

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

Fall 2017
Projected Implementation Date

Associate of Science
Award to be Offered

1905.00
Suggested HEGIS Code

Sciences
Department of Proposed Program

Chemistry
Title of Proposed Program

40.0501
Suggested CIP Code

Veronica Dougherty, Ph.D.
Name of Department Head

Rebecca Walker
Contact Name

rwalker@cecil.edu
Contact E-Mail Address

443-674-1948
Contact Phone Number

May Way Belt
Signature and Date

4/20/17 President/Chief Executive Approval

February 23, 2017 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.

Mission

Cecil College is an inclusive, open-access college committed to academic excellence and service to the greater region. The College provides a supportive learning environment to a diverse body of students as they build the skills and knowledge to achieve academic success, **prepare to transfer, and enter the workforce**. Further, Cecil College fosters intellectual, professional, and personal development through lifelong learning opportunities, the arts, and community engagement.

The Associate of Science Chemistry program is central to the College's mission because it will prepare students for transfer to four-year programs as well as entry level employment as chemical technicians.

"In the past, most chemical technicians were trained on the job. Today, industry demands a solid foundation in applied basic chemistry and math, plus experience using various kinds of standard labware. Computer knowledge and oral and written communication skills are also required.

The best preparation is a two-year associate degree program designed to prepare people for a career in chemical technology, which is currently offered at over 100 community and two-year colleges."¹

The Chemistry Program offers two years of Chemistry (General and Organic) that is transferable to most four year colleges in the area, and a one semester introductory level class (Chemistry and Art) for non-science majors.

¹ American Chemical Society. (2017). Chemical Technicians Overview. Retrieved from <https://www.acs.org/content/acs/en/careers/college-to-career/chemistry-careers/chemical-technology.html>.

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

**Chemistry
Associate of Science**

	<i>General Education Requirements</i>	<i>General Education Code</i>	<i>Credits</i>
ARTS/HUM	Arts and Humanities Electives	H	3
CHM 103 and CHM 113	General Chemistry I and General Chemistry I Lab	S	3 1
CHM 104 and CHM 114	General Chemistry II General Chemistry II Lab	S	3 1
EGL 101	Freshman Composition	E	3
EGL 102	Composition and Literature	H	3
MAT 121	Precalculus ²	M	4
SOC SCI	Social Science Electives ³	SS	6
SPH 121or SPH 141	Interpersonal Communications Public Speaking	H	3
	<i>Program Requirements</i>		
CHM 203	Organic Chemistry I with Lab		4
CHM 204	Organic Chemistry II with Lab		4
CSC 109 or PHE 180	Introduction to Programming or Matlab Fundamentals		3
ELECT	Electives		3
MAT 201	Calculus I with Analytic Geometry	M	4
MAT 202	Calculus II with Analytic Geometry	M	4
PHY 217	General Physics I with Lab	SL	4
PHY 218	General Physics II with Lab	SL	4

Total Credits Required in Program: 60

² Students 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

³ Courses must be from two different disciplines

Program Outcomes:

Upon successful completion of this Program, students will be able to:

- Apply principles and theories in the basic areas of chemistry
- Collect and perform qualitative/quantitative chemical analyses of data
- Communicate scientific information through written and /or verbal formats
- Utilize critical thinking to identify and solve problems
- Describe and utilize the techniques applicable to chemistry research projects
- Use basic laboratory instrumentation for both basic and organic chemistry processes

Course Descriptions:

CHM 103 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: MAT 093 or MAT 098

Co-requisites: CHM 113, EGL 101

CHM 104 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-requisites: CHM 114, MAT 121

CHM 113 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 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

CHM 203 Organic Chemistry I with Laboratory studies the structure, properties, major reactions, and nomenclature of organic compounds. Also included in the course are stereochemistry and spectroscopic methods of analysis. Major classes of organic compounds discussed are aliphatic hydrocarbons, alkyl halides, aromatic hydrocarbons, and alcohols. The laboratory portion of CHM 203 includes essential organic chemistry laboratory techniques and experiments designed to reinforce concepts discussed in lecture. 4 credits

Pre-requisites: CHM 104, CHM 114

CHM 204 Organic Chemistry II with Laboratory is the continuation of CHM 203. Topics include organometallic compounds, carbonyl compounds, carboxylic acids and their derivatives, condensation reactions, amines, aryl halides, and phenols. Special topics include carbohydrates, proteins, and nucleic acids. The laboratory portion of the course is designed to reinforce concepts discussed in lecture and to teach organic chemistry laboratory techniques. 4 credits
Pre-requisite: CHM 203

CSC 109 Introduction to Programming covers core concepts and techniques needed to logically plan and develop computer programs, including object oriented programming and modular design. This course uses the Python programming language. 3 credits
Pre-requisite: MAT 097 Introductory and Intermediate Algebra (recommended)

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 introduces students to the genres of fiction, poetry, and drama. Focused on these literary forms, the writing assignments further the skills of close reading, critical analysis, source-based inquiry, research, and synthesis. 3 credits
Prerequisite: Grade of C or higher in 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 vectors. A problem solving approach utilizes applications and a graphing calculator throughout the course. 4 credits
Pre-requisites: Grade of C or better in MAT093 or MAT 098, 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: C or better in MAT 201

PHE 180 Introduction to MATLAB guides students from basic computations through applications of symbolic mathematics, numerical techniques, and graphical analysis. Students will focus on problem-solving and the basics of programming, M-files, functions, plotting, matrix algebra, and numerical and graphical techniques. 3 credits

Prerequisites: EGL 101 and MAT 201

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 C or better

Co-requisite: MAT 202

SPH 121 Interpersonal Communication is a survey course covering all facets of human communication. The course emphasizes basic communication skills and awareness of what contributes to effective communicating and what contributes to messages miscommunicated. It also provides students with practice in verbal and listening skills. Students relate communication learning to all areas of life and career skills. Classroom discussions, activities and experiments on a variety of topics are used as a basis for students' growing awareness of perception and skills in communication. 3 credits

Co-requisite: EGL 093

SPH 141 Public Speaking (H) is the study of the principles and models of communication in conjunction with hands-on experience in the planning, structuring, and delivery of speeches. Students study and deliver several kinds of public address. The course also provides students with a model for constructive criticism to teach the students what contributes to effective public speaking. 3 credits

Co-requisite: EGL 093

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.**”

“Chemical technicians play a vital role in a variety of industries by working with chemists and chemical engineers to develop, test, and manufacture chemical products. These technicians are highly skilled scientific professionals who are critical members of scientific teams that conduct much of the hands-on work that is required. Some technicians assist senior researchers in the laboratory, but many work independently to collect valuable information for review. Chemical technicians work in laboratories, making sure that processes are carried out safely, cost-effectively, and according to the highest professional standards. Chemical technicians work in every aspect of the chemical process industry—from basic research to hazardous waste management.”⁴

The median annual wage for chemical technicians was \$44,660 in May 2015.⁵

“Chemical technicians’ duties and titles often depend on where they work. The following are the two main types of chemical technicians:

Laboratory technicians typically help scientists conduct experiments and analyses. Often, they prepare chemical solutions, test products for quality and performance, and analyze compounds produced through complex chemical processes. Chemical laboratory technicians may analyze samples of air and water to monitor pollution levels. Laboratory technicians usually set up and maintain laboratory equipment and instruments.

Processing technicians monitor the quality of products and processes at chemical manufacturing facilities. For example, they adjust processing equipment to improve production efficiency and output. They also collect samples from production batches, which then are tested for impurities and other defects. In addition, processing technicians test product packaging to make sure that it is well designed, will hold up well, and will have a limited impact on the environment.”⁶

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

A search of the Maryland Department of Labor, Licensing, and Regulation database for occupational projections reveals that there will be a 5.6% increase in the number of openings until 2024 for the occupational title Chemical Technician. The database did not list the job titles

⁴ Ibid.

⁵ Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition, Chemical Technicians. Retrieved from <https://www.bls.gov/ooh/life-physical-and-social-science/chemical-technicians.htm>.

⁶ Ibid.

Laboratory Technician or Processing Technician, so this may be underestimating the actual demand.

E. Reasonableness of program duplication:

A search of the Maryland Higher Education Commission's Academic Program Inventory database did not reveal any other Associate Degree programs in the state. However, a broader Internet search revealed that the following Maryland institutions have Associate Degree programs in Chemistry:

Institution	Program
Alleghany College of Maryland	Arts & Sciences – AOC Chemistry (AS)
Anne Arundel Community College	Arts & Sciences – Chemistry A.S.
Carroll Community College	AA Arts & Sciences - Chemistry
Community College of Baltimore County	Associate of Science (A.S.) in Science Transfer Pattern - Chemistry
Hagerstown Community College	Chemistry, Arts and Sciences Option, A.S.
Harford Community College	Associate of Sciences Degree - Option in Arts and Sciences
Montgomery College	Chemistry and Biochemistry Track, Science AS
Prince George's Community College	Chemistry Option, Associate of Arts in General Studies

Despite the fact that there are numerous programs available in the state, Cecil College's location on Maryland's Eastern Shore will not present undue competition with any of these programs. The nearest program is approximately 20 miles away from Cecil College, and is Harford's "Associate of Sciences Degree – Option in Arts and Sciences."

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.

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

Faculty Member	Credentials	Status	Courses Taught
Allan Drach Assistant Professor of Mathematics	M.A., Villanova University	Full-time	MAT 121 Precalculus
Anne E. Edlin Professor of Mathematics	Ph.D., Temple University	Full-time	MAT 202 Calculus II with Analytic Geometry
Norman Ellerton Adjunct Instructor	Ph.D., Leeds University	Part-time	CHM 203 Organic Chemistry I with Lab CHM 204 Organic Chemistry II with Lab
Kristy Erickson Professor of Mathematics	Ed.D., Walden University	Full-time	MAT 201 Calculus I with Analytic Geometry
Jennifer Levi Professor of English	Ph.D., University of Delaware	Full-time	EGL 101 Freshman Composition
Anand Patel Assistant Professor of Engineering and Physics	M.S., University of Maryland Baltimore County	Full-time	PHE 180 Matlab Fundamentals
Patricia D. Richardson	B.A., Michigan State University; Graduate studies, Michigan State University	Full-time	SPH 121 Interpersonal Communications SPH 141 Public Speaking
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
Nathanael R. Tagg Assistant Professor of English	M.F.A., Rutgers University	Full-time	EGL 102 Composition and Literature
Jacqueline Wilson Assistant Professor of Computer Science	M.A., Harvard University	Full-time	CSC 109 Introduction to Programming
Gail Wyant Professor of Physics, Engineering and Geosciences	M.S., State University of New York at Stony Brook	Full-time	PHY 217 General Physics I with Lab PHY 218 General 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.

Cecil College's Cecil County Veterans Memorial Library is a member of Maryland Digital Library, Maryland Community College Library Consortium and Lyrasis. CCVM Library has reciprocal borrowing privileges with the other Maryland community college libraries.

Students enrolled in AS Chemistry upon faculty request can receive in-class library instruction on specific program resources available for chemistry. The instructional librarian will develop a subject guide for this program and it will be highlighted at the orientation providing students with a direct pathway to relevant resources. Students will learn during the orientation session that inter-library loan is available and how to submit requests.

Students have on-and-off campus online access to EBSCOhost's Academic Search Complete database with full-text access to Organic Chemistry International journal, multiple full-text chemistry journals and EBSCOhost's eBook Academic Collection which currently includes over 540 relevant titles. ProQuest Science database provides full-text access to seventeen chemistry journals. eBooks and online journals are supplemented with library's print collection.

Instructors have the option of placing textbooks and DVDs on Reserve for student use. The library staff welcomes and strongly encourages faculty to submit requests for books, multi-media resources and databases to support their instruction.

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

The Chemistry Program is housed on the North East Campus; lecture classes are held in the Technology Center (TC) or the Arts and Sciences (AS) buildings, while the labs are held exclusively in a well-equipped lab located in the Arts and Sciences building.

The TC building classrooms are equipped with projector screens for both smart board and traditional projectors. The traditional projectors are capable of connecting to College supplied Microsoft Pro tablets for interactive learning practice. Additionally, the lecture rooms have an instructor computer, ample whiteboard space, tables, chairs, and a large periodic table for instruction. 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. The computers are fitted with ACD Labs ChemSketch chemical drawing software that students can access to generate professional looking structures and figures for reports and presentations, and the College-wide learning management system, Blackboard™.

The Chemistry lab space has three work benches with sinks, vacuum and air bulk heads, power outlets, and USB connections. Instead of Bunsen burners, rechargeable portable butane burners are supplied as needed. A high temperature oven is also located in the lab. The space easily holds up to 24 students safely. Six fume hoods with sinks, cold water, air bulkheads and vacuum

bulkheads are shared between the students. A whiteboard, an instructor computer connected to a Xerox color printer, Blu-Ray disk player, Apple-TV, and document camera projector facilitate enhanced instruction and demonstrations.

Faculty and students utilize the Vernier Data Collection system technology to enhance teaching and learning experiences when gathering sample measurements. With the Vernier system a wide array of measuring sensors including temperature, pressure, voltage, and ultraviolet-visible connections are regularly used. The lab is fitted with laptop computers to operate the data collection system. Also, there is ample storage for all the glassware required for conducting routine experiments.

The lab is connected to a balance area that has two analytical balances and four top loading balances. Adjoining the balance area is the instrument room housing other training equipment including a newly purchased IKA Rotary Evaporator and a 60 MHz benchtop Nuclear Magnetic Resonance Spectrometer from Nanalysis Corporation. Additionally, the instrument room holds the centrifuge, melting point stations, portable gas chromatography equipment, cabinets for storage, and a sink with an additional eyewash station.

The bulk of the chemicals (including distilled and ultrapure water sources) are stored in the preparatory lab that is shared for all Chemistry and Biology labs. The preparatory lab separates the Chemistry and Microbiology labs. All chemicals are labeled and stored in the appropriate cabinets. Safety Data Sheets (SDS) are updated annually and hard copies are placed inside the Chemistry and preparatory labs, and outside the preparatory lab. Both lab spaces are equipped with a safety shower and eyewash station that is routinely flushed, as well as an updated fire extinguisher and phone for emergencies.

Outside the lab on the same floor is a study area/lounge for students to meet and have group or independent study sessions. Also available is a separate enclosed conference area for tutoring. The adjunct office is equipped with computers, desks, chairs and telephones. The lab manager is provided with office space outside the preparatory lab and there are additional workspaces for lab staff and student workers. All workspace is equipped with a computer, desk, chairs, locking cabinets and telephone with voicemail.

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

Please see next two pages for revenue and expense tables.

**Cecil College – AS Chemistry
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)	\$46,117	\$46,117	\$60,990	\$60,990	\$60,990
a. Number of F/T students	7	7	10	10	10
b. Annual Tuition/Fee Rate	\$107/credit	\$107/credit	\$107/credit	\$107/credit	\$107/credit
c. Total F/T Revenue (a * 33 * b)	\$24,717	\$24,717	\$35,310	\$35,310	\$35,310
d. Number of P/T students	10	10	12	12	12
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)	\$21,400	\$21,400	\$25,680	\$25,680	\$25,680
3. Grants, Contracts, & Other External Sources	0	0	0	0	0
4. Other sources:					
Student Dev. Fees	\$3,448	\$3,448	\$4,560	\$4,560	\$4,560
Registration Fees	\$2,550	\$2,550	\$3,300	\$3,300	\$3,300
Total (Add 1-4)	\$52,115	\$52,115	\$68,8509	\$68,850	\$68,850

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 = 7 students * 33 credits = 231 total credits; 231 credits * \$107/cr. = \$24,717
- Part-time students complete 20 credits per year on average; Year one tuition revenue = 10 students * 20 credits = 200 credits * \$107/cr. = \$21,400
- Student Development Fee is \$8/credit hour; Fees for year one = 431 total credits * \$8 = \$3,448
- 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 = 17 students * \$150 = \$2,550

**Cecil College – AS Chemistry
Projected Expenses**

TABLE 2: EXPENDITURES					
Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1. Faculty (b + c below)	\$45,098	\$45,812	\$46,537	\$47,274	\$48,024
a. #FTE	.75	.75	.75	.75	.75
b. Total Salary	\$35,625	\$36,159	\$36,702	\$37,252	\$37,811
c. Total Benefits	\$9,473	\$9,652	\$9,835	\$10,022	\$10,213
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)	\$45,098	\$45,812	\$46,537	\$47,274	\$48,024

Assumptions:

- Programs will be implemented with existing faculty resources and administrative staff, so there are no new expenses for personnel. Only one full-time faculty salary is allocated in the Expenditures Table as other full-time faculty members listed above for particular courses are budgeted through departments that are not responsible for this program.
- 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.