

B. S. BIOLOGICAL SCIENCES 2022-2023

FRESHMAN YEAR

<u>First Semester</u>	<u>Second Semester</u>
BIOL 1010 Frontiers in Biol. I1(1,0)	BIOL 1110 Prin. of Biol. II ¹4(3,3)
BIOL 1100 Prin. of Biol. I ¹4(3,3)	CH 1020 General Chemistry4(3,3)
CH 1010 General Chemistry4(3,3)	ENGL 1030 Composition and Rhetoric.....3(3,1)
MATH 1060 Calculus of One Var. I4(4,0)	Mathematical Sciences Requirement ³ <u>3</u>
SC REACH Act Requirement ² <u>3</u>	14
16	

SOPHOMORE YEAR

CH 2230 Organic Chemistry ⁴3(3,0)	BCHM 3050 Essential Elements of Bioch ⁸3(3,0)
CH 2270 Organic Chemistry Lab ⁴1(0,3)	Arts and Humanities (Literature) Req. ⁶3
GEN 3000 Fundamental Genetics ⁵3(3,0)	Global Challenges Course Requirement ⁶3
Oral Communication Requirement ⁶3	Major Requirement ^{4,9}4
Organismal Diversity Requirement ⁷ <u>4</u>	Social Science Requirement ⁶ <u>3</u>
14	16

JUNIOR YEAR

BIOL 3350 Evolutionary Biology3(3,0)	PHYS 2080 General Physics II ¹³3(3,0)
BIOL 4610 Cell Biology.....3(3,0)	PHYS 2100 General Physics II Lab ¹³1(0,2)
PHYS 2070 General Physics I ¹⁰3(3,0)	Arts and Humanities (Non-Lit) Req. ⁶3
PHYS 2090 General Physics Lab I ¹⁰1(0,3)	Functional Biol. Requirement ¹⁴3
Advanced Lab Requirement ¹¹2	Major Requirement ⁹ <u>5</u>
Ecology Requirement ¹² <u>3</u>	15
15	

SENIOR YEAR

BIOL 4930 Senior Seminar or MICR 4930 Senior Seminar2(2,0)	Global Challenges Course Requirement ⁶3
Major Requirement ⁹6	Major Requirement ⁹6
Social Science Requirement ⁶3	Elective <u>6</u>
Elective <u>4</u>	15
15	

Total Semester Hours = 120

¹ BIOL 1100 and BIOL 1110 are strongly recommended; however, BIOL 1030/1050 may substitute for BIOL 1100 and BIOL 1040/1060 may substitute for BIOL 1110.

² See South Carolina REACH Act Requirements in the Academic Regulations section in the Undergraduate Catalog.

³ MATH 1080, STAT 2300, or other approved coursework. See advisor. Medical/dental schools have different mathematics requirements. Statistics will be useful in either graduate study or professional school.

⁴ CH 2010 and CH 2020 may be substituted. Most professional health sciences schools require two semesters of organic chemistry with laboratory, CH 2230/2270 and CH 2240/2280.

⁵ GEN 3020 may be substituted.

⁶ See General Education Requirements. The Medical Colleges Admissions Test (MCAT) includes questions on psychology and sociology.

⁷ At least one lecture and associated laboratory selected from BIOL 3010, BIOL 3020/BIOL 3060, BIOL 3030/BIOL 3070, BIOL 3040/BIOL 3080, BIOL 3200, BIOL 4060/BIOL 4070, BIOL 4250/BIOL 4260.

⁸ BCHM 3010 may be substituted.

⁹ Twenty-one credit hours from 3000-level or higher BIOL, ETOX, or MICR courses (except MICR 3000) or from CH 2240/CH 2280, ENR 4130, WFB 3130, WFB 4720, or WFB 4770. Selections must include at least three laboratory courses. Any combination of BIOL 3940, BIOL 4910, BIOL 4920, BIOL 4940, BIOL 4950, MICR 3940, MICR 4910, MICR 4920, MICR 4940 and MICR 4950 may not exceed eight credits.

¹⁰ PHYS 1220/1240 may be substituted.

¹¹ At least one course selected from BIOL 4020, BIOL 4030, BIOL 4090, BIOL 4110, BIOL 4240, BIOL 4280, BIOL 4330, BIOL 4440, BIOL 4450, BIOL 4470, BIOL 4500, BIOL 4570, BIOL 4600, BIOL 4620, BIOL 4710, BIOL 4760, or BIOL 4820.

¹² At least one course selected from BIOL 4100, BIOL 4410, BIOL 4420, BIOL 4430, BIOL 4460, BIOL 4480, BIOL 4700, or MICR 4030.

¹³ PHYS 2210/PHYS 2230 may be substituted.

¹⁴ At least one course selected from BIOL 4040, BIOL 4080, BIOL 4200, BIOL 4210, BIOL 4400, BIOL 4530, BIOL 4590, BIOL 4750, BIOL 4800, BIOL 4830, BIOL 4840, MICR 4140 or MICR 4170.

NOTE: A transfer course may not be used to satisfy the General Education Global Challenges Requirement. While a transfer course may fulfill other degree requirements, students must enroll in a Clemson course(s) on the Global Challenges list to fulfill the Global Challenges Requirement.

2022/2023 B.S. BIOLOGICAL SCIENCES CURRICULUM

BIOL Core Requirement: (29 cr.)	SEM/Yr	_Grade
BIOL 1010	1(1,0)	_____
BIOL 1100/1101	4(3,3) ¹	_____
BIOL 1110/1111	4(3,3) ¹	_____
BIOL 3350	3(3,0)	_____
BIOL 4610	3(3,0)	_____
BIOL 4930 OR MICR 4930	2(2,0)	_____
<i>Organismal Diversity Requirement (4 cr.)</i>		
BIOL 3010/3011, 3020/3060, 3030/3070, 3040/3080, 3200/3201, 4060/4070, OR 4250/4260	_____	_____
<i>Ecology (3 cr.)</i>		
BIOL 4100, 4410, 4420, 4430, 4460, 4480, 4700, MICR 4030, OR 4040	_____	_____
<i>Functional Biology Requirement (3 cr.)</i>		
BIOL 4040, 4080, 4200, 4210, 4400, 4530, 4590, 4750, 4800, 4830, 4840, MICR 4140, OR MICR 4170	_____	_____
<i>Advanced Lab Requirement (2 cr.)²</i>		
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Major Requirement: (21 cr.)³		
Laboratory Course req. _____	_____	_____
Laboratory Course req. _____	_____	_____
Laboratory Course req. _____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
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Required Science Courses (33 cr.)		
BCHM 3050	3(3,0)	_____
CH 1010/1011	4(3,3)	_____
CH 1020/1021	4(3,3)	_____
CH 2230, 2270 OR CH 2010, CH 2020	3(3,0) & 1(0,3) ⁴	_____
GEN 3000	3(3,0)	_____
MATH 1060	4(4,0)	_____
MATH 1080 OR STAT 2300	4(4,0) 3(3,0) ⁵	_____
PHYS 2070, 2090	3(3,0) & 1(0,2) ⁶	_____
PHYS 2080, 2100	3(3,0) & 1(0,2) ⁶	_____
Required Non-Science Courses (21 cr.)		
ENGL 1030/1031	3(3,1)	_____
Arts & Humanities – Literature	3(3,0) ⁷	_____
Arts & Humanities – Non-Literature	3(3,0) ⁷	_____
Oral Communication	3(3,0) ⁷	_____
SC REACH Act	3(3,0) ⁸	_____
Social Sciences	_____	_____
_____	3(3,0) ^{7,9}	_____
_____	3(3,0) ^{7,9}	_____

¹ BIOL 1100 and BIOL 1110 are strongly recommended; however, BIOL 1030/1050 may substitute for BIOL 1100 and BIOL 1040/1060 may substitute for BIOL 1110.

² One course selected from BIOL 4020, BIOL 4030, BIOL 4090, BIOL 4110, BIOL 4240, BIOL 4280, BIOL 4330, BIOL 4440, BIOL 4450, BIOL 4470, BIOL 4500, BIOL 4570, BIOL 4600, BIOL 4620, BIOL 4710, BIOL 4760, or BIOL 4820.

³ Twenty-one credit hours from 3000-level or higher BIOL, ETOX, or MICR courses (except MICR 3000) or from CH 2240/CH 2280, ENR 4130, WFB 3130, WFB 4720, or WFB 4770. Selections must include at least three laboratory courses. Selections must include at least three laboratory courses **not used to satisfy other requirements.**

BIOL 3010, 3060, 3070, 3080, 3150, 3160, 3200, 4000, 4020, 4030, 4070, 4130, 4150, 4260, 4440, 4450, 4470, 4540, 4570, 4640, 4690, 4710, 4740, 4760, 4820, 4890, 4900, 4970

CH 2280

MICR 3050, 4070, 4130, 4500, 4510

WFB 4720, 4770

Any combination of BIOL 3940, BIOL 4910, BIOL 4920, BIOL 4940, BIOL 4950, MICR 3940, MICR 4910, MICR 4920, MICR 4940 and MICR 4950 may not exceed eight credits.

⁴ Most medical, dental, and veterinary medicine schools require two semesters of organic chemistry with laboratory, CH 2230/2270 and 2240/2280, rather than a one semester survey of organic chemistry (CH 2010/2020)

⁵ Statistics will be useful in both graduate school and professional school.

⁶ Students may choose to take physics with calculus, PHYS 1220, 1240 (MATH 1060 pre-req.) & PHYS 2210, 2230 (MATH 1080 pre-req).

⁷ See General Education Requirements.

⁸ HIST 1010, POSC 1010, or POSC 1030

⁹ The Medical Colleges Admissions Test (MCAT) questions on psychology and sociology.

Other Courses SEM/Yr Grade

CU 1000 _____	_____	_____
GCC _____	_____	_____
GCC _____	_____	_____

Electives (10 cr.)

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____