The B.S. in Biology and B.S. in Microbiology and Immunology are undergoing changes in Fall 2020. Would it be advantageous for you to switch catalogs? You can change catalogs at the end of Fall 2020, but you can be planning ahead if you intend to switch.

**What is new in the 2020 catalog for Biology Students?**

- For B.S. in Biology students there will be fewer required labs and more Biology electives.
- Initiation of the **Sophomore Research Initiative** which gives second year students the opportunity to engage in authentic research with faculty and graduate students.

For more information:
See details and degree plans below,
Consult with your advisor (who can make the catalog change in Banner),
Consult with Jessica Chiles in the Biology Office. jessica.chiles @utsa.edu | (210) 458-4463

**Pending final approval of the 2020-2022 catalog.**
Molecular Genetics Lab 2362 is replacing the Genetics Lab 2322. 
Molecular Biochemistry Lab 3362 is replacing both the Biochemistry Lab 3522 and the Cell Biology Lab 3822.

If you have already taken any of the old labs:
  Genetics Lab 2322 can substitute for the new Molecular Genetics Lab 2362.
  Either Biochemistry Lab 3522 or Cell Biology Lab 3822 can substitute for Molecular Biochemistry Lab 3362.
If you have taken all three of the old courses, 2 credit hours can be used as Biology electives.
Students cannot get credit for both the old and the new labs.

B.S. in Biology – Fewer required labs / more Biology electives.
  Besides the changes in labs mentioned above:
  Physiology Lab and the Lecture/Lab pair will no longer be required.
  Biology electives will increase form the original 12 credit hours to 21 credit hours.

Students classified as pre PBI or PMI from older catalogs, will be re-designated BIO or MI if they switch to the 2020 catalog. However, student progress will still be tracked and assessed at 60 hours for the same requirements as PBI and PMI plus completion of Genetics Bio 2313.
Sophomore Research Initiative (SRI)

In the sophomore year students can take the required laboratories Molecular Genetics (BIO 2362) and Molecular Biochemistry (BIO 3362) alone as standard courses, or in conjunction with the Sophomore Research Initiative (SRI). SRI gives second year students the opportunity to engage in authentic research with faculty and graduate students. Students working in teams will conduct their own research projects on a specific biological problem over two semesters. Several different research topics will be available to choose from. There will be approximately one hour of lecture/lab meeting and four to six hours of lab work per week. Students will receive credit for both BIO 2362 and BIO 3362 and be concurrently enrolled in three credit hours of Independent Study to reflect the additional hours required to complete their research. Students will present their final data in poster format at the end of the second semester. The opportunity to be part of the SRI is limited, students should register early.

The SRI option is not available to students who have already completed any of the following Bio 2322, Bio 3522 or Bio 3822.
<table>
<thead>
<tr>
<th>Core Curriculum</th>
<th>Required BIO Courses</th>
<th>Science Support</th>
<th>BS in Biology</th>
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</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
<td></td>
<td>Students must complete the six courses in red within 60 credit hours in order to remain a Biology major.</td>
</tr>
<tr>
<td>Fall</td>
<td>AIS 1203 Academic Inquiry &amp; Scholarship</td>
<td>BIO 1404 Biosciences I Core Science</td>
<td>CHE 1103 &amp; 1121 General Chemistry I &amp; Lab</td>
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<tr>
<td>Spring</td>
<td>WRC 1023 Freshman Composition II</td>
<td>BIO 1414 Biosciences II Core Science</td>
<td>CHE 1113 &amp; 1131 General Chemistry II &amp; Lab</td>
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<tr>
<td><strong>Second Year</strong></td>
<td></td>
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<tr>
<td>Fall</td>
<td>WRC 1013 Freshman Composition I</td>
<td>BIO 2413 Genetics</td>
<td>CHE 2603 &amp; 2612 Organic Chemistry I &amp; Lab</td>
</tr>
<tr>
<td>Spring</td>
<td>CS 1173 Data Analysis &amp; Visualization</td>
<td>Free Elective</td>
<td>PHY 1603 &amp; 1011 Algebra-based Physics I or PHY 1402 &amp; 1951 Physics for Scientists &amp; Engineers I</td>
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<tr>
<td><strong>Third Year</strong></td>
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<tr>
<td>Fall</td>
<td></td>
<td>Bio 3413 Physiology</td>
<td>CHE 2613 Organic Chemistry II</td>
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<tr>
<td>Spring</td>
<td></td>
<td>Bio 3813 Cell Biology</td>
<td>PHY 1603 &amp; 1011 Algebra-based Physics II or PHY 1402 &amp; 1951 Physics for Scientists &amp; Engineers</td>
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<td><strong>Fourth Year</strong></td>
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<tr>
<td>Fall</td>
<td></td>
<td>Bio 3513 Biochemistry</td>
<td>Free Elective</td>
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<td>Spring</td>
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<td>Upper-division BIO elective</td>
<td>Upper-division BIO elective</td>
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</table>

Prerequisite: Genetics is a prerequisite for most 3000-4000 level courses. Check the catalog for additional course requirements.
<table>
<thead>
<tr>
<th>FIRST YEAR</th>
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<th>THIRD YEAR</th>
<th>FOURTH YEAR</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
<td><strong>Fall</strong></td>
<td><strong>Spring</strong></td>
</tr>
<tr>
<td>AIS 1203 Academic Inquiry &amp; Scholarship</td>
<td>WRC 1023 Freshman Composition II</td>
<td>American History</td>
<td>American History</td>
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<tr>
<td>WRC 1013 Freshman Composition I</td>
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<td>Government, Political Science</td>
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</table>

**Core Curriculum**

**Required BIO Courses**

- BIO 1404 Biosciences I Core Science
- BIO 1414 Biosciences II Core Science
- Bio 2313 Genetics
- Bio 2362 Molecular Genetics Lab
- Bio 3362 Molecular Biochemistry Lab
- Bio 3413 Physiology
- Bio 3513 Biochemistry

- BIO 1404 Biosciences I Core Science
- BIO 1414 Biosciences II Core Science
- Bio 2313 Genetics
- Bio 2362 Molecular Genetics Lab
- Bio 3362 Molecular Biochemistry Lab
- Bio 3413 Physiology
- Bio 3513 Biochemistry

**Science Support**

- CHE 1103 & 1121 General Chemistry I & Lab
- CHE 1113 & 1131 General Chemistry II & Lab
- CHE 2603 & 2612 Organic Chemistry I
- CHE 3543 & 3552 Organic Chemistry II & Lab
- PHY 1603 & 1611 Algebra-based Physics I
- OR PHY 1801 & 1811 Physics for Scientists & Engineers I
- PHV 1801 & 1811 Physics for Scientists & Engineers I

**Credits**

<table>
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<th>FIRST YEAR</th>
<th>SECOND YEAR</th>
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**BS in Microbiology**

*Students must complete the six courses in red within 60 credit hours in order to remain a Biology major.*
### BS in Biology - Sophomore Research Initiative

**Students must complete the six courses in red within 60 credit hours in order to remain a Biology major.**
<table>
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<td>Spring</td>
<td>Fall</td>
<td>Spring</td>
</tr>
<tr>
<td>AIS 1201</td>
<td>WRC 1023</td>
<td>American History</td>
<td>American History</td>
</tr>
<tr>
<td>Academic Inquiry &amp; Scholarship</td>
<td>Freshman Composition II</td>
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<td></td>
</tr>
<tr>
<td>WRC 1013</td>
<td></td>
<td>Social &amp; Behavioral Sciences</td>
<td>Creative Arts</td>
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<tr>
<td>Freshman Composition I</td>
<td></td>
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</tbody>
</table>

**Core Curriculum**

**Required BIO Courses**

- BIO 1404 **Biosciences I**
- BIO 1414 **Biosciences II**
- Bio 2313 **Genetics**
- BIO 3713 & 3722 **Microbiology & Laboratory**
- BIO 3813 **Cell Biology**
- BIO 4783 **Upper-division MICROBIOLOGY Elective**
- Bio 3913 **Physiology**
- BIO 4743 & 4752 **Immunology & Laboratory**
- Free Elective

**Science Support**

- CHE 1103 & 1121 **General Chemistry I & Lab**
- CHE 2603 & 2612 **Organic Chemistry I**
- CHE 3573 & 3582 **Organic Chemistry II with Bio Apps & Laboratory**
- PHY 1001 & 1011 **Physics I**
- PHY 1903 & 1911 **Physics for Scientists & Engineers I**
- OR
- PHY 1903 & 1911 **Physics II**
- PHY 1903 & 1911 **Physics for Scientists & Engineers II**

- STA 1103 **Calculus for Biosciences**
- STA 1403 **Probability & Statistics for the Biosciences**

**BS in Microbiology - Sophomore Research Initiative**

*Students must complete the six courses in red within 60 credit hours in order to remain a Biology major.*