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

Institution Submitting Proposal	Prince George's Community College

Each action below requires a separate proposal and cover sheet.

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

Payment Submitted: (●) Yes ( ) No

Payment Type: ( ) R*STARS # 0347223 (●) Check # 0347223

Payment Amount: $850.00

Date Submitted: 12/15/22

Department Proposing Program	Natural Sciences	
Degree Level and Degree Type	Associate of Science	
Title of Proposed Program	Biology	
Total Number of Credits	60	
Suggested Codes	HEGIS: 4920.01	CIP: 26.0101
Program Modality	(●) On-campus ( ) Distance Education (fully online) ( ) Both	
Program Resources	(●) Using Existing Resources ( ) Requiring New Resources	
Projected Implementation Date (must be 60 days from proposal submisison as per COMAR 13B.02.03.03)	(●) Fall ( ) Spring ( ) Summer	Year: 2023
Provide Link to Most Recent Academic Catalog	URL: https://catalog.pgcc.edu/	
Preferred Contact for this Proposal	Name: Dr. Clayton Railey	
	Title: EVP and Provost of Teaching Learning, and Student Success	
	Phone: (301) 546-0406	
	Email: raileyca@pgcc.edu	
President/Chief Executive	Type Name: Dr. Falecia Williams	
	Signature: Falecia D Williams	Date: 12/15/2022
	Date of Approval/Endorsement by Governing Board:	12/08/2022

Revised 1/2021

PRINCE GEORGE'S COMMUNITY COLLEGE
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James Fielder, Ph.D., Secretary
Maryland Higher Education Commission
6 N. Liberty Street
Baltimore, MD 21201

January 10, 2023
In response to 22681 originally submitted December 15, 2022

Dear Dr. Fielder,

Prince George's Community College is requesting the addition of a new program, **Biology, A.S.** degree program. This degree is currently the General Studies, A.A. with Area of Concentration in Biology (HEGIS 4950.01; CIP 24.0199). Given the content of the curriculum, the degree type of Associate of Science is a better fit than an Area of Concentration. Several curricular changes have also been made (listed in blue font below).

The new proposed codes are as follows: HEGIS: 4920.01; CIP: 26.0101.

Proposed Program Description
The Biology, A.S. provides students with the foundation for understanding organisms, including their origin, evolution, characteristics, and interaction with their environment. Students examine biological processes at various levels of organizations such as molecular, cellular, organismal, and ecological. Students gather data and utilize various analytical skills for interpreting data and drawing conclusions. This is a recommended program of study for students planning to pursue a bachelor's degree in biology, medical school, healthcare professions, biological research, and biotechnology.
Proposed Program Outcomes
Graduates of the **Biology, A.S. degree** program will be able to:
1. Investigate natural phenomena through experimentation, using the scientific method. 2. Identify interactions among biotic and abiotic factors in ecosystems. 3. Explain the key principles of modern evolutionary theory and its importance throughout the field of biology. 4. Identify prevailing theories of the origins of organic molecules and life. 5. Explain the central dogma of biology and how genetic information is transmitted across generations. 6. Evaluate relationships between structure and function at the various levels of biological organization. 7. Apply key concepts from chemistry and mathematics to solve biological problems. 8. Report scientific findings using proper terminology and formatting, and in adherence to ethical standards.
Proposed Courses

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PAS-1000 First Year Experience Credits: 1 (Institutional Requirement)
EGL-1010 Composition I: Expository Writing Credits: 3 (English General Education Requirement)
MAT-1360 Precalculus Part II Credits: 4 (Mathematics General Education Elective; Critical Course)
or
MAT-2410 Calculus I Credits: 4 (Mathematics General Education Elective; Critical Course)
BIO-1130 Principles of Biology: Evolution, Ecology, and Behavior Credits: 4 (Science w/ Lab General Education Requirement)
CHM-1010 General Chemistry I Credits: 4 (Science w/ Lab General Education Requirement; Critical Course)
INT-1010 Introduction to Information Technology Credits: 3 (Computer Literacy Institutional Requirement)
EGL-1340 Writing About Technical Topics Credits: 3 (English General Education Requirement)
CHM-1020 General Chemistry II Credits: 3 (Program Requirement)
CHM-1030 General Chemistry II Laboratory Credits: 2 (Program Requirement)
BIO-1140 Principles of Biology: Cellular and Molecular Biology Credits: 4 (Program Requirement; Critical Course)

Program Elective Course #1: Choose 4 credits from the Program Elective Course List

COM-1010 Foundations of Communication Credits: 3 (Arts/Humanities General Education Elective)
or
COM-1110 Public Speaking Credits: 3 (Arts/Humanities General Education Elective)
CHM-2010 Organic Chemistry I Credits: 4 (Program Requirement; Critical Course)
BMT-2750 Leadership Development Credits: 3 (Arts/Humanities General Education Elective) or
PHL-1330 Ethics Credits: 3 (Arts/Humanities General Education Elective)

Program Elective Course #2: Choose 4 credits from the Program Elective Course List

ANT-1030 Introduction to Cultural Anthropology Credits: 3 (Social Science General Education Elective) or
ECN-1030 Principles of Macroeconomics Credits: 3 (Social Science General Education Elective)
CHM-2020 Organic Chemistry II Credits: 3 (Program Requirement)
CHM-2040 Organic Chemistry II Laboratory Credits: 2 (Program Requirement)
PSY-1010 General Psychology Credits: 3 (Social Science General Education Requirement) or
SOC-1010 Introduction to Sociology Credits: 3 (Social Science General Education Requirement)

Program Elective Course List:
BIO-1110 Environmental Biology Credits: 3 (Program Elective) and
BIO-1120 Environmental Biology Laboratory Credits: 1 (Program Elective)
BIO-1270 Research Techniques and Methods Credits: 1 (Program Elective)
BIO-2010 Microbiology Credits: 4 (Program Elective)
BIO-2030 Genetics Credits: 4 (Program Elective)

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BIO-2050 Human Anatomy & Physiology I Credits: 4 (Program Elective) BIO-2060 Anatomy and Physiology II Credits: 4 (Program Elective) **MAT-2410 Calculus I Credits: 4 (Program Elective; only if not used for General Education math requirement)**
Total Proposed Number of Credits: 60

Prince George's Community College's Curriculum Committee and Board of Trustees have approved this new program. The additional MHEC paperwork is also included. A payment of eight hundred fifty dollars ($850) has been forwarded to cover the new program fee. Feel free to contact me with any questions.

Respectfully,

Clayton A. Railey, II

Dr. Clayton Railey
EVP and Provost of Teaching, Learning, and Student Success
Prince George's Community College
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NEW ACADEMIC DEGREE PROGRAMS, NEW STANDALONE CERTIFICATE PROGRAMS, AND SUBSTANTIAL MODIFICATIONS TEMPLATE

1. Name of Proposed Certificate/Degree Program: Biology, A.S.
2. Type of Proposal: New Certificate/Degree Program

PART A: Centrality to Institutional and Planning Priorities

1. Provide a description of the program, including each area of concentration (if applicable), and how it relates to the institution's approved mission.

For more information: PGCC Mission Statement.

Prince George's Community College (PGCC) proposes replacing the Associate of Arts in General Studies with a Concentration in Biology to a standalone degree, Associate of Science in Biology. The Biology, A.S. provides students with the foundation for understanding organisms, including their origin, evolution, characteristics, and interaction with their environment. Students examine biological processes at various levels of organizations such as molecular, cellular, organismal, and ecological. Students gather data and utilize various analytical skills for interpreting data and drawing conclusions. This is a recommended program of study for students planning to pursue a bachelor's degree in biology, medical school, healthcare professions, biological research, and biotechnology.

Prince George's Community College is committed to providing affordable, high-quality learning experiences that support the professional and personal growth of individuals in this region. This program supports that mission by providing students with an intellectual experience to gain knowledge and understanding of biology as well as problem-solving and laboratory skills. This program supports professional development because the knowledge and skills acquired are necessary for transfer and for application in a variety of jobs in healthcare, scientific analysis, and research.

2. Explain how the proposed program supports the institution's strategic goals and provide evidence that affirms it is an institutional priority.

For more information: FY2022-2025 Vision, Mission, and Strategic Goals and Vision 2030 Strategic Imperatives

Prince George's Community College is the region's premier center for innovations in learning, community engagement, and strategic partnerships that inspire educational, career, and personal success. Prince George's Community College provides affordable, high-quality learning experiences that support personal, professional, and educational development for diverse populations contributing to the economic equity and cultural vibrancy of our community.

The Biology A.S. program supports PGCC's strategic goal for "Optimizing pathways to graduation, transfer, or entering the workforce". As part of the Sciences, Engineering and Mathematics Guided Pathway, graduates of the Biology A.S. degree program are prepared for transfer to a variety of four-

year colleges and universities, where they can earn their Bachelor's degree in a related program of study before entering the workforce. This also aligns with the Vision 2030 Strategic Imperative of enabling 50,000 workers to earn a workforce credential aligned to high-skill, high-wage jobs.

The coursework, learning opportunities, and interaction with experienced and highly-skilled faculty that are available to students in this program also support PGCC's institutional goal of "Ensuring learning and achievement through high-impact educational practices."

Consequently, this proposal to offer a Biology Associate of Science program is in alignment with our mission since it helps to establish a career path to prepare students for a wide variety of professional opportunities in areas of natural sciences and healthcare.

3. Provide a brief narrative of how the proposed program will be adequately **funded** for at least the first five years of program implementation. (Additional related information is required in section L.)

All costs of this newly proposed program will be funded through the annual operating budget for Teaching, Learning, and Student Success. This new program will not require any additional expenditures outside those that are offset by increased tuition revenue from projected enrollment in the program (details are provided in Part L – Table 1). There are no new costs for equipment, instructional supplies, facilities, or staff. The program as is proposed can be fully staffed with both current full-time and adjunct faculty and staff to support its operations. Initially no additional expense will be incurred; however, additional faculty would be hired as necessitated by growth in enrollment in years 3-5 (details are provided in Part L – Table 2.)

4. Provide a description of the **institution's commitment** to:

   a. *ongoing administrative, financial, and technical support of the proposed program*

The proposed A.S. in Biology program has the necessary support at the department, division, and institutional level to operate successfully. The Natural Sciences department that will house the degree is well-established at PGCC, with an existing cadre of full-time tenured/tenure-track faculty, as well as qualified adjunct faculty, available to teach the program courses (see the table in Part I for a full listing of faculty), and administrative support personnel. All courses in the program can be taught by existing faculty.

As outlined in Parts K and L, PGCC is confident that the existing administrative and technical supports and physical facilities available to the department and college as a whole are sufficient to ensure the program's viability – the department is not seeking any capital investments or specialized facilities, since current office, classroom, and lab space in Chesapeake Hall will suffice, nor is it seeking any additional administrative positions or technology supports to successfully deliver the program. At the college level, E-Learning Services and our Technology Help Desk are able to provide comprehensive technical assistance to faculty and students.

   b. ***continuation of the program*** *for a period of time sufficient to allow enrolled students to complete the program.*

The program implementation is long-term, with a tenured/tenure-track faculty dedicated to the ongoing course offerings to ensure students are able to complete the degree within a reasonable time frame. The college is committed to student success and will provide all enrolled students with

the necessary courses and resources (such as advisors to guide students through the program) so they can graduate on schedule.

PART B: Critical and Compelling Regional or Statewide Need as Identified in the State Plan:

1. Demonstrate **demand and need** for the program in terms of meeting **present and future** needs of the region and the State in general based on one or more of the following:

   *a. The need for the advancement and evolution of **knowledge***

   *b. **Societal needs**, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education*

   *c. The need to strengthen and expand the capacity of **historically black institutions** to provide high quality and unique educational programs.*

a) The need for the advancement and evolution of knowledge

Health care fields and scientific research are rapidly growing due to the rise in the need for healthcare professionals and advances in a multitude of areas of research. The Associate Degree in Biology prepares students to transfer to a 4-year university leading to a Baccalaureate degree and also provides opportunities for entry-level jobs as laboratory technicians, medical assistants, or medical salespersons. An Associate of Science in Biology provides students with an educational experience that helps them design and conduct experiments using scientific knowledge. This program is a more rigorous science program than an Associate of Arts program because this new program puts more emphasis in Biology than the more flexible Associate of Arts program. Students also have the opportunity to specialize in a particular field such as Microbiology or Genetics. Thus, the Biology A.S. program will better prepare students with the necessary foundation they need for transfer or preparing for a career where scientific and technical skills are critical.

b) Societal needs, including expanding educational opportunities and choices for minority and educationally disadvantaged students at institutions of higher education.

Prince George's Community college is a minority-serving institution. As of 2019, about 61% of Prince George's County residents identify as black and about 20% identify as Hispanic. The A.S. Biology program will allow the College to expand the opportunities available to its service population by providing a program that provides students with skills that are relevant to the fields of healthcare and scientific research.

c) The need to strengthen and expand the capacity of historically black institutions to provide high quality and unique educational programs.

With its greater emphasis in Biology and cognate courses, the Biology A.S. program provides a high-quality education through the skills acquired to meet the needs of life science majors. Students are prepared to enter the healthcare field and take on research positions that are constantly changing with new technologies and innovations. With the requirement of four-semester chemistry, students are well-prepared to transfer to Biology programs in four-year

universities such as University of Maryland College Park and University of Maryland Baltimore County. Although the new program itself is not unique, it is a new program that puts a greater emphasis in Science and Math, thus giving an opportunity for students to focus their studies and skill-building in a subject that they have chosen. This program allows Prince George's Community College to expand its capacity as a majority black institution to offer high quality educational programs to all of its diverse students.

2. Provide evidence that the perceived need is consistent with the Maryland State Plan for Postsecondary Education.

The 2022 Maryland State Plan for Higher Education outlines three primary goals for the postsecondary community in Maryland:

Student Access: Ensure equitable access to affordable and high-quality postsecondary education for all Maryland residents.

Student Success: Promote and implement practices and policies that will ensure student success.
Innovation: Foster innovation in all aspects of Maryland higher education to improve access and student success.

This new program proposal aligns most closely with the **Student Success** goals, and specifically with **Priority 6**: Improve systems that prevent timely completion of an academic program.

As is stated on Page 54 of the Plan, transfer continues to be a challenge in Maryland. PGCC intends to change this program from a general studies area of concentration to a standalone AS degree for the specific reason of enhancing successful transfer and eliminating challenges for students. The proposed standalone program is an affordable transfer degree option for students, providing required courses that match the transfer needs of students and align with the freshman and sophomore years of Maryland's public four-year institutions.

After the successful completion of all application steps, each student in this program is given an individual academic degree plan and assigned a college advisor who is specifically trained in the transfer process. This advisor, along with program faculty and staff, will help students navigate through the program and through the transfer process.

Additionally, the curriculum for the program is designed with a multiplicity of educational tools and resources to support the diverse learners at the College. Some courses offered are accessible in both in-person and online formats, which allows ease of access and flexibility to students enrolled in the program. In addition to the online format, some program courses are also offered in a structured remote format (synchronous) to allow greater flexibility to both students and program faculty. Remote tutoring and advising resources are also available for students as an ongoing effort to support and promote program success and timely completion by all students.

Part C: Quantifiable and Reliable Evidence and Documentation of Market Supply and Demand in the Region and State:

1. Describe potential **industry** or industries, **employment** opportunities, and expected **level of entry** (ex: mid-level management) for graduates of the proposed program.

The Associate of Science degree in Biology is a transfer degree option that provides graduates with the prerequisite skills to transfer to four-year colleges and universities. This program introduces graduates to the skills necessary to conduct research, solve problems and think critically. These skills are required for entry-level jobs in the field of life sciences and healthcare such as biological technicians.

2. Present data and analysis **projecting market demand** and the availability of openings in a job market to be served by the new program.

Since this is a transfer degree option, the job availability that was considered was entry-level biological technicians with a bachelor's degree. According to the Bureau of Labor Statistics in May 2021, there are 3,970 jobs available in Maryland as Biological Technicians, who assist biological and medical scientists. Maryland is ranked 4th for states with the highest concentration of jobs and location quotients in this occupation. The national estimate for Biological Technicians is $76,150. (https://www.bls.gov/oes/current/oes194021.htm)

3. Discuss and provide evidence of market surveys that clearly provide quantifiable and reliable **data** on the **educational and training needs** and the anticipated number of **vacancies** expected over the next 5 years.

Since this is a transfer degree option, the job outlook that was considered was entry level biological technicians with a bachelor's degree. According to Bureau of Labor Statistics in May 2021, employment of biological technicians from 2020-2030 is projected to grow 7%, which is similar in pace to that of the average of all occupations. The number of annual job openings for this occupation is estimated to be about 11,800.

4. Provide data showing the current and **projected supply** of prospective graduates.

According to the **Bureau of Labor Statistics**, careers as Biological Technician is some of the fast-growing occupations. The table below highlights the projected growth for this occupation, and several other, similar occupations (https://www.bls.gov/ooh/life-physical-and-social-science/biological-technicians.htm).

Occupational Code	Occupational Title	Employment			
		2020	2030	Change	%. Change

19-4021	Biological technicians	87,600	93,500	5900	7%
19-4042	Environmental science and protection technicians	34200	37800	3600	11%
19-4010	Agricultural and food science technicians	26,600	28,700	2100	8%
19-1023	Zoologists and wildlife biologists	18,500	19,500	1000	5%

https://www.bls.gov/ooh/life-physical-and-social-science/biological-technicians.htm#tab-8

For the state of Maryland, the data is shown in the table below:

Occupational Code	Occupational Title	Employment			
		2020	2030	Change	% Change
19-4021	Biological technicians	2430	2574	144	5.93%
19-4042	Environmental science and protection technicians, including health	749	827	78	10.41%
19-4010	Food scientist and technologist	231	276	45	19.48%
19-1023	Zoologists and wildlife biologists	400	435	35	8.75%

https://www.dllr.state.md.us/lmi/iandoproj/maryland.shtml

According to the Local Integrated Public Workforce System Plan 2020 – 2024 published by Prince George's County Workforce Development Board, Professional, Scientific, and Technical Services ranked first as the county's advertised job openings in Maryland Workforce Exchange (see the table below). While the data does not specify Biological Technicians, it is one of the occupations within this area.

In addition, based on the labor market information from the Bureau of Labor and Statistics, MD labor, and the Prince Georges County State of the workforce report, the Board ranked this area of occupation as the 5th in the primary demand industries of focus for Prince George's County Public Workforce

System. The selection was based on their contribution to the county's GRP, employment, location quotient, and projected growth within Prince George's County.

https://pgcajc.com/wp-content/uploads/2021/06/PGC-2020-2024-Local-Plan-Pre-Public-Comment.pdf

Industries by Advertised Jobs Table

Rank	Industry	Job Openings
1	Professional, Scientific, and Technical Services	1,594
2	Health Care and Social Assistance	1,546
3	Retail Trade	1,325
4	Accommodation and Food Services	1,259
5	Administrative and Support and Waste Management and Remediation Services	648
6	Transportation and Warehousing	462
7	Educational Services	409
8	Construction	298
9	Wholesale Trade	285
10	Finance and Insurance	22

Part D: Reasonableness of Program Duplication:

1. Identify **similar programs** in the State and/or same geographical area. Discuss similarities and differences between the proposed program and others in the same degree to be awarded.

For more information: Institution Program Inventory and Degree Trend Data

In reviewing the Academic Program Inventory and comparing PGCC with other community colleges in the state of Maryland, we found that Howard Community College offers an Associate of Arts degree, not an Associate of Science degree. Montgomery College and Anne Arundel Community College in Maryland both offer an Associate of Science degree in Biology. In the curriculum of other community colleges that offer A.S. programs, only two semesters of Chemistry are required. The PGCC Biology Associate of Science program is different because it requires 4 semesters of Chemistry, which includes 2 semesters of introductory Chemistry and 2 semesters of Organic Chemistry. This complete sequence better prepares students for transfer to the Biology Program at 4-year universities such as University of Maryland College Park and University of Maryland Baltimore County, which require students to take these courses before their junior year.

2. Provide **justification** for the proposed program.

The Associate of *Arts* degree in Biology that is currently offered at Prince George's Community College is part of General Studies A.A with various area of concentration with the goal of providing students

with a flexible program where they have many different options in selecting courses in their major. While the flexibility in the curriculum can help students tailor their program of study to fit their needs, improper course selection by students may result in less focus on Biology and its cognate courses. An Associate of *Science* degree is more rigorous and has less flexibility, thus it helps guide students who have selected this major. Students who graduate from the program will have sufficient background in Biology, Chemistry, and Mathematics to fulfill most of the prerequisites for upper-level Biology, Biochemistry, or Bioinformatics courses at their chosen transfer institutions. The choice of elective courses allows students to start in their specific Biology concentration, such as Genetics or Molecular Biology. Physics was not included as one of the electives since students can take this course after their transfer and since this course typically is not a prerequisite for upper-level Biology courses. This program fulfills the course requirements for transfer to the Biology program at various 4-year institutions in the state of Maryland, such as the University of Maryland College Park, University of Maryland Baltimore County, Morgan State, Howard University, and Bowie State. We have articulation agreements with each of these institutions which will be further enriched with a more robust program of study at PGCC. In addition to facilitating transfer to four-year universities, the curriculum in this program also offers preparation for various career opportunities as well, and thus will help fill the need for knowledgeable and skilled graduates.

Part E: Relevance to High-demand Programs at Historically Black Institutions (HBIs)

1. Discuss the program's potential impact on the implementation or maintenance of high-demand programs at HBI's.

The proposed program aligns with the following programs at HBIs in our area and we anticipate that students will transfer into these programs:

- University of Maryland Global Campus (UMGC) – Bachelor of Science in Biotechnology
- Bowie State – Bachelor of Science in Biology
- Morgan State – Bachelor of Science in Biology with General or Biomedical/Pre-Professional track
- Howard University - Bachelor of Science in Biology

PART F: Relevance to the identity of Historically Black Institutions (HBIs)

1. Discuss the program's potential impact on the uniqueness and institutional identities and missions of HBIs.

Prince George's Community College is considered a majority-minority institution, the opportunity exists to collaborate with Bowie State or Morgan State University on Biology degrees. The college is firmly positioned to begin articulation discussions and the proposal of 2+2 programs with these four-year partners.

PART G: Adequacy of Curriculum Design, Program Modality, and Related Learning Outcomes (as outlined in COMAR 13B.02.03.10):

1. Describe how the proposed program was **established**, and also describe the faculty who will **oversee** the program.

Establishment of the Program:

PGCC has an established process for curriculum development and revision which is driven by the faculty and overseen by the Office of the Executive Vice-President & Provost for Teaching, Learning & Student Success. Program proposals originate by faculty at the department level. After a proposal is approved by the department chair and division dean, it moves through several steps in the approval process including Assessment Committee, Curriculum Committee, General Education Committee (as applicable) and Executive Vice President & Provost. The final step in the approval process for new programs or a substantial modification is from the College's Board of Trustees, before submission to MHEC for approval.

Faculty who will oversee the program:

Lorraine Clarke, Biology Program Coordinator; Thomas Snowden, Natural Sciences Department Chair

2. Describe educational **objectives and learning outcomes** appropriate to the rigor, breadth, and (modality) of the program.

Graduates of the Biology A.S. Degree will be able to:

- Investigate natural phenomena through experimentation, using the scientific method.
- Identify interactions among biotic and abiotic factors in ecosystems.
- Explain the key principles of modern evolutionary theory and its importance throughout the field of biology.
- Identify prevailing theories of the origins of organic molecules and life.
- Explain the central dogma of biology and how genetic information is transmitted across generations.
- Evaluate relationships between structure and function at the various levels of biological organization.
- Apply key concepts from chemistry and mathematics to solve biological problems.
- Report scientific findings using proper terminology and formatting, and in adherence to ethical standards.

3. Explain how the institution will:

*a) provide for **assessment of student achievement of learning outcomes** in the program*

*b) **document** student achievement of learning outcomes in the program*

The College's Research, Assessment and Effectiveness (RAE) office manages the assessment cycle and determines when programs are assessed. Course-level assessment is a part of program-level assessment to determine how students are meeting program outcomes. The College uses an all-in-one approach to assessment and assessment instruments are aligned to the course outcomes and peer reviewed by the Teaching, Learning and Assessment

Committee (TLAC). The assessment instruments are administered and the data analyzed to generate a Student Learning Outcome Assessment Report (SLOAR) and Program Learning Outcome Assessment Report (PLOAR). The SLOAR and PLOAR are used to develop an action plan including re-assessment and the results are reviewed.

4.Provide a list of courses with title, semester credit hours and course descriptions, along with a description of program requirements

PAS-1000: First Year Experience (Institutional Requirement)
Credits: 1
This course assists incoming students in making a successful transition to college. Students focus on those behaviors and attitudes that are needed to achieve academic success. Students learn specific academic success skills/strategies and discover resources that are necessary to succeed in their college courses. Students engage in an exploration of the programs of study offered and design goals for learning that lead to an educational and career/professional plan.

CHM-1020: General Chemistry II (Program Requirement)
Credits: 3
Study of chemical equilibrium relative to gases, heterogeneous systems, weak electrolytes including acids and bases, solubility product studies, kinetics, thermodynamics, electrochemistry, and nuclear chemistry.

CHM-1030: General Chemistry II Laboratory (Program Requirement)
Credits: 2
This course introduces a number of modern and classical analytical methods including instrumentation and the computer. Measurement and its error are examined in detail due to the analytical approach taken in the course. We will analyze familiar household products where possible. Some of the experiments expand topics covered in CHM-1020 (kinetics, equilibrium constant, electrochemistry), while others build on topics from CHM-1010.

BIO-1140: Principles of Biology: Cellular and Molecular Biology (Program Requirement)
Credits: 4
This course is one of a two-course sequence for students majoring in science, health, and related disciplines. This course addresses the cellular and biochemical aspects in organisms, including cell anatomy and physiology, structure and function of macromolecules, energy processing, and the molecular biology of gene expression.

CHM-2010: Organic Chemistry I (Program Requirement)
Credits: 4
University-parallel organic chemistry sequence. Students will examine structures and nomenclature of the common classes of organic molecules and predict the consequent physical properties, and the nature and mechanisms of their chemical reactions. They will employ instrumental and qualitative analysis techniques to determine structures of organic compounds. They will also employ standard organic chemistry research-lab equipment and methodologies to synthesize, extract, purify, and analyze organic compounds.

CHM-2020: Organic Chemistry II (Program Requirement)
Credits: 3
Continuation of CHM-2010 with emphasis on reaction mechanisms, and synthesis of organic compounds.

CHM-2040: Organic Chemistry II Laboratory (Program Requirement)
Credits: 2
Experiments in organic synthesis and analysis of compounds from CHM-2020 with emphasis on microscale experiments and common laboratory and instrumental techniques, including spectroscopy.

BIO-1110: Environmental Biology (Program Elective)
Credits: 3
Survey of basic scientific principles needed to understand current environmental problems and evaluate alternatives for solving those problems.

BIO-1120: Environmental Biology Laboratory (Program Elective)
Credits: 1
Supplements BIO-1110, providing laboratory and field experiences relevant to environmental issues.

BIO-1270: Research Techniques and Methods (Program Elective) New Course
Credits: 1
This course is designed to provide a basis for understanding the significance and nature of experimentation and to introduce the principles underlying experimental design. Students implement basic biomedical and behavioral sciences techniques and apply them to inquiry-based research problems. This course covers introductory-level scientific methods, sampling, qualitative and quantitative designs, and research strategies. It incorporates techniques used across disciplines including biology, chemistry, mathematics, and psychology.

BIO-2010: Microbiology (Program Elective)
Credits: 4
Structure and function of microorganisms and their roles in pathology. Laboratory includes culture methods, staining, and identification of bacteria.

BIO-2030: Genetics (Program Elective)
Credits: 4
Genetics and heredity. Analysis of classical and molecular genetics, emphasizing contemporary topics.

BIO-2050: Human Anatomy & Physiology I (Program Elective)
Credits: 4
University-parallel sequence. Structure and function of human body systems with emphasis on cells, tissues, transport mechanisms and integumentary, skeletal, muscular, and nervous systems.

BIO-2060: Anatomy & Physiology II (Program Elective)
Credits: 4
Continuation of Human Anatomy & Physiology sequence. Structure and function of cardiovascular, lymphatic/immune, respiratory, digestive, urinary, endocrine, and reproductive systems. Laboratory includes vertebrate dissection.

MAT-2410: Calculus I (Program Elective)
Credits: 4
This course is the first course in a three-semester sequence of university-level calculus for a variety of majors including, but not exclusive to, science, engineering, and mathematics. The course is an introduction to single variable calculus: study of limits, continuity, differentiation and its applications, definite and indefinite integrals and the Fundamental Theorem of Calculus.

5. Discuss how general education requirements will be met, if applicable.

Composition:

EGL-1010: Composition I: Expository Writing (English General Education Requirement)
Credits: 3
University-parallel freshman English. Fundamentals of effective prose writing, including research-based informative, analytical, and argumentative essays.

EGL-1340: Writing About Technical Topics (English General Education Requirement)
Credits: 3
Preparation of various types of technical business, government, and scientific communications, including presentations. Creation of commonly used documents such as letters, memoranda, and résumés, as well as various types of reports such as progress reports, recommendation reports, and proposals. Development of clear, concise, and accurate style for communicating complex information, with emphasis on audience, purpose, and presentation choices. A continuation and extension of the rhetorical principles and composition skills addressed in EGL-1010.

Humanities:

COM-1010: Foundations of Communication (Arts/Humanities General Education Elective)
Credits: 3
This survey course provides a foundation for the study of communication competency and skills. In this course, students explore basic communication skills across a variety of contexts, and with diverse audiences. Emphasis is placed upon the foundation and characteristics of communication and public speaking. Students learn how to use basic intrapersonal and interpersonal communication, along with listening skills to identify self-concept, perception, and identity management. Students will increase their communication competence by enhancing their listening skills and the uses of verbal and nonverbal communication. Students will discover how one's culture impacts communication. Students learn the public speaking process, from topic creation, outline, and message development, to delivery of an effective informative and persuasive presentation.

COM-1110: Public Speaking (Arts/Humanities General Education Elective)
Credits: 3
This course focuses on the public speaking process, examining the methods of creating a speech through the selection of a topic, engaging in the requisite speech-building skills regarding multimodal speech types, and culminating in delivering a cultivated speech. Students learn critical public speaking techniques related to their application in multimodal speech types. Additionally, students utilize their knowledge to critique the public speaking techniques of others.

BMT-2750: Leadership Development (Arts/Humanities General Education Elective)
Credits: 3
In this course, students explore what leadership means through integrating readings from humanities, experiential exercises, films, and contemporary research. Students explore their own leadership potential through a variety of practice types and develop confidence to accept leadership roles. Topics include developing a personal leadership philosophy, building a team, and guiding through conflict. Students also explore ethics in leadership and how to realize change within an organization.

PHL-1330: Ethics (Arts/Humanities General Education Elective)
Credits: 3
Ethics involves personal decisions each student makes daily. The course will identify the various ethical/moral theories that affect those decisions. The course will involve current issues and concerns to strengthen a student's own ethical deliberations and how such deliberations may be applied to the student's designated career interests.

Mathematics:

MAT-1360: Precalculus Part II (Mathematics General Education Elective)
Credits: 4
This course is the second part of a two-semester sequence intended as preparation for calculus for students who are majoring in a scientific or technical field. Topics include trigonometric functions using the unit circle approach, analytic trigonometry, and oblique triangles and applications. Additional topics necessary for calculus include introduction to polar coordinate system, vectors, parametric equations, solving systems of equations, and sequences and summation. Problems are solved through analytical and graphical approaches.

MAT-2410: Calculus I (Mathematics General Education Elective)
Credits: 4
This course is the first course in a three-semester sequence of university-level calculus for a variety of majors including, but not exclusive to, science, engineering, and mathematics. The course is an introduction to single variable calculus: study of limits, continuity, differentiation and its applications, definite and indefinite integrals and the Fundamental Theorem of Calculus.

Science:

BIO-1130: Principles of Biology: Evolution, Ecology, and Behavior (Science with Lab General Education Requirement)
Credits: 4
This course is an introduction to ecology, evolution, and behavioral biology. Students explore various aspects of evolutionary theory as it pertains to the origin of life, natural selection, population dynamics, as well as contemporary issues. Students distinguish the key components and levels of ecosystems to assess human impacts on biodiversity and climate. The laboratory portion focuses on analysis of Mendelian genetics, phylogenetic relationships, and scientific communication.

CHM-1010: General Chemistry I (Science with Lab General Education Requirement)
Credits: 4
CHM-1010 is the first semester of a university-parallel first-year chemistry sequence. This course is fully transferable to most four-year colleges and universities. Topics include the structure of matter; elements and compounds; chemical reactions and stoichiometry; basic thermodynamics; modern atomic and molecular structure; chemical bonding, physical states of matter; and properties of solutions.

Social Sciences:

ANT-1030: Introduction to Cultural Anthropology (Social Science General Education Elective)
Credits: 3
Anthropological approaches to culture, language, and social organization, including religious belief, gender role, family form, and economic life.

ECN-1030: Principles of Macroeconomics (Social Science General Education Elective)
Credits: 3
This course explores the factors that impact the overall performance of an economy, by examining aspects of the economy from an aggregate perspective. It focuses on the policies that government pursues in order to achieve price stability, economic growth, and full employment. Topics covered include supply and demand analysis, national income accounting, business cycles, aggregate expenditure, and aggregate demand and supply models, and fiscal and monetary policy.

PSY-1010: General Psychology (Social Science General Education Elective)
Credits: 3
University-parallel introductory course which surveys the field of psychology, including the study of behavior, cognitive processes, the concepts of memory, perception and sensation, consciousness, personality development, psychological disorders, psychotherapy, and social behavior.

SOC-1010: Introduction to Sociology (Social Science General Education Elective)
Credits: 3
Survey of sociological concepts and their application to culture, socialization, social organizations, and social change.

Computer Literacy:

INT-1010 Introduction to Information Technology (Computer Literacy Institutional Requirement) Credits: 3
Introduction to Information Technology is a survey course in evolving information technology and its relevance to individuals and society. Students examine the categories of computing devices and different types of computer applications, software and their uses. Emphasis in this course is on enhancing students' skills in data analysis and programming. Additionally, students evaluate ethical principles related to privacy, security, intellectual property and how these apply to their academic and professional life. They also explore strategies to manage risks related to systems security threats. Lastly, students learn about the basic principles of connectivity and data communications.
Students possessing skills and knowledge in this area may receive credit for INT 1010 by passing the department's challenge exam (currently the three Internet and Computing Core Certification tests, known as IC3). Students who are already IC3 certified may receive credit for INT 1010 by presenting their three certificates to the transfer evaluator in the Office of Records and Registration.

6. Identify any specialized accreditation or graduate certification requirements for this program and its students.

There are no specialized accreditation or graduate certification program associated with this program.

7. If contracting with another institution or non-collegiate organization, provide a copy of the written contract.

There is no contract with any other institution or non-collegiate organization associated with this program.

8. Provide assurance and any appropriate evidence that the proposed program will provide students with clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services and financial aid resources, and costs and payment policies.

Clear, complete, and timely information on the curriculum, course and degree requirements will be posted in the college catalog after MHEC approval. Each program has a dedicated page in the college catalog where the program description will be located. The nature of faculty and student interaction, assumptions about technology competence and skills, technical equipment requirements, learning management system, availability of academic support services are located in the course syllabus, college catalog and/or the Learning Management System. Financial aid resources, costs and payment policies are located on the college website under "Paying For College."

9. Provide assurance and any appropriate evidence that **advertising, recruiting, and admissions materials** will clearly and accurately represent the proposed program and the services available.

The PGCC Office of Communications and Marketing will create brochures, flyers and electronic marketing (e-marketing) materials necessary to promote and advertise the program to potential students. The Office of Communications and Marketing department provides communications materials that create awareness and visibility to efforts to promote the program both internally and externally. The internal process of creating recruitment and advertising materials follows the internal process used by the Office of Communications and Marketing. The information regarding prior learning can be found on the College website: Transfer Credit Policies and Procedures

PART H: Adequacy of Articulation

1. If applicable, discuss how the program supports **articulation** with programs at partner institutions. Provide all relevant articulation agreements.

For more information: Transfer Agreements and Articulation Agreements

Prince George's Community College has an array of articulation agreements with many four-year partners. Below is a list of the articulation agreements that cover students pursuing degrees in the Biological Sciences:

American College of Education:

ACE will collaborate with PGCC to provide a seamless transfer experience of credits from PGCC AA, AAS, AS, and AAT programs. Partnership grants are also available.

ACE Articulation Agreement

Argosy University

Argosy University/Washington, DC (AU/DC) agrees to accept into its Bachelor of Arts degree completion program students with a cumulative GPA of 2.0 or higher who have completed the Associate of Arts (AA) or Associate of Science degree from PGCC.

Argosy University Articulation agreement

Bowie State University

A qualifying student may transfer from Prince George's Community College into Bowie State University for the completion of certain programs, including Biology, A.A. Bowie State University will accept credits towards completion of each degree program on the following Program Crosswalks: Biology, Business Administration, Computer Science, Criminal Justice, Nursing, Psychology, and Sociology.

Bowie State University Articulation Agreement

The Catholic University of America's Metropolitan College

The Catholic University of America's Metropolitan College accepts applications from students who wish to transfer from Prince George's Community College (PGCC) into any baccalaureate degree program at Metropolitan College. Transferring PGCC applicants must meet the same admissions criteria set forth for other students applying for transfer. The application fee is waived. PGCC Students who graduate with an A.A. or and A.S. degree, who have earned at least 24 semester hours of transferable work at PGCC, and who have a PGCC GPA of at least 2.5 are guaranteed admission to Metropolitan College.

CUAMC Articulation Agreement

Excelsior College

Excelsior will recognize toward an appropriate Excelsior baccalaureate degree, as determined by Excelsior, up to 90 (or more) applicable academic credits awarded to PGCC students for work completed in a PGCC program toward a PGCC associate degree or recognized by PGCC for work completed by its students at other institutions and accepted by it toward a PGCC degree.

EC Articulation Agreement

FISK University

FISK and PGCC have an agreement for transfer to Fisk University and the following baccalaureate degree programs for holders of an AA or A.S. Degree of: 1. Biology, 2. Business Administration, 3. Computer Science, 4. Psychology, and 5. Sociology. Students accepted to either program shall pay tuition and/or students' financial aid qualifications/scholarship shall be accepted for payment when available; Students will complete a minimum of 54 credit hours to complete the undergraduate degree program.

FISK University Agreement

The George Washington University

Under this agreement, students who desire to obtain a Bachelor of Science in Health Sciences (BSHS) and have completed an applicable associate degree (AA, AS, AAA, AAS, and others) from PGCC will be guaranteed admission to GWU's School of Medicine and Health Sciences. Students must have completed each course with a grade of C or higher and with an overall GPS of 2.75.

GWU Articulation Agreement

Georgetown University

Under this agreement students who graduate from Prince George's Community College with at least 60 credits and a GPA of 3.0 and above, the student will be automatically admitted to Georgetown University's Bachelor of Arts in Liberal Studies program.

Georgetown University Articulation Agreement

Hood College

This agreement facilitates the admission of PGCC students who have successfully graduated with an AA/AS/AAT with a 2.5 GPA to be given guaranteed admission. To be eligible a student must submit the appropriate transfer application, official transcripts from all post-secondary institutions attended, and meet the general transfer requirements as outlined in the Hood College Catalog. PGCC students who transfer to Hood College and enroll full-time will receive a PGCC scholarship in the amount of $500 per semester. Students who transfer to Hood prior to graduating may apply for a reverse transfer of credit to complete their associate degree.

Hood College Articulation Agreement

Howard University

This agreement facilitates admission and transferability of academic credits of qualified students from programs at regionally accredited Prince George's Community College into four-year bachelor's degree programs at Howard University.

Howard University Articulation Agreement

Kaplan University:

PGCC Associate degree graduates will be considered prequalified for KU degree programs. A minimum of 25% of credit requirements for a degree must be finished at KU and up to 60 semester credit hours will be accepted in transfer from PGCC.

Kaplan University Articulation agreement

Morgan State University:

The program is designed for graduates/transfers of the Associate of Arts General Studies Program with an area of Concentration in Biology at PGCC. A maximum of seventy (70) credit hours from PGCC will be allowed towards fulfillment of the minimum one hundred and twenty (120) credit hours required for baccalaureate completion (Biology). Students must maintain a 2.0 cumulative GPA to transfer to MSU.

MSU Articulation Agreement

Stevenson University:

Under this agreement students who graduate from Prince George's Community College with an AA or AS and a GPA of 2.5 and above, the student will be automatically admitted to Stevenson University. Students are also qualified for a 20% Tuition reduction per credit hour.

Stevenson University Articulation Agreement

Strayer University

The articulation agreement is designed to coordinate transfer policies, enhance advising, and promote the acceptance of equivalent courses/credits between Strayer University (SU) and Prince George's Community College (PGCC). PGCC students who graduate with an AA/AS or AAT/AAS degree, earned at least 24 semester hours of transferable work at PGCC, and have a PGCC curriculum GPA of at least 2.0 are guaranteed admission to SU.

Strayer University Articulation agreement

University of Baltimore:

The goal of this Agreement is to provide seamless transition from PGCC's associate degrees to the University's baccalaureate degrees that offers PGCC students incentives and structured transfer pathways for attaining four-year baccalaureate degrees from the University. Each department may amend this agreement for specific AA/AS to BA/BS pathways.

UNIV BALT Articulation Agreement

University of Maryland, College Park:

UMD College Park and PGCC will continue the Maryland Transfer Advantage Program, which guarantees UM admission to PGCC transfers (even without an AA/AS degree) contingent on specific requirements. Students who complete at least 15 credits at PGCC with a minimum 3.0 GPA (or completion of an associate's with a 3.0) will be accepted into UM.

UM College Park Agreement

Part I: Adequacy of Faculty Resources (as outlined in COMAR 13B.02.03.11).

1. Provide a brief narrative demonstrating the quality of program faculty. Include a summary list of faculty with appointment type, terminal degree title and field, academic title/rank, status (full-time, part-time, adjunct) and the course(s) each faulty member will teach in the proposed program.

Only program courses have to be included (required and elective). Institutional requirements and general education courses do not need to be included.

In the last column, do not list any courses outside of this program.

Faculty Name	*Appointment Type*	*Terminal Degree*	*Academic Title/Rank*	*Status*	*Course(s) Faculty Member will teach in this Program*
Anderson, Derek	Resident	M.S., Biotechnology	Associate Professor	Full-time	BIO-2010: Microbiology
Anriany, Yuda	Tenured	Ph.D., Microbiology	Associate Professor	Full-time	BIO-1140: Principles of Biology: Cellular and Molecular Biology; BIO-2010: Microbiology
Beck, Peggy	Tenured	M.S., Mathematics	Professor	Full-time	MAT-2410: Calculus I
Elemo, Rufus	Contract	Ph.D., Petroleum Engineering	Instructor	Adjunct	MAT-2410: Calculus I
Bello, Kuburat	Tenure-track	Ph.D., Higher Education Leadership; M.S., Developmental Biology	Professor	Full-time	BIO-1140: Principles of Biology: Cellular and Molecular Biology; BIO-2050: Human Anatomy and Physiology I; BIO-2060: Human Anatomy and Physiology II
Clarke, Lorraine	Tenure-track	Ph.D., Plant Biology	Associate Professor	Full-time	BIO-1140: Principle of Biology: Cellular and Molecular Biology; BIO-2030: Genetics

Dombalagian, Markar,	Contract	Ph.D., Chemistry	Instructor	Adjunct	CHM-2040: Organic Chemistry II Laboratory
Gebler, Glenn	Tenure-track	Ph.D., Biology	Professor	Full-time	BIO-2010: Microbiology; BIO-2050: Human Anatomy and Physiology I; BIO-2060: Human Anatomy and Physiology II
Georgescu, Radu	Tenure-track	M.S. Mathematics	Associate Professor	Full-time	MAT-2410: Calculus I
Hubley, Mark	Tenured	Ph.D., Biology	Professor	Full-time	BIO-2050: Human Anatomy and Physiology I; BIO-2060: Human Anatomy and Physiology II
Heighton, Lynne	Tenure-track	Ph.D., Chemistry	Professor	Full-time	CHM-1020: General Chemistry II; CHM-1030: General Chemistry II Laboratory
Houser-Archield, Nadene	Tenure-track	Ph.D., Chemistry	Professor	Full-time	CHM-2010: Organic Chemistry I; CHM-2020: Organic Chemistry II; CHM-2040: Organic Chemistry II Laboratory

Hyatt, Sarah	Tenure-track	M.S., Animal Dairy, and Veterinary Medicine	Associate Professor	Full-time	BIO-1110: Environmental Biology; BIO-1120: Environmental Biology Lab;
Imholtz, Alex	Tenured	M.S., Biology	Associate Professor	Full-time	BIO-2050: Human Anatomy and Physiology I; BIO-2060: Human Anatomy and Physiology II
Klein, Michelle	Tenured	M.S., Biology	Associate Professor	Full-time	BIO-2010: Microbiology; BIO-2050: Human Anatomy and Physiology I; BIO-2060: Human Anatomy and Physiology II; BIO-1270: Research Techniques and Methods
Konnova, Svetlana	Tenure-track	Ph.D., Physics	Associate Professor	Full-time	MAT-2410: Calculus I
Kram, Brian	Tenured	M.S., Biology	Professor	Full-time	BIO-2050: Human Anatomy and Physiology I
Mennella, Rocco	Tenure-track	M.S. Mathematics	Professor	Full-time	MAT-2410: Calculus I
Miller, William	Tenure-track	Ph.D., Chemical Engineering	Professor	Full-time	CHM-1020: General Chemistry II; CHM-1030: General

					Chemistry II Laboratory
Mirtova, Helen	Tenured	Ph.D., Mathematics	Professor	Full-time	MAT-2410: Calculus I
Novick, Jaison	Tenure-track	Ph.D., Mathematics	Associate Professor	Full-time	MAT-2410: Calculus I
Pahadi, Nirmal	Contract	Ph.D., Chemistry	Instructor	Adjunct	CHM-2010: Organic Chemistry I
Parto, Paria	Tenure-track	Ph.D., Veterinary Medicine and Comparative Anatomy	Professor	Full-time	BIO-2050: Human Anatomy and Physiology I; BIO-2060: Human Anatomy and Physiology II
Richards, Reyniak	Tenure-track	M.S. Chemistry	Assistant Professor	Full-time	CHM-2020: Organic Chemistry II; CHM-2040: Organic Chemistry II Laboratory; CHM-2010: Organic Chemistry I; CHM-1020: General Chemistry II; CHM-1030: General Chemistry II Laboratory
Ring, Tracy	Tenure-track	M.S., Marine Biology	Associate Professor	Full-time	BIO-1110: Environmental Biology; BIO-1120: Environmental Biology Lab
Roozbehi, Fariba	Tenure-track	Ed.D., Mathematics Education	Associate Professor	Full-time	MAT-2410: Calculus I

Sadeghian, Cyrus	Tenure-track	M.S., Biology	Assistant Professor	Full-time	BIO-111:0 Environmental Biology; BIO-1120: Environmental Biology Lab; BIO-1140: Cellular and Molecular Biology; BIO-2010: Microbiology
Tavakoli, Kourosh	Tenure-track	Ph.D., Mathematics	Professor	Full-time	MAT 2410: Calculus I
Vargas, Noelle	Tenure-track	Ph.D., Chemistry	Professor	Full-time	CHM-1020: General Chemistry II; CHM-1030: General Chemistry II Laboratory
Yasapala, Nilanthi	Tenure-track	Ph.D., Chemistry	Associate Professor	Full-time	CHM-1020: General Chemistry II; CHM-1030: General Chemistry II Laboratory; CHM-2020: Organic Chemistry II; CHM-2040: Organic Chemistry II Laboratory; CHM-2010: Organic Chemistry I
Zeigler, Bekki	Tenure-track	M.S., Biology	Associate Professor	Full-time	BIO-1110: Environmental Biology; BIO-1120: Environmental Biology Lab

2. Demonstrate how the institution will provide **ongoing pedagogy training** for faculty in evidenced-based best practices, including training in:

   a. Pedagogy that meets the needs of the students
   b. The learning management system
   c. Evidenced-based best practices for distance education, if distance education is offered.

The College provides opportunities for continuous teaching improvement through ongoing training for full- and part-time faculty year-round on a variety of evidence-based best practices related to:

- pedagogy to meet the needs of a diverse student population, using a variety of modalities
- pedagogy specific to distance education
- the learning management system (Canvas)

Concentrated training is offered during professional development periods in August, October, and January.

PART J: Adequacy of Library Resources (as outlined in COMAR 13B.02.03.12).

1. Describe the **library resources** available and/or the measures to be taken to ensure resources are adequate to support the proposed program.

The library maintains online accessible and extensive databases, journals, and E-texts. Students may request holdings and inter-library loans either by email or in person. Additionally, the library will provide journals and publications specifically related to the various professions in the field.

The PGCC library has extensive online resources available to students, including:

- Agriculture (Gale OneFile)
- Credo Reference
- EBook Central
- EBSCO Host Academic E-book Collection Gale Virtual Reference Library
- Environmental Studies (Gale OneFile)
- Health and Medicine (Gale OneFile)
- Human Anatomy (Gale Interactive)
- Information Science (Gale OneFile)
- ProQuest General Database
- PubMed Database
- Salem Science E-books
- Science (Gale in Context)
- Streaming Video Films on Demand VAST Academic Video Collection

Moreover, the library has ready access to:

a) Interlibrary loan services compliant to and in support of the Library of Congress and its Bibliographic Utilities.
b) The holdings of the Prince George's County Memorial Library System.

c) The holdings of the University of Maryland System.

PART K: Adequacy of Physical Facilities, Infrastructure and Instructional Equipment (as outlined in COMAR 13B.02.03.13).

1. Provide an assurance that physical facilities, infrastructure and instruction equipment are adequate to initiate the program, particularly as related to spaces for classrooms, staff and faculty offices, and laboratories for studies in the technologies and sciences.

This program will mainly be housed in Chesapeake Hall. Current buildings, classroom and office spaces, and teaching and learning equipment are sufficient to support this program. All facilities and equipment are subject to routine cleaning, inspection, and maintenance.

2. Provide assurance and any appropriate evidence that the institution will ensure students enrolled in and faculty teaching in distance education will have adequate access to:

*a. An institutional **electronic mailing system***

Prince George's Community College provides access to it electronic mailing system (Microsoft 365 Outlook) to its full-time and part-time faculty members. Each faculty member's school email address uses the domain @pgcc.edu. Faculty receive emails from both students and colleagues via the Outlook system. Students enrolled in credit programs are issued a school email address upon enrollment. Each Prince George's Community College student email address uses the domain @students.pgcc.edu.

b. ***A learning management system** that provides the necessary technological support for distance education*

Each course offered at the College is created in a Canvas shell that allows remote access during a given semester. Each faculty member, full-time or part-time, is given access to each class that he/she is assigned to teach via the Canvas Learning Management System (LMS). Within the learning management system, faculty are able to see who is enrolled in the course, create a gradebook, create discussion boards, upload various content formats, and communicate with individual or groups of students. Zoom is integrated into each Canvas course through an LTI (learning tools integration). Panopto is integrated into each Canvas section through as LTI to ensure student privacy as well as provide streaming technology in accordance with the best practices for video.

After successfully enrolling in a course at Prince George's Community College, each student is provided access to each course that he/she is enrolled for the given semester. Access to the course is granted four days prior to the official start of the course. Within the learning management system, students can access all course content posted by the instructor, access graded assignments, and communicate with the instructor and other students.

PART L: Adequacy of Financial Resources with Documentation (as outlined in COMAR 13B.02.03.14).

1. Complete Table 1: Resources and Narrative Rationale. Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each resource category. If resources have been or will be reallocated to support the proposed program, briefly discuss the sources of those funds.

TABLE 1: PROGRAM RESOURCES					
Resource 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)	$776,664	$820,134	$863,604	$907,074	$950,544
a. Number of F/T Students	100	105	110	115	120
b. Annual Tuition/Fee Rate	$4,830	$4,830	$4,830	$4,830	$4,830
c. Total F/T Revenue (a x b)	$483,000	$507,150	$531,300	$555,450	$579,600
d. Number of P/T Students	152	162	172	182	192
e. Credit Hour Rate	$161	$161	$161	$161	$161
f. Annual Credit Hours	12	12	12	12	12
g. Total P/T Revenue (d x e x f)	$293,664	$312,984	$332,304	$351,624	$370,944
3. Grants, Contracts & Other External Sources	$ 0	$ 0	$ 0	$ 0	$ 0
4. Other Sources	$ 0	$ 0	$ 0	$ 0	$ 0
TOTAL (Add 1 – 4)	$776,664	$820,134	$863,604	$907,074	$950,544

Reallocated Funds: There are no reallocated funds for this program.
Tuition/Fee Revenue: Assuming modest growth in both full-time and part-time enrollments and tuition and fees are assumed constant over the next five years, the chart displays the overall financials for the program. The in-county tuition rate of $114 per credit and a fee of $47 per credit for a total of $161 per credit have been used to calculate revenue; with 30 credits per year for full-time students, and an average of 12 credits per year for part-time.
Grants, Contracts, & Other External Sources: This program does not use grants, contracts, or external sources for funding.
Other Sources: There are no other sources used for funding.

2. Complete **Table 2: Program Expenditures and Narrative Rationale**. Provide finance data for the first five years of program implementation. Enter figures into each cell and provide a total for each year. Also provide a narrative rationale for each expenditure category.

TABLE 2: PROGRAM EXPENDITURES					
Expenditure Categories	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**
1. Faculty (b + c) below	$ 0	$ 0	$74,063	$74,063	$74,063
a. Number of FTE	0	0	1	1	1
b. Total Salary	$ 0	$ 0	$55,000	$55,000	$55,000
c. Total Benefits	$ 0	$ 0	$19,063	$19,063	$19,063
2. Admin Staff (b + c below)	$ 0	$ 0	$ 0	$ 0	$ 0
a. Number of 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. Number of FTE	0	0	0	0	0
b. Total Salary	$ 0	$ 0	$ 0	$ 0	$ 0

c. Total Benefits	$ 0	$ 0	$ 0	$ 0	$ 0
4. Technical Support and 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)	$ 0	$ 0	$74,063	$74,063	$74,063

Faculty: The current program is currently fully staffed with both full-time and adjunct faculty. Initially no additional expense will be incurred; however, additional faculty would be hired as enrollment necessitates. The funds listed in Table are the anticipated average salary and benefits for a new assistant professor of biology for years 3-5.
Admin Staff: This program will be housed in Natural Sciences Department as part of the STEM Division which already has a dean, associate dean, department chair, and coordinator in place who currently support the program. No additional administrative staff is necessary.
Support Staff: This program will be housed in the Natural Science Department. Office associates support the department as a whole, and not individual programs, so it is not expected that any new support staff will be needed.
Technical Support and Equipment: There is no additional or new technical support or equipment needed for this program. Current technical support and equipment is sufficient for the needs of the students and faculty.
Library: Current library materials are sufficient for the needs of the students and faculty.
New or Renovated Space: There is no new or renovated space needed for this program. Current classroom space is sufficient for the needs of the students and faculty.
Other Expenses: There are no other expenses required or needed for this program.

Part M: Adequacy of Provisions for Evaluation of Program (as outlined in COMAR 13B.02.03.15).

1. Discuss procedures for **evaluating courses, faculty and student learning outcomes**.

Prince George's Community College has identified three sets of learning outcomes for its students: course, program, and the College's Core Competencies (institutional learning outcomes). Course

outcomes define the skills, knowledge, and values that students are expected to acquire upon completion of a course. Program outcomes specify the skills, knowledge, and values that students are expected to acquire upon completion of a program of study. The College has a rigorous course and program assessment process. Course assessment takes place by using embedded tests and assignments that address specific course outcomes. Data from these course-embedded assessments are publicly distributed every semester in the Student Learning Outcomes Assessment Report (SLOAR). An additional report showing student achievement of the Student Core Competencies is published every year and analyzed to improve courses and to ensure program learning outcomes are met. This is the Program Learning Outcomes Assessment Report (PLOAR.)

Non-tenured faculty members are evaluated yearly by students and administrators. Each year, non-tenured faculty members have their course material and student evaluations assessed by their department chairs and deans, with final verification of the assessment conducted by the Executive Vice President and Provost for Teaching, Learning and Student Success. In order to receive high evaluations, faculty members must demonstrate effective teaching above all, but professional development in the discipline and participation in departmental, divisional, and college-wide activities are also assessed. The same criteria for evaluation are carried out for tenured members of the faculty, but once every four years. The above assessment process also provides administrators the opportunity to set out action plans for faculty improvement in teaching, professional development, and/or college service in order for each or any of those facets of the faculty member's career to be enhanced.

2. Explain how the institution will evaluate the proposed program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.

Complete program assessment takes place every four years, with progress toward achievement of improvement plans being evaluated every two years. Data regarding enrollment, retention, and graduation are collected and analyzed against program outcomes, courses offered, and other variables. Each program must have an advisory board consisting of professionals in the field assist in the construction and analysis of program review data. The college has a five-year program review cycle which entails program's educational effectiveness, including assessments of student learning outcomes, student retention, student and faculty satisfaction, and cost-effectiveness.

PART N: Consistency with the State's Minority Student Achievement Goals (as outlined in COMAR 13B.02.03.05).

1. Discuss how the proposed program addresses minority student access and success, and the institution's cultural diversity goals and initiatives.

Prince George's Community College provides affordable, high-quality learning experiences that support personal, professional, and educational development for diverse populations, contributing to the economic equity and cultural vibrancy of our community. The mission of Prince George's Community College is compatible with the State's minority achievement goals. The College provides accessible and affordable education, and it is committed to diversity. With a majority African American student body and a significant Hispanic/Latino student population, Prince George's Community College is well positioned to provide opportunities for students traditionally

underrepresented in higher education. Moreover, the graduates of this program will further align with the racial makeup of the region's workforce. The College will continue to recruit a diverse student base from both public and private schools and the local community. In addition to working with and relying on the college's student recruiting professionals, additional activities to recruit a diverse body of students will include:

- involvement with community-based organizations, high schools, and teen church programs;
- increased visibility of the new programs (e.g. college Website and catalog); and
- clear communication about the integrated nature of the academic work with practical experience and professional networking opportunities.

In sum, the College will continue to engage with community partners and stakeholders who represent the diversity of the region.

PGCC has a Diversity, Equity and Inclusion office and a number of programs geared to special populations, including Diverse Male Student Initiatives (DMSI), Women of Wisdom (W.O.W.), and Vocational Support Services. Additionally, interactive workshops and cultural diversity events are available on an ongoing basis at both the main campus and the extension centers. Furthermore, a Truth, Racial Healing, and Transformation (TRHT) Campus Center organizes Listening Sessions and Racial Healing Circles. Each of these initiatives focuses on improving the retention and success of minority students.

Part O: Relationship to Low Productivity Programs Identified by the Commission:

1. If the proposed program is directly related to an identified low productivity program, discuss how the fiscal resources (including faculty, administration, library resources and general operating expenses) may be redistributed to this program.

This is a new program. Therefore, a low-productivity self-analysis is not applicable here.

PART P: Adequacy of Distance Education Programs (as outlined in COMAR 13B.02.03.22)

1. Provide affirmation and any appropriate evidence that the institution is eligible to provide Distance Education.

Prince George's Community College is eligible to provide Distance Education by the Maryland Higher Education Commission (MHEC). Please see File 22293.

2. Provide assurance and any appropriate evidence that the institution complies with the C-RAC guidelines, particularly as it relates to the proposed program.

Prince George's Community College provides assurance that programs that are offered in a distance format comply with current CRAC guidelines. Please find a copy of the institution's accreditation status for offering distance learning through MSCHE at the following link: https://www.msche.org/institution/0175/. The college also participates in the National Council for

State Authorization Reciprocity Agreements (NC-SARA) as evidenced on the following link: https://nc-sara.org/directory.

The program offers the following courses in a distance learning format:
CHM-2020: Organic Chemistry II
BIO-1110: Environmental Biology
BIO-1120: Environmental Biology Laboratory
BIO-2050: Human Anatomy & Physiology I
BIO-2060: Anatomy and Physiology II
MAT-1360: Precalculus Part II
MAT-2410: Calculus I
EGL-1010: Composition I: Expository Writing
EGL-1340: Writing About Technical Topics
PHL-1330: Ethics
ANT-1030: Introduction to Cultural Anthropology
ECN-1030: Principles of Macroeconomics
PSY-1010: General Psychology
SOC-1010: Introduction to Sociology
INT-1010: Introduction to Information Technology