

August 4, 2020

Dr. James D. Fielder Secretary of Higher Education Maryland Higher Education Commission 6 N. Liberty Street Baltimore, MD 21201

Dear Dr. Fielder:

Enclosed for the Commission's review is a proposal for a new Associate of Applied Science degree offered by Cecil College:

#### AAS Bioproduction HEGIS Code 5499.00; CIP Code 41.0101

We have enclosed a check for \$850 to cover the Commission's fee for this review.

Should you have any questions or require additional information, please contact Dr. Colleen Flewelling, Associate Dean for Academic Assessment and Development, at 443-674-1948 or cflewelling@cecil.edu.

Sincerely,

Coming Dege

Christy Dryer, DNP Vice President of Academic Programs

### **OWN YOUR FUTURE**



Cover Sheet for In-State Institutions New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	Cecil College				
Each action	below requires a separate proposal and cover sheet.				
New Academic Program	O Substantial Change to a Degree Pro	gram			
• New Area of Concentration	O Substantial Change to an Area of Co				
O New Degree Level Approval	O Substantial Change to a Certificate				
New Stand-Alone Certificate	O Cooperative Degree Program	Brann			
O Off Campus Program	O Offer Program at Regional Higher E	Education Cent			
	O R*STARSPayment Amount:Date Submitted:O CheckAmount:\$850				
Department Proposing Program	Sciences				
Degree Level and Degree Type	AAS				
Title of Proposed Program	Bioproduction				
Total Number of Credits	60				
Suggested Codes	HEGIS: 5499.00 CIP: 41.0101				
Program Modality	O On-campus O Distance Educat	tion (fully onlin			
Program Resources	O Using Existing Resources O Requiring New	Resources			
Projected Implementation Date	O Fall O Spring O Summer	Year:2020			
Provide Link to Most Recent Academic Catalog	URL: https://catalog.cecil.edu/				
	Name: Colleen Flewelling				
Desformed Constant for this Deserved	Title: Associate Dean of Academic Assessment and Development				
Preferred Contact for this Proposal	Phone: 443-674-1948				
	Email: cflewelling@cecil.edu				
Descident/OhioSE section	Type Name: Mary W. Bolt				
President/Chief Executive	Signature: Mary Way Bolt Date: 07/13/2				
	Date of Approval/Endorsement by Governing Board:	06/25/2020			

Revised 3/2019

MARYLAND HIGHER EDUCATION COMMISSION 6 N. Liberty Street • 10<sup>th</sup> Floor • Baltimore, MD 21201 T 410.767.3300 • 800.974.0203 • F 410.332.0270 • TTY for the Deaf 800.735.2258 <u>www.mhec.maryland.gov</u>

### CECIL COLLEGE NEW PROGRAM PROPOSAL AAS BIOPRODUCTION HEGIS 5499.00 CIP 41.0101

#### A. Centrality to institutional mission statement and planning priorities:

This program offers an introduction to the field of Bioprocessing. This exciting new field harnesses cellular processes to create vital industrial and medical products. Students will be introduced to the requisite skills and knowledge for either a transfer to a four-year program or entry-level positions in the industry. Job prospects include Bioprocessing Specialist and Bioprocessing Engineer.

By introducing students to this new field, this program directly supports Cecil College's mission to provide a supportive learning environment to students as they build the skills and knowledge to achieve academic success, prepare to transfer, and enter the workforce.

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

The AAS in Bioproduction prepares students for either an entry level position in bioprocessing or biotechnology, or for further study in a Biology or Bioproduction program at a four-year institution. Students' expenses for their degree are greatly reduced when they complete two years of their degree at Cecil College. The chart below compares tuition at 4-year state institutions which have Biology programs with the cost of attending Cecil College. Decreased expenses allow many students to complete a degree they would otherwise be unable to complete, supporting goal 2 (Success) of the Maryland State Plan for Education.

Institution	Rate	Cost per credit 2020-21	Cost for 60 credits	Savings over 2 vears
Cecil College	In-county	\$125	\$7,500	ycuis
	2			-
Morgan State	In-state	\$250	\$15,000	\$7,500
University				
Frostburg State	In-state	\$276	\$16,560	\$9,060
University				
Towson University	In-state	\$299	\$17,940	\$10,440
University of Maryland	In-state	\$361	\$21,660	\$14,160
Baltimore County				
University of Maryland	In-state	\$367	\$21,660	\$14,160
College Park				

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

Bioprocessing is a new and emerging profession leading to jobs such as Bioprocessing Specialist, Bioprocessing Engineer, Manufacturing Technician and Biopharmaceutical Technician. According to the Jefferson Institute of Bioprocessing, "Over 800,000 people currently work directly in the US biopharmaceutical industry and an additional 3.9 million people work in companies that support biomanufacturing. In 2019, biopharmaceutical companies contributed nearly \$1.39T to the national economy making it one of the country's fastest growing sectors."<sup>1</sup>

#### D. Reasonableness of program duplication:

A search of the Maryland Higher Education Commission's Academic Program Inventory database reveals three similar Associate degree programs in Maryland.

Institution	Program Name	Degree Offered
Frederick Community College	Biotechnology	Associate
Hagerstown Community College	Biotechnology	Associate
Montgomery College	Biotechnology	Associate

Because these programs are located more than 50 miles from Cecil College's campus, offering this program at Cecil College will allow students in Cecil County a more accessible and affordable option to study nearby their residence.

#### E. Relevance to high-demand programs at Historically Black Institutions (HBIs)

We anticipate there will be no impact on the implementation or maintenance of high-demand programs at HBI's.

#### F. Relevance to the identity of Historically Black Institutions (HBIs)

Bachelor's degree programs in Biology are offered at University of Maryland Eastern Shore, Coppin State University, Morgan State University, and Bowie State University. Because Cecil's AAS program in Bioproduction may lead to transfer to a bachelor's degree program, graduates could choose to attend any of these institutions.

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

The following information on degree requirements, learning outcomes, and course descriptions will be made available to students in the college catalog, which is available on the Cecil College website. Students may also consult with advisors and faculty members to learn about these programs.

Information about new programs is clearly and accurately represented in advertising, recruiting, and admissions materials. The College's Academic Programs unit widely shares information about the

<sup>&</sup>lt;sup>1</sup> https://www.jefferson.edu/academics/colleges-schools-institutes/kanbar-college-of-design-engineeringcommerce/research-and-innovation/institute-for-bioprocessing/academic-offerings/bioprocess-engineering-shorttraining.html

requirements for new or changed degrees in MHEC-approved programs. The Admissions and Marketing departments use this information to update application and inquiry forms, internal recruitment products, and other marketing materials.

Faculty at Cecil College design all courses and programs, which are then presented to the Academic Affairs Committee, a committee comprised primarily of faculty, for approval.

Course	Courses	Credits
Code	(34 Credits)	
BIO 132	Principles of Biology II	3
BIO 133	Principles of Biology II Laboratory	1
BIO 200	Microbiology	3
BIO 210	Microbiology Lab	1
BIP 101	Introduction to Biotechnology	4
BIP 102	Biotechnology Laboratory Techniques	
BIP 201	Introduction to Bioprocessing	
BIO 202	College Based Work Experience – BIP	
CHM 103	General Chemistry I	
CHM 113	General Chemistry I Lab	1
CHM 104	General Chemistry II	
CHM 114	General Chemistry II Lab	
MAT or SCI	Math, Science, or Engineering Elective	2
elective		

The proposed AAS program in Bioproduction requires the following courses:

Total Credits: 34

#### **COURSE DESCRIPTIONS**

**BIO 132 Principles of Biology II** is the second semester of a two-semester general biology sequence designed for students majoring in areas of science or health science. Basic principles of biology will be studied with emphasis on evolution, classification of life forms and their environments, ethology, and ecology of populations and communities. Credits: 3 Prerequisite(s): BIO 130, BIO 131, MAT 121 Corequisite(s): BIO 133

**BIO 133 Principles of Biology II Lab** is the second semester of a two-semester general biology laboratory sequence designed for students majoring in areas of science or health science. Students will perform experimental activities in the lab and field that include the study of evolution, organismal diversity and their environments, ethology, and ecology of populations and communities. Credits: 1 Corequisite(s): BIO 132

**BIO 200 Microbiology** surveys the roles of microorganisms in today's environment. We examine the history and development of microbiology, survey the diversity of microbes, and compare the structures of prokaryotic and eukaryotic organisms. Metabolic processes such as fermentation, photosynthesis, aerobic and anaerobic respiration are studied. Beneficial microbes and epidemiology are discussed. We will examine the growing role of microbes, through bioengineering and immunology, in maintaining our

environmental and personal health. Credits: 3 Prerequisite(s): MAT 093 or MAT 095 or MAT 097 Corequisite(s): BIO 210, EGL 101

**BIO 210 Microbiology Lab** introduces the student to methods for studying microbes including various types of microscopy, staining techniques, transformation and culture methods. Students will participate in lab experiments that stress the importance of microbe diversity, their unique physical and chemical growth requirements, and appropriate identification processes. Students are required to spend additional time in the lab to monitor lab results on non-lab days. Credits: 1 Corequisite(s): BIO 200

**BIP 101 Introduction to Biotechnology** studies the principles and applications of biotechnology. Topics include genes and gene regulation, protein production, and recombinant DNA technologies. These technologies are discussed as they apply to plants and animals, the medical field, forensics, and the environment. The laboratory portion will include biotechnology techniques and experiments designed to reinforce concepts discussed in lecture. Credits: 3 Prerequisite(s): BIO 130, EGL 101, MAT 121 or MAT 127.

**BIP 102 Biotechnology Laboratory Techniques** studies the current techniques and applications in biotechnology. Topics include laboratory skills, cell culture, microbiology, DNA structure and analysis, bacterial transformation, plasmid purification, PCR, protein structure and analysis, immunological applications, and research foundations. These techniques and applications are discussed while applying them to research, agriculture, plants, animals, food science, humans and health, forensics, and the environment. The laboratory portion will include biotechnology techniques and applications that reinforce the concepts discussed in lecture. Prerequisite(s): BIP 101 Corequisite(s): BIO 132

**BIP 201 Introduction to Bioprocessing** introduces the techniques and processes necessary for the production of biological products. Biomanufacturing practices, including both upstream and downstream processing, will be discussed with hands-on application of these concepts. Students will grow bacterial and/or mammalian cells in culture in order to produce purified products in compliance with biomanufacturing industry standards. Prerequisite(s): BIP 102

**BIP 202 College-Based Work Experience-BIP** provides the opportunity for a student to obtain work experience that is productive in nature and an essential part of the overall educative process. The work assignment is related to the student's field of study and/or career interests. Prerequisite(s): GPA of 2.0 and completion of all relevant courses as listed in the program option.

**CHM 103** General Chemistry I studies the fundamental principles of chemistry including measurement, atomic structure, stoichiometry, energy relationships, chemical bonding, molecular structure, and gases. Credits: 3 Corequisite(s): CHM 113, EGL 101, MAT 121 or MAT 127

**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. Credits: 3 Prerequisite(s): CHM 103, CHM 113 Corequisite(s): CHM 114

**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. Credits: 1 Corequisite(s): CHM 103

**CHM 114 General Chemistry II Lab** will build upon the basic chemistry laboratory techniques and procedures learned in CHM103. 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. Credits: 1 Prerequisite(s): CHM 103, CHM 113 Corequisite(s): CHM 104

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

- Demonstrate competency with appropriate laboratory instruments and techniques
- Using critical thinking, be able toe valuate the validity of data
- Recognize, design and produce a report on a research topic
- Perform upstream and downstream processing for the production of biological products

In addition, all Computer Science students take the following General Education requirements

General Education Requirements (26 credits)		General Education Code	Credits
EGL 101	College Composition	Е	3
EGL 102	Composition and Literature	Н	3
HUM 101	Introduction to Critical Inquiry	Н	3
MAT 127	Introduction to Statistics	М	4
BIO 130	Principles of Biology I	S	3
BIO 131	Principles of Biology I Lab		1
CIS 101	Introduction to Computer Concepts	Ι	3
SPH 121	Interpersonal Communication	Н	3
SOC SCI	Social Science Elective	SS	3

Total Credits: 26

**BIO 130 Principles of Biology I** is the first semester of a two semester general biology sequence designed for students majoring in areas of science or health science. Basic principles of biology will be studied with emphasis on cellular and molecular biology. Credits: 3 Corequisite(s): BIO 131, EGL 101, MAT 121

**BIO 131 Principles of Biology I Lab** is the first semester of a two-semester general biology laboratory sequence designed for students majoring in areas of science or health science. Students will develop and perform experiments involving molecular biology, biochemistry, genetics, and cell biology. Credits: 1 Corequisite(s): BIO 130

**CIS 101 Introduction to Computer Concepts** is a non-technical course covering the use of word processing, spreadsheets, databases, and presentation software. Emphasis is placed on computer literacy and the use of personal computers. Students with limited keyboarding skills should take CIS 105, Keyboarding, at the same time, or prior to, enrolling in this course. Credits: 3

**EGL 101 College Composition (E)** 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 a minimum of 7,500 words, approximately 5,000 words of which are finished formal writing in four-five assignments, including a 2,000-word persuasive research essay. 3 credits. Pre-requisites: C or better in COL 081 and EGL 093 or equivalent skills assessment.

**EGL 102 Composition & 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 an analytical research paper are assigned. Credits: 3 Prerequisite: EGL101

**HUM 101 Introduction to Critical Inquiry** fosters the characteristics of successful academic pursuit: openness, curiosity, creativity, persistence, and metacognition. In the context of a common reader and the students' own academic and career goals, students will practice critical thought, information assimilation, investigation, discussion, collaboration, and qualitative and quantitative analysis as they develop the habits of mind and cultural literacy necessary for college and global citizenship. Credits: 3 Prerequisite(s): EGL 091 or equivalent Corequisite(s): MAT 097 and EGL 093

**MAT 127 Introduction to Statistics** introduces students to the study of measures of central tendency, measures of variation, graphical representation of data, least squares regression, correlation, probability, probability distributions, sampling techniques, parameter estimation, and hypothesis testing. The emphasis is on applications from a variety of sources including newspapers, periodicals, journals, and many of the disciplines that students may encounter in their college education. Students shall be expected to gather and analyze data, and formally report the results of their research. The use of technology and statistical software is integrated throughout the course. Credits: 4 Prerequisite(s): EGL 093, MAT 093 or MAT 095 or MAT 097, a Grade of C or better in MAT 093 or MAT 095

**SPH 121 Interpersonal Communications (H)** is a survey course covering all facets of human communication. The course emphasizes basic communication skills and awareness of what contributes to effective communicating, as well as 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. Credits: 3 Corequisite: EGL093

Cecil College does not contract with another institution or non-collegiate organization in providing this program.

#### H. Adequacy of articulation

Cecil College has not yet pursued any articulation agreements for this program.

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

Faculty Member	Credentials	Status	Courses Taught
Heather Cadogan, Associate Professor of Biology	M.S. Clemson University (Biological Sciences)	Full-time	BIO 133 Principles of Biology II Lab
Christopher Castillo, Associate Professor of Mathematics	Ph.D. University of Delaware (Mathematics)	Full-time	MAT 127 Introduction to Statistics
Anne Edlin, Professor of Mathematics	Ph.D. Temple University (Mathematics)	Full-time	HUM 101 Introduction to Critical Inquiry
Christopher Gaspare, Assistant Professor of English	M.A. Washington College (English)	Full-time	EGL 101 College Composition
Carlos Lampkin, Assistant Professor of Business	M.B.A. Wilmington University (Business)	Full-time	CIS 101 Introduction to Computer Concepts
Nathanael Tagg, Associate Professor of English	M.F.A. Rutgers University (English)	Full-time	EGL 102 Composition and Literature
Christine Warwick, Assistant Professor of Biology	M.S. University of Saint Joseph (Biology)	Full-time	<ul> <li>BIO 130 Principles of Biology I</li> <li>BIO 131 Principles of Biology I Lab</li> <li>BIO 132 Principles of Biology II</li> <li>BIO 200 Microbiology</li> <li>BIO 210 Microbiology Lab</li> <li>BIP 101 Introduction to Biotechnology</li> <li>BIP 201 Introduction to Bioprocessing</li> <li>BIP 202 College Based Work Experience - BIP</li> </ul>
Ebony Roper, Associate Professor of Chemistry	Ph.D. Howard University (Chemistry)	Full-time	CHM 103 General Chemistry I CHM 104 General Chemistry II CHM 113 General Chemistry I Lab CHM 114 General Chemistry II Lab
Karen Long	M.A.T. Wayne State University (Education, with English and Speech concentrations)	Part-time	SPH 121 Interpersonal Communication
Kayla Ross	B.S. University of Maryland University College (Laboratory Management)	Part-time	BIP 102 Biotechnology Laboratory Techniques

Faculty have several opportunities for ongoing professional development in pedagogy. Cecil College's instructional technologist offers regular workshops on using technologies to improve both face-to-face and online teaching. In addition, each semester she offers the Quality Matters-based Professional Development for Online Teaching (PDOT) course on best practices in online teaching. The College also

funds faculty participation in academic conferences, including conferences focused on pedagogical topics. In January 2019, Cecil College hosted the annual conference of the Association of Faculties to Advance Community College Teaching (AFACCT); more than 35 full-time and adjunct faculty attended. In 2018-19, Cecil College also piloted the Faculty Guild professional development program with selected full-time and part-time faculty; six additional faculty members participated in this program in 2019-20.

#### J. 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 (MDL) and the Maryland Community College Library Consortium (MCCLC). CCVM Library has reciprocal borrowing privileges with other community college libraries within the state of Maryland. CCVM Library also subscribes to Inter-Library Loan, where students and faculty can request physical books, eBooks, and scholarly articles from institutions nationwide.

Students can make an appointment to meet one-on-one or in groups with the Instructional Librarian for assistance with the following: narrowing down a research topic, finding articles in the library databases, finding books and eBooks, evaluating resources, and crafting citations. The Instructional Librarian also visits classes upon request to teach library information sessions tailored to class projects and curricula.

The library subscribes to approximately 84 online databases that cover the majority of disciplines offered at Cecil College. The following databases in particular may help most with varying aspects of the Bioproduction degree: Academic Search Complete, ProQuest Central, ProQuest Biology, ProQuest Science, ProQuest Health & Medical, ProQuest Health Management, ProQuest Public Health, ProQuest Research Library, PubMed, GreenFILE, JSTOR, CINAHL, MEDLINE, Joanna Briggs Institute, and Ovid.

CCVM Library offers both a 20,000 volume physical book collection, and 190,000 volume online eBook collection for student use with texts directly related to the Biomedical Science concentration, as well as a list of open resources on its Open Educational Resources (OER) LibGuide that both students and faculty can utilize. The library also has a number of program required textbooks on reserve for students to use in the library. CCVM Library staff welcomes and encourages faculty to submit requests for books, multi-media resources, and databases to support student projects and teacher instruction throughout the academic year.

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

All students have the opportunity to utilize all physical facilities on campus including the Library; the Arts and Sciences Building; the Engineering and Math Building; Physical Education Complex; and the Technology/Conference Center, housing the computer lab, a student lounge / dining area and a Conference Center.

The department has sufficient dedicated office space for program faculty, staff, and students. Faculty offices include a desk and multiple chairs available for private conferences with students and/or faculty, bookshelves for department resources, and a locked file cabinet to secure program materials.

There is also dedicated office space for adjunct faculty. The adjunct offices are equipped with computers, desks, chairs, and telephones.

Multiple conference rooms are available for faculty meetings and or private conferences with students in the Engineering and Math Building, the Arts and Science Building, and the Physical Education Complex.

Available technology includes state-of-the-art smart classrooms 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. The Writing Center is a free service to all Cecil College students. Tutors are available during a variety of day and evening hours to assist students with reading and writing assignments in any subject. Free subject matter tutoring is also available to all students upon request.

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

1. Complete Table 1: Resources (pdf) and Table 2: Expenditure(pdf). Finance data(pdf) for the first five years of program implementation are to be entered. Figures should be presented for five years and then totaled by category for each year.

	<b>Resource</b> Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1.	Reallocated funds	\$0	\$0	\$0	\$0	\$0
2.	Tuition/Fee Revenue (c + g below)	\$13,250	\$16,223	\$19,361	\$24,450	\$27,997
a.	Number of F/T students	2	2	2	3	3
b.	Annualized Tuition/Fee Rate <sup>2</sup>	\$4,125	\$4,249	\$4,376	\$4,507	\$4,643
с.	Total F/T Revenue (a x b)	\$8,250	\$8,498	\$8,752	\$13,522	\$13,928
d.	Number of P/T students	2	3	4	4	5
e.	Credit Hour Rate	\$125	\$129	\$133	\$137	\$141
f.	Annualized Credit Hour Rate <sup>3</sup>	\$2,500	\$2,575	\$2,652	\$2,732	\$2,814
g.	Total P/T Revenue (d x e x f)	\$5,000	\$7,725	\$10,609	\$10,927	\$14,069
3.	Grants, Contracts & other External Sources	\$0	\$0	\$0	\$0	\$0
4.	Other Sources	\$1,448	\$1,758	\$2,068	\$2,482	\$2,792
	Total (add 1-4)	\$14.698	\$17,981	\$21,429	\$26,932	\$30,789

#### **TABLE 1: RESOURCES**

Cecil College expects that this program will enroll approximately 4 students in the first year, with subsequent modest growth.

We are projecting tuition increases of 2% each year. Other sources of revenue include Student Development fees (\$8/credit) and Registration fees (\$75/semester). On average, full-time Cecil students take 33 credits per year; part-time students take 20 credits per year on average.

<sup>&</sup>lt;sup>2</sup> Assumes Cecil County resident taking 35 credits per year.

<sup>&</sup>lt;sup>3</sup> Assumes Cecil County resident taking 20 credits per year.

TARLE 2	: EXPENDITURE	'C
	• LAI LIDII UNL	40

	Expenditure Categories	Year 1	Year 2	Year 3	Year 4	Year 5
1.	Faculty $(b + c below)$	\$13,598	\$13,838	\$14,075	\$14,316	\$14,561
a.	# FTE	0.15	0.15	0.15	0.15	0.15
b.	Total Salary	\$9,270	\$9,409	\$9,550	\$9,693	\$9,839
с.	Total Benefits	\$4,328	\$4,429	\$4,525	\$4,623	\$4,772
2.	Admin. Staff ( $b + c$ below)	\$0	\$0	\$0	\$0	\$0
a.	#FTE	0	0	0	0	0
b.	Total Salary	\$0	\$0	\$0	\$0	\$0
с.	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
с.	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)	\$13,598	\$13,838	\$14,075	\$14,316	\$14,561

This program will be implemented with existing faculty resources and administrative staff, so there are no new expenses for personnel. Faculty FTE is estimated based on the expected amount of time one faculty member will devote to advising and administering this program, or .15 FTE.

Salaries are forecasted to increase 1.5% each year, while health benefits are forecasted to increase 2.5% each year. Library resources and equipment are budgeted within the general operating budget on an ongoing basis.

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

Faculty members are evaluated 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. In addition, 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. Student course evaluations are an important component in the College's process of monitoring student satisfaction.

All faculty members are contractually obligated to complete an annual report that includes assessment results. Faculty satisfaction is monitored through the Great Colleges to Work For Survey, which is administered every two years.

The College's Assessment Plan requires that each learning goal for an academic program be reviewed at least once every four years. These assessments are used to make improvements to the program. In addition, the College has an established Comprehensive Program Review process through which programs evaluate their strengths, opportunities, and cost effectiveness every eight years.

Student retention rates are regularly monitored by the division dean.

**N.** 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 embraces the value of diversity, and strives to continuously foster inclusiveness, and has identified "Graduates will illustrate knowledge of …the Diversity of Human Cultures" as one of the institution's six General Education learning goals.

#### **O.** Relationship to low productivity programs identified by the Commission:

This program is not related to low productivity programs identified by the Commission.

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

Cecil College is a member of NC-SARA and follows C-RAC guidelines for distance education.