an understanding of kinematics of a particle and a rigid body

- Demonstrate an understanding of kinetics concerning force and acceleration, work and energy, impulse and momentum for a particle and a rigid body
- Demonstrate an understanding of, and application for, force vectors
- Demonstrate an understanding of equilibrium of a particle and a rigid body
- Demonstrate an understanding of the basic concepts of thermodynamics
- Demonstrate an understanding of mass and energy balance analysis for closed and open systems
- Demonstrate an understanding of gas power cycles, vapor cycles, and combined power cycles
- Demonstrate an understanding of stress and strain
- Demonstrate an understanding of mechanical properties of materials
- Demonstrate an understanding of axial loading, torsion, bending and transverse shear
- Demonstrate an understanding of stress and strain transformations
- Design and conduct experiments, as well as analyze and interpret data
- Apply the engineering design process
- Function on multidisciplinary teams
- Communicate in an effective and professional manner both verbally and in writing

**Civil Engineering
Associate of Science**

	<i>General Education Requirements</i>	<i>General Education Code</i>	<i>Credits</i>
ARTS/HUM	Arts and Humanities Elective ¹	H	3
EGL 101	Freshman Composition	E	3
EGL 102	Composition and Literature	H	3
MAT 121	Precalculus ²	M	4
MAT 201	Calculus I with Analytic Geometry	M	4
PHY 217	General Calculus Physics I with Lab	SL	4
PHY 218	General Calculus Physics II with Lab	SL	4
SOC SCI	Social Science Electives ³	SS	6
<i>Program Requirements</i>			
CHM 103	General Chemistry I	S	3
CHM 113	General Chemistry I Lab		1
CHM 104	General Chemistry II	S	3
CHM 114	General Chemistry II Lab		1
MAT 202	Calculus II with Analytic Geometry	M	4
MAT 203	Multivariable Calculus	M	4
MAT 246	Introduction to Differential Equations	M	3
PHE 101	Introduction to Engineering Design		3
PHE 211	Statics		3
PHE 212	Dynamics		3

PHE 213	Mechanics of Materials		3
PHE 221	Thermodynamics		3

Total Credits Required in Program: 65

¹Selection may not include EGL designation

²Students placed in MAT 201 or higher Math may replace MAT 121 with MAT, PHY, PHE, CSC or CHM elective(s) **students must satisfy the four credit requirement**

³Courses must be from two different disciplines

Course Descriptions:

CHM 103 General Chemistry I

General Chemistry I studies the fundamental principles of chemistry including measurement, atomic structure, stoichiometry, energy relationships, chemical bonding, molecular structure, and gases. 3 credits

Pre-requisites: EGL 101, MAT 093 or MAT 098

Co-requisite: CHM 113

CHM 104 General Chemistry

General Chemistry II is a continuation of General Chemistry I. Topics include solutions, chemical kinetics, chemical equilibrium, acids and bases, equilibria in aqueous solution, chemical thermodynamics, electrochemistry, nuclear chemistry, and coordination chemistry.

3 credits

Pre-requisites: CHM 103, CHM 113

Co-requisite: CHM 114, MAT 121

CHM 113 General Chemistry I Lab

General Chemistry I Lab will expose students to basic chemistry laboratory techniques and procedures such as sample preparation, data collection, gravimetric analysis and titration.

Because this course is designed to complement the General Chemistry I lecture course, conceptual topics include physical properties, determination of molecular weights, stoichiometry, energy, and gas laws. 1 credit

Co-requisite: CHM 103

CHM 114 General Chemistry II Lab

General Chemistry II Lab will build upon the basic chemistry laboratory techniques and procedures learned in Chemistry 103. This course covers conceptual topics including qualitative analysis, chemical reactions in aqueous solution, acid-base reaction, reaction rates, chemical equilibrium, electrochemistry, and oxidation-reduction reactions. 1 credit

Pre-requisites: CHM 103, CHM 113

Co-requisite: CHM 104

EGL 101 Freshman Composition teaches students the skills necessary to read college-level texts critically and to write effective, persuasive, thesis-driven essays for various audiences. The majority of writing assignments require students to respond to and synthesize texts (written and visual) through analysis and/or evaluation. Students also learn how to conduct academic research, navigate the library's resources, and cite sources properly. The course emphasizes the revision process by integrating self-evaluation, peer response, small-group collaboration, and individual conferences. Additionally, students are offered guided practice in appropriate style, diction, grammar, and mechanics. Beyond completing multiple readings, students produce approximately 5,000 words of finished formal writing in four-five assignments, including a 2,000-word persuasive research essay. 3 credits

Pre-requisites: C or better in COL081 and EGL093 or equivalent skills assessment

EGL 102 Composition and Literature (H) introduces students to the genres of fiction, poetry, and drama in order to gain a fuller understanding and appreciation of these literary forms. Several brief compositions and a term paper will be assigned. 3 credits

Pre-requisites: CIS 101 and EGL 101

MAT 121 Precalculus (M) prepares the student for the study of calculus, discrete mathematics, and other mathematics intensive disciplines through the study of algebraic, exponential, logarithmic, and trigonometric functions. Topics include functions, laws of logarithms, trigonometric and inverse trigonometric functions, trigonometric identities, solutions of trigonometric equations, the Laws of Sines and Cosines, and polar coordinates. A problem solving approach utilizes applications and a graphing calculator throughout the course. 4 credits

Pre-requisites: Grade of C or better in MAT093, EGL093

MAT 201 Calculus I with Analytic Geometry (M) introduces students to the mathematical techniques for limits (including L'Hospital's Rule), differentiation, and integration of algebraic, trigonometric, inverse trigonometric, logarithmic, exponential, hyperbolic, and inverse hyperbolic functions. Applications of differentiation and integration are studied. 4 credits

Pre-requisites: EGL 093 and grade of C or better in MAT 121

MAT 202 Calculus II with Analytic Geometry introduces integration techniques, improper integrals, sequences, infinite series, conic sections and polar coordinates. Students will solve applied problems related to limits, differentiation, integration, and infinite series. A computer algebra system, such as Maple, is introduced and used. 4 credits

Pre-requisite: Grade of C or better in MAT 201

MAT 203 Multivariable Calculus provides the student with a study of three-dimensional space, introduction to hyperspace, partial differentiation, multiple integration, vectors in a plane, and topics in vector calculus to include Green's Theorem, Stokes' Theorem, and the divergence theorem. Knowledge of a computer algebra system, MAPLE, is expanded. 4 credits

Pre-requisite: MAT 202

MAT 246 Introduction to Differential Equations introduces the basic techniques for solving and/or analyzing first and second order differential equations, both linear and nonlinear, and systems of differential equations. The use of a mathematical software system is an integral part of the course. 3 credits

Pre-requisite: Grade of C or better in MAT 202

PHE 101 Introduction to Engineering Design is a project-based course that introduces the product development process. Working in teams and using modern computer tools, students complete the design of a complex system requiring problem specification, product research, product design, product modeling and analysis, fabrication, testing, redesign, and product presentation. Engineering fundamentals such as units and dimensions, CAD modeling and analysis, creation of engineering drawings, data analysis with spreadsheets, properties of materials, mechanics, heat transfer, circuits, computer programming and other engineering topics are studied.

Co-requisite: MAT 201

PHE 211 Statics will introduce students to the study of the equilibrium of bodies (both solids and fluids) under the influence of various kinds of loads. Forces, moments, couples, equilibrium of a particle, equilibrium of a rigid body, analysis of trusses, frames and machines, internal forces in structural members, friction, center of gravity, centroids, composite bodies, and fluid pressure are topics which will be considered. Vector and scalar methods are used to solve problems. Conceptual understanding will be integrated with problem-solving. 3 credits

Pre-requisites: PHY 217 and MAT 202

PHE 212 Dynamics will introduce students to the study of systems of heavy particles and rigid bodies at rest and in motion. Force, acceleration, work-energy, and impulse-momentum relationships, motion of one body relative to another in a plane and in space are topics which will be considered. Vector and scalar methods are used to solve problems. Conceptual understanding will be integrated with problem-solving. 3 credits

Pre-requisite: PHE 211

PHE 213 Mechanics of Materials will introduce students to the study of stress and deformation of beams, shafts, columns, tanks, and other structural, machine, and vehicle members. Topics include stress transformation using Mohr's circle, centroids and moments of inertia, shear and bending moment diagrams, derivation of elastic curves, and Euler's buckling formula.

Conceptual understanding will be integrated with problem-solving. 3 credits

Pre-requisite: PHE 211

PHE 221 Thermodynamics will introduce students to the interaction between heat and mechanical energy in materials and machines and its application to mechanical systems. Topics covered include first and second laws of thermodynamics, cycles, reactions, and mixtures, fluid mechanics, heat transfer, fluid-energetics laboratory, and the application of these engineering sciences to energy systems design. Conceptual understanding will be integrated with problem-solving. 3 credits

Pre-requisites: PHE 211 and PHY 218

PHY 217 General Calculus Physics I with Lab (SL) is the first course of a three semester calculus-based general physics course sequence. This course provides a comprehensive introduction for students interested in physics and engineering. Topics related to mechanics include linear and rotational kinematics and dynamics, energy and momentum conservation, collisions, equilibrium of rigid bodies, and oscillations. Problem-solving and laboratory skills

will be emphasized in this course. Previous exposure to physics principles and strong mathematics skills are highly recommended. 4 credits

Prerequisite: MAT 121

Co-requisite: MAT 201

PHY 218 General Calculus Physics II with Lab (SL) is the second course of a three semester calculus-based general physics course sequence. This course provides a comprehensive introduction to students interested in physics and engineering. Topics include: thermodynamics, electricity, magnetism, and radioactivity. Problem-solving and laboratory skills will be emphasized in this course. 4 credits

Prerequisite: PHY 217 with a grade of C or better

Co-requisite: MAT 202

C. Critical and compelling regional or Statewide need as identified in the State Plan:

The proposed program meets the critical and compelling regional and statewide need outlined in Goal 5 of *Maryland Ready: 2013 Maryland State Plan for Postsecondary Education* – “Maryland will stimulate economic growth, innovation, and vitality by supporting a knowledge-based economy, especially through increasing education and training and promoting the advancement and commercialization of research.”

The job outlook for engineers is shaped both by society's growing need to devise solutions to technically challenging problems — global warming, a shortage of clean water, the demand for faster and smarter computing — and by short supply. Only 4.5 percent of all undergraduates come out of school with engineering degrees, according to the National Science Foundation.¹

Engineering is the discipline, art, and profession of acquiring and applying technical, scientific, and mathematical knowledge to design and implement materials, structures, machines, devices, systems, and processes that safely realize a desired objective or invention. Engineers solve problematic technical issues by using the fundamentals of math and science to develop cost effective solutions. Engineers not only work in the development and design of new products, they also work in the testing, production, and maintenance of new products. Engineers oversee production assembly lines, determine why products break down, and administer tests to improve product quality. They also determine how much money and time is necessary to finish projects.

The proposed program meets the critical and compelling regional and statewide need outlined in Goal 5 of *Maryland Ready: 2013 Maryland State Plan for Postsecondary Education* – “Maryland will stimulate economic growth, innovation, and vitality by supporting a knowledge-based economy, especially through increasing education and training and promoting the advancement and commercialization of research.”

In addition, the *2013 Maryland State Plan for Postsecondary Education* notes “Increasing the number of STEM degrees awarded to students is another key goal for Maryland postsecondary education. STEM-related occupations are critical because they are closely tied to technological innovation, economic growth, and increased productivity. Currently, workers with

¹ You're an Engineer: You're Hired. *U.S. News & World Report*, March 2012.

STEM competencies and degrees are in high demand” (p.12). The Plan notes that “Data from the Georgetown University Center for Education and the Workforce (2011) rank STEM jobs as the second fastest-growing occupational category in the nation, behind health care” (p.12).

D. Quantifiable & reliable evidence and documentation of market supply & demand in the region and State:

According to the Maryland Department of Labor, Licensing, and Regulation, the statewide demand for Civil Engineers will increase by 23% between 2014 and 2024. This represents total openings of 1,535.² As there are no other Associate Degree programs in the state, Cecil College would be serving an important need in terms of access and affordability to meet the state’s need for Civil Engineers.

E. Reasonableness of program duplication:

A search of the Maryland Higher Education Commission’s Academic Program Inventory database reveals that there are no other Associate Degree programs in Civil Engineering in the state, but the Community College of Baltimore County has a Lower Division Certificate in Civil Engineering Technology. The following institutions in the state have Bachelor’s Degree programs in Civil Engineering:

Johns Hopkins University	CIVIL ENGINEERING	Bachelor's Degree
Morgan State University	CIVIL ENGINEERING	Bachelor's Degree
Univ. of Maryland, College Park	CIVIL ENGINEERING	Bachelor's Degree

F. Relevance to Historically Black Institutions (HBIs)

No impact is anticipated on the state’s historically black institutions.

G. If proposing a distance education program, please provide evidence of the Principles of Good Practice (as outlined in COMAR 13B.02.03.22C).

Not applicable.

² Maryland Occupational Projections - 2014-2024 - Workforce Information and Performance. Retrieved from <http://dllr.maryland.gov/lmi/iandoproj/maryland.shtml>

H. Adequacy of faculty resources (as outlined in COMAR 13B.02.03.11).

Faculty Member	Credentials	Status	Courses Taught
Brandy Biddy, Assistant Professor of Mathematics	M.S., John's Hopkins University	Full-time	MAT 246 Introduction to Differential Equations
John Climent, Professor of Mathematics	Ph.D., University of Delaware	Full-time	MAT 203 Multivariable Calculus
Jack Cohen, Assistant Professor of Sociology and Psychology	M.Div. Eastern/Palmer Theological Seminary	Full-time	Social Science Electives
Anne Edlin Associate Professor of Mathematics	Ph.D., Temple University	Full-time	MAT 201 Calculus I with Analytic Geometry
Kristy Erickson, Professor of Mathematics	Ed.D. Walden University	Full-time	MAT 121 Precalculus MAT 202 Calculus II with Analytic Geometry
Craig Frischkorn, Professor of English	Ph.D., English State University of New York at Buffalo	Full-time	EGL 101 Freshman Composition
Jennifer Levi, Professor of English	Ph.D., University of Delaware	Full-time	EGL102 Composition and Literature
Anand Patel Assistant Professor of Engineering	M.S., UMBC	Full-time	PHE 101 Introduction to Engineering Design PHE 211 Statics PHE 212 Dynamics PHE 213 Mechanics of Materials PHE 221 Thermodynamics
Ebony Roper, Assistant Professor of Chemistry	Ph.D., Howard University	Full-time	CHM 103 General Chemistry I CHM 113 General Chemistry I Lab CHM 104 General Chemistry II CHM 114 General Chemistry II Lab
Gail Wyant, Professor of Physics and Geosciences	M.S., Stony Brook University	Full-time	PHY 217 General Calculus Physics I with Lab PHY 218 General Calculus Physics II with Lab

I. Adequacy of library resources (as outlined in COMAR 13B.02.03.12).

Cecil College's Cecil County Veterans Memorial Library is a member of Maryland Digital Library and the Maryland Community College Library Consortium.

Students enrolled in the Civil Engineering Associate of Science program have on-campus and off-campus access to the following relevant databases: EBSCOhost's Academic Search Complete, EBSCO's eBook Academic Collection (contains over 140,000 titles), ProQuest Central and ProQuest Science. Titles within these resources include: journal Civil Engineering, journal Civil Engineering Dimension, journal Civil Engineering & Environmental Systems, journal Advance in Civil Engineering, journal Heavy Construction Industry, Including Civil Engineering Construction, Major Construction Projects, Land Subdivision, Infrastructure, Utilities, Highways and Bridges Industry (US), eBook Mechanical Engineering, Materials Science and Civil Engineering, eBook Life Cycle Costing for the Analysis, Management and Maintenance of Civil Engineering Infrastructure, eBook Dynamic of Civil Engineering and Transport Structures and Wind Energy.

Instructors have the option to place textbooks and DVDs on reserve in the library for their courses, or the library can purchase textbooks and DVDs to place on reserve for student use. The library staff welcomes and encourages faculty to submit requests for books, multi-media resources and databases to support their instruction. Students and faculty can submit Inter-Library Loan requests for books and articles.

J. Adequacy of physical facilities, infrastructure and instructional equipment (as outlined in COMAR 13B.02.03.13)

The Engineering Program is housed on the North East campus in the Engineering and Math building. The Engineering and Math building houses the program labs and classrooms, student lounge, conference rooms. Engineering students will also have the opportunity to utilize additional physical facilities on campus including the Library; the Arts and Sciences Building, housing the Biology and learning labs; and the Technology/Conference Center, housing the computer lab, simulation labs, a student lounge / dining area and a Conference Center.

In the Engineering and Math building, the Engineering program has two dedicated classrooms, one dedicated machine shop and one printer room. The classrooms are equipped with desks, chairs, locked storage areas, a sink, counter top, whiteboard and computer projector system for Power Point, Blackboard and Internet access. The classrooms are also equipped with computers and laptops that allow engineering students to access CAD software like AutoCAD and SolidWorks, programming languages like C, C++ and MATLAB, along with other software like MS Word, MS Excel and MS PowerPoint. The Machine Shop is a spacious room equipped with materials and equipment for students to work on a variety of lab experiments and projects, providing them with technical skills and hands-on experience. The Printer Room is equipped with a 3-D printer that allows students to import and print designs from CAD software.

The Engineering Program has sufficient dedicated office space for program faculty and staff and students. The faculty offices includes table and chairs available for private conferences with students and/or faculty, bookshelves for department resources and four locked file cabinets to

secure program materials. On the second floor of the Engineering and Math building, there is also dedicated office space for adjunct faculty. The adjunct office is equipped with computers, desks, chairs and telephones. A conference room is available for faculty meetings and or private conferences with students. In a faculty work area, the faculty has access to table, chairs, faculty mailboxes, courier service as well as a copy and fax machine. Also in this work area are a refrigerator, sink, cupboards and microwave for faculty use.

Program faculty and students utilize technology systems to enhance teaching and learning experiences and to support the technical didactic and clinical educational experiences as evident in the curriculum. Available technology includes state-of-the-art electronic classrooms and clinical labs with interactive white boards, projection systems, immediate capture and documentation cameras, wireless internet access; and the college-wide Course Management System 'Blackboard', which can provide on-line learning to supplement courses.

The North East campus computer lab, housed in the Technology Center, provides 28 computers and technology resource staff, during regular lab hours, to assist students. Engineering faculty works closely with the Technology Resources department to provide up-to-date hardware and software to faculty and students.

K. Adequacy of financial resources with documentation (as outlined in COMAR 13B.02.03.14)

Please see next two pages.

**Cecil College – A.S. Civil Engineering Program
Projected Revenues**

TABLE 1: RESOURCES					
Resource Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Reallocated funds	N/A	N/A	N/A	N/A	N/A
2. Tuition revenue (c+g below)	\$63,986	\$63,986	\$74,686	\$74,686	\$85,386
a. Number of F/T students	6	6	6	6	6
b. Annual Tuition/Fee Rate	\$107/credit	\$107/credit	\$107/credit	\$107/credit	\$107/credit
c. Total F/T Revenue (a * 33 * b)	\$21,186	\$21,186	\$21,186	\$21,186	\$21,186
d. Number of P/T students	20	20	25	25	30
e. Credit Hour Rate	\$107/credit	\$107/credit	\$107/credit	\$107/credit	\$107/credit
f. Annual Credit Hour Rate	N/A	N/A	N/A	N/A	N/A
g. Total P/T Revenue (d * 20 * e)	\$42,800	\$42,800	\$53,500	\$53,500	\$64,200
3. Grants, Contracts, & Other External Sources	0	0	0	0	0
4. Other sources:					
Student Dev. Fees	\$4,784	\$4,784	\$5,584	\$5,584	\$6,384
Registration Fees	\$3,900	\$3,900	\$4,650	\$4,650	\$5,400
Total (Add 1-4)	\$72,670	\$72,670	\$84,920	\$84,920	\$97,170

Assumptions:

- Tuition revenue is conservatively projected based on an in-county rate of \$107/credit
- Full-time students complete 33 credits per year on average; Year one tuition revenue = 6 students * 33 credits = 198 total credits * \$107/credit = \$21,186
- Part-time students complete 20 credits per year on average; Year one tuition revenue = 20 students * 20 credits = 400 total credits * \$107/credit = \$42,800
- Student Development Fee is \$8/credit hour; Fees for year one = 598 total credits * \$8 = \$4,784
- Registration fee = \$75/semester; registration fees are assumed to be two semesters each year or \$150, but students may elect to also take courses in the summer; Year one registration fees = 26 students * \$150 = \$3,900

TABLE 2: EXPENDITURES					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	\$68,791	\$70,286	\$71,432	\$72,598	\$73,784
a. #FTE	1.0	1.0	1.0	1.0	1.0
b. Total Salary	\$51,856	\$52,634	\$53,423	\$54,225	\$55,038
c. Total Benefits	\$16,935	\$17,652	\$18,009	\$18,373	\$18,746
2. Administrative Staff (b + c below)	0	0	0	0	0
a. #FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
3. Support Staff (b + c below)	0	0	0	0	0
a. #FTE	0	0	0	0	0
b. Total Salary	0	0	0	0	0
c. Total Benefits	0	0	0	0	0
4. Equipment	0	0	0	0	0
5. Library	0	0	0	0	0
6. New or Renovated Space	0	0	0	0	0
7. Other Expenses	0	0	0	0	0
Total (Add 1-7)	\$68,791	\$70,286	\$71,432	\$72,598	\$73,784

Assumptions:

- Programs will be implemented with existing faculty resources and administrative staff, so there are no new expenses for personnel.
- Salary and benefits are based on one full-time faculty member in the Sciences Department
- Library resources and equipment are budgeted in the operating budget on an ongoing basis.
- Salaries are forecasted to increase @ 1.5% each year
- Health benefits are forecasted to increase @ 2.5% each year

L. Adequacy of provisions for evaluation of program (as outlined in COMAR 13B.02.03.15).

Individual course assessment reports document student learning outcomes which are taken directly from the course syllabus. The Assessment Committee has established a rubric for course assessment reports which requires documentation of desired learning outcomes (taken from the syllabus), indicators of student learning outcomes, direct and indirect methods of assessment, quantitative and qualitative data on student performance, and how assessment results will be used to further improve student learning outcomes in the future. Each report is reviewed to ensure that it meets the guidelines established by the Assessment Committee. Reports are collected for one-third of all courses offered during the fall and spring semesters each academic year, resulting in a review of all courses within 36 months.

Faculty members are evaluated each and every semester by students enrolled in their courses. The College uses an electronic survey process (Evaluation Kit) and students are required to complete the evaluation within a specified time frame at the end of the semester or they are locked out of the learning management system (Blackboard) until they complete the survey. This has resulted in a very high response rate for all courses.

The College has an established Program Review Policy and a Program Review and Assessment Plan. Both of these documents have been endorsed by the Faculty Senate and approved by the Board of Trustees. One-fifth (20%) of the programs are reviewed each year so that all programs are reviewed on a five-year cycle. A repository, which is accessible to all faculty members, is kept for all Program Review and Assessment documents. Additionally, a database has been established to track the status of recommended changes/revisions to programs.

Faculty members are assessed in the classroom by the appropriate Dean or designee each semester for their first year at Cecil College, annually for the next two years, and every three years thereafter.

All faculty members are contractually obligated to complete an annual report: inclusive of assessment results.

M. Consistency with the State's minority student achievement goals (as outlined in COMAR 13B.02.03.05 and in the State Plan for Postsecondary Education).

Cecil College has qualified professional staff in the student advising and student support areas. Advisors seek and support other-race students consistent with the core values of the College, which encompass diversity and inclusiveness. In addition, the College has adopted a Strategic Initiative to "create educational opportunities for a diverse community of learners." The College plans to employ broad recruitment efforts to attract a racially diverse student body. Statements of non-discrimination are included in College publications and will appear in any marketing pieces for the program. In addition, the Director of Minority Student Services will assist in marketing and referring students to the new program.

N. Relationship to low productivity programs identified by the Commission:

Not applicable.