

BIOMEDICAL SCIENCE SPECIALIZATION - APPLIED HEALTH SCIENCES, BACHELOR OF APPLIED SCIENCE

Program Code: HSBSBIOM

Meta-Major: HSCI

Location(s): Cocoa, Melbourne, Palm Bay, Titusville

Delivery Method(s): On-Campus, Hybrid

Previous Degree Required: AS/AA

Eligible for Financial Aid: Yes

Additional Limited Access Application Process Required: No

Program Testing Requirements:

Classification of Instructional Programs (CIP) Code: 51.2211

Florida Department of Education CIP Code: 1105122111

Students can only select one major and one specialization. Students may receive a specific A.S./B.A.S. degree only one time. While students may take courses from multiple specializations, however, the degree will be awarded only once.

The Biomedical Science track in the Applied Health Sciences Bachelor of Applied Science degree is most appropriate for students with a strong background in biology who plan to move on to a medical career or apply for an advanced degree program that involves patient contact. It builds upon a student's existing professional knowledge to enhance skills in communication, critical thinking, problem solving, and research and leadership theories.

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Specialization Requirements

Code	Title	Credit Hours
Associate Degree		
Complete Associate Degree		60
Applied Health Science - Core Courses		
HSC 3741	Writing for Healthcare Professionals	3
ISC 3523	Applied Scientific Thinking	3
Biomedical Science Major Courses 27		
BCH 4024	Introduction to Biochemistry and Molecular Biology	
HSA 4910/ HSC 3801	Capstone: Case Studies in Biomedical Science ¹ or HSC 4851 Health Sciences Internship	
HSC 4500	Epidemiology	
MCBC 3020	Biology of Microorganisms	
PCB 3063	Genetics	
PCB 4233	Immunology	
PHC 4031	Emerging and Infectious Diseases	

PHC 4094	Introduction to Biostatistics for Health Science and Public Health	
Biomedical Science Electives		27
Select 27 credit hours from the following:		
ANS 3440	Principles of Animal Nutrition	
ANS 4911	Individual Mentored Research in Animal Science	
ANSC 3006	Introduction to Animal Science	
ATEC 4640	Laboratory Animals and the IACUC	
BCHC 4103	Biochemical Methods	
BSC 3424	Nanotechnology	
BSC 4434	Bioinformatics	
BSC 4870	Principles of Pharmacology	
BSC 4911	Individual Mentored Research in Biology/ Biotechnology	
BSCC 4422	Methods and Applications in Biotechnology 2	
HSA 3502	Healthcare Risk Management	
HSA 3702	Healthcare Research	
HSC 3201	Community Health	
HSC 3537	Health and Medical Terminology	
HSC 3740	Quality Assurance for the Biomedical Sciences Laboratory	
HSC 3820	Transcultural Biomedical Science - Study Abroad	
HSC 4184	Healthcare Leadership	
HSC 4404	Medical Disaster Management	
HSCC 3543	Quantitative Biomedical Laboratory Methods	
HSCC 4544	Quantitative Biomedical Laboratory Instrumentation	
MCB 4203	Bacterial and Viral Pathogenesis	
PCB 3134	Cell Biology	
PCB 4234	Biology of Cancer	
ZOO 4911	Individual Mentored Research in Zoology	
ZOOC 4232	Comparative Parasitology	
ZOOC 4603	Developmental Biology	

Biomedical Science Support Courses

Students may select up to 16 credits from the following as part of their 27 Biomedical Electives:

BSCC 1011	General Biology 2	
BSCC 1426	Introduction to Biotechnology Methods	
BSCC 1427	Introduction to Biotechnology Methods 2	
CHM 1045	General Chemistry 1	
CHM 1046	General Chemistry 2	
CHM 2210	Organic Chemistry 1	
CHM 2211	Organic Chemistry 2	
CHML 1045	General Chemistry 1 Laboratory	
CHML 1046	General Chemistry 2 Laboratory	
CHML 2210	Organic Chemistry 1 Laboratory	
CHML 2211	Organic Chemistry 2 Laboratory	
MAC 2311	Calculus 1 with Analytic Geometry	
MAC 2312	Calculus 2 with Analytic Geometry	
PHY 2048	General Physics 1	
PHY 2049	General Physics 2	
PHYL 2048	General Physics 1 Laboratory	

PHYL 2049 General Physics 2 Laboratory

Total Credit Hours

120

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Student will have the option to take HSC 4851 Health Sciences Internship or HSC 3801 Clinical Observation/Volunteer Work and HSA 4910 Capstone: Case Studies in Biomedical Science

Learning Outcomes: Biomedical Science / Biotechnology Science BAS Specializations

1. Analyze biological processes at all levels of organization: molecular, cellular and microbial, organismal, population, and ecosystem.
 - *Supports Core Ability: Think Critically and Solve Problems*
2. Write a technical biological/bio-medical paper.
 - *Supports Core Ability: Work Cooperatively*
3. Explain the importance of unifying concepts in biology, including cell theory, genetics and evolution.
 - *Supports Core Ability: Think critically and solve problems*
4. Apply laboratory skills in support of bio-medical systems.
 - *Supports Core Ability: Process information*
5. Evaluate historical developments and research in the biological and bio-medical sciences.
 - *Supports Core Ability: Think critically and solve problems*
6. Analyze data and scientific literature.
 - *Supports Core Ability: Communicate effectively*
7. Apply scientific methods in laboratory-based and field-based inquiry.
 - *Supports Core Ability: Process information*
8. Characterize awareness of professional, ethical and global issues in a diverse society.
 - *Supports Core Ability: Model Ethical & Civic Responsibility*