CURRICULUM PLAN COLLEGE OF SCIENCE 2024-2025

MY ADVISOR'S NAME IS: _____

BIOLOGICAL SCIENCES
CELL, MOLECULAR AND MEDICAL

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	

Additional University Requirements

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

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	

MAJOR-SPECIFIC

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

CODE	COURSE NAME	HRS	GRADE
BSC 121/L	Principles of Biology II / Lab	3/1	
CHM 211	Principles of Chemistry I	3	
CHM 217	Principles of Chemistry I Lab	2	
CHM 212	Principles of Chemistry II	3	
CHM 218	Principles of Chemistry II Lab	2	
PHY 201	College Physics I	3	
PHY 202	College Physics I Lab	1	

AREA OF EMPHASIS-SPECIFIC

Students who wish to add an area of emphasis in Cell, Molecular and Medical Biology must take the following courses:

CODE	COURSE NAME	HRS	GRADE
CHM 355	Organic Chemistry I	3	
CHM 356	Organic Chemistry II	3	
CHM 361	Organic Chemistry II Lab	3	
PHY 203	College Physics II	3	
PHY 204	College Physics II Lab	1	
BSC 3__	BSC Core Course	3/4	
BSC 3__	BSC Core Course	3/4	
BSC 3__	BSC Core Course	3/4	
BSC 3__	BSC Core Course	3/4	
_____	AoE Elective	3/4	
_____	AoE Elective	3/4	
_____	AoE Elective	3/4	
_____	AoE Elective	3/4	
_____	AoE Elective	3/4	
_____	AoE Elective	3/4	
_____	BSC Technical Elective	3	
_____	BSC Technical Elective	3	
_____	BSC Technical Elective	3	
_____	Free Elective (MTH 122 recommended for PHY pre-req)	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 can be chosen from: BSC302, 322, 324, 332/332L, or 334/334L.
- AoE Electives can be chosen from: BSC 304, 340, 404, 417, 420, 422, 423, 424, 426, 428, 435, 436, 443, 448, 450, 451, 454, 456 or CHM 365
- BSC Technical Electives: Select three 300 or 400-level BSC or closely related courses for technical electives. The courses must be approved by the department chair.

● General Education Requirement ■ College Requirement ◆ Major 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.

FOUR YEAR PLAN COLLEGE OF SCIENCE 2024-2025

MY ADVISOR'S NAME IS: _____

BIOLOGICAL SCIENCES
CELL, MOLECULAR AND MEDICAL

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 Cell, Molecular and Medical Biology will be prepared for a wide range of careers in fields including biotechnology, cell biology, medicine and/or medical research.

YEAR ONE

FALL SEMESTER

CODE	COURSE NAME	HRS	GRADE
BSC 120/L	Principles of Biology I / Lab	3/1	
CHM 211	Principles of Chemistry I	3	
CHM 217	Principles of Chemistry Lab I	2	
MTH 140 or MTH 229	Applied Calculus or Calculus/ Analytic Geom I (CT)	3-5	
ENG 101	Beginning Composition	3	
UNI 100	Freshman First Class	1	
TOTAL HOURS		**16-18**	

SPRING SEMESTER

CODE	COURSE NAME	HRS	GRADE
BSC 121/L	Principles of Biology II / Lab	3/1	
CHM 212	Principles of Chemistry II	3	
CHM 218	Principles of Chemistry Lab II	2	
FYS 100	First Year Sem Crit Thinking	3	
_____	Core II Fine Arts	3	
TOTAL HOURS		**15**	

Summer Term (optional):

YEAR TWO

FALL SEMESTER

CODE	COURSE NAME	HRS	GRADE
BSC 3__	BSC Core Course	3/4	
CHM 355	Organic Chemistry I	3	
ENG 201	Advanced Composition	3	
_____	Core II Social Science (PSY 201 or SOC 200 recommended) (CT)	3	
_____	Free Elective (MTH 122 recommended for PHY pre-req)	3	
TOTAL HOURS		**15-16**	

SPRING SEMESTER

CODE	COURSE NAME	HRS	GRADE
BSC 3__	BSC Core Course	3/4	
CHM 356	Organic Chemistry II	3	
CHM 361	Organic Chemistry II Lab	3	
_____	AoE Elective (BSC 417 Recommeded)	3/4	
_____	Core I Critical Thinking	3	
TOTAL HOURS		**15-17**	

Summer Term (optional):

YEAR THREE

FALL SEMESTER

CODE	COURSE NAME	HRS	GRADE
BSC 3__	BSC Core Course	3/4	
PHY 201	College Physics I	3	
PHY 202	College Physics I Lab	1	
_____	Core I Critical Thinking	3	
_____	AoE Elective (CHM 365 Recommended)	3/4	
CMM 103	Fund Speech-Communication	3	
TOTAL HOURS		**16-18**	

SPRING SEMESTER

CODE	COURSE NAME	HRS	GRADE
BSC 3__	BSC Core Course	3/4	
PHY 203	College Physics II	3	
PHY 204	College Physics II Lab	1	
_____	Core II Humanities	3	
_____	AoE Elective	3/4	
TOTAL HOURS		**13-15**	

Summer Term (optional):

YEAR FOUR

FALL SEMESTER

CODE	COURSE NAME	HRS	GRADE
_____	AoE Elective	3/4	
_____	AoE Elective	3/4	
_____	BSC Technical Elective	3	
_____	Multicultural or International	3	
_____	Writing Intensive	3	
TOTAL HOURS		**15-17**	

SPRING SEMESTER

CODE	COURSE NAME	HRS	GRADE
BSC 491	Capstone	2	
_____	Writing Intensive	3	
_____	AoE Elective	3/4	
_____	BSC Technical Elective	3	
_____	BSC Technical Elective	3	
TOTAL HOURS		**14-15**	

Summer Term (optional):

● General Education Requirement ■ College Requirement ◆ Major 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.