ENVIRONMENTAL SCIENCE, BACHELOR OF SCIENCE - PHYSICAL SCIENCE TEACHING FOCUS

Program Code: S600D
Career Pathway: Science, Technology, Engineering, and Math

Location(s): Most courses for this program are offered at all BC locations. Specialized courses are offered at Central Campus. (https://www.broward.edu/about/locations/)
Program Entrance Requirements Tracks A, B, C, D: Entry requires completion of an AA/AS degree or transfer of 60+ credits (including general education) from another accredited institution. Applicants must have:

- A cumulative grade point average of 2.5 on a 4.0 scale
- Submit a letter of recommendation
- Submit all transcripts from previous institutions
- Be approved by the Environmental Science department
- Completed the following courses with a C or higher:

Course	Title	Credits
BSC2010	INTRODUCTION TO BIOLOGY I	3.00
BSC2010L	INTRODUCTION TO BIOLOGY I LABORATORY	1.00
CHM1045	GENERAL CHEMISTRY 1	3.00
CHM1045L	GENERAL CHEMISTRY I LAB	1.00
Select one of the following:		4.00
PSC1121 & 1121L	PHYSICAL SCIENCES SURVEY and PHYSICAL SCIENCES LABORATORY	
ESC1000 & 1000L	EARTH SCIENCE and EARTH SCIENCE LABORATORY	
GLY1010 & 1010L	PHYSICAL GEOLOGY and PHYSICAL GEOLOGY LABORATORY	

- STA2023 STATISTICS must be completed prior to entry or during the first year of baccalaureate study

PROGRAM DESCRIPTION: The Bachelor of Science (BS) in environmental science is designed for students that wish to pursue a career as a laboratory/field technician and/or progress to a graduate degree program (MS or PhD). The curriculum will provide the students with a foundational understanding of science, critical thinking skills, experiential learning, ethics and specific technical knowledge and skills required to work in the laboratory or the field. The Biosecurity track focuses on ecology, entomology, plant science, genetics and other aspects of environmental science. An optional Advanced Technical Certificate in Geographic Information Systems (GIS) provides additional discipline skills and knowledge that will make them competitive for employment within the environmental and biological science workforce.

GRADUATION REQUIREMENTS

The Bachelor of Science degree will be awarded to students who meet the following requirements:

- A minimum of 120 semester credit hours in the prescribed coursework is required for the Bachelor of Science degree. Coursework is comprised of both lower division (AA or AS) and upper division (BS) as specified by the program sheet.
- Successful completion of the Senior Internship or Senior Research.
- Students must maintain an overall GPA of 2.5 to meet their graduation requirements.

FOREIGN LANGUAGE REQUIREMENT

Students must successfully complete the foreign language requirement as prescribed in college policy and the college catalog.

ADDITIONAL PROGRAM INFORMATION

Completion of the degree requires an internship or independent study project.

Course	Title	Credits
OCE3008	ADVANCED OCEANOGRAPHY	3.00
OCE3064C	MARINE CONSERVATION AND RESTORATION BIOLOGY	3.00
EDF3280	INSTRUCTIONAL STRATEGIES	3.00
GLY4820	HYDROGEOLOGY	3.00
GLY4820L	HYDROGEOLOGY LAB	1.00
SWS3006	INTRO TO SOIL SCIENCE	3.00
Select one of the following:		3.00
EVR2949	CO OP WORK EXPERIENCE	
BSC2910	DIRECTED INDEPENDENT RESEARCH	
BSC4911	INDEPENDENT RESEARCH IN THE BIOLOGICAL SCIENCES	
BSC4948	SENIOR INTERNSHIP	
PSC4912	INDEPENDENT RESEARCH IN THE PHYSICAL SCIENCES	
PSC4948	SENIOR INTERNSHIP	
ENY4906	DIRECTED ENTOMOLOGICAL RESEARCH	
TSL3080	ESOL ISSUES AND STRATEGIES I	3.00
BSC4848	SCIENTIFIC COMMUNICATION	3.00
EEX3011	INTRODUCTION TO EXCEPTIONAL STUDENT EDUCATION	3.00
RED3342	FOUND OF RESEARCH PRAC. IN READ ED & APP. OF INST.	3.00
GLY4731	COASTAL AND MARINE SCIENCE	3.00
PCB4043	INTRODUCTION TO ECOLOGY	3.00
GLY4203	ENVIRONMENTAL GEOLOGY AND LITHOSPHERIC PROCESSES	3.00
PCB4454C	BIOSTATISTICS WITH LAB	4.00
EDG4410	CLASSROOM MANAGEMENT	3.00
SCE4330	METHODS AND STRATEGIES OF TEACHING BIOLOGICAL SCIENCE	3.00
Electives	Elective Courses [1]	10.00
Total Credits		**60**

[1] Program Electives (p. 2)

Notes:

Students must satisfy the Digital Literacy requirement by testing out, completing a Credit for Prior Learning portfolio, or passing CGS1060C COMPUTER AND INTERNET LITERACY.

In accordance with Florida Statute and Florida Administrative Code, students may need to satisfy the Civic Literacy Graduation Requirement. Visit the Civic Literacy Graduation Requirement page at broward.edu/civic-literacy (https://students.broward.edu/resources/civic-literacy/).

Students are strongly encouraged to meet with an advisor (https://students.broward.edu/resources/advising/) to create a personalized educational plan.

Program Electives

Course	Title	Credits
ALS4163	CHALLENGES IN PLANT RESOURCE PROTECTION	3.00
BCH3033	BIOCHEMISTRY I	3.00
BSC2011	INTRODUCTION TO BIOLOGY II	3.00
BSC2011L	INTRODUCTION TO BIOLOGY II LABORATORY	1.00
BSC2910	DIRECTED INDEPENDENT RESEARCH	1-3
BSC4911	INDEPENDENT RESEARCH IN THE BIOLOGICAL SCIENCES	4.00
BSC4930	SPECIAL TOPICS IN BIOLOGICAL SCIENCE	1-3
BSC4948	SENIOR INTERNSHIP	3.00
BOT2010	GENERAL BOTANY	3.00
BOT2010L	GENERAL BOTANY LABORATORY	1.00
CGS1510C	EXCEL DATA ANALYSIS	3.00

CHM1046	GENERAL CHEMISTRY II	3.00
CHM1046L	GENERAL CHEMISTRY II LAB	1.00
CHM2210	ORGANIC CHEMISTRY I	3.00
CHM2210L	ORGANIC CHEMISTRY I LABORATORY	1.00
CHM2211	ORGANIC CHEMISTRY II	3.00
CHM2211L	ORGANIC CHEMISTRY II LABORATORY	1.00
COP1700C	INTRODUCTION TO DATABASE AND MYSQL	3.00
ENY3005	PRINCIPLES OF ENTOMOLOGY	2.00
ENY3005L	PRINCIPLES OF ENTOMOLOGY LAB	1.00
ENY4161C	INSECT CLASSIFICATION	3.00
ENY4660	MEDICAL AND VETERINARY ENTOMOLOGY	3.00
ENY4905	REVIEW OF SCIENTIFIC LITERATURE	1-3
ENY4906	DIRECTED ENTOMOLOGICAL RESEARCH	3.00
ENY4949	ENTOMOLOGY INTERNSHIP	3.00
EVR1261	FUNDAMENTALS OF AIR POLLUTION	3.00
EVR1858	ENVIRONMENTAL REGULATION	3.00
EVR2930	ENVIRONMENTAL SCIENCE SEMINAR	1.00
EVR2949	CO OP WORK EXPERIENCE	3.00
EVR3400C	WILDLIFE ECOLOGY AND MANAGEMENT	3.00
EVS4905	REVIEW OF SCIENTIFIC LITERATURE	1-3
FAS4202C	BIOLOGY OF FISH	3.00
GIS1000	MAPPING FUNDAMENTALS SYSTEMS II	3.00
GIS1030	REMOTE SENSING AND APPLICATIONS	3.00
GIS1040C	INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS I	3.00
GIS1042C	INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS II	3.00
GIS1047C	APPLICATIONS OF GEOGRAPHIC INFORMATION SYSTEMS	3.00
ISM3013C	INFORMATION SYSTEMS MANAGEMENT	3.00
MAC1114	TRIGONOMETRY	3.00
MAC1140	PRE CALCULUS ALGEBRA	3.00
MAC1147	PRECALCULUS ALGEBRA AND TRIGONOMETRY	5.00
MAC2233	CALCULUS FOR BUSINESS, SOCIAL AND LIFE SCIENCES	3.00
MAC2311	CALCULUS AND ANALYTICAL GEOMETRY I	5.00
MAC2312	CALCULUS AND ANALYTICAL GEOMETRY II	5.00
MAC2313	CALCULUS AND ANALYTICAL GEOMETRY III	5.00
MAD2104	DISCRETE MATHEMATICS	3.00
MAP2302	DIFFERENTIAL EQUATIONS	3.00
MCB2010	MICROBIOLOGY	3.00
MCB2010L	MICROBIOLOGY LABORATORY	1.00
MCB4652	ENVIRONMENTAL MICROBIOLOGY	3.00
OCE3008	ADVANCED OCEANOGRAPHY	3.00
OCE3064C	MARINE CONSERVATION AND RESTORATION BIOLOGY	3.00
ORH2527		
PCB3023	MOLECULAR AND CELLULAR BIOLOGY	3.00
PCB3063	GENETICS	3.00
PCB3063L	GENETICS LAB	1.00
PCB4303	FRESHWATER ECOSYSTEMS	3.00
PCB4341C	ADVANCED BIOLOGICAL FIELD TECHNIQUES	3.00
PLP3002C	FUNDAMENTALS OF PLANT PATHOLOGY	3.00
PSC3639C	MARINE BENTHIC ECOLOGY	3.00
PSC4473C	SCIENTIFIC DIVING	3-4
PSC4912	INDEPENDENT RESEARCH IN THE PHYSICAL SCIENCES	1-3
PSC4930	SPECIAL TOPICS IN PHYSICAL SCIENCE	1-3

PSC4948	SENIOR INTERNSHIP	3.00
STA2023	STATISTICS	3.00
SWS2242C	WETLANDS MANAGEMENT I	3.00
ZOO2010	GENERAL ZOOLOGY	3.00
ZOO2010L	GENERAL ZOOLOGY LABORATORY	1.00
ZOO4713	COMPARATIVE VERTEBRATE ANATOMY & PHYSIOLOGY	3.00
ZOO4713L	COMPARATIVE VERTEBRATE MORPHOLOGY AND PHYSIOLOGY LAB	1.00

PROGRAM HIGHLIGHTS

CREDIT FOR PRIOR LEARNING

Accelerate your path to completion with these options:

- Credit by exam
- Earned industry certifications
- Prior Learning Assessment
- And much more…

RELATED INDUSTRY CERTIFICATIONS

Upon completing this program, graduates will be eligible to sit for the following industry certifications/licenses: N/A

MEDIAN WAGE AND JOB GROWTH OUTLOOK

Broward College has Career Coach (https://www.broward.edu/careercoach/)! It is designed to help you find a good career by providing the most current local data on wages, employment, job postings, and associated education and training.

FUND YOUR EDUCATION

This program is Financial Aid (https://www.broward.edu/admissions/financial-aid/) eligible. Scholarships (https://www.broward.edu/admissions/financial-aid/scholarships/) may be available.

PROGRAM LEARNING OUTCOMES

Graduates from this program will:

- Demonstrate increased proficiency in biostatistical analysis as it relates to Environmental Science.
- Successfully calculate Simpson's Inverse Index and Shannon-Weiner's Index for case study data.
- Demonstrate ability to use citation management software and properly cite references.
- Demonstrate mastery/competency of Jaccard's Index of Similarity, specifically in the following areas: define biodiversity and differentiate it from species richness and calculate biodiversity index values.
- Demonstrate proficiency with insect classification, specifically identifying Hempitera: Suborder Heteroptera to family.