

Biology

Bachelor of Science

Biological Sciences

Pre-Medical Concentration Tier 3 (Math ACT ≥25, Math SAT ≥600) 2019 Undergraduate Bulletin

General College Curriculum (43 SH)			Hours
Campbell Freshman Seminar	CUFS	100	1
Introduction to Christianity	CHRS	125	3
English Fundamentals ¹	ENGL	100	3
Academic Writing ¹	ENGL	101	3
Academic Writing and Literature	ENGL	102	3
Literature Elective	ENGL	2	3
Fine Arts (Art, Music, Theater) ²		131	3
Western Civilization I OR II	HIST	111/112	3
Foreign Language I ³		101	3
Foreign Language II ³		102	3
Foreign Language III ³		201	3
Humanities/Fine Arts Elective4			3
Social/Behavioral Sciences Elective ⁵			3
Humanities OR Social Science Elective ⁶			3
Lifetime Wellness	PE	185	2
Connections ⁷	CUC	100	0.5
Connections ⁷	CUC	200	0.5

Major Requirements (39 SH)			Hours	
Basic Biology	BIOL	111	4	
Cellular & Molecular Biology	BIOL	201	4	
Botany	BIOL	202	4	
Zoology	BIOL	203	4	
Intro to Research & Scientific Lit.	BIOL	205	3	
Ecology	BIOL	327	4	
Genetics	BIOL	342	4	
Seminar	BIOL	451	1	
Biochemistry ⁸	BIOL	430	4	
Animal Physiology ⁸	BIOL	437		
Plant Physiology ⁸	BIOL	438		
Biology Elective9	BIOL		4	
Biology Elective ⁹	BIOL		3	
Ancillary Requirements (31 SH)				
Analytical Geometry & Calculus I	MATH	122	4	
Elementary Statistics	MATH	160	3	
General Chemistry I	CHEM	111	4	
General Chemistry II	CHEM	113	4	
Organic Chemistry I	CHEM	227	4	

Open Electives ¹⁰	(minimum 11 SH)			Hours
Trigonometry (PRE	REQ FOR PHYS 221)	MATH	112	3

CHEM

PHYS

PHYS

228

221

Organic Chemistry II

General Physics

General Physics II

Total Credit Hours Earned (Minimum Hours Required= 124)

Students enrolled in this concentration must earn a grade of "C" or higher in all science courses (biology, chemistry, physics)

¹ English: ENGL 100 and ENGL 101 may be waived for students that meet certain criteria

² Fine Arts: "Appreciation," "Introduction," or "Survey" course in art, music, or theatre; (ART 131, MUSC 131, or THEA 131)

³ Foreign Language: Students are required to pass a 201 level Foreign Language Course. 3-9 hours, depending on placement.

⁴ *GCC Humanities/Fine Arts Electives:* Choose one course from CHRS (202, 212, 224, 236, 251, 322 or higher), PHIL 121, ENGL (201, 202, 203, 204, 205, or 206), HIST (1xx, 2xx, 3xx, or 4xx), FLAN (221, 222, 241, 242), MUSC 331, HONOR (207 or 305)

⁵ GCC Social/Behavioral Sciences Electives: Choose one course from CRIM, ECON, GEOG, POLS, PSYC, SOCI, COMM 240, or HONOR 307

⁶ GCC Elective: Choose one additional course from either the Humanities/Fine Arts or Social/Behavioral Sciences Elective Lists. (See ⁴ & ⁵)

⁷ Connections: Students entering with less than 30 semester hours must complete both CUC 100 and CUC 200. Students entering with 30 or more semester hours must complete either CUC 100 or CUC 200

⁸ Students are required to take one of the following: BIOL 430, BIOL 437, or BIOL 438

⁹ *Biology Electives:* Take a minimum of 7 hours of BIOL electives; some restrictions apply: maximum of 8 hours of Human A&P (BIOL 221, 285, 286), maximum of 4 hours of Microbiology (BIOL 275, 334). **See reverse for suggested electives**.

¹⁰ Open Electives: Any Campbell course, including BIOL courses or courses from the GCC elective lists beyond the GCC requirements to reach a minimum of 124 total hours. Students are encouraged to complete more than the minimum number of hours in biology. See reverse for suggested electives.

Medical School:

Students should check the specific requirements for each medical school program. Some schools may have additional requirements. The MCAT is required for admission to medical school.

Suggested Electives:

The following courses are required for most medical programs or content is covered on the MCAT:

- BIOL 430 Biochemistry
- BIOL 334 Microbiology & Immunology
- BIOL 221 Essentials of Human Anatomy & Physiology
- PSYC 222 General Psychology (MCAT content)
- SOCI 225 Principles of Sociology (MCAT content)

The following courses are **recommended** for most medical programs:

- BIOL 310 Advanced Human Physiology
- BIOL 335 Immunology
- BIOL 336 Medical Microbiology

A student will significantly strengthen their application to medical school with the addition of work experience in a medical setting. This work may include volunteer, CAN, EMT, medical missions work, etc. Any work which includes patient contact is preferred.

SAMPLE CURRICULUM OUTLINE*

SIMILE COM	ucc	LUI					
FRESHMAN YEAR							
SEMESTER 1			HRS	SEMESTER 2			<u>HRS</u>
Basic Biology	BIOL	111	4.0	Botany	BIOL	202	4.0
English Fundamentals ¹	ENGL	100	3.0	Academic Writing	ENGL	101	3.0
Trigonometry	MATH	112	3.0	General Chemistry II	CHEM	113	4.0
General Chemistry I	CHEM	111	4.0	Foreign Language		102	3.0
Freshman Seminar	CUFS	100	1.0	Connections	CUC	100	0.5
SOPHOMORE YEAR							
SEMESTER 1			HRS	SEMESTER 2			HRS
Intro to Research & Sci. Lit	BIOL	205	3.0	Cellular & Molecular Biology	BIOL	201	4.0
Organic Chemistry I	CHEM	227	4.0	Organic Chemistry II	CHEM	228	4.0
General Physics I	PHYS	221	4.0	General Physics II	PHYS	221	4.0
Academic Writing & Lit	ENGL	102	3.0	Elementary Statistics	MATH	160	3.0
Foreign Language		201	3.0	•			
Connections	CUC	200	0.5				
JUNIOR YEAR							
SEMESTER 1			HRS	SEMESTER 2			HRS
Microbiology & Immunology ⁹	BIOL	334	4.0	Genetics	BIOL	342	4.0
Biochemistry ⁸	BIOL	430	4.0	Analytical Geometry & Calc I	MATH	122	4.0
Zoology	BIOL	203	4.0	Literature Elective	ENGL	2	3.0
General Psychology ⁵	PSYC	222	3.0	Principles of Sociology ⁶	SOCI	225	3.0
SENIOR YEAR							
SEMESTER 1			HRS	SEMESTER 2			HRS
Essentials of Human A & P9	BIOL	221	4.0	Ecology	BIOL	327	4.0
Seminar	BIOL	451	1.0	Fine Arts ²		131	3.0
Western Civ. I or II	HIST 1	111/112	3.0	Open Elective ¹⁰			4.0
Intro to Christianity	CHRS	125	3.0	GCC Humanities Elective			3.0
Open Elective ¹⁰		-	3.0	Lifetime Wellness	PE	185	2.0
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^{*}actual degree plan may differ, students should meet with their academic advisor to create a plan specific and unique to their interests/background