# Bachelor of Science in Biochemistry to Master of Science in Biomedical Engineering Fast-Track

## About This Program

Bachelor of Science in Biochemistry to Master of Science in Biomedical Engineering Fast-Track enables outstanding UT Arlington senior undergraduate students in biochemistry to satisfy degree requirements leading to a master's degree in bioengineering while completing their undergraduate studies.

The BS in Biochemistry of this Fast-Track program is an American Chemical Society Certified degree.

### ASSOCIATED PROGRAMS

For detailed information about the programs associated with this Fast Track, refer to their individual degree pages.

**Biochemistry BS (https://catalog.uta.edu/science/chemistry/undergraduate/biochem-bs/)**

**Biomedical Engineering MS (https://catalog.uta.edu/engineering/bio/graduate/bioengineering-ms/)**

## Admissions Criteria

Students interested in this program should consult with Bioengineering Advisors when they are within 30 hours of completing their bachelor's degrees. They must have completed at least 30 hours of relevant course work at UT Arlington, achieving a GPA of at least 3.0 in those courses, and have an overall GPA of 3.0 or better in all UT Arlington College of Science courses.

Students must take the following undergraduate courses in order to be admitted into the fast track program.

- BE 3380 HUMAN PHYSIOLOGY IN BE
- CHEM 2335 QUANTITATIVE CHEMISTRY
- CHEM 4311 BIOCHEMISTRY I

The cumulative GPA required for the foundation courses is a 3.3. Students must also maintain a 3.3 GPA or higher in all CHEM courses completed at UTA, and have a cumulative GPA of a 3.3 or higher.

The following courses will satisfy requirements for both the BS and the MS:

- BE 5333 NANO BIOMATERIALS AND LIVING-SYSTEMS INTERACTIONS
- BE 5365 TISSUE ENGINEERING LAB
- BE 5372 DRUG DELIVERY SYSTEM

For automatic admission to the master's program, students must complete these courses with at least a B.

## Curriculum

| | | |
|---|---|---|
| **Foundations** | | |
| Complete foundations requirments in Biochemistry BS per catalog. | | 58 |
| **Specialization** | | |
| Biomedical Engineering | | |
| BE 3380 | HUMAN PHYSIOLOGY IN BE [1] | 3 |
| BE 4337 | TRANSPORT PHENOMENA IN BIOMEDICAL ENGINEERING | 3 |
| Chemistry | | |
| CHEM 1341 | GENERAL CHEMISTRY I | 3 |
| CHEM 1181 | GENERAL CHEMISTRY I LABORATORY FOR ADVANCED CHEMICAL TECHNOLOGIES | 1 |
| CHEM 1342 | GENERAL CHEMISTRY II | 3 |
| CHEM 1182 | GENERAL CHEMISTRY II LABORATORY FOR ADVANCED CHEMICAL TECHNOLOGIES | 1 |
| CHEM 2321 | ORGANIC CHEMISTRY I | 3 |
| CHEM 2322 | ORGANIC CHEMISTRY II | 3 |
| CHEM 2335 | QUANTITATIVE CHEMISTRY [1] | 3 |
| CHEM 2283 | SYNTHESIS AND ANALYSIS LABORATORY I | 2 |
| CHEM 2284 | SYNTHESIS AND ANALYSIS LABORATORY II | 2 |
| CHEM 3321 | PHYSICAL CHEMISTRY I | 3 |

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|---|---|---|
| CHEM 3181 | PHYSICAL CHEMISTRY I LABORATORY | 1 |
| CHEM 3322 | PHYSICAL CHEMISTRY II | 3 |
| CHEM 3182 | PHYSICAL CHEMISTRY II LABORATORY | 1 |
| CHEM 3317 | INORGANIC CHEMISTRY | 3 |
| CHEM 4311 | BIOCHEMISTRY I [1] | 3 |
| CHEM 4242 | LABORATORY TECHNIQUES IN BIOCHEMISTRY | 2 |
| CHEM 4312 | BIOCHEMISTRY II | 3 |
| CHEM 4461 | INSTRUMENTAL ANALYSIS | 4 |
| CHEM 4313 | METABOLISM AND REGULATION | 3 |
| or CHEM 4314 | ENZYMOLOGY | |
| Graduate Level Biomedical Engineering [2] | | |
| BE 5333 | NANO BIOMATERIALS AND LIVING-SYSTEMS INTERACTIONS | 3 |
| BE 5365 | TISSUE ENGINEERING LAB | 3 |
| BE 5372 | DRUG DELIVERY SYSTEM | 3 |
| Electives sufficient to reach the 120 credit requirement. | | |
| **Bioengineering MS** | | |
| Complete MS requirements per catalog. | | 21 |
| **Total Hours** | | **141** |

1 This courses must be completed with cumulative GPA of 3.3 or higher for admission to the fast track.

2 Undergraduate courses being satisfied by these graduate courses are CHEM 4313 (or CHEM 4314), CHEM 4346, and one hour advanced elective. One credit hour difference will be satisfied by other undergraduate courses.

## Advising Resources

First time in college students should plan to speak to a program advisor when starting their second year. Transfer students should be advised prior to New Maverick Orientation.

### Location:

SH 303

### Email:

chemugradadvisor@uta.edu

### Phone:

817-272-9687

### Web:

Advising Information (https://www.uta.edu/academics/schools-colleges/science/departments/chemistry/advising/)