## CURRICULUM PLAN COLLEGE OF SCIENCE 2024-2025

# **BIOLOGICAL SCIENCES** FORENSIC 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.

FICAL THINKING				CORE 2:				
COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
First Year Seminar	٠	3		ENG 101	Beginning Composition	•	3	
Critical Thinking Course	٠	3		ENG 201	Advanced Composition	•	3	
Critical Thinking Course	•	3		CMM 103	Fund Speech-Communication	•	3	
				MTH 140	or Applied Calculus or Calculus/	• •	3-5	
al University Requirements				MTH 229	Analytic Geom I (CT)			
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	
Capstone		2			Core II Fine Arts	•	3	
	COURSE NAME First Year Seminar Critical Thinking Course Critical Thinking Course al University Requirements Writing Intensive Writing Intensive Multicultural or International	COURSE NAME First Year Seminar Critical Thinking Course Critical Thinking Course Critical Thinking Course al University Requirements Writing Intensive Writing Intensive Multicultural or International	COURSE NAMEHRSFirst Year Seminar3Critical Thinking Course3Critical Thinking Course3Critical Thinking Course3Al University Requirements3Writing Intensive3Writing Intensive3Multicultural or International3	COURSE NAME       HRS       GRADE         First Year Seminar       3	COURSE NAMEHRSGRADECODEFirst Year Seminar3ENG 101Critical Thinking Course3ENG 201Critical Thinking Course3MTH 140Critical Thinking Course3MTH 140MTH 1229MTH 140MTH 229Writing Intensive3Writing Intensive3Multicultural or International3	COURSE NAME       HRS       GRADE       CODE       COURSE NAME         First Year Seminar       3       3       ENG 101       Beginning Composition         Critical Thinking Course       3       ENG 201       Advanced Composition         Critical Thinking Course       3       CMM 103       Fund Speech-Communication         Critical Thinking Course       3       MTH 140 or       Applied Calculus or Calculus/         MTH 1229       Analytic Geom I (CT)       MTH 229       Analytic Geom I (CT)         BSC 120/L       Principles of Biology I / Lab       Core II Humanities         Writing Intensive       3       Core II Social Science         Multicultural or International       3       Core II Social Science	COURSE NAME       HRS       GRADE       CODE       COURSE NAME         First Year Seminar       3        ENG 101       Beginning Composition       •         Critical Thinking Course       3        ENG 201       Advanced Composition       •         Critical Thinking Course       3        CMM 103       Fund Speech-Communication       •         Critical Thinking Course       3        MTH 140 or       Applied Calculus or Calculus/       •         MTH 140 or       Applied Calculus or Calculus/       •       MTH 229       Analytic Geom I (CT)         BSC 120/L       Principles of Biology I / Lab       •       •         Writing Intensive       3        Core II Humanities       •         Multicultural or International       3        Core II Social Science       •	COURSE NAME       HRS       GRADE       CODE       COURSE NAME       HRS         First Year Seminar       3       3       ENG 101       Beginning Composition       3         Critical Thinking Course       3       Image: Seminar       3       Image: Seminar       3       3         Critical Thinking Course       3       Image: Seminar       3       Image: Seminar       3       3         Critical Thinking Course       3       Image: Seminar       3       Image: Seminar       3       3         Critical Thinking Course       3       Image: Seminar       3       Image: Seminar       3       3         Critical Thinking Course       3       Image: Seminar       3       Image: Seminar       3       3         Critical Thinking Course       3       Image: Seminar       Image: Seminar       3

### MAJOR-SPECIFIC

All Biological Sciences majors are required to take the following courses:										
	CODE C	OURSE NAME		HRS	GRADE	CODE	COURSE NAME			
	BSC 121/L	Principles of Biology II / Lab	•	3/1		CHM 212	Principles of Chemistry II			
	CHM 211	Principles of Chemistry I	•	3		CHM 218	Principles of Chemistry II Lab			
	CHM 217	Principles of Chemistry I Lab	•	2		PHY 201	College Physics I			
						PHY 202	College Physics I Lab			

### AREA OF EMPHASIS-SPECIFIC

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

					CODE	COURSE NAME		HRS	GRADE
CODE	COURSE NAME		HRS	GRADE	BSC 3	BSC Core Course	۵	3/4	
CHM 355	Organic Chemistry I	•	3		FSC 224	Intro to Forensic Science		4	
CHM 356	Organic Chemistry II	•	3					-	
CHM 361	Organic Chemistry II Lab	•	3		CJ 200 or	Intro to Criminal Justice or Intro to	•	3	
	, , , , , , , , , , , , , , , , , , ,				211	Law Enforcement			
CHM 365	Indtroductory Biochemistry	•	3		CJ	CJ Elective	٠	3	
PHY 203	College Physics II	•	3			AoE Elective	٠	3/4	
PHY 204	College Physics II Lab	•	1			AoE Elective	•	3/4	
BSC 3	BSC Core Course	٠	3/4			AoE Elective	•	3/4	
BSC 3	BSC Core Course	٠	3/4			AoE Elective		3/4	
BSC 3	BSC Core Course	٢	3/4			BSC Technical Elective		3	
BSC 3	BSC Core Course	٠	3/4			Free Elective (MTH 122		3	
						•		5	
						recommended for PHY pre-reg)			

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- 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. • 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.
- Students are encouraged to seek a minor in Criminal Justice.
- Coursework listed as "elective" may vary for each student.
- · 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 requirement as well as the University writing intensive requirement.

MY ADVISOR'S NAME IS:

HRS GRADE

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- · 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. Biochemistry courses count towards those 40 hours in this Area of Emphasis.
- · CJ elective can be met by taking one of the following courses: CJ 314, 322, 323, 406 or 422.
- · AoE Elective students will select from the following: BSC 304, 404, 417, 422, 423, 424, 426, 428, 435, 436, 443, 448, 450, 451, 454, 456, 463
- BSC Technical Elective: Select a minimum of 3 credits of 300 or 400-level BSC or closely related courses for technical electives.

# FOUR YEAR PLAN COLLEGE OF SCIENCE 2024-2025 **BIOLOGICAL SCIENCES** FORENSIC 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.

		FALL SEMESTER					SPRING SEMESTER			
	CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRAD
	BSC 120/L	Principles of Biology I / Lab	• •	3/1		BSC 121/L	Principles of Biology II / Lab	٠	3/1	
	CHM 211	Principles of Chemistry I	•	3		CHM 212	Principles of Chemistry II	•	3	
Ξ	CHM 217	Principles of Chemistry Lab I	٠	2		CHM 218	Principles of Chemistry Lab II	•	2	
ONE	MTH 140 o	r Applied Calculus or Calculus/	• •	3-5		FYS 100	First Year Sem Crit Thinking	•	3	
	MTH 229	Analytic Geom I (CT)					Core II Fine Arts	•	3	
YEAR	ENG 101	Beginning Composition	•	3						
$\succ$	UNI 100	Freshman First Class		1						
	TOTAL HO	URS		16-18	:	TOTAL HO	OURS		15	
Su	ummer Term (opt	tional):								
	_	FALL SEMESTER		-		_	SPRING SEMESTER	-	-	-
	CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRA
	BSC 3	BSC Core Course	•	3/4		BSC 3	BSC Core Course	•	3/4	
	CHM 355	Organic Chemistry I	•	3		CHM 356	Organic Chemistry II	•	3	
0	ENG 201	Advanced Composition	•	3		CHM 361	Organic Chemistry II Lab	٠	3	
DWD		Core II Social Science (PSY 201 or SOC	. •	3		FSC 224	Intro to Forensic Science	•	4	
		200 recommended)					Core I Critical Thinking	•	3	
YEAR		Free Elective (MTH 122		3			5			
YF		recommended for PHY pre-req)								
	TOTAL HO	URS		15-16		TOTAL HO	NURS		16-17	,
Si	ummer Term (opt									
	60.05	FALL SEMESTER		1100	CRADE	60.05	SPRING SEMESTER		LIDE	604
					GRADE	CODE	COURSE NAME			GRA
	BSC 3	BSC Core Course	•	3/4		BSC 3	BSC Core Course	•	3/4	
Ħ	PHY 201	College Physics I	•	3		PHY 203	College Physics II	•	3	
RB	PHY 202	College Physics I Lab	•	1		PHY 204	College Physics II Lab	•	1	
THREE		AoE Elective (BSC 417 Recommended)	•	3/4			Core II Humanities	•	3	
AR 1			•	2		CJ 200 or	Intro to Criminal Justice or Intro to	•	3	
	CHM 365	Indtroductory Biochemistry	•	3		211	Law Enforcement			
YE		Fund Speech-Communication		3						
	TOTAL HO			16-18		TOTAL HO	DURS		13-14	ŀ
	ummer Term (opt	tional):								
Si							SPRING SEMESTER			
Si		FALL SEMESTER							HRS	GRA
S	CODE	COURSE NAME			GRADE	CODE	COURSE NAME			
S	CODE	COURSE NAME AoE Elective	•	<b>HRS</b> 3/4	GRADE	CODE BSC 491	Capstone	• •	2	
ľ	CODE	COURSE NAME	•		GRADE		Capstone Writing Intensive	• •		
UR	CODE	COURSE NAME AoE Elective	•	3/4	GRADE		Capstone		2	
UR	CODE	COURSE NAME AoE Elective AoE Elective	•	3/4 3/4	GRADE		Capstone Writing Intensive		2 3	
FOUR	CODE	COURSE NAME AoE Elective AoE Elective Core I Critical Thinking	• • • • • •	3/4 3/4 3	GRADE	BSC 491	Capstone Writing Intensive AoE Elective		2 3 3/4	
FOUR	CODE	COURSE NAME AoE Elective AoE Elective Core I Critical Thinking Multicultural or International	•	3/4 3/4 3 3	GRADE	BSC 491	Capstone Writing Intensive AoE Elective CJ Elective		2 3 3/4 3	
UR	CODE    	COURSE NAME AoE Elective AoE Elective Core I Critical Thinking Multicultural or International Writing Intensive	•	3/4 3/4 3 3		BSC 491	Capstone Writing Intensive AoE Elective CJ Elective BSC Technical Elective		2 3 3/4 3	

# 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 SCIENCES - FORENSIC BIOLOGY - 2024-2025 **YEAR THREE YEAR ONE**

Talk with your professors to enhance

your study skills and build your

critical thinking abilities.

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Take a pulse check. Know what

you need to do every year to keep

your grants, scholarships, or federal

financial aid.



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 studving 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.



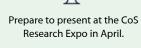
Want to continue your education and increase your opportunities? Talk to a faculty member about whether graduate school fits your career goals.

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# **YEAR FOUR**



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



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



Develop relationships with professors

who can serve as future references by

attending their office hours.

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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

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 TWO** 

Stav 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.



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.

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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.

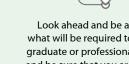


Have you considered adding a minor? Think about personal areas of interest you'd like to explore or how you might enhance your major with a related skill set.



school. Discuss undergraduate research opportunities with faculty in your major right now.

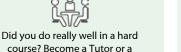




what will be required to apply to graduate or professional schools, and be sure that you are on track.

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

R



course? Become a Tutor or a Supplemental Instructor.

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Look ahead and be aware of

Strenat enhance v Present what you've le academic conference off campus.



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

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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.

# 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



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