BS – Microbiology with Biochemistry minor (PRE-DENT) (SC-BS/MICR/BCHM/PDMI)  
2021 Catalog year: College of Science and Engineering

This is not an official degree audit and it is subject to change. This chart is intended to be used by students who start out at Texas State. Please contact the College of Science Undergraduate Advising Center for advising.

**Note:** In addition to major courses, students must also complete all core and minor requirements (if applicable) and any other requirements for graduation.

**Key:**
Arrows indicate prerequisites. Arrows with dotted lines indicate co-requisites. Courses taught specific semesters are indicated with the following codes:
- F = Fall
- S = Spring
- Su = Summer Session I or II
- Required WI courses: BIO 4416
- Additional WI courses: BIO 3200, 3422, 4126, 4166, 4326, 4432, 4441, 4446, 4447, 4448

Core courses must be completed:
- Communication Component Code 010 (6 cr)
- Mathematical Component Code 020 (3 cr)
- Life & Physical Science Component Code 030 (6 cr)
- Language, Philosophy, and Culture Component Code 040 (3 cr)
- Civic Arts Component Code 050 (3 cr)
- American History Component Code 060 (6 cr)
- Government/Political Science Component Code 070 (6 cr)
- Social and Behavioral Sciences Component Code 080 (3 cr)
- Component Area Option Codes 090, 091, 092, 093, and 094 (6 cr)

US 1100 may be required for some students. Some majors require specific courses to be chosen from a component area. Consult with an advisor to determine the most expedient way to complete core and major-specific requirements.

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**Note:** Students in the pre-dental concentration must complete BIO 3421 or 3426, MATH 2328, PHIL 1320 and PSY 1300.

Choose one set:
- MATH 2321 (F,S,Su) & MATH 2328 (F,S,Su)
- MATH 2471 (F,S,Su) & MATH 2328 (F,S,Su)

*See advisor for guidance.*

### Freshman

- Fall semester
  - BIO 1330 (F,S,Su) & BIO 1130 (F,S,Su)
    - Functional Biology
    - TCCNS: BIO 1306+1106 or 1307+1107
  - CHEM 1311+1111 or 1411
  - BIO 1130 (F,S,Su) & BIO 1131 (F,S)
    - General Chemistry I
    - TCCNS: CHEM 2323+2123

- Spring semester
  - BIO 2450 (F,S,Su)
    - Organisms
    - TCCNS: BIO 2416 or 2316+2116
  - BIO 2400 (F,S)
    - Microbiology
    - TCCNS: BIO 2421

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### Sophomore

- Fall semester
  - BIO 1331 (F,S,Su) & BIO 1131 (F,S)
    - Organisational Biology
    - TCCNS: BIO 2416
  - CHEM 2341 (F,S,Su) & CHEM 2141 (F,S,Su)
    - General Chemistry II
    - TCCNS: CHEM 2325+2125

- Spring semester
  - CHEM 2342 (F,S,Su) & CHEM 2142 (F,S,Su)
    - Organic Chemistry II
    - TCCNS: CHEM 2325+2125

### Junior

- Fall semester
  - PHYS 1115 (F,S,Su) & PHYS 1115 (F,S,Su)
    - General Physics I
    - TCCNS: PHYS 1301+1101/1401
    - (also allow PHYS 1430)

- Spring semester
  - PHYS 1315 (F,S,Su) & PHYS 1115 (F,S,Su)
    - General Physics II
    - TCCNS: PHYS 1302+1102/1402
    - (also allow PHYS 2425)

### Senior

- Fall semester
  - Elective hours (as needed, see advisor)

- Spring semester
  - BIO 3421 (F,S,Su) OR BIO 3426 (F,S,Su)
    - Vertebrate Physiology
    - OR
    - Human Physiology
    - BIO 4301 (F,S)
      - General Ecology
    - BIO 4342 (F,S)
      - Biochemistry
    - BIO 4416 (F,S)
      - Metabolism

**11-12 hours from:**

- BIO 3442 (F,S)
- BIO 4301 (F)
- BIO 4299 (F)
- BIO 4347 (F)
- BIO 4367 (F)
- BIO 4126 (S)
- BIO 4448 (S)
- BIO 4443 (F)
- BIO 4126 (F)
- BIO 4166 (F)
- BIO 4416 (S)
- BIO 4432 (S)

**Note:** BIO 4447 cannot count for both physiology and advanced microbiology. Only counts for one requirement. If taking BIO 4366, must also complete BIO 4166. If taking BIO 4326, must also complete 4126. Check course prerequisites.

**Additional WI courses:** BIO 3200, 3442, 4126, 4166, 4326, 4441, 4446, 4447, 4448

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- Arrows with dotted lines indicate co-requisites.
- Arrows with dash lines are recommended prerequisites.
- Courses taught specific semesters are indicated with the following codes:
  - F = Fall
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**Elective hours**

- 3-4 hours advanced biology electives, chosen in consultation with an academic advisor.

- BIO 4299 requires faculty and departmental approval to count towards advanced electives and must be taken twice. Check course prerequisites.

- DO NOT COUNT: BIO 3351, 4305, 4402, 4403, 4408