Program Overview
The M.S. in Biotechnology, located on the Abilene & Lubbock campuses, is a 21 month Master of Science degree offered through the Graduate School of Biomedical Sciences. Our Master's program prides itself on offering a blend of science, technology and business in the academic setting and a wide variety of funded research opportunities in our friendly and collaborative environment. Internal or external internships complete our research requirements.

Those with a strong entrepreneurial spirit may be interested in our dual MS/MBA program administered in cooperation with Texas Tech University (TTU).

Students admitted to the JD program at TTU or the MD program at TTUHSC may also receive dual degrees with an MS in Biotechnology, and 12 shared credits.

Students with a desire to continue in a Biomedical Sciences Ph.D. program at TTUHSC will have completed most of the core requirements and some electives.

Check us out at:  www.ttuhsc.edu/biomedical-sciences/program/biotechnology

Requirements:
- Science-based undergraduate background
- GRE
- Final U.S. Transcripts (with GPA)
- TOEFL or IELTS (International Students)
- Transcript Evaluation (for International Students Only)
- Application can be found at: http://www.bioraider.com
- Application Deadline: May 1
- Program Locations: Abilene or Lubbock, TX campuses

Application Information:
Applicants should submit the following required documents:
- Completed application
- At least 2 letters of recommendation
- Official transcript(s) from all school(s)
- Admissions Information: https://www.ttuhsc.edu/biomedical-sciences/academics/admissions.aspx
- Application Instructions: https://www.ttuhsc.edu/biomedical-sciences/apply

Contact Information:

Abilene Director:
Sanjay K. Srivastava, Ph.D.
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Lubbock Director:
Susan E. Bergeson, Ph.D.
susan.bergeson@ttuhsc.edu

Abilene, TX
Lubbock, TX
**Biotechnology**

Biotechnology is currently one of the most exciting scientific career opportunities. The job market is expanding to create solutions that harness the power of biotechnology to tackle issues in health & medicine.

**Abilene campus:**
The Department of Immunotherapeutics and Biotechnology faculty members are well-funded by the NIH, CPRIT, DOD, and private foundations, all with primary membership in the GSBS Biotechnology program. The research conducted in the department is highly translational with an emphasis on cancer biology, cancer immunology and immunotherapy, nanoparticle drug delivery, the tumor microenvironment and drug screening. An open concept laboratory space promotes collaboration between research groups and full utilization of research infrastructure and specialized equipment.

http://www.ttuhscl.edu/pharmacy/immunotherapeutics-biotechnology/

**Lubbock campus:**
Biotechnology members on the Lubbock campus are faculty in our basic science and clinical departments. As such, they represent a wide variety of research areas including: addiction, Alzheimer's disease, cancer, diabetes, epilepsy, HIV, immunology, neurobiology, pain, parasitology, protein biophysics, reproductive biology, role of microbiota in GI disorders, transporter function, virology and vision.

**Overview of the Biotechnology Program**

Students in the 21-month M.S. program complete the Biotechnology curriculum in the first year, which consists of classwork and lab rotations. After two semesters, students are matched to a TTUHSC lab and conduct research or obtain an internship with a company in the biotechnology industry. A very attractive feature of the program is its reasonable cost.

http://www.fiscal.ttuhscl.edu/studentbusserv/description_of_tuition_and_fees.aspx

The cost of tuition/fees is partially offset by a scholarship in the first year of the program and by a paid research assistantship after two semesters (TTUHSC RA = $25,000 annually, for 11+ months). The cost of living in West Texas is among the lowest in the United States.

Students have the option of completing a non-thesis or thesis project during the second year. More information about the program and curriculum can be found at:

www.ttuhscl.edu/biomedical-sciences/program/biotechnology.aspx

**Curriculum**

**First Year**

<table>
<thead>
<tr>
<th>Fall Semester</th>
<th>Spring Semester</th>
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<tbody>
<tr>
<td>GSBS 5471</td>
<td>GBTC 6101</td>
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<tr>
<td>GSBS 5372</td>
<td>GBTC 6202</td>
</tr>
<tr>
<td>GSBS 5373</td>
<td>GBTC 6301</td>
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<tr>
<td>GSBS 5174</td>
<td>GBTC 5101</td>
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<tr>
<td>GSBS 5020</td>
<td>GSBS 5350</td>
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<tr>
<td></td>
<td>Elective (optional)</td>
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| GSBS 5471 | Core I: Molecules |
| GSBS 5372 | Core II: Cells |
| GSBS 5373 | Core III: Genes |
| GSBS 5174 | Core IV: Biomedical Seminar |
| GSBS 5020 | Biotechnology Laboratory Methods |

**Second Year—paid research June 1st—mid-May**

**Summer Semester**

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<thead>
<tr>
<th>Lab Option</th>
<th>Industry Option</th>
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<tbody>
<tr>
<td>GBTC 7000</td>
<td>Research</td>
</tr>
<tr>
<td>Industry Option</td>
<td>Biotechnology Internship</td>
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**Fall Semester**

<table>
<thead>
<tr>
<th>Lab Option</th>
<th>Industry Option</th>
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<tbody>
<tr>
<td>GBTC 7000</td>
<td>Research</td>
</tr>
<tr>
<td>GBTC 5299</td>
<td>Biotechnology Report</td>
</tr>
<tr>
<td>Elective</td>
<td>(Optional)</td>
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**Spring Semester**

<table>
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<tr>
<th>Lab Option</th>
<th>Industry Option</th>
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<tbody>
<tr>
<td>GBTC 6001</td>
<td>Biotechnology Internship</td>
</tr>
<tr>
<td>GBTC 5299</td>
<td>Biotechnology Final Report</td>
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**Selected Electives**

GBTC 5210  The Microbiome-Role in Health and Disease
GBTC 5212  Fundamentals of Bacteriology
GBTC 5213  Fundamentals of Virology/Parasitology
GBTC 5214  Fundamentals in Immunology
GBTC 5340  Biology of Cancer
GBCM 6320  Advanced Cell Biology
GBCM 6333  Advanced Protein Biochemistry
GMBP 5302  Human Physiology
GSPH 5310  Introduction to Statistical Methods
GSBS 5399  Topics in Biomedical Sciences
GTNP 5303  Principles of Translational Neuroscience and Pharmacology