The University of Texas at Arlington
The Department of Chemistry and Biochemistry

BS in Biological Chemistry

2014 – 2015 Catalog
Total Credit Hours Required: 120
Advanced Credit Hours Required: 36 (3000 level or above)

**Required Chemistry Courses**

**General Chemistry**
- 1441 General Chemistry I and Lab
- 1442 General Chemistry II and Lab
  (Prerequisite: CHEM 1441)

**Organic Chemistry**
- 2321 Organic Chemistry I (Prerequisite: CHEM 1442)
- 2181 Organic Chemistry I Lab (Corequisite: CHEM 2321)
- 2322 Organic Chemistry II (Prerequisite: CHEM 2321)
- 2182 Organic Chemistry II Lab (Corequisite: CHEM 2322)

**Quantitative Chemistry**
- 2355 Quantitative Chemistry (Prerequisite: CHEM 1442)
- 2285 Quantitative Chemistry Lab (Corequisite: CHEM 2355)

**Physical Chemistry**
- 3315 Biophysical Chemistry I (Prerequisite: CHEM 2335,
  3 hours physics, MATH 2425)
- 3175 Biophysical Chemistry I Lab (Corequisite: CHEM 3315)

**Inorganic Chemistry**
- 3317 Inorganic Chemistry I (Pre/Corequisite: CHEM 2322)
- 4318 Inorganic Chemistry II (Prerequisite: CHEM 2322)

**Biochemistry**
- 4311 General Biochemistry I
  (Prerequisite: CHEM 2322)
- 4242 Lab Techniques in Biochemistry
  (Prerequisite: CHEM 4311)
- 4312 General Biochemistry II
  (Prerequisite: CHEM 4311)
- 4314 Enzymology (Prerequisite: CHEM 4311)
- 3 hours from:
  - 4313 Metabolism and Regulation (Prerequisite: CHEM 4312)
  - 4316 Biochemical Genetics (Prerequisite: CHEM 4312)

**Other Chemistry**
- 4461 Instrumental Analysis
  (Prerequisite: CHEM 2335, 2285)

**Other Required Courses**

**English**
- 1301 Critical Thinking, Reading, and Writing I
- 1302 Critical Thinking, Reading, and Writing II

**Language, Philosophy, and Culture**
- 3 hours of an approved course (see Catalog)

**Social and Behavioral Sciences**
- 3 hours of an approved course (see Catalog)

**Creative Arts**
- 3 hours of an approved course (see Catalog)

**Political Science**
- 2311 Government of the United States
- 2312 State and Local Government

**History**
- 1311 History of the United States (∼1865)
- 1312 History of the United States (1865→)

**Foundational Component Area**
- 3 hours of an approved course (see Catalog)

**Computer Competency**
- CSE 1301 or passing score on Computer Skills Placement Test

**Mathematics**
- 1323 Precalculus II
- 1426 Calculus I
- 2425 Calculus II

**Physics**
- 1441 General College Physics I
- 1442 General College Physics II

**Biology**
- BIOL 1441 Cell and Molecular Biology
- BIOL 1442 Structure and Function of Organisms
- BIOL 3444 General Microbiology
- 6 hours from: BIOL 3315 Genetics and
  BIOL 3301 Cell Physiology or BIOL 3312 Immunobiology
  or BIOL 3345 Human Physiology

**Electives**
- Sufficient to reach 120 total credit hours
- Sufficient to reach 36 advanced hours

Undergraduate Advisor
Charu Gupta
Life Science Room 107
Phone: (817) 272 – 9687
E-mail: cgupta@uta.edu

Department of Chemistry and Biochemistry
Chemistry and Physics Building Room 130
Phone: (817) 272 - 3171
Fax: (817) 272 - 3808
Math, Physics, and Chemistry Pre- and Corequisites Flow Chart (grade of “C” or better is required to meet prerequisite)

Suggested Course Sequence

First Year: Fall - 14 credit hours
- CHEM 1441
- MATH 1323
- ENGL 1301
- BIOL 1441

Spring - 15 credit hours
- CHEM 1442
- MATH 1426
- ENGL 1302
- BIOL 1442

Second Year: Fall – 15 credit hours
- MATH 2425
- PHYS 1441
- Language, Philosophy, and Culture
- CHEM 2321 and 2181

Spring – 16 credit hours
- BIOL 3315
- PHYS 1442
- CHEM 2335 and 2285
- CHEM 2322 and 2182

Third Year: Fall – 17 credit hours
- CHEM 3315 and 3175
- CHEM 4311
- BIOL 3444
- POLS 2311
- Social and Behavioral Sciences

Spring – 14 credit hours
- CHEM 4242
- CHEM 4312
- CHEM 4314
- POLS 2312
- Foundational Component Area

Fourth Year: Fall – 16 credit hours
- CHEM 4313 or 4316
- CHEM 3317 or 4318**
- HIST 1311
- Advanced Elective (3 hrs)
- BIOL 3301 or 3312 or 3345

Spring – 13 credit hours
- CHEM 4461
- HIST 1312
- Computer Competency
- Creative Arts

*Minimum GPA Required: 2.25 in CHEM, 2.25 in COS, and 2.25 Overall.
**CHEM 4318 usually offered in Spring semesters.

NOTE: For a thorough explanation of degree requirements please consult the Undergraduate Catalog.