

# BACHELOR OF SCIENCE (B.S.) MAJOR IN MICROBIOLOGY (PRE- MEDICAL CONCENTRATION)

**Minimum required: 120-125  
semester credit hours**

## General Requirements

- The general education core curriculum courses are listed in the degree plan below along with the statewide component code number. See the General Education Core Curriculum (<http://mycatalog.txstate.edu/undergraduate/general-education-core-curriculum>) section of this catalog for the Texas State requirements and options in the core curriculum, including Honors courses.
- Majors must complete a minimum of 36 advanced hours (3000 or 4000 level courses).
- Majors must select a minor from the approved list of Undergraduate Minors (<http://www.mycatalog.txstate.edu/undergraduate/minors>). The recommended minor is Chemistry or Biochemistry. Minor and electives should be chosen in consultation with the academic advisor.
- The minimum number of hours required for this degree program is 120. The number of elective hours a student will complete depends on the number of hours a student may need to achieve the required 120 total or 36 advanced hours.
- Nine semester credit hours must be writing intensive (WI).
- If two years of the same foreign language were taken in high school, then no additional language hours will be required. In the absence of such high school language, two semesters of the same modern language must be taken at the college level.
- For transfer students, 24 semester credit hours in biology, chemistry and physics (or their equivalents) may be transferred from a Texas public institution of higher education for the Biology Field of Study and be applied to the Bachelor of Science degree with a major in Microbiology at Texas State University. More information about the Field of Study (<http://mycatalog.txstate.edu/undergraduate/general-information/academic-policies/texas-legislative-requirements>) is available in the Academic Policies section of this catalog. The transferable Texas Common Course Number (TCCN) is listed below the Texas State University course number in the following course list.

Code	Title	Hours
BIO 1330	Functional Biology	3
TCCN: BIOL 1306		
BIO 1130	Functional Biology Laboratory	1
TCCN: BIOL 1106		
BIO 1331	Organismal Biology	3
TCCN: BIOL 1307		
BIO 1131	Organismal Biology Laboratory	1
TCCN: BIOL 1107		
CHEM 1341	General Chemistry I	3
TCCN: CHEM 1311		
CHEM 1141	General Chemistry Laboratory I	1

TCCN: CHEM 1111		
CHEM 1342	General Chemistry II	3
TCCN: CHEM 1312		
CHEM 1142	General Chemistry Laboratory II	1
TCCN: CHEM 1112		
CHEM 2341	Organic Chemistry I	3
TCCN: CHEM 2323		
CHEM 2141	Organic Chemistry Laboratory I	1
TCCN: CHEM 2123		
PHYS 1315	General Physics I	3
TCCN: PHYS 1301		
PHYS 1115	General Physics I Laboratory	1
TCCN: PHYS 1101		
Total Hours		24

## Course Requirements

		Freshman	
	First Semester Hours		Second Semester Hours
BIO 1330 (Life & Physical Sciences Component Code 030)	3	BIO 1331 (Life & Physical Sciences Component Code 030)	3
BIO 1130 (Life & Physical Sciences Component Code 030)	1	BIO 1131 (Life & Physical Sciences Component Code 030)	1
CHEM 1141	1	CHEM 1142	1
CHEM 1341	3	CHEM 1342	3
US 1100	1	ENG 1320 (Communication Component Code 010)	3
ENG 1310 (Communication Component Code 010)	3	HIST 1310 (American History Component Code 060)	3
POSI 2310 (Government/Political Science Component Code 070)	3		
		15	14
		Sophomore	
	First Semester Hours		Second Semester Hours
BIO 2450	4	BIO 2400	4
CHEM 2141	1	CHEM 2142	1
CHEM 2341	3	CHEM 2342	3
Mathematics (Component Code 020) <sup>1</sup>	3	Mathematics (Component Code 020) <sup>1</sup>	3
HIST 1320 (American History Component Code 060)	3	POSI 2320 (Government/Political Science Component Code 070)	3
Select one of the following: (Creative Arts Component Code 050)	3		
ART 2313			
DAN 2313			
MU 2313			
TH 2313			
		17	14

		<b>Junior</b>	
First Semester	Hours	Second Semester	Hours
BIO Advanced Elective <sup>2,3</sup>	8	BIO Advanced Electives <sup>2,3</sup>	3-4
PHYS 1315	3	PHYS 1325	3
PHYS 1115	1	PHYS 1125	1
PHIL 1320 (Language, Philosophy & Culture Component Code 040)	3	COMM 1310 (Component Area Option Code 090/091)	3
		BIO 3421	4
15		14-15	

		<b>Senior</b>	
First Semester	Hours	Second Semester	Hours
BIO Advanced Electives <sup>2,3</sup>	3-4	BIO 4301	3
Minor/Advanced Electives <sup>5</sup>	9-10	BIO 4416	4
PSY 1300 (Social & Behavioral Sciences Component Code 080)	3	Minor/Advanced Electives <sup>4</sup>	1-2
		ENG Literature (Component Area Option Code 090/094) <sup>5</sup>	3
		Electives <sup>4</sup>	5-6
15-17		16-18	

Total Hours: 120-125

<sup>1</sup> Mathematics requirements may be satisfied by taking MATH 2321 and MATH 2328, or MATH 2471 and MATH 2328.

<sup>2</sup> Fifteen hours of advanced BIO electives are required of which 11-12 hours must be chosen from: BIO 3430 (fall), BIO 3442, BIO 4326/BIO 4126, BIO 4350R (spring), BIO 4366/BIO 4166, BIO 4446 (spring), BIO 4447 (fall), BIO 4448 (spring), BIO 4480 (fall), or BIO 4413 (fall) Junior year - 2nd Semester.