



May 27, 2021

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 stand-alone lower division certificate offered by Cecil College:

**LDC Pre-Veterinary Technician  
HEGIS Code 5206.05; CIP Code 51.0808**

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](mailto:cflewelling@cecil.edu).

Sincerely,

Christy Dryer, DNP  
Vice President of Academic Programs

**Academic Programs**

One Seahawk Drive • North East, MD 21901 • 410-287-1000 • [www.cecil.edu](http://www.cecil.edu)

**OWN YOUR FUTURE**



## Cover Sheet for In-State Institutions

### New Program or Substantial Modification to Existing Program

Institution Submitting Proposal	
---------------------------------	--

***Each action below requires a separate proposal and cover sheet.***

New Academic Program	Substantial Change to a Degree Program
New Area of Concentration	Substantial Change to an Area of Concentration
New Degree Level Approval	Substantial Change to a Certificate Program
New Stand-Alone Certificate	Cooperative Degree Program
Off Campus Program	Offer Program at Regional Higher Education Center

Payment Submitted:	Yes No	Payment Type:	R*STARS Check	Payment Amount:	Date Submitted:
Department Proposing Program					
Degree Level and Degree Type					
Title of Proposed Program					
Total Number of Credits					
Suggested Codes			HEGIS:	CIP:	
Program Modality			On-campus		Distance Education ( <i>fully online</i> )
Program Resources			Using Existing Resources		Requiring New Resources
Projected Implementation Date			Fall	Spring	Summer      Year:
Provide Link to Most Recent Academic Catalog			URL:		
Preferred Contact for this Proposal			Name:		
			Title:		
			Phone:		
			Email:		
President/Chief Executive			Type Name:		
			Signature: <i>Mary Way Bolt</i>		Date:
			Date of Approval/Endorsement by Governing Board:		

Revised 3/2019

## MHEC Checks

Tracey Kempself <TKempself@cecil.edu>

Wed 5/26/2021 3:28 PM

To: Colleen Flewelling <cflewelling@cecil.edu>

Below is the check information you requested.

Check # 188546 – New program proposal fee pre vet tech

Check # 188547 – New program proposal fee pre engineering

Check # 188548 – New program proposal fee sports mngmnt

Tracey Kempself

Accounts Payable

Cecil College

One Seahawk Drive | North East, MD 21901

O: 410-287-1019 | F. 410-287-1026

[Accountspayable@cecil.edu](mailto:Accountspayable@cecil.edu) | [www.cecil.edu](http://www.cecil.edu)

**CECIL COLLEGE  
NEW PROGRAM PROPOSAL  
LOWER DIVISION CERTIFICATE PRE-VETERINARY TECHNICIAN  
HEGIS 5206.05 CIP 51.0808**

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

This certificate is designed to provide a basis for further study in the veterinary technician field. The Veterinary Technician Certificate provides a course of study designed to meet the needs of students who plan to study and transfer to a college or a university that grants an Associate or Baccalaureate Degree in Veterinary Medicine Technology.

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 Lower Division Certificate for Pre-Veterinary Technicians prepares students further study in a Veterinary Technician program at a two- or four-year institution. Students' expenses for their degree are greatly reduced when they complete 34 credits of their degree at Cecil College. The chart below compares tuition at 2- and 4-year state institutions which have Veterinary Technician 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 34 credits	Savings over 34 credits
Cecil College	In-county	\$125	\$4,250	-
Community College of Baltimore County	In-state	\$241	\$8,194	\$3,944
University of Maryland College Park	In-state	\$367	\$12,478	\$8,228

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

A Pre-Veterinary Technician certificate prepares students for a veterinary technician position. Maryland's Department of Labor, Licensing and Regulation projects a significant increase from 2018-2028 in the number of openings for these types of positions.<sup>1</sup>

Field	2018-2028 Percent Change in openings in Maryland
Veterinary Technologists and Technicians	+19.4%

In addition, EMSI reports that in areas within a 60-mile radius of Cecil college, there is an aggressive demand for veterinary technicians and a higher-than-average number of job postings for this field.

**D. Reasonableness of program duplication:**

A search of the Maryland Higher Education Commission's Academic Program Inventory database reveals no similar certificate programs in Maryland.

**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 lower division certificate program for Pre-Veterinary Technician 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 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.

The proposed lower division certificate in Pre-Veterinary Technician requires the following courses:

Course Code	Courses (34 Credits)	Credits
BIO 130	Principles of Biology I	3
BIO 131	Principles of Biology I Laboratory	1
BIO 132	Principles of Biology II	3
BIO 133	Principles of Biology II Laboratory	1
BIO 200	Microbiology	3
BIO 210	Microbiology Lab	1
BIO 208	Anatomy and Physiology I	3

Course Code	Courses (34 Credits)	Credits
BIO 218	Anatomy and Physiology I Lab	1
BIO 209	Anatomy and Physiology II	3
BIO 219	Anatomy and Physiology II Lab	1
BIO 213	College Based Work Experience – BIO	3
CHM 103	General Chemistry I	3
CHM 113	General Chemistry I Lab	1
EGL 101	College Composition	3
MAT	Math Elective (select from MAT 121, MAT 127 or higher-level Math course)	4

Total Credits: 34

## COURSE DESCRIPTIONS

**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

**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 208 Anatomy and Physiology I** studies the structural and functional organization of the human organism with initial emphasis on the concepts of homeostasis and levels of organization. This is followed by a brief survey of histology and then the study of four organ systems: integumentary, skeletal,

muscular and nervous. It is strongly recommended that students take an introductory Biology course before enrolling in an Anatomy and Physiology course. Credits: 3 Prerequisite(s): MAT 093 or MAT 097 Corequisite(s): BIO 218, EGL 101

**BIO 209 Anatomy and Physiology II** completes the sequence of study of the human body by studying the following organ systems: endocrine, cardiovascular, respiratory, digestive, urinary and reproductive. Relevant topics of metabolism, electrolyte balance and human genetics and development are included. Credits: 3 Prerequisite(s): BIO 208, BIO 218, MAT 093 or MAT 097 Corequisite(s): BIO 219

**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

**BIO 213 College Based Work Experience – BIO** 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. Credits: 3.

**BIO 218 Anatomy and Physiology I Lab** reinforces the topics covered in the lecture course BIO208 with hands-on activities. Students will use models, wall charts, microscopes, dissections and experimental observations. Students will study basic histology as well as the structure and function of the skin, skeletal, muscular, and nervous systems. It is strongly recommended that students take an introductory Biology course before enrolling in an Anatomy and Physiology course. Credits: 1 Corequisite(s): BIO 208

**BIO 219 Anatomy and Physiology II Lab** uses models, microscopes, dissections and experimental observations to reinforce topics in the endocrine, cardiovascular, digestive, respiratory, urinary and reproductive systems. Credits: 1 Prerequisite(s): BIO 218 Corequisite(s): BIO 209

**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 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

**EGL 101 College 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 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. Credits: 3 Prerequisite(s): C or higher in COL 081 and EGL 093 OR appropriate score on Cecil College-approved placement metric

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

- Demonstrate the entry level knowledge, in math, biology, chemistry, and communication skills and abilities associated with many disciplines within the field of veterinary technician. See specific courses as listed above for Student Learning Outcomes.

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

## H. Adequacy of articulation

Cecil College is pursuing several 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 Gaspere, Assistant Professor of English	M.A. Washington College (English)	Full-time	EGL 101 College Composition
Christine Warwick, Assistant Professor of Biology	M.S. University of Saint Joseph (Biology)	Full-time	BIO 130 Principles of Biology I BIO 131 Principles of Biology I Lab BIO 132 Principles of Biology II BIO 200 Microbiology BIO 210 Microbiology Lab BIO 213 College Based Work Experience BIO
Melissa Burke, Assistant Professor of Biology	M.A.T. University of Maryland (Secondary Education of Biology)	Full-Time	BIO 208 Anatomy & Physiology I BIO 218 Anatomy & Physiology I Lab
Susan Marengo, Associate Professor of Biology	Ph.D. Colorado State University (Physiology)	Full-time	BIO 209 Anatomy & Physiology II BIO 219 Anatomy & Physiology II Lab
Ebony Roper, Associate Professor of Chemistry	Ph.D. Howard University (Chemistry)	Full-time	CHM 103 General Chemistry I CHM 113 General Chemistry I Lab

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 and hosts faculty-wide professional development workshops on topics such as teaching about race and racism in the college classroom and reflective structured dialog.

**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 85 online databases that cover most disciplines offered at Cecil College. The following databases may help most with varying aspects of the Pre-Veterinary Technician Certificate: Academic Search Complete, ProQuest Central, ProQuest Research Library, American Chemical Society's Guide to Scholarly Communication, ProQuest Biology, ProQuest Career & Technical Education, CINAHL, ProQuest Health & Medical, ProQuest Health Management, ProQuest Health Source, Joanna Briggs Institute, Medline, ProQuest Nursing & Allied Health, Nursing Reference Center, ProQuest Public Health, ProQuest Science, EBSCO GreenFILE, JSTOR, and more.

CCVM Library offers both a 20,000-volume physical book collection, and 209,000 volume online eBook collection for student use with texts directly related to courses in the Pre-Veterinary Technician Certificate, 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 several course 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.

**TABLE 1: RESOURCES**

	<b>Resource Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
1.	Reallocated funds	\$0	\$0	\$0	\$0	\$0
2.	Tuition/Fee Revenue (c + g below)	\$18,250	\$21,373	\$26,390	\$29,913	\$33,625
a.	Number of F/T students	2	2	3	3	3
b.	Annualized Tuition/Fee Rate <sup>1</sup>	\$4,125	\$4,249	\$4,376	\$4,507	\$4,643
c.	Total F/T Revenue (a x b)	\$8,250	\$8,498	\$13,129	\$13,522	\$13,928
d.	Number of P/T students	4	5	5	6	7
e.	Credit Hour Rate	\$125	\$129	\$133	\$137	\$141
f.	Annualized Credit Hour Rate <sup>2</sup>	\$2,500	\$2,575	\$2,652	\$2,732	\$2,814
g.	Total P/T Revenue (d x e x f)	\$10,000	\$12,875	\$13,261	\$16,391	\$19,696
3.	Grants, Contracts & other External Sources	\$0	\$0	\$0	\$0	\$0
4.	Other Sources	\$2,068	\$2,378	\$2,792	\$3,102	\$3,412
	<b>Total (add 1-4)</b>	<b>\$20,318</b>	<b>\$23,751</b>	<b>\$29,182</b>	<b>\$33,015</b>	<b>\$37,037</b>

Cecil College expects that this program will enroll approximately 6 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>1</sup> Assumes Cecil County resident taking 35 credits per year.

<sup>2</sup> Assumes Cecil County resident taking 20 credits per year.

**TABLE 2: EXPENDITURES**

	<b>Expenditure Categories</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
1.	Faculty (b + c below)	\$9,065	\$9,245	\$9,423	\$9,606	\$9,792
a.	# FTE	0.1	0.1	0.1	0.1	0.1
b.	Total Salary	\$6,180	\$6,273	\$6,367	\$6,462	\$6,559
c.	Total Benefits	\$2,885	\$2,972	\$3,056	\$3,144	\$3,233
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
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
	<b>Total (Add 1-7)</b>	<b>\$9,065</b>	<b>\$9,245</b>	<b>\$9,423</b>	<b>\$9,606</b>	<b>\$9,792</b>

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 .1 FTE.

Salaries are forecasted to increase 1.5% each year, while health benefits are forecasted to increase 3.5% 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.