

BIOMEDICAL SCIENCES - BS

Biomedical sciences are the interventional applied life sciences that connect clinical, service and research experiences to improve human, animal and environmental health.

Program Requirements

First Year

		Semester Credit Hours
Fall		
BIMS 101	Introduction to Biomedical Sciences	1
BIOL 111	Introductory Biology I ¹	4
CHEM 119	Fundamentals of Chemistry I ¹	4
Mathematics (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics) ^{1,2}		3
Social and behavioral sciences (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences)		3
Semester Credit Hours		15

Spring		
BIOL 112	Introductory Biology II ¹	4
CHEM 120	Fundamentals of Chemistry II ¹	4
Select one of the following: ¹		3
ENGL 103	Introduction to Rhetoric and Composition	
ENGL 104	Composition and Rhetoric	
ENGL 203	Writing About Literature	
ENGL 210	Technical and Professional Writing	
Mathematics (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics) ^{1,2}		3
Semester Credit Hours		14

Second Year

Fall		
BIMS 250	Professionalism, Skill Development, Career Exploration, and Ethical Conduct in BIMS	1
CHEM 257	Organic Chemistry I - Structure and Function ¹	4
PHYS 201	College Physics ¹	4
Community health/Environmental health ³		2
Creative arts (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts)		3
Semester Credit Hours		14

Spring		
CHEM 258	Organic Chemistry II - Reactivity and Applications ¹	4
PHYS 202	College Physics ¹	4
American history (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) ⁴		3
Community health/Environmental health ³		2

Language, philosophy and culture (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture)	3
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Semester Credit Hours 16

Third Year

Fall		
BICH 409 or BICH 410	Principles of Biochemistry or Comprehensive Biochemistry I	3
BIMS 320/ GENE 320	Biomedical Genetics	3
POLS 206	American National Government	3
Anatomy and physiology ⁵		4
General electives ⁶		3
Semester Credit Hours		16

Spring

POLS 207	State and Local Government	3
VTPB 409	Introduction to Immunology	3
Select one of the following:		3
BIMS 303	Research Methodologies and Experimental Design in Biomedical Sciences	
BIMS 491	Research	
VIBS 491	Research	
VLCS 491	Research	
VTPB 491	Research	
VTPP 491	Research	
VSCS 491	Research	
Anatomy and physiology ⁵		4
Communication (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#communication)		3
Semester Credit Hours		16

Fourth Year

Fall		
STAT 302 or STAT 312	Statistical Methods ⁷ or Statistics for Biology	3
American history (https://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) ⁴		3
Anatomy and physiology ⁵		3
Directed electives ⁸		6
Semester Credit Hours		15

Spring		
BIMS 499	Biomedical Sciences Capstone Experience	1
VTPB 425	Biomedical Microbiology	3
Directed electives ⁸		10

Semester Credit Hours 14

Total Semester Credit Hours 120

¹ Common Body of Knowledge Courses (CBK) must be completed with a grade of C or better. All CBK courses must be complete prior to advancing to the third and fourth year upper-division requirements.

² To fulfill the 6-8 hours of core mathematics, students must (i) select one of the following from MATH 142, MATH 147, MATH 151, MATH 171; and (ii) select one of the following from MATH 140, MATH 148, MATH 150, MATH 152, MATH 172, STAT 201.

³ A minimum of 4 total credits are required. Select from the following: BIMS 110, VIBS 111, VIBS 210, VIBS 222, VIBS 413, VTPB 221, VTPP 330.

⁴ HIST 105 and HIST 106 are recommended, however students may choose from other American History core courses.

⁵ To fulfill the Anatomy and Physiology Requirement, students must complete one of the following sequences: (i) BIOL 319, BIOL 320, and VTPP 413, or (ii) VIBS 446 or VIBS 402/BIMS 402, VTPP 423, and VTPP 427. Consult an advisor for permissible course sequencing.

⁶ Select any course 100-499 except MATH 102-104 (<https://catalog.tamu.edu/undergraduate/course-descriptions/math/>); only 1 credit KINE 199 may be used.

⁷ Students who complete STAT 201 in Mathematics core must take STAT 312.

⁸ A list of approved courses that fulfill the directed elective hours is available below and on the BIMS Program website. Please consult a BIMS advisor for specific questions.

ANSC 107, ANSC 108, ANSC 210, ANSC 303/NUTR 303, ANSC 318, ANSC 320, ANSC 326/FSTC 326, ANSC 327/FSTC 327, BICH 412, BICH 414, BICH 431/GENE 431, BICH 432/GENE 432, BIMS 101, BIMS 110, BIMS 125, BIMS 201, BIMS 250, BIMS 289, BIMS 291, BIMS 303, BIMS 380, BIMS 405/GENE 405, BIMS 421/GENE 421, BIMS 481, BIMS 484, BIMS 485, BIMS 489, BIMS 491, BIMS 499, BIOL 401, BIOL 402, BIOL 403, COMM 370, ENTO 208, ENTO 209, ENTO 210, ENTO 423, ENTO 425, ENTO 427, ENTO 431/FIVS 431, ENTO 432/FIVS 432, KINE 433, MKTG 443/PHLT 426, NUTR 222, POSC 454, URPN 370, VIBS 111, VIBS 201/NRSC 201, VIBS 204, VIBS 210, VIBS 211, VIBS 222, VIBS 243, VIBS 277, VIBS 285, VIBS 289, VIBS 305, VIBS 310, VIBS 311, VIBS 343, VIBS 401/NRSC 401, VIBS 407/NRSC 407, VIBS 408, VIBS 411, VIBS 413, VIBS 422, VIBS 424/VTPP 424, VIBS 426/ENTO 426, VIBS 443, VIBS 445/BIMS 445, VIBS 446, VIBS 447, VIBS 450, VIBS 456, VIBS 485, VIBS 489, VLCS 422, VLCS 485, VLCS 491, VSCS 485, VSCS 491, VTPB 212, VTPB 221, VTPB 285, VTPB 289, VTPB 301/RWFM 309, VTPB 303, VTPB 407, VTPB 408, VTPB 409, VTPB 410, VTPB 411, VTPB 415, VTPB 426, VTPB 438, VTPB 460, VTPB 485, VTPB 487, VTPB 489, VTPP 123, VTPP 207, VTPP 208, VTPP 223, VTPP 224, VTPP 234, VTPP 235, VTPP 281, VTPP 285, VTPP 289, VTPP 291, VTPP 330, VTPP 401/BMEN 400, VTPP 404, VTPP 420, VTPP 423, VTPP 425, VTPP 427, VTPP 438, VTPP 444, VTPP 452, VTPP 481, VTPP 485, VTPP 489, VTPP 491.

When satisfying the required 16 hours of BIMS directed electives and 3 hours of general electives: Any combination of variable credit 285, 291, 484, 485, and/or 491 courses may not exceed 9 credit hours.

BIMS 484 on its own or in combination with other variable credit courses may not exceed 6 total credit hours. Any combination of 289/489 courses may not exceed 9 credit hours. Restrictions will be enforced by the BIMS academic advising office.

A minimum of two courses designated to fulfill the university's writing and oral communication graduation requirement.

All students are required to complete 3 hours of International and Cultural Diversity credit (ICD) and 3 hours of Cultural Discourse (CD) credits. A course satisfying a core category, a college department requirement, or a free elective can be used to satisfy this requirement. Select in consultation with academic advisor.