



April 1, 2024

Sanjay Rai, PhD
Acting Secretary of Higher Education
Maryland Higher Education Commission
6 N. Liberty St.
Baltimore, MD 21201

Dear Dr. Rai,

Frederick Community College (FCC) is requesting MHEC approval of the following new proposed area of concentration program: **Public Health Science Area of Concentration within the Health Sciences A.S.**

The Public Health Science AOC program is designed to prepare students to transfer to 4-year institutions where they can continue their education to bachelor's and master's degree programs. The program equips students with the knowledge and skills to promote and monitor health in individual, local, national, and global settings including disease prevention, environmental health, behavioral health, nutrition, and mental health. Graduates can pursue careers in a wide variety of settings including hospitals, health departments, government agencies, educational health settings, and worksite wellness programs.

Thank you for your consideration of this proposal. If you have any questions regarding this request for approval, please do not hesitate to call me at 301-846-2491.

Payment in the amount of **\$250** has been transmitted electronically in accordance with the MHEC fee schedule.

Sincerely,

Dr. Anne P. Davis
Provost and Vice President for Teaching, Learning and Student Success
adavis@frederick.edu

pc: Erin Peterson, FCC (epeterson@frederick.edu)
Dr. Sandy McCombe Waller, FCC (smccombewaller@frederick.edu)



Office Use Only: PP#

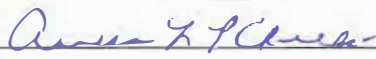
Cover Sheet for In-State Institutions
New Program or Substantial Modification to Existing Program

Institution Submitting Proposal: Frederick Community College

Each action below requires a separate proposal and cover sheet.

- | | |
|--|---|
| <input type="radio"/> New Academic Program | <input type="radio"/> Substantial Change to a Degree Program |
| <input checked="" type="radio"/> New Area of Concentration | <input type="radio"/> Substantial Change to an Area of Concentration |
| <input type="radio"/> New Degree Level Approval | <input type="radio"/> Substantial Change to a Certificate Program |
| <input type="radio"/> New Stand-Alone Certificate | <input type="radio"/> Cooperative Degree Program |
| <input type="radio"/> Off Campus Program | <input type="radio"/> Offer Program at Regional Higher Education Center |

Payment Yes Payment R*STARS # Payment \$250 Date Submitted: 3/29/24
 Submitted: No Type: Check # 198704 Amount:

Department Proposing Program	Health Science
Degree Level and Degree Type	Area of Concentration (within Health Sciences A.S.)
Title of Proposed Program	Public Health Science
Total Number of Credits	60
Suggested Codes	HEGIS: 1201.01 CIP: 51.0001
Program Modality	<input checked="" type="radio"/> On-campus <input type="radio"/> Distance Education (fully online) <input type="radio"/> Both
Program Resources	<input checked="" type="radio"/> Using Existing Resources <input type="radio"/> Requiring New Resources
Projected Implementation Date <small>(must be 60 days from proposal submission as per COMAR 13B.02.03.03)</small>	<input checked="" type="radio"/> Fall <input type="radio"/> Spring <input type="radio"/> Summer Year: 2024
Provide Link to Most Recent Academic Catalog	URL: https://frederick-public.courseleaf.com/
Preferred Contact for this Proposal	Name: Erin Peterson
	Title: Assistant Dean, Curriculum Systems and Scheduling
	Phone: (301) 846-2651
	Email: epeterson@frederick.edu
President/Chief Executive	Type Name: Dr. Annesa Cheek
	Signature:  Date: 3/25/24
	Date of Approval/Endorsement by Governing Board: 03/20/2024

Revised 1/2021

**MHEC Academic Program Proposal
Frederick Community College
Public Health Science Area of Concentration (within the proposed Health Sciences A.S.
degree)
New Area of Concentration**

A. Centrality to Institutional Mission 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.

The proposed Public Health Science Area of Concentration AOC under the Health Sciences Associate of Science (A.S.) degree is designed to prepare students to transfer to 4-year institutions where they can continue their education to bachelor's and master's degree programs in Public Health Science. This will allow students to pursue careers in a wide variety of settings including hospitals, health departments, government agencies, educational health settings, and worksite wellness programs. The creation of this area of concentration will support the mission of Frederick Community College through preparation of students to successfully enter the workforce based on needs of local, regional, and global communities.

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

This proposed program directly supports the mission of Frederick Community College by helping students meet their career goals and aligns with the following FCC Forward Strategic Plan 2020-2025.

- 1) Enhance student success and completion through collaborative and effective academic support by creating a more succinct academic pathway
- 2) Increase access, affordability, and retention through planned academic advising and degree pathways.
- 3) Promote excellence in the design and delivery of curriculum, and support of student learning.

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.)

The proposed new program will be funded by tuition and fees collected by students enrolled within the program. FCC currently has sufficient full-time and part-time faculty and administrative staff to meet the needs of the program, no new hiring will be necessary.

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

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

The current Program Manager for Health Sciences reports to the Associate Vice President for Teaching, Learning and Student Success/Dean of Health, Business, Technology, and Science. The Program Manager leads the development of specific curriculum and courses, procurement of programmatic equipment and supplies, and will actively contribute to the ongoing administrative, financial, and technical support of the proposed programs.

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

FCC is committed to the success of all students and anticipates the continuation of this proposed program beyond the time needed for students to complete the program. College policy allows up to a five-year teach-out period. The College offers a variety of support programs including tutoring, academic success, program specific advisors, and faculty advisors.

B. Critical and Compelling Regional or Statewide Need as Identified in the State Plan (effective December 2022, must reference new plan & specific outcomes):

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 heightened focus on public health issues, preventive care, and holistic well-being of workers, families, and communities has emerged in the post-pandemic era. In response to this trend along with labor market data showing 16% projected growth in public health jobs in the region, an area of concentration in public health within the Health Science A.S. degree is proposed.

Public Health Sciences is an interdisciplinary field that emphasizes evidence-based practices grounded in robust data collection and interpretation. The proposed program will provide evidence-based content that aligns with the standards and guidelines set forth by the Council on Education for Public Health (CEPH). The program equips students with the knowledge and skills to promote and track health in individual, local, national, and global settings including disease prevention, environmental health, behavioral health, nutrition, and mental health.

Community colleges provide access to high quality, affordable educational programming. By creating the proposed program, we will provide state of the art and evidence-based content that aligns with the standards and guidelines set forth by the Council on Education for Public Health (CEPH).

2. Provide evidence that the perceived need is consistent with the [2022 State Plan](#) (be sure to relate at least one priority)

The Maryland State Plan for Postsecondary Education outlines the below goals and strategies-

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

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.

Priority 5: Maintain the commitment to high-quality postsecondary education in Maryland.

The proposed program will create better prepared graduates which will allow stronger employability with local and regional hospitals, health departments, nursing homes, government agencies, educational health settings, and worksite wellness programs. These updates improve workforce development and increase workforce readiness.

By increasing the number of prepared graduates in the Health Sciences, we will contribute to meeting the need for qualified professionals.

These curricula align CEPH standards and guidelines which ensure high-quality educational content.

Priority 6: Improve systems that prevent timely completion of an academic program

The proposed program creates a clear pathway to graduation and transfer with specific course requirements in sequential order.

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.

Public Health Science graduates can be employed in hospitals, health departments, nursing homes, government agencies including federal, state, and local, educational health settings, worksite wellness programs, pharmaceutical, biotech, and medical device firms, health information firms, and health marketing firms, and the opportunity continue to graduate programs.

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

The U.S. Bureau of Labor Statistics projects Health Education Specialists to grow "faster than average" for all occupations between 2022 and 2033, predicted to be 7%. As of 2021 there were 60,400 jobs in the field, and this is predicted to increase by 6,600 annually over the decade.

The U.S. Bureau of Labor Statistics projects Dietitians and Nutritionists to grow "faster than average" for all occupations between 2022 and 2033, predicted to be 7%. As of 2022 there were 78,600 jobs in the field, and this is predicted to increase by 5,600 annually over the decade.

The U.S. Bureau of Labor Statistics projects Epidemiologists to grow "much faster than average" for all occupations between 2022 and 2033, predicted to be 27%. As of 2022 there were 10,000 jobs in the field, and this is predicted to increase by 800 annually over the decade.

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.

FCC's close proximity to the Baltimore-Washington metropolitan area, where the location quotient is in the top 5 nationally, is a dense concentration of fitness industry, health education and public health jobs (US Bureau of Labor and Statistics, 2021). This will be a consistent and growing demand over the next five years. Location quotient, as defined by the Bureau of Economic Analysis, is an analytical statistic that measures a region's industrial specialization relative to a larger geographical unit, usually the nation. In the Baltimore-Washington metropolitan area, lightcast.io indicates this as a hotspot for Health Education Specialists with 2,109 employees with the national average for this size area having 1,233 employees and a median compensation of \$95,498 compared to \$58,960 national median.

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

Current and Projected Supply of Prospective Graduates					
	Year 1 (AY 2024-25)	Year 2 (AY 2025-26)	Year 3 (AY 2026-27)	Year 4 (AY 2027-28)	Year 5 (AY 2028-29)
Proposed Enrollment	10	12	15	18	22
Prospective Graduates*		7	8	11	13
*assumes 70% completion rate					

We project 10-15 students will enroll in the new Public Health Science AOC in the first year of implementation and anticipate a 25% growth annually for the first 3-4 years. This is projected from the current Pre-Health Professions program where 10% of current students (10-12) complete the new Public Health Science AOC with another 3-5 enrolling as new students. For

future growth, as the Pre-Health Professions program is phased out, we anticipate more students will choose to enroll in this new pathway.

This data will be collected by the program manager and be reported to the Program Advisory Committee annually, as well as to the Health, Business, Technology, and Science Dean, and Faculty and Staff.

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.**

The following Maryland Community College have Public Health associate degrees:

- Anne Arundel Community College
- Carroll Community College
- Cecil College
- Community College of Baltimore County
- Howard Community College
- Montgomery College

The proposed Public Health Science AOC at FCC creates opportunities for students in Frederick County and the surrounding counties to access a high quality, affordable Public Health Science transfer program in a high demand, high wage career pathway. This specific AOC creates a more science-based approach to Public Health than that of other programs which contributes to greater success in bachelor and graduate programs and graduates are more qualified to obtain positions in scientific data-driven careers.

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

The Public Health Science Area of Concentration AOC prepares students to transfer to 4-year institutions where they can continue their education to bachelor's and master's degree programs in Public Health Science. Public Health Science graduates can be employed in hospitals, health departments, nursing homes, government agencies including federal, state, and local, educational health settings, worksite wellness programs, pharmaceutical, biotech, and medical device firms, health information firms, and health marketing firms, along with the opportunity continue to graduate programs. Regional and local employers may include Frederick Health, LifeBridge and Medstar Health, Frederick and Maryland Health Departments.

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 would have an impact on programs at HBIs. We anticipate a positive effect, as the improved skill and quantity of FCC program graduates might, in turn, increase the amount of students available to transfer to similar programs at HBIs including Bowie State University Public Health Informatics and Technology, Coppin State University Rehabilitation Services or Health Sciences, and Morgan State University Health Education, Interdisciplinary Health and Human Sciences or Nutritional Sciences.

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.

Given the aforementioned 4-year HBI programs in this area, the level of interaction between this proposal and any elements of Maryland 4-year HBIs should increase and, as 4-year institutions enhance academic offerings, the additions of this FCC 2-year program should improve transferability.

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.

Previous program updates were proposed through a Perkins grant for the 2022/2023 academic year and approved. This work was to completely overhaul the Health and Exercise Science program at FCC. These updates include the curriculum updates to fit within CoAES accreditation guidelines and build two new academic labs – cardiometabolic and strength labs – with state of the art, modern equipment. The program also realigned affiliation with leading academic and credentialing organizations to the American College of Sports Medicine (ACSM) and the National Strength and Conditioning Association (NSCA).

Upon further analysis, it became clear more academic programming was necessary for increased student opportunities in the Health Sciences to include a broader transfer pathway to Health Sciences, Public and Community Health, Allied Health, Exercise Science, Kinesiology, Rehabilitation Science, Gerontology, Epidemiology, and Pre-Professional programs.

The Public Health Science curriculum development was completed by Noah Gibson, Program Manager for Health and Exercise Sciences with consultations by Dr. Jennifer Hodgson, Associate Clinical Professor, Public Health Science Program Director, Public Health Science at the University of Maryland, and Dr. Tracy Zeeger, Assistant Dean and Associate Clinical Professor, Behavioral and Community Health Director of Undergraduate Studies at the University of Maryland. Mr. Gibson will continue program operations and accreditation work. He has been teaching in the Health Sciences for 15 years, is a published author on Exercise Oncology focusing on the effects of exercise on cardiovascular health with cancer treatments, and he is certified by the NSCA as a Certified Strength and Conditioning Specialist and USA

Weightlifting Sports Performance Coach, both since 2007. He is also a Subject Expert Instructor in the University of Maryland School of Public Health.

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

Program Learning Outcomes:

- Define the role of Public Health in the broader context of education in public sectors.
- Describe the science of human health and disease across the lifespan.
- Identify health-related needs and understand interventional approaches to promote and protect health.
- Examine socio-economic, behavioral, biological, and environmental factors that contribute to health and disease.

3. Explain how the institution will:

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

The College assesses the effectiveness of its academic programs using a well-structured five-year review process. The process consists of an analysis of program mission, goals, and objectives, assessment of the program according to internal and external data, assessment of the curriculum, assessment of student learning outcomes, assessment of resources and viability, a summary of key findings and recommendations, a review by two external reviewers, and a submission of a formal action plan. The action plan then serves as the foundation for improvements made to the program over the next four years.

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

Programs collect data from individual courses to record student achievement of learning outcomes based on the established cycles, relevant to the measures identifiable above for each of the learning objectives and program goals. The data collected are evaluated to determine the level of student achievement that has occurred based on the learning outcomes. Data will be analyzed, and updates will be made as deemed necessary.

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

Public Health Science Area of Concentration Program Requirements:

English

ENGL 101	English Composition	3
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Mathematics

MATH 175	Applied Calculus ¹	3
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Social & Behavioral Sciences

Social & Behavioral Sciences Elective (Gen Ed course list) - Required course(s) below:		3
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PSYC 101	General Psychology	
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or SOCY 101	Introduction to Sociology	
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Social & Behavioral Sciences Elective (Gen Ed course list)		3
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Arts & Humanities

Arts Elective (Gen Ed course list)		3
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Humanities Elective (Gen Ed course list)		3
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Communication Elective (Gen Ed course list)		3
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Biological & Physical Sciences

BSCI 150	Principles of Biology I	4
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BSCI 201	Anatomy and Physiology I	4
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General Education Elective		3
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PHED 165	Fitness for Living (required)	
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Physical Education, Health, or Nutrition Requirement		
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PHED 165	Fitness for Living (satisfies this requirement)	
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Concentration Courses

PBHL 170	Foundations of Public Health	3
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BSCI 202	Anatomy and Physiology II	4
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BSCI 240	Genetics (Spring)	4
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BSCI 263	Elements of Microbiology (Fall)	4
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CHEM 101	General Chemistry I	4
CHEM 150	Essentials of Organic Chemistry and Biochemistry	
or CHEM 201	Organic Chemistry I ²	4
PBHL 240	Introduction to Health Behaviors	3
Electives ³		2
Total Credits		60

1

MATH 175 has a prerequisite of MATH 145 or MATH 145S or MATH 155

2

CHEM 201 has a prerequisite of CHEM 102

3

Select electives in consultation with an advisor

Course Descriptions for Required Courses:

ENGL 101 - English Composition (3)

Gen Ed English

Prerequisites: ENGL 70 or ENGL 75 or (ESOL 72 and ESOL 73) or ESOL 100 or satisfactory performance on the writing assessment and satisfactory performance on the reading assessment (formerly EN 101)

Develops students' ability to use writing, reading, research, and thinking processes to create documented essays that demonstrate the conventions of academic writing.

MATH 175 - Applied Calculus (3)

Gen Ed Math

Prerequisite: Grade of C or better in MATH 145 or MATH 145S or MA 130 or MA 130S or appropriate score on mathematics placement test (formerly MA 201)

Presents methods for finding the derivatives and integrals of algebraic and transcendental functions with applications in each program. This course is a brief, applied version of traditional Calculus designed to help students understand how calculus is used in business, biology, and/or the social sciences. This course is not intended to replace traditional Calculus, nor can it be used as a prerequisite for Calculus I or Calculus II.

PSYC 101 - General Psychology (3)

Gen Ed Psychology

Prerequisites: ENGL 70 or ENGL 75 or (ESOL 72 and ESOL 73) or ESOL 100 (formerly PS 101)

Emphasizes the major factors that influence human behavior, including behavioral neuroscience, perceptual processes, consciousness, intelligence, personality and psychological disorders.

Or

SOCY 101 - Introduction to Sociology (3)

Gen Ed Sociology

Prerequisites: ENGL 70 or ENGL 75 or (ESOL 72 and ESOL 73) or ESOL 100

(formerly SO 101)

Introduces the student to the study of society and the impact of society upon the individual. Exemplifies social processes in cultural patterns and institutions. Examines group values at various levels of human relationship.

BSCI 150 - Principles of Biology I (4)

Gen Ed Science

Prerequisites: ENGL 70 or ENGL 75 or (ESOL 72 and ESOL 73) or ESOL 100 AND

[(Prerequisite: MATH 120A or MATH 145S) OR (Prerequisite or Co-requisite: MATH 120 or higher credit level (non-A or S) MATH course) OR (appropriate score on mathematics placement test)] *MATH 120A, MATH 145S can serve as prerequisites only, not co-requisites*

(formerly BI 101)

Explores the basic biological principles common to all living organisms, including biological chemistry, bioenergetics and metabolism, cellular and molecular biology, and classical and molecular genetics. Methods of scientific inquiry and data analysis are studied and practiced. BSCI 150 is the first of a two semester series that together with BSCI 160 is a comprehensive survey of modern biology and is intended for STEM (science, technology, engineering, and math) majors and pre-allied health majors. Meets the requirement for a general education science lab course.

BSCI 201 - Anatomy and Physiology I (4)

Gen Ed Science

Prerequisites: ENGL 70 or ENGL 75 or (ESOL 72 and ESOL 73) or ESOL 100 AND

[(Prerequisite: MATH 120A or MATH 145S) OR (Prerequisite or Co-requisite: MATH 120 or higher credit level (non-A or S) MATH course) OR (appropriate score on mathematics placement test)] AND (BSCI 55 or BSCI 150 or BI101 or BSCI 223 or BI 120 or CHEM 101)*

**MATH 120A, MATH 145S can serve as prerequisites only, not co-requisites*

(formerly BI 103)

Presents a study of physiology according to the body systems approach. Emphasizes relationships between form and function at both the microscopic and gross levels of organization. Includes basic anatomical terminology, concepts of cell biology, histology, integumentary system, skeletal system, muscular system, nervous system, special senses, and endocrine system. BSCI 201 is the first course in a two-semester sequence and is intended for STEM (science, technology, engineering, and math) majors and pre-allied Health majors. Meets the requirement for a general education science lab course.

PHED 165 - Fitness for Living (3)

Gen Ed Wellness

Prerequisites: ENGL 70 or ENGL 75 or (ESOL 72 and ESOL 73) or ESOL 100 OR Co-requisite: ENGL 75 or ESOL 100

(formerly PE 154)

Covers the components of physical fitness, stress, care of the back, nutrition and weight control. Evaluations in all areas included through laboratory experiences.

PBHL 170 - Foundations of Public Health (3)

Prerequisites: ENGL 70 or ENGL 75 or ESOL 100

Provides a comprehensive introduction to the field of public health, equipping students with the foundational knowledge and critical thinking skills necessary to understand and address complex issues related to the health of populations. Explores the core principles, concepts, and practices of public health. Students will apply critical thinking to social, behavioral, environmental, and biological factors that contribute to community health outcomes.

BSCI 202 - Anatomy and Physiology II (4)

Gen Ed Science

Prerequisite: BSCI 201 or BI 103

(formerly BI 104)

Presents a study of physiology according to the body systems approach. Emphasizes relationships between form and function at both the microscopic and gross levels of organization. Includes cardiovascular system, lymphatic system and immunity, respiratory system, digestive system and metabolism, urinary system, fluid/electrolyte balance, acid/base balance, and reproductive system. BSCI 202 is the second course in a two-semester sequence and is intended for STEM (science, technology, engineering, and math) majors and pre-allied health majors. Meets the requirement for a general education science lab course.

BSCI 240 - Genetics (4)

Prerequisites: (BSCI 150 or BII01) and CHEM 101

(formerly BI 240)

Includes history of genetics, the chemical basis of heredity, the chromosomes and genes, probability, variation in gene structure, mutation, extrachromosomal systems and genes flow in populations. Meets the requirement for a science lab course.

This course is only offered in the Spring.

BSCI 263 - Elements of Microbiology (4)

Prerequisites: CHEM 101 and (BSCI 150 or BI 101 or BSCI 201 or BI 103)

(formerly BI 203)

Covers the basic principles of cell chemistry and microbiology with respect to human physiology. Includes cell physiology, growth and metabolism of microorganisms, important groups of pathogenic microorganisms, antimicrobial agents, immunology, and introductory biochemistry. Intended for allied health students. Meets the requirement for a science lab course.

This course is only offered in the Fall.

CHEM 101 - General Chemistry I (4)

Gen Ed Science

Prerequisites: ENGL 70 or ENGL 75 or (ESOL 72 and ESOL 73) or ESOL 100 AND [(Prerequisite: MATH 120A or MATH 145S) OR (Prerequisite or Co-requisite: MATH 120 or higher credit level (non-A or S) MATH course) OR (appropriate score on mathematics placement test)] *MATH 120A, MATH 145S can serve as prerequisites only, not co-requisites (formerly CH 101)*

Examines the concepts underlying modern chemistry including atomic and molecular structure, bonding, states of matter, and solutions. Intended for science majors, technology majors (STEM), and pre-allied health major. Laboratory experiments illustrate the lecture material. Meets the requirement for a general education science lab course.

CHEM 150 - Essentials of Organic Chemistry and Biochemistry (4)

Prerequisites: Grade of 'C' or better in CHEM 100 or CHEM 101

Introduces organic chemistry concepts and their application in biochemical systems. Course topics include nomenclature of organic compounds, functional groups, reactions, stereochemistry, carbohydrates, proteins, lipids, and nucleic acids. This course is intended for students needing a one semester introductory survey course in organic chemistry. Laboratory experiments introduce physical separation techniques, synthesis, purification, and identification of organic compounds and biomolecules. This course is not a prerequisite for CHEM 202.

Or

CHEM 201 – Organic Chemistry I (4)

Prerequisites: Grade of 'C' or better in CHEM 102 (formerly CH 201)

Focuses on structure, nomenclature, reactions and uses of hydrocarbons, alkyl halides, alcohols, and compounds containing related functional groups. Mass spectrometry, infrared, and nuclear magnetic resonance spectroscopy are also covered. Lab experiments introduce basic organic chemistry techniques, synthesize and purify organic compounds, and provide hands-on experience with infrared spectroscopy. Meets the requirement for a science lab course.

PBHL 240 - Introduction to Health Behaviors (3)

Prerequisites: PBHL 170 or EXSC 170

Provides students with a foundational understanding of the principles, theories, and practices related to health behavior within the context of public health. Students will learn how theory can be used to investigate health-related behaviors and interventions. The knowledge and skills gained in this course can be applied in addressing the health concerns of individuals and communities.

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

General Education requirements will be met in the Area of Concentration as outlined in the requirements section above.

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

Certifications in Public and Community Health are all bachelor's degree or higher. We support the first two years of coursework that lead to certification after transfer and bachelor's degree completion.

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

N/A

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.

Communication at the program and institutional level is accomplished through publication on the college website, brochures, semester schedules, and the College academic catalog. The College will provide resources to students in the program that other programs offer at the College to provide clear, complete, and precise information. Information regarding curriculum, courses, degree requirements, including suggested sequence pathways, program brochures and handbook, admission information, financial aid resources, and cost and payment policies are available on the college websites.

Information related to faculty/student interactions, assumption of technology competence and skills, technical equipment requirements, and the learning management system can be found under the Resources tab on the college website.

All students will receive an assigned advisor based out of the Office of Career and Academic Planning Services. This advisor will work closely with the Health and Exercise Science program manager to ensure that all information, including information related to transfer is up to date and communicated to the student.

Not only is it essential that the College measure student achievement, but it must also provide students with clear information on how they are expected to achieve each core learning outcome. This is accomplished at the course level through information communicated in the syllabi.

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 FCC website is managed by the College marketing department and the academic catalog is managed by the Assistant Dean, Curriculum Systems and Scheduling. Updates of essential program and course information are made in collaboration with all College departments to include Teaching, Learning and Student Success, Student Affairs, Financial Aid, Registration and Records, Student Development, and Enrollment Services. This process ensures the materials available are clear and accurate and contain pertinent information regarding all program offerings and services available. Upon confirmation of a new Public Health Science program, the Institutional Effectiveness Department at FCC will activate an integrated marketing plan.

H. Adequacy of Articulation (effective December 2022, must include either a program-specific articulation agreement or a justification for why an articulation agreement is not feasible or applicable; the articulation agreement must be specific to the proposed academic program and must be with another public institution in Maryland.)

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

The program supports transfer articulations with surrounding 4-year institutions. This would allow FCC to create articulations with any public Maryland Universities that have a Health Sciences, Public Health, Exercise Science, or Kinesiology bachelor’s degree.

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 faculty member will teach (in this program).

The proposed Tactical Strength and Conditioning Certificate will require oversight by one full-time faculty who also serves as the program manager. The program manager has been teaching in the Health Sciences for 15 years, is a published author on Exercise Oncology focusing on the effects of exercise on cardiovascular health with cancer treatments, and he is certified by the NSCA as a Certified Strength and Conditioning Specialist and USA Weightlifting Sports Performance Coach, both since 2007. He is also a Subject Expert Instructor in the University of Maryland School of Public Health. Further, all other program faculty have appropriate degrees, applicable certifications, and practical experience in the field along with substantial teaching experience.

Faculty Name	Appointment Type	Terminal Degree Title and Field	Academic Rank/Title	Status	Courses to be Taught
Noah Gibson	Faculty	MS in Applied Health Physiology	Assistant Professor/Program Manager	Full-time	Able to teach all Health and Exercise Courses –

		48 Doctoral Credits in Exercise Physiology			EXSC 170, EXSC 240, EXSC 250
Kristina Nixon	Adjunct	MS in Exercise Science	Level 2 Adjunct	Part-Time	EXSC 227
Colleen Parsons	Adjunct	MS in Applied Health Physiology and MEd in Science Education	Level 1 Adjunct	Part-Time	EXSC 230
Isaac Colbert	Adjunct	MS in Health Promotion and Sport Administration	Level 3 Adjunct	Part-Time	EXSC 180
Gayle Reznikov	Adjunct	MPH in International Community Health Education	Level 3 Adjunct	Part-Time	All PBHL Courses

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.**

Through the Center for Teaching and Learning (CTL) and the Diversity, Equity, and Inclusion office, Teaching, Learning and Student Success offers adjunct and full-time faculty a responsive, innovative system of professional development in teaching and learning that reflects the characteristics and needs of FCC students. Blackboard is used as the College's learning management system.

Pedagogy and evidence-based practices programming includes:

- New full-time faculty orientation, a yearlong series focused on introducing new full-time faculty and learning administrators to best practices in teaching and learning, and the policies, procedures, and practices of the College
- New adjunct faculty orientation, adjunct faculty professional development evenings, and for adjuncts only monthly themed gatherings
- Professional development services, provides teaching and learning resources, consultations, facilitates conference funding approval, houses Alternative Credit Approval Team (ACAT), and supports the organization of Academic Affairs Faculty and Leadership Retreats.
- Teaching and Learning Hours, four tracks of professional development sessions designed to inspire faculty to engage student minds and support their success through active learning, innovation, and scholarship, including Culturally Responsive Teaching and Cultural and Global Competence Development; Scholarship of Teaching and Learning; Technology, Teaching and Innovation; and Faculty Leadership and Academic Management.
- CTL Faculty Scholars Program, designed to support the professional development needs of full-time and adjunct faculty by providing faculty subject matter experts the opportunity to create and deliver Teaching and Learning Hours in support of professional development priorities.
- Academic department chairs, program managers, and fellow faculty provide discipline specific training and professional development for adjunct and full-time faculty such as lab safety, clinical orientation, outcomes assessment, curricular requirements, and equipment use.
- Further, full-time faculty are supported in their pathways to promotion through the Faculty Appointment and Promotion Process. The myriad pathways to promotion include alternative credit options which are approved by ACAT.
- Finally, in collaboration with Human Resources Employee Development Advisory Team (EDAT) and other college stakeholders, Academic Affairs ensures that development of faculty and staff by supporting the orientation of new employees; the ongoing training of faculty and staff on college policies and procedures, business practices, wellness, and hiring.

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. *If the program is to be implemented within existing institutional resources, include a supportive statement by the President for library resources to meet the program's needs.***

No new holdings will be needed for this program update. The Library subscribes to database content that would support this program and has a robust collection of print and ebooks. Collection development guidelines are focused on supporting the curriculum of the College, and resources are allotted to fulfill faculty and program requests to update materials as needed.

The President supports the adequacy of library resources to meet this program's needs.

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. If the program is to be implemented within existing institutional resources, include a supportive statement by the President for adequate equipment and facilities to meet the program's needs.**

The program received a Perkins innovations grant to equip lab facilities and create two new labs – a cardiometabolic lab and strength lab. This includes funds to purchase a metabolic cart, BODPOD air displacement plethysmograph, 8 cycle ergometers, and two clinical grade treadmills. Additionally, the program received funding to purchase an electrocardiograph stress testing console, and all necessary equipment for a new strength lab.

The President supports the adequacy of equipment and facilities to meet this program's needs.

- 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, and**
 - b) A learning management system that provides the necessary technological support for distance education**

While the proposed program is not distance education/fully online, some courses in the program may be offered online and/or have a companion Blackboard course site. At the time of registration, all students will sign up for their myFCC account to gain access to the myFCC Student Portal. All students make a Required Orientation, Advising and Registration (R.O.A.R.) appointment. At this time, they are issued an FCC email address for electronic mail communication. During their respective orientations and regularly thereafter, students and faculty are strongly encouraged to sign up to the College emergency and closing alert system "FCC Alerts". In the event of a campus emergency or weather-related school closing, FCC Alert subscribers receive text, phone calls, and/or email notifications.

FCC utilizes Blackboard as its Learning Management System (LMS) and provides IT assistance to students for technological support. Blackboard LMS allows faculty to administer and teach courses online by providing students with access to course materials and the ability to interact with their peers/faculty through the LMS. Blackboard Collaborate is the primary web conferencing platform for instruction. Zoom is also available for programs with specific requirements that cannot be met through Blackboard Collaborate.

The student portal has easy access links to the LMS Online Learning tool, Microsoft Outlook Email, PeopleSoft Registration and Student Account, IT Help Desk, and more.

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)	\$19,000.80	\$60,169.20	\$72,836.40	\$91,837.20	\$110,838
a. Number of F/T Students	10	19	23	29	35
b. Annual Tuition/Fee Rate	\$31,666.80	\$3,166.80	\$3,166.80	\$3,166.80	\$3,166.80
c. Total F/T Revenue (a x b)	\$31,6684	\$60,169.20	\$72,836.40	\$91,837.20	\$110,838
d. Number of P/T Students	0	0	0	0	0
e. Credit Hour Rate	0	0	0	0	0
f. Annual Credit Hour Rate	0	0	0	0	0
g. Total P/T Revenue (d x e x f)	0	0	0	0	0
3. Grants, Contracts & Other External Sources	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000
4. Other Sources	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTAL (Add 1 – 4)	\$56,668	\$85,169.20	\$97,836.40	\$116,837.20	\$135,838

RESOURCES NARRATIVE RATIONALE

Reallocated Funds

No funds will need to be reallocated.

Staffing (Administrative, Faculty, and Support)

Currently the program has in place 1 fulltime faculty member and 3 adjuncts who will be used to teach courses within this program no additional funding will be required. We have administrative and support staff who are already assigned to work and support this program.

Tuition and Fee Revenue

The College is expecting enrollment in the Health & Exercise Science AAS, with AOC in Exercise Science will start with a class of 6 students to start in Fall 2023. By the fourth year, the College plans to expand the program by offering a day as well as an evening classes when enrollment reaches 16 students. This will expand the total number of students by year 5 to 20. Calculations utilize current tuition and fees.

Grants and Contracts

The Health & Exercise Sciences AOC received a CTE Innovation Grant for \$150,000 and HEERF funding in the amount of \$96,559 to provide the equipment and supplies needed to support the start-up and development of the program.

Other Sources

Not Applicable

Total Year

Total Year financial resources amount to \$403,608 over the first five years of the program. This includes already awarded grant funding in year 1 and eligible allocations of grant funding for each year afterwards.

**** No assumptions have been made for tuition, fees, salaries or general expenditure cost and increases.**

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)	89,039	91,708	94,459	97,292	100,210
a. Number of FTE	1	1	1	1	1

b. Total Salary	66,126	68,109	70,152	72,256	74,423
c. Total Benefits	22,913	23,599	24,307	25,036	25,787
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)	45,446	46,450	47,843	49,295	50,757
a. Number of FTE	.60	.60	.60	.60	.60
b. Total Salary	33,774	34,514	35,549	36,615	37,714
c. Total Benefits	11,672	11,936	12,294	12,680	13,043
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	18,900	18,900	18,900	18,900	18,900
TOTAL (Add 1 – 7)	153,385	157,058	161,202	165,487	169,867

PROGRAM EXPENDITURES NARRATIVE RATIONALE

Faculty

There is one full-time faculty member. Costs include salary, 3% COLA added to current salary for year 1 and then each year after. The benefits are based on 7.65% FICA and 27% benefits.

Administrative Staff

The full-time faculty member is also the program manager, so that is why the administrative staff costs are 0.

Support Staff

These figures combine costs of 3 employees providing support divided over 6 programs. The salaries include a 3% COLA added in each year. The salaries and the cost of benefits are divided over the 6 programs they support.

Other Expenses

This includes the cost of 21 adjunct credits each year at approximately \$900 per credit.

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.
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.

Continuous Program Evaluations					
Data for Review	Frequency	Timeframes	Data Source	Data Collector	Reporting
Student Course Evals	Each semester	1 week after term ends	Evaluation Kit in Blackboard	Faculty and HES Program Manager	Included in faculty evaluations, faculty meetings, PAC Meetings
Faculty Observations/Evaluations	Annually for faculty	Faculty evaluations – week after term ends	Direct classroom observations, student course evals	Program Manager	Annual Faculty Evaluation
Graduation Exit Survey	Annually	Last week of graduation term	Survey results	Program Manager	Faculty Meetings, PAC Meetings

6-month graduate survey	Annually	6-months following end of graduation term	Survey results	Program Manager	Faculty Meetings, PAC Meetings
Enrollment Data	Each semester	1 week after term start	PeopleSoft (PS)	Program Manager	Faculty Meetings, PAC Meetings
Graduation Data	Annually	June	PS/OPAIR	OPAIR Staff	Faculty Meetings, PAC Meetings
Retention Rate	Annually	June	PS/OPAIR	OPAIR staff	Faculty Meetings, PAC Meetings
Completion Rate	Annually	June	PS/OPAIR	OPAIR Staff	Faculty Meetings, PAC Meetings
Program Mission, Goals, Student Learning Outcomes	Annually	Fall PAC Meeting	Various	Program Manager and other faculty	Website, Faculty meetings, PAC Meeting
Formal Program Review	Every 5 years	October-June	All data sources identified	Faculty; PAC subcommittee	PAC Meetings; Dean of Health, Business, Technology, and Science

Additional Tracking	Ongoing	Throughout each term		HES Faculty and Staff	
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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 & success, and the institution’s cultural diversity goals and initiatives.**

FCC has long been committed to the recruitment and retention of minority students and providing a learning environment that is open, welcoming, and supportive of cultural diversity. FCC’s Strategic Plan for 2022-2025 identifies the following goals and strategies.

Model educational excellence by designing and delivering student learning experiences, pathways, and programs that increase student access, success, and completion. [MSCHE Standards III and V].

b. strengthen faculty and staff technology skills, cultural competence, instructional effectiveness, leadership, and innovation

d. eliminate the achievement and opportunity gaps for underrepresented students and emerging populations

g. increase student cultural and global competence through innovation and alignment of curricular and co-curricular programming.

Support the student learning experience through data-informed enrollment management, responsive programming, and efficient systems [MSCHE Standard IV]

optimize enrollment in all learning environments with intentional focus on underrepresented and emerging populations by enhancing access, improving success, and accelerating completion.

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.**

Not applicable. The proposed program is not related to an identified low productivity program.

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.**

While the proposed program is not a distance education/fully online, program, FCC has been approved to offer distance education programs by both the Maryland Higher Education Commission and the Middle States Commission on Higher Education.

Quality assurance of the online courses is maintained formally with the Quality Matters (QM) course review protocol. The Colleges Institutional Values, Mission, Vision, and Strategic Goals guide the delivery of all instruction regardless of the delivery format. For more than 15 years, the College has demonstrated a commitment to offering a successful, high-quality online program with an appropriate academic and technical infrastructure.

Online learning has become an integral part of teaching and learning at FCC. Budget allocations support a staff in the Center for Distributed Learning as well as online program initiatives already in place such as curriculum development, Quality Matter course reviews, faculty training, and learning object database subscriptions. As part of the Center for Teaching and Learning, the Online Learning and Learning Innovation (OLLI) unit is fully integrated into the curriculum, governance, and administrative processes of the College. FCC faculty teaching online courses receive individual training and course development and guidelines from OLLI.

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

In compliance with C-RAC guidelines, all online instructors are subject to a peer course evaluation, and instructors can apply for Quality Matters certification. Students evaluate each course at the end of each semester. Program managers, department chairs, the AVP/Deans in Academic Affairs and the Provost have access to each student course evaluation in their area. Student feedback is used for course and program improvement, and faculty are expected to reflect on student evaluations in their annual self-evaluation. Program-level evaluation for Distributed Learning is ongoing and is documented in detail in a series of annual or bi-annual reports by the Center for Distributed Learning. The Quality Matters (QM) Peer Review protocol is at the center of the College's quality assurance efforts in course design. The QM protocol is based on a rubric with 43 key quality standards for an online course. The standards are used to peer-review existing online courses at FCC, to guide the design of new courses, and shape the training of online faculty. Sixty-nine percent of fully online courses have been formally QM reviewed.

A protocol for re-reviewing QM courses with expired review terms is in place. The College has made every effort to comply with relevant federal and state regulations for its Program of Online Courses, for example, the efforts to comply with Substantive Change in Degree Programs, ADA compliance requirements, compliance with the federal definition of a Credit Hour, compliance with current copy right provisions, and USDOE's State Authorization Regulations. As a member of Maryland Online (MOL), FCC is part of two interconnected contractual arrangements with MOL and Quality Matters (QM). The MOL course-sharing initiative (Seatbank) provides students from different Maryland Community Colleges with greater access to distance learning opportunities. Colleges share distance learning courses with the expectation that the shared courses meet the same quality standards as articulated in the rubric updated biannually for QM's peer review process.