#### CURRICULUM PLAN COLLEGE OF SCIENCE 2022-2023

**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: CRIT CODE	ICAL THINKING COURSE NAME		HRS	GRADE	COF	RE 2: CODE C	COURSE NAME		HRS	GRADE
FYS 100	First Year Seminar	•	3			ENG 101	Beginning Composition	•	3	
	Critical Thinking Course	•	3			ENG 201	Advanced Composition	•	3	
	Critical Thinking Course	•	3			CMM 103	Fund Speech-Communication	•	3	
Addition	al University Requirements				-	MTH 140 or MTH 229	Applied Calculus or Calculus/ Analytic Geom I (CT)	• •	3-5	
	Writing Intensive		3			BSC 120/L	Principles of Biology I / Lab	• •	3/1	
	Writing Intensive		3				Core II Humanities	٠	3	
	Multicultural or International		3				Core II Social Science	٠	3	
BSC 491	Capstone		2				Core II Fine Arts	•	3	

#### MAJOR-SPECIFIC

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

CHM 217 CHM 212 CHM 218	Principles of Chemistry I Lab Principles of Chemistry II Principles of Chemistry II Lab	* * *	2 3 2		<ul> <li>PHY 201</li> <li>PHY 202</li> </ul>	College Physics I College Physics I Lab	•	3	
	. ,	*	2 3		( ()	5 ,	•	3 1	
CHM 217	Principles of Chemistry I Lab	•	2		PHY 201	College Physics I	•	3	
								-	
CHM 211	Principles of Chemistry I	•	3		or 355	Organic Chemistry I			
BSC 121/L	Principles of Biology II / Lab	٠	3/1		CHM 327	Intro Organic Chemistry or	•	3	
		1 3,	5,	1 37					

#### 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	٠	4			AoE Elective	٠	4	
BSC 340	Principles of Evolution	٠	3			AoE Elective	٠	4	
BSC 417	Biostatistics	٠	3			BSC Technical Eleective	٠	3	
BSC 324	Principles of Genetics	٠	4			BSC Technical Eleective	٠	3	
BSC 3	BSC Core Course	٠	4/5			BSC Technical Eleective	٠	3	
	AoE Elective	٠	3			BSC Technical Eleective	٠	3	
	AoE Elective	٠	3			Free Elective		3	
	AoE Elective	٠	4			Free Elective (MTH 122		3	
						recommended for PHY pre-req)			

#### 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.

MY ADVISOR'S NAME IS:

- 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.

# FOUR YEAR PLAN COLLEGE OF SCIENCE 2022-2023 **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.

		CODE	FALL SEMESTER		црс	GRADE	CODE (	SPRING SEMESTER		LIDC	GRAD
	-			• •		GRADE					GRAD
	<b></b>	BSC 120/L	Principles of Biology I / Lab		3/1		 BSC 121/L	Principles of Biology II / Lab	•	3/1	
		MTH 140 o MTH 229	11	• •	3-5		FYS 100	First Year Sem Crit Thinking	•	3	
되 Z			Analytic Geom I (CT)	•	2			Fine Arts Elective	•	3	
ONE		ENG 101	Beginning Composition		3		CMM 103	Fund Speech-Communication	•	3	
AR			Core I Critical Thinking		3			Free Elective (MTH 122		3	
YEAR		UNI 100	Freshman First Class		1			recommended for PHY pre-req)			
		TOTAL HO			14-16		TOTAL HOU	JRS		16	
	Sumr	ner Term (opt	ional):								
		_	FALL SEMESTER				_	SPRING SEMESTER			
	_	CODE	COURSE NAME		HRS	GRADE	CODE (	COURSE NAME	_	HRS	GRAD
		BSC 320	Principles of Ecology	•	4		CHM 212	Principles of Chemistry II	٠	3	
		CHM 211	Principles of Chemistry I	•	3		CHM 218	Principles of Chemistry II Lab	•	2	
0		CHM 217	Principles of Chemistry I Lab	•	2		BSC 417	Biostatistics	•	3	
TWO		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		• ·	
YEAR			SOC 200) (CT)					Core I Critical Thinking	•	3	
H X											
		TOTAL HO	JRS		15		TOTAL HOU	JRS		14-15	
		ner Term (opt									
		-									
			FALL SEMESTER					SPRING SEMESTER			
		CODE	COURSE NAME		HRS	GRADE	CODE (	COURSE NAME		HRS	GRAD
		CHM 327	Intro Organic Chemistry or	•	3			AoE Elective	•	4	
Ξ		or 355	Organic Chemistry I					AoE Elective	•	4	
HREE		BSC 324 or		•	3-4			BSC Technical Eleective	٠	3	
		340	of Evolution		2			Core II Humanities	•	3	
Ч Ч			AoE Elective	•	3						
EAI			AoE Elective	•	3						
거			Free Elective		3						
		TOTAL HO	JRS		15-16		TOTAL HOU	JRS		14	
	Sumr	ner Term (opt	ional):								
	-	_	FALL SEMESTER		-	_	_	SPRING SEMESTER	-	-	-
	-	CODE	COURSE NAME	_	LIDC	GRADE	CODE (	COURSE NAME	-	LIDC	GRAD
		PHY 201	College Physics I	•	3	GRADE	BSC 491	Capstone	• •	2	GNAL
		PHY 202	College Physics I Lab		1		BSC 3	BSC Core Course		4/5	
പ്പ		F111 202	BSC Technical Eleective		3		DJC J	BSC Technical Eleective		3	
ОŪ.			BSC Technical Eleective						•	4	-
			Multicultural or International	•	3			AoE Elective	•	4	
Ē.			Writing Intensive					Writing Intensive		3	
Ē.			writing intensive	•	3						
AR F											
YEAR FO		TOTAL HO	100		16		TOTAL HOU	100		16-17	

### INVOLVEMENT OPPORTUNITIES

- Student Government Association
- Campus Activity Board
- JMELI
- Commuter Student Advisory Board
- Club Sports
- Religious Organizations
- Political Organizations
- Residence Hall Association
- Cultural Organizations
- National Society of Leadership and Success

#### **RELATED MAJORS**

- Biomechanics
- Athletic Training
- Education
- Geology
- Geography
- Environmental Science

# **GRADUATION REOUIREMENTS**

- Have a minimum of 120 credit hours (some colleges or majors require more);
- · Have an overall and Marshall Grade Point Average of 2.00 or higher;
- Have an overall Grade Point Average of 2.00 or higher in the major area of study;
- Have earned a grade of C or better in English 201 or 201 H;
- Have met all major(s) and college reauirements
- Have met the requirements of the Core Curriculum:
- Have met the residence requirements of Marshall University, including 12 hours of 300/400 level coursework in the student's college (see section entitled "Residence Requirements" in the undergraduate catalogue);
- Be enrolled at Marshall at least one semester of the senior year:
- Have transferred no more than 72 credit hours from an accredited West Virginia twoyear institution of higher education.

Colleges and specific programs may have unique requirements that are more stringent than those noted above. Students are responsible for staying informed about and ensuring that they meet the requirements for graduation.

This academic map is to be used as a guide in planning your coursework toward a degree. Due to the complexities of degree programs, it is unfortunate but inevitable that an error may occur in the creation of this document. The official source of degree requirements at Marshall University is DegreeWorks available in your myMU portal. Always consult regularly with your advisor.

Stay on the Herd Path and come Have guestions? Need to talk? You to class! Class attendance is more already have a Friend-At-Marshall important to your success than ready to help you succeed. Find your your high school GPA, your class FAM Peer Mentor here: standing, or your ACT/SAT scores. www.marshall.edu/fam





In order to graduate on time, you need to take an average of 15 credits per semester. Are you on track? Take 15 to Finish.

Take an elective course that links diversity to your field of study.



**YEAR ONE** 



Are you completing enough credits to graduate on time? Dropping or failing a class can put you behind. Use summer terms to quickly get back on track.



Join or create a club or organization related to your interests or career goals. Biology students are members of at least 20 different campus clubs.



Have you considered adding a minor? Think about personal areas of interest you'd like to explore or how you might enhance your major with a related skill set.



research opportunities with faculty in your major right now.



Talk with your professors to enhance

your study skills and build your

critical thinking abilities.

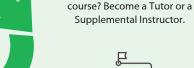
\_\_\_\_\_

Take a pulse check. Know what

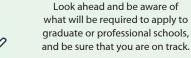
you need to do every year to keep

your grants, scholarships, or federal

financial aid.







Start looking for volunteer experiences in fields related to your career choice or interest. Talk to professors about what makes a good opportunity.

QE

# ECOLOGY AND EVOLUTIONARY BIOLOGY - 2022-2023

# **YEAR THREE**



Think about who can help you grow as a student and a professional (professors, advisors, alumni, etc) and ask at least one to be your mentor.



College is a great time to experience the world! Consider studying abroad in the summer, during Spring Break, or for an entire semester.



Does admission to your chosen graduate or professional school require career shadowing? Start looking for opportunities now.



Complete admissions exams (GRE, MCAT, PCAT, LSAT, etc) the summer before your senior year.





Want to continue your education and increase your opportunities?

Talk to a faculty member about whether graduate school fits your career goals.

# **YEAR FOUR**



graduate? Meet with your advisor for your Senior Eval to see what



enhance your presentation skills. Present what you've learned at an academic conference off campus.



Apply for a nationally competitive scholarship like Fulbright, Rhodes, or Gates Cambridge. Contact the Office of National Scholarships at Marshall.

Research Expo in April.



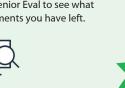
Be at the top of your professional game! Prepare a final resume and practice your interview skills with a career coach in Career Education.

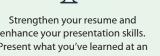




This is it! Are you on track to

requirements you have left.









Are you on track to graduate? Meet with your advisor for your Junior Eval to make sure you know what requirements you have left.

0



Make sure that you stand out. If you are entering a competitive field, ensure that you can highlight challenging courses and experiences.

# TRANSFERABLE SKILLS ASSOCIATED WITH THIS MAJOR

- Scientific Knowledge
- Communication Skills
- Ability to Work as Part of a Team
- Technology Literacy
- Adaptability

### ASSOCIATED CAREERS

- Research and Development
- Grant Writing
- Quality Control
- Medicine
- Conservation
- Genetics
- Ecology
- Microbiology
- Food Science
- Information Management
- Data Analysis
- Education
- Technical Writing
- Lobbying
- Law
- Advocacy
- Pharmaceutical Sales
- Consulting
- Marketing

Prepare to present at the CoS



Make sure that you stand out. If you are entering a competitive field, ensure that you can highlight challenging courses and experiences.



Talk to faculty about pursuing optional professional certifications.



Marshall University College of Science 1 John Marshall Drive Huntington, WV 25755 1-304-696-3170 cos@marshall.edu marshall.edu/cos