

BIOMEDICAL SCIENCES PRE-PROFESSIONAL OPTION, B.S.

Course	Title	Semester Credit Hours
Freshman Year		
Semester 1		
BIOL 1306 & BIOL 1106	General Biology I and General Biology Laboratory I	4
CHEM 1311 & CHEM 1111	Gen Inorganic Chemistry I and Gen Inorganic Chem Lab I	4
ENGL 1301	Rhetoric and Composition	3
MATH 2413	Calculus I	4
UNIV 1201	Learning in Global Context	2
Semester Credit Hours		17
Semester 2		
BIOL 1307 & BIOL 1107	General Biology II and General Biology Laboratory II	4
CHEM 1312 & CHEM 1112	Gen Inorganic Chemistry II and Gen Inorganic Chem Lab II	4
ENGL 1302	Rhetoric and Composition	3
Creative arts (https://catalog.tamuk.edu/undergraduate/general-requirements-graduation-baccalaureate-degree/#creative)		3
Semester Credit Hours		14
Sophomore Year		
Semester 1		
BIOL 2421	Elementary Microbiology	4
HIST 1301	American History to 1877	3
PHYS 1301 & PHYS 1101	College Physics I and Coll Physics I Laboratory	4
POLS 2301	Government and Politics of US	3
Communications (https://catalog.tamuk.edu/undergraduate/general-requirements-graduation-baccalaureate-degree/#communication)		3
Semester Credit Hours		17
Semester 2		
HIST 1302	American History since 1877	3
PHYS 1302 & PHYS 1102	College Physics II and College Physics II Lab	4
POLS 2302	Government and Politics of TX	3
Lang/Phil/Culture (https://catalog.tamuk.edu/undergraduate/general-requirements-graduation-baccalaureate-degree/#language)		3
Social/Behavioral (https://catalog.tamuk.edu/undergraduate/general-requirements-graduation-baccalaureate-degree/#social)		3
Semester Credit Hours		16
Junior Year		
Semester 1		
BIOL 3402	Genetics	4
BIOL 3408	Animal Physiology	4
CHEM 3323 & CHEM 3123	Organic Chemistry I and Organic Chemistry Lab I	4
Minor or elective		3
Semester Credit Hours		15
Semester 2		
BIOL 4401	Molecular Biology	4
CHEM 3325 & CHEM 3125	Organic Chemistry II and Organic Chemistry Lab II	4

STAT 4301	Biostatistics	3
Minor or elective		3
Semester Credit Hours		14
Senior Year		
Semester 1		
BIOL 4426	Cellular Physiology	4
BIOL 4102	Seminar (WI)	1
BIOL, adv. ¹		3
Electives, adv.		4
Minor, adv. ²		3
Semester Credit Hours		15
Semester 2		
BIOL 4335	Molecular Genetics	3
BIOL, adv. ¹		3
Electives, adv.		3
Minor, adv. ²		3
Semester Credit Hours		12
Total Credit Hours Required:		120

¹ Students pursuing the pre-professional option (medicine, veterinary medicine, dentistry, pharmacy, physician's assistant, optometry, physical therapy and occupational therapy) may choose from approved biology electives that are biomedically relevant courses, below:

² Student pursuing the pre-professional option may choose from any approved minor electives in any suitable field.

Approved Biomedical Sciences Electives

Code	Title	Semester Credit Hours
BIOL 2401	Human Anatomy and Physiol	4
BIOL 2402	Human Anat and Physiology II	4
BIOL 3112		1
BIOL 3301	Evolutionary Theory	3
BIOL 3407	Ecology	4
BIOL 4304	Research Projects in Biol	3
BIOL 4332	Pathophysiology	3
BIOL 4334	Molecular Neurobiology	3
BIOL 4355	Topics in Biology (Approved topics are: Epigenetics, Immunology, Genetics of Human Disease, Systems Neurobiology, Ecology and Human Disease or Understanding Human Physiology)	3
BIOL 4402	Vertebrate Embryology	4
BIOL 4406	Bacteriology	4
BIOL 4408	Immunology	4
BIOL 4410	Topics in Biology (Approved topics are: Forensic Science, Advanced Forensic Science, Ecology of Human Disease, Functional Neuroanatomy or Human Ecology and Health)	4
BIOL 4430	Parasitology	4
BIOL 4433	Histology	4
Total Semester Credit Hours		52

Organismal Biology Courses not Suitable for Biomedical Electives

Code	Title	Semester Credit Hours
BIOL 3375		3
BIOL 3401	Invertebrate Zoology	4
BIOL 3403	Plant Taxonomy	4

BIOL 3405	Vertebrate Zoology	4
BIOL 3409	Field Biology I	4
BIOL 4413	Nonflowering Plants	4
BIOL 4425	Ornithology	4
BIOL 4427	Herpetology	4
BIOL 4429	Mammalogy	4
BIOL 4431	Ichthyology	4
BIOL 4355	Topics in Biology (Special Topics: Tropical Ecology, Tropical Bid. Field Tech.)	3
BIOL 4410	Topics in Biology (Special Topics: Marine Ecology, Marine Biology)	4
Total Semester Credit Hours		46

New courses will be reviewed and approved by the department Biomedical Curriculum Committee.