0

# **BIOLOGY, B.S. - PRE-MEDICAL PROFESSIONS OPTION**

## Major in Biology, BS

**Total Hours** 

Code	Title	Hours
CORE COURSES		26
Foundations of	f Biology - See Appendix 1	
BIOL 211	Concepts of Zoology	
BIOL 221	Concepts of Botany	
BIOL 343	Principles of Ecology & Evolution	
BIOL 362	Cell and Developmental Biology	
BIOL 364	Foundations of Genetics & Molecular Biology	
BIOL 472	Seminar In Biology	
Option in Pre-Medical Professions - See separate block		

## **Appendix 1. Foundations of Biology**

Code	Title	Hours
Foundations of Biology C- or Higher		4
BIOL 101	Foundations of Biology	

### **Concentration in Pre-Medical Professions**

PRE-PROFESSIONAL COURSES - Choose 1 of the following options 1-2:  Option 1. Human Anatomy Physiology I and II  BIOL 254 Human Anatomy & Physiology I  BIOL 255 Human Anatomy & Physiology II  Option 2. Comp Vert Anatomy and Animal Physiology  BIOL 318 Comparative Vertbrate Anatomy  BIOL 435 Animal Physiology  BIOLOGY ELECTIVES (9-12 to bring total BIOL credits to 43 minimum) 9 - Choose 9 hours from:  BIOL 300 Co-Op Ed Experience in Biol  BIOL 352 Nutritional Science  BIOL 363 Medical Microbiology  BIOL 415 Mammalogy  BIOL 417 Parasitology  BIOL 437 Endocrinology  BIOL 438 Neurobiology  BIOL 438 Neurobiology  BIOL 454 Immunology  BIOL 462 Molecular Biology  BIOL 463 Virology  BIOL 463 Virology  BIOL 465 Developmental Biology  BIOL 467 Human Genetics:Analysis/Apps  BIOL 498 Independent Study  BIOL 499 Departmental Honors	Code	Title	Hours
BIOL 254 Human Anatomy & Physiology I BIOL 255 Human Anatomy & Physiology II Option 2. Comp Vert Anatomy and Animal Physiology BIOL 318 Comparative Vertbrate Anatomy BIOL 435 Animal Physiology BIOLOGY ELECTIVES (9-12 to bring total BIOL credits to 43 minimum) 9 - Choose 9 hours from: BIOL 300 Co-Op Ed Experience in Biol BIOL 352 Nutritional Science BIOL 363 Medical Microbiology BIOL 415 Mammalogy BIOL 417 Parasitology BIOL 437 Endocrinology BIOL 438 Neurobiology BIOL 454 Immunology BIOL 454 Immunology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study		NAL COURSES - Choose 1 of the following options	7-8
BIOL 255 Human Anatomy & Physiology II Option 2. Comp Vert Anatomy and Animal Physiology BIOL 318 Comparative Vertbrate Anatomy BIOL 435 Animal Physiology BIOLOGY ELECTIVES (9-12 to bring total BIOL credits to 43 minimum) 9 - Choose 9 hours from: BIOL 300 Co-Op Ed Experience in Biol BIOL 352 Nutritional Science BIOL 363 Medical Microbiology BIOL 415 Mammalogy BIOL 417 Parasitology BIOL 437 Endocrinology BIOL 438 Neurobiology BIOL 454 Immunology BIOL 361 Microbiology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 489 Honors Course BIOL 498 Independent Study	Option 1. Hum	an Anatomy Physiology I and II	
Option 2. Comp Vert Anatomy and Animal Physiology BIOL 318 Comparative Vertbrate Anatomy BIOL 435 Animal Physiology BIOLOGY ELECTIVES (9-12 to bring total BIOL credits to 43 minimum) 9 - Choose 9 hours from: BIOL 300 Co-Op Ed Experience in Biol BIOL 352 Nutritional Science BIOL 363 Medical Microbiology BIOL 415 Mammalogy BIOL 417 Parasitology BIOL 437 Endocrinology BIOL 438 Neurobiology BIOL 454 Immunology BIOL 361 Microbiology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 254	Human Anatomy & Physiology I	
BIOL 318 Comparative Vertbrate Anatomy BIOL 435 Animal Physiology  BIOLOGY ELECTIVES (9-12 to bring total BIOL credits to 43 minimum) 9 - Choose 9 hours from: BIOL 300 Co-Op Ed Experience in Biol BIOL 352 Nutritional Science BIOL 363 Medical Microbiology BIOL 415 Mammalogy BIOL 417 Parasitology BIOL 437 Endocrinology BIOL 438 Neurobiology BIOL 438 Neurobiology BIOL 454 Immunology BIOL 361 Microbiology BIOL 361 Microbiology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 255	Human Anatomy & Physiology II	
BIOL 435 Animal Physiology BIOLOGY ELECTIVES (9-12 to bring total BIOL credits to 43 minimum) 9 - Choose 9 hours from: BIOL 300 Co-Op Ed Experience in Biol BIOL 352 Nutritional Science BIOL 363 Medical Microbiology BIOL 415 Mammalogy BIOL 417 Parasitology BIOL 437 Endocrinology BIOL 438 Neurobiology BIOL 454 Immunology BIOL 361 Microbiology BIOL 361 Microbiology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	Option 2. Comp	p Vert Anatomy and Animal Physiology	
BIOLOGY ELECTIVES (9-12 to bring total BIOL credits to 43 minimum)  - Choose 9 hours from:  BIOL 300 Co-Op Ed Experience in Biol  BIOL 352 Nutritional Science  BIOL 363 Medical Microbiology  BIOL 415 Mammalogy  BIOL 417 Parasitology  BIOL 437 Endocrinology  BIOL 438 Neurobiology  BIOL 454 Immunology  BIOL 361 Microbiology  BIOL 462 Molecular Biology  BIOL 463 Virology  BIOL 465 Developmental Biology  BIOL 467 Human Genetics:Analysis/Apps  BIOL 489 Honors Course  BIOL 498 Independent Study	BIOL 318	Comparative Vertbrate Anatomy	
- Choose 9 hours from:  BIOL 300 Co-Op Ed Experience in Biol  BIOL 352 Nutritional Science  BIOL 363 Medical Microbiology  BIOL 415 Mammalogy  BIOL 417 Parasitology  BIOL 437 Endocrinology  BIOL 438 Neurobiology  BIOL 454 Immunology  BIOL 361 Microbiology  BIOL 462 Molecular Biology  BIOL 463 Virology  BIOL 465 Developmental Biology  BIOL 467 Human Genetics:Analysis/Apps  BIOL 489 Honors Course  BIOL 498 Independent Study	BIOL 435	Animal Physiology	
BIOL 352 Nutritional Science BIOL 363 Medical Microbiology BIOL 415 Mammalogy BIOL 417 Parasitology BIOL 437 Endocrinology BIOL 438 Neurobiology BIOL 454 Immunology BIOL 361 Microbiology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study			m) 9
BIOL 363 Medical Microbiology  BIOL 415 Mammalogy  BIOL 417 Parasitology  BIOL 437 Endocrinology  BIOL 438 Neurobiology  BIOL 454 Immunology  BIOL 361 Microbiology  BIOL 462 Molecular Biology  BIOL 463 Virology  BIOL 465 Developmental Biology  BIOL 467 Human Genetics:Analysis/Apps  BIOL 489 Honors Course  BIOL 498 Independent Study	BIOL 300	Co-Op Ed Experience in Biol	
BIOL 415 Mammalogy BIOL 417 Parasitology BIOL 437 Endocrinology BIOL 438 Neurobiology BIOL 454 Immunology BIOL 361 Microbiology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 352	Nutritional Science	
BIOL 417 Parasitology  BIOL 437 Endocrinology  BIOL 438 Neurobiology  BIOL 454 Immunology  BIOL 361 Microbiology  BIOL 462 Molecular Biology  BIOL 463 Virology  BIOL 465 Developmental Biology  BIOL 467 Human Genetics:Analysis/Apps  BIOL 489 Honors Course  BIOL 498 Independent Study	BIOL 363	Medical Microbiology	
BIOL 437 Endocrinology BIOL 438 Neurobiology BIOL 454 Immunology BIOL 361 Microbiology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 415	Mammalogy	
BIOL 438 Neurobiology  BIOL 454 Immunology  BIOL 361 Microbiology  BIOL 462 Molecular Biology  BIOL 463 Virology  BIOL 465 Developmental Biology  BIOL 467 Human Genetics:Analysis/Apps  BIOL 489 Honors Course  BIOL 498 Independent Study	BIOL 417	Parasitology	
BIOL 454 Immunology BIOL 361 Microbiology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 437	Endocrinology	
BIOL 361 Microbiology BIOL 462 Molecular Biology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 438	Neurobiology	
BIOL 462 Molecular Biology BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 454	Immunology	
BIOL 463 Virology BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 361	Microbiology	
BIOL 465 Developmental Biology BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 462	Molecular Biology	
BIOL 467 Human Genetics:Analysis/Apps BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 463	Virology	
BIOL 489 Honors Course BIOL 498 Independent Study	BIOL 465	Developmental Biology	
BIOL 498 Independent Study	BIOL 467	Human Genetics:Analysis/Apps	
- to	BIOL 489	Honors Course	
BIOL 499 Departmental Honors	BIOL 498	Independent Study	
	BIOL 499	Departmental Honors	

Students interested in Veterinary School are encouraged to take BIOL 318 435; Students interested in Dental School are encouraged to take BIOL 461, 454, 465; Students interested in Pharmacy programs should take BIOL 461 454; Students interested in Physician Assistant programs should take BIOL 461 454 and an additional 1-3 credits of microbiology courses or independent study.

Total Hours	16-17

## Req Related for Biology, BS

Code	Title	Hours

For Biology Majors the G2 block of the Liberal Arts Core will be fulfilled by your required related coursework.

#### **CHEMISTRY**

26

A C- or higher in CHEM 111 and 112 is a pre-requisite for CHEM 235. A C- or higher in CHEM 231 is a pre-requisite for CHEM 232. Students interested in graduate or professional school should take CHEM 231

	and 232.	·	
	CHEM 111	Introductory Chemistry 1	4
	CHEM 112	Introductory Chemistry 2	4
	Organic Chemistr	y I (C- minimum) and II	8
	CHEM 231	Organic Chemistry 1	
	CHEM 232	Organic Chemistry 2	
(	CHEM 326	Biochemistry 1	4
	MATHEMATICS F	OR PRE-MEDICAL PROFESSIONS	
	MATH 161	Calculus 1	4
	Biometry or Surve	ey of Statistics - Choose 1 of the following:	3
	BIOL 375	Biometry	
	MATH 235	Survey of Statistics	
PHYSICS			
	undefined - Choos	se 1 of the following options 1-2:	8-10
	Option 1. Phys	ics with Algebra	
	PHYS 131	Physics 1 with Algebra	
	PHYS 132	Physics 2 with Algebra	
	Option 2. Phys	ics with Calculus	
	PHYS 231	Physics 1 with Calculus	
	PHYS 232	Physics 2 with Calculus	
	RECOMMENDED	GENED FOR MCAT	
PSYC 100, 227/228, PHIL 100 and SOCY 101 are recommended G Ed courses for students planning to take the MCAT			

PSYC 100, 227, 228 (G3), PHIL 100 (G1), and SOCY 101 (G3)

**Total Hours**