Biotechnology, AAS

Program Description

The Associate of Applied Science Degree in Biotechnology will train students to harness cellular and molecular processes in living & non-living organisms to develop technologies and products that help improve lives and the health of the planet. Students accomplish this through an interdisciplinary study of relevant science disciplines, including the biological sciences, chemical sciences, and biotechnology.

This program provides knowledge and experience through lecture and laboratories that immerses students in the biotechnology field's ever-evolving techniques, protocols, practices, and careers, qualifying them for entry-level positions in the biotechnology industry. This degree is specifically designed for students transferring with a Biotechnology Certificate from Dixie State looking continue their education and earn an AAS degree. Students will analyze and solve problems associated with biotechnology in medicine, agriculture, livestock, the environment and other related sectors. Local support for this program comes from the following local biotechnology companies, Soft Cell Biological Research, Soft Cell Laboratories, Intermountain- Precision Genomics, Red Mesa Science and Refining, Deseret Laboratories, and Gene Stat. These companies will provide internships, mentorship, and employment opportunities for students in the program. Ultimately, we see the program creating a pipeline for the local and regional biotechnology industry.

Program Curriculum

63 credits

GENERAL EDUCATION & INSTITUTIONAL REQUIREMENTS

The required General Education courses for the Associate of Applied Science degree at Utah Tech include a course in English, Quantitative Reasoning and Human Relations.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM 2110</td>
<td>Interpersonal Communication (SS, GC)</td>
<td>3</td>
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<tr>
<td>or PSY 1010</td>
<td>General Psychology (SS, GC)</td>
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<tr>
<td>ENGL 1010</td>
<td>Introduction to Writing (EN)</td>
<td>3-4</td>
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<tr>
<td>or ENGL 1010D</td>
<td>Introduction to Writing (EN)</td>
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<td></td>
<td>General Education (Fine Arts) (catalog.utahtech.edu/programs/generaleducation/#gerequirementstext)</td>
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Biotechnology Requirements

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<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>BIOL 1610 &amp; BIOL 1615</td>
<td>Principles of Biology I (LS) and Principles of Biology I Lab (LAB)</td>
<td>5</td>
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<td>BIOL 2060 &amp; BIOL 2065</td>
<td>Principles of Microbiology and Principles of Microbiology Lab</td>
<td>4</td>
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<tr>
<td>BIOL 2890R</td>
<td>Introductory Life Science Internship</td>
<td>2</td>
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<tr>
<td>BTEC 1010</td>
<td>Fundamentals of Biotechnology</td>
<td>3</td>
</tr>
<tr>
<td>BTEC 2010</td>
<td>DNA Methods and Analysis</td>
<td>3</td>
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<tr>
<td>BTEC 2020</td>
<td>Protein Purification and Analysis</td>
<td>3</td>
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<tr>
<td>BTEC 2030</td>
<td>Cell Culture Techniques</td>
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<tr>
<td>BTEC 2040</td>
<td>Advanced Nucleic Acids Laboratory</td>
<td>3</td>
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<tr>
<td>CHEM 1210 &amp; CHEM 1215</td>
<td>Principles of Chemistry I (PS) and Principles of Chemistry I Lab (LAB)</td>
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<tr>
<td>MATH 1050</td>
<td>College Algebra / Pre-Calculus (MA) (or higher)</td>
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<td>Total Hours</td>
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Graduation Requirements

1. Complete a minimum of 63 college-level credits (1000 and above).
2. Complete at least 20 lower-division credits at Utah Tech for institutional residency.
3. Cumulative GPA 2.0 or higher.