

BIOLOGICAL SCIENCES ECOLOGY AND EVOLUTIONARY BIOLOGY

REQUIREMENTS

CORE CURRICULUM

The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at marshall.edu/gened.

CORE 1: CRITICAL THINKING

CODE	COURSE NAME	HRS	GRADE
FYS 100	First Year Seminar	3	_____
_____	Critical Thinking Course	3	_____
_____	Critical Thinking Course	3	_____

CORE 2:

CODE	COURSE NAME	HRS	GRADE
ENG 101	Beginning Composition	3	_____
ENG 201	Advanced Composition	3	_____
CMM 103	Fund Speech-Communication	3	_____
MTH 140 or MTH 229	Applied Calculus or Calculus/ Analytic Geom I (CT)	3-5	_____
BSC 120/L	Principles of Biology I / Lab	3/1	_____
_____	Core II Humanities	3	_____
_____	Core II Social Science	3	_____
_____	Core II Fine Arts	3	_____

Additional University Requirements

_____	Writing Intensive	3	_____
_____	Writing Intensive	3	_____
_____	Multicultural or International	3	_____
BSC 491	Capstone	2	_____

MAJOR-SPECIFIC

All Biological Sciences majors are required to take the following courses:

BSC 121/L	Principles of Biology II / Lab	3/1	_____	CHM 327	Intro Organic Chemistry or	3	_____
CHM 211	Principles of Chemistry I	3	_____	or 355	Organic Chemistry I		
CHM 217	Principles of Chemistry I Lab	2	_____	PHY 201	College Physics I	3	_____
CHM 212	Principles of Chemistry II	3	_____	PHY 202	College Physics I Lab	1	_____
CHM 218	Principles of Chemistry II Lab	2	_____				

AREA OF EMPHASIS-SPECIFIC

Students who wish to add an area of emphasis in Ecology and Evolutionary Biology must take the following courses:

CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE
BSC 320	Principles of Ecology	4	_____	_____	AoE Elective	4	_____
BSC 340	Principles of Evolution	3	_____	_____	AoE Elective	4	_____
BSC 417	Biostatistics	3	_____	_____	BSC Technical Elective	3	_____
BSC 324	Principles of Genetics	4	_____	_____	BSC Technical Elective	3	_____
BSC 3__	BSC Core Course	4/5	_____	_____	BSC Technical Elective	3	_____
_____	AoE Elective	3	_____	_____	BSC Technical Elective	3	_____
_____	AoE Elective	3	_____	_____	Free Elective	3	_____
_____	AoE Elective	4	_____	_____	Free Elective (MTH 122 recommended for PHY pre-reg)	3	_____

MAJOR INFORMATION

- Students must pass BSC 120 Principles of Biology I & BSC 120L Principles of Biology I Lab and earn a grade of C or better in BSC 121 Principles of Biology II & BSC 121L Principles of Biology II Lab, CHM 211 Principles of Chemistry I, and CHM 212 Principles Chemistry II before they can enroll in any upper-level BSC course except BSC 227 Human Anatomy, BSC 228 Human Physiology and BSC 250 Microbiol & Human Disease.
- BSC 104 Introduction to Biology, BSC 105 Human Biology, BSC 227/227L Human Anatomy, BSC 228/228L Human Physiology, and BSC 250 Microbiol and Human Disease do not count towards a BSC major and cannot substitute for any required or elective BSC courses.
- A minimum of 15 hours of 400-level credit is required.
- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- In addition to the Core General Education requirements, the College of Science requires 3-5 hours of Calculus, and 40 hours of upper level credit.
- The CHM coursework provides a Chemical Sciences minor.
- Coursework listed as "elective" may vary for each student. Students are encouraged to use elective hours toward a 2nd minor or toward prerequisites.
- Students are strongly encouraged to select courses that meet two or more Core or College requirements.
- Course offerings and course attributes are subject to change. Please consult

- each semester's schedule of courses for availability and attributes.
- MTH 140 Applied Calculus requires ACT Mathematics score of 24 or higher. Students with an ACT Mathematics score less than 24 will be placed in the appropriate prerequisite mathematics courses.
- All Biological Science majors are required to complete a minimum of 40 hours of credits in the Department of Biological Sciences.
- Capstone Experience: It is the responsibility of each student to consult his/her advisor regarding details of meeting the capstone requirement. The capstone may be a traditional independent study research project under the supervision of a faculty member selected by the student, participation in a classroom-based capstone course, or the development and implementation of an internship, co-op, or community-based project. Students must have completed a minimum of 16 hours of BSC coursework before they will be permitted to register for Capstone.
- BSC Core Courses: students will select one of the following: BSC 302 & 304, 322, 332 & 332L or 334 & 334L
- AoE Elective students will select a minimum of 18 credits of the following: BSC 301, 310, 312, 401, 406, 408, 409, 410, 411, 416, 420, 421, 422, 424, 425, 426, 430, 431, 438, 443, 450, 460 or CHM 365
- BSC Technical Electives: Select a minimum of 12 credits of 300 or 400-level BSC or closely related courses for technical electives. The courses must be approved by the department chair.

◆ Area of Emphasis

◆ Major Requirement

■ College Requirement

● General Education Requirement

Milestone Course: This is a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.

BIOLOGICAL SCIENCES ECOLOGY AND EVOLUTIONARY BIOLOGY

The Department of Biological Sciences is committed to teaching students about the science of life from molecular to global scales. A degree in Biological Sciences prepares students for careers and graduate study in diverse fields such as human and veterinary medicine, dentistry, biomedical and pharmaceutical research, environmental consulting, wildlife ecology, and K12 or higher education. Students completing the Area of Emphasis in Ecology and Evolutionary Biology will be prepared for a wide range of careers including ecology, paleontology, environmental education, and may take positions with universities, museums, state or federal government agencies (USFS, USFWS, USGS, DNR, EPA); environmental consulting firms; conservation agencies; and non-governmental organizations.

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE	
BSC 120/L	Principles of Biology I / Lab	3	1	_____	BSC 121/L	Principles of Biology II / Lab	3	1	_____
MTH 140 or	Applied Calculus or Calculus/	3-5		_____	FYS 100	First Year Sem Crit Thinking	3		_____
MTH 229	Analytic Geom I (CT)			_____	_____	Fine Arts Elective	3		_____
ENG 101	Beginning Composition	3		_____	CMM 103	Fund Speech-Communication	3		_____
_____	Core I Critical Thinking	3		_____	_____	Free Elective (MTH 122	3		_____
UNI 100	Freshman First Class	1		_____	_____	recommended for PHY pre-req)			_____
TOTAL HOURS					TOTAL HOURS				
14-16					16				

Summer Term (optional):

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE	
BSC 320	Principles of Ecology	4		_____	CHM 212	Principles of Chemistry II	3		_____
CHM 211	Principles of Chemistry I	3		_____	CHM 218	Principles of Chemistry II Lab	2		_____
CHM 217	Principles of Chemistry I Lab	2		_____	BSC 417	Biostatistics	3		_____
ENG 201	Advanced Composition	3		_____	BSC 324 or	Principles of Genetics or Principles	3-4		_____
_____	Core II Social Science (PSY 201 or	3		_____	340	of Evolution			_____
_____	SOC 200) (CT)			_____	_____	Core I Critical Thinking	3		_____
TOTAL HOURS					TOTAL HOURS				
15					14-15				

Summer Term (optional):

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE	
CHM 327	Intro Organic Chemistry or	3		_____	_____	AoE Elective	4		_____
or 355	Organic Chemistry I			_____	_____	AoE Elective	4		_____
BSC 324 or	Principles of Genetics or Principles	3-4		_____	_____	BSC Technical Elective	3		_____
340	of Evolution			_____	_____	Core II Humanities	3		_____
_____	AoE Elective	3		_____					_____
_____	AoE Elective	3		_____					_____
_____	Free Elective	3		_____					_____
TOTAL HOURS					TOTAL HOURS				
15-16					14				

Summer Term (optional):

FALL SEMESTER					SPRING SEMESTER				
CODE	COURSE NAME	HRS	GRADE		CODE	COURSE NAME	HRS	GRADE	
PHY 201	College Physics I	3		_____	BSC 491	Capstone	2		_____
PHY 202	College Physics I Lab	1		_____	BSC 3__	BSC Core Course	4/5		_____
_____	BSC Technical Elective	3		_____	_____	BSC Technical Elective	3		_____
_____	BSC Technical Elective	3		_____	_____	AoE Elective	4		_____
_____	Multicultural or International	3		_____	_____	Writing Intensive	3		_____
_____	Writing Intensive	3		_____					_____
TOTAL HOURS					TOTAL HOURS				
16					16-17				

Summer Term (optional):

General Education Requirement
 Major Requirement
 College Requirement
 Area of Emphasis

Milestone Course: This is a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.