#### 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.

ORE 1: CRI	TICAL THINKING			COF	RE 2:						
CODE	COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRADE	
FYS 100	First Year Sem Crit Thinking	•	3			ENG 101	<b>Beginning Composition</b>	•	3		
MTH 229	Critical Thinking Course	•	3			ENG 201	Advanced Composition	•	3		
	Critical Thinking Course	•	3			CMM 103	Fund Speech-Communication	•	3		
						MTH 229	Calculus I (or Precalc & Calc)	• •	5		
Addition	al University Requirements					BSC 120	Principles of Biology I	• •	4		
	Writing Intensive		3				Core II Humanities	•	3		
	Writing Intensive		3				Core II Social Science	•	3		
	Multicultural or International		3				Core II Fine Arts	•	3		
BSC 491	Capstone		2								

#### MAJOR-SPECIFIC

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

	CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
	BSC 121	Principles of Biology II	•	4		CHM 361	Organic Chemistry II Lab	•	3	
	CHM 211	Principles of Chemistry I	<b>♦</b>	3		PHY 201	College Physics I	•	3	
<b>***</b>	CHM 217	Principles of Chemistry I Lab	<b>♦</b>	2		PHY 202	College Physics I Lab	•	1	
	CHM 212	Principles of Chemistry II	<b>♦</b>	3		PHY 203	College Physics II	•	3	
<b>**</b>	CHM 218	Principles of Chemistry II Lab	<b>♦</b>	2		PHY 204	College Physics II Lab	•	1	
	CHM 355	Organic Chemistry I	<b>♦</b>	3		BSC 491	Capstone (C)	• •	2	
<b>**</b>	CHM 356	Organic Chemistry II	•	3						

### AREA OF EMPHASIS-SPECIFIC

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

	CODE (	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
<b>***</b>	BSC 302,	Microbiology, Genetics or Cell	•	3-4			AoE Elective	•	4	
	324 or 322	Biology					AoE Elective	•	3	
<b>***</b>	BSC 302,	Microbiology, Genetics or Cell	•	3-4			AoE Elective	•	3	
	324 or 322	Biology					Free Elective		3	
	BSC 322	Cell Biology	•	3			Free Elective		3	
	BSC 430	Plant Ecology	•	3			Free Elective		3	
	BSC 416	Plant Taxonomy	•	4			Free Elective		3	
	BSC 420	Plant Physiology	•	4			Free Elective		3	

#### MAJOR INFORMATION

- Students must pass BSC 120 and earn a grade of C or better in BSC 121, CHM 211, and CHM 212 before they can enroll in any upper-level BSC course except BSC 227, 228 and 250. BSC 104 and 105 will not substitute for BSC 120 and 121 for a major in the Department of Biological Sciences.
- AofE Elective Pick 3 of the following:BSC 302, 304, 410, 411, 412, 445, 460 or CHM 365
- 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.
- In addition to the Core General Education requirements, the College of Science requires 3 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 prerequisities.

MY ADVISOR'S NAME IS:

- Students are strongly encouraged to select courses that meet two or more Core or College requirements. For example, a writing intensive literature course could satisfy the Core II Humanities as well as the University writing intensive requirement.
- Course offerings and course attributes are subject to change semesters.
   Please consult each semester's schedule of courses for availability and attributes.
- Calculus I requires ACT Mathematics score of 27 or higher. Students with an ACT Mathematics score less than 27 will be placed in the appropriate mathematics courses.
- All Biological Science majors are required to complete a minimum of 40 hours of credits in the Department of Biological Sciences.

FOUR YEAR PLAN COLLEGE OF SCIENCE 2019-2020

## BIOLOGICAL SCIENCE PLANT 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. <u>Students completing the Area of Emphasis in Plant Biology</u> will be prepared for a wide range of careers including agricultural and pharmaceutical research, industry, plant ecology, and positions with state or federal government agencies (USFS, USF-WS, USACE, DNR, EPA).

FALL SEMESTER							SPRING SEMESTER					
	CODE	COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRADE	
<b>₹</b>	BSC 120	Principles of Biology I	• •	4		<b>***</b>	BSC 121	Principles of Biology II	•	4		
	MTH 229	Calculus I (CT) (or Precalc & Calc)	• •	5			FYS 100	First Year Sem Crit Thinking	•	3		
	ENG 101	Beginning Composition	•	3				Core II Fine Arts	•	3		
		Free Elective		3			CMM 103	Fund Speech-Communication	•	3		
	UNI 100	Freshman First Class		1				Multicultural or International	•	3		
	TOTAL HO	OURS		16			TOTAL HO	OURS		16		
Summer Term (optional):												
		EATT CEMECTED				CDDING CEMECTED						

			FALL SEMESTER						SPRING SEMESTER			
		CODE C	OURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRADE
	<b>**</b>	BSC 302,	Microbiology, Genetics or Cell	•	3-4		1	CHM 212	Principles of Chemistry II	•	3	
		324 or 322	Biology				<b>**</b>	CHM 218	Principles of Chemistry II Lab	<b>♦</b>	2	
0	<b>**</b>	CHM 211	Principles of Chemistry I	•	3				Free Elective		3	
$\mathbf{T}\mathbf{W}$	•	CHM 217	Principles of Chemistry I Lab	•	2				Core I Critical Thinking	•	3	
띪		ENG 201	Advanced Composition	•	3		<b>**</b>	BSC 302,	Microbiology, Genetics or Cell	•	3-4	
EA			Core II Social Science (PSY 201 or	•	3			324 or 322	Biology			
$\Xi$			SOC 200)									
	TOTAL HOURS			14-15		TOTAL HOURS				14-15	5	
	Sumi	mer Term (optio	onal):									

			FALL SEMESTER						SPRING SEMESTER			
		CODE	COURSE NAME		HRS	GRADE		CODE	COURSE NAME		HRS	GRADE
		BSC 322	Cell Biology	•	3		<b>***</b>	CHM 356	Organic Chemistry II	•	3	
6-3	<b>₹</b>	CHM 355	Organic Chemistry I	•	3			CHM 361	Organic Chemistry II Lab	•	3	
臣			AoE Elective	•	4				Core II Humanities	•	3	
THREE			Free Elective		3			BSC 430	Plant Ecology	•	4	
			Free Elective		3				Free Elective		3	
AR												
K E												
		TOTAL HO	DURS		16			TOTAL HO	DURS		16	
	Sum	mer Term (op	otional):									

		FALL SEMEST	ER				SPRING SEMEST	TER		
	CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
	BSC 416	Plant Taxonomy	•	4		BSC 491	Capstone (C)	• •	2	
		AoE Elective	•	3			Writing Intensive	•	3	
JR	PHY 201	College Physics I	•	3		BSC 420	Plant Physiology	•	4	
FOUR	PHY 202	College Physics I Lab	•	1			AoE Elective	•	3	
		Writing Intensive	•	3		PHY 203	College Physics II	•	3	
YEAR						PHY 204	College Physics II Lab	<b>•</b>	1	
X										
	TOTAL HO	OURS		14		TOTAL HO	OURS		16	
	Summer Term (op	otional):								

MY ADVISOR'S NAME IS:

#### **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 requirements:
- 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.

# BIOLOGICAL SCIENCE PLANT BIOLOGY — 2019-2020

#### **YEAR ONE**



Have guestions? Need to talk? You already have a Friend-At-Marshall ready to help you succeed. Find your FAM Peer Mentor here: www.marshall.edu/fam

Develop relationships with professors

who can serve as future references by

attending their office hours.

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.



Stay on the Herd Path and come to class! Class attendance is more important to your success than your high school GPA, your class standing, or your ACT/SAT scores.





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.



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

YEAR TWO

## 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.





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

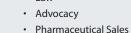


Make sure that you stand out. If you are entering a competitive field, ensure that you can highlight challenging courses and experiences.



Want to continue your education and increase your opportunities? Talk to a faculty member about whether graduate school fits your career goals.

· Lobbying Law Advocacy



 Consulting Marketing

TRANSFERABLE SKILLS

Scientific Knowledge

· Communication Skills

Technology Literacy

**ASSOCIATED CAREERS** 

Research and Development

Adaptability

Grant Writing

Conservation

Microbiology

• Food Science

· Data Analysis

Technical Writing

Education

• Information Management

Medicine

Genetics

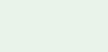
Ecology

· Quality Control

ASSOCIATED WITH THIS MAJOR

• Ability to Work as Part of a Team

## YEAR FOUR



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.



No need to wait until graduate school. Discuss undergraduate research opportunities with faculty in your major right now.



Did you do really well in a hard course? Become a Tutor or a Supplemental Instructor.



Look ahead and be aware of what will be required to apply to graduate or professional schools, and be sure that you are on track.

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



This is it! Are you on track to graduate? Meet with your advisor for your Senior Eval to see what requirements you have left.



Strengthen your resume and 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.



Prepare to present at the CoS Research Expo in April.



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.



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



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