

Biochemical Engineering Minor

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Minor Requirements:

Before beginning these courses the student must meet the required course prerequisites. A minimum grade of C- is required in all of the courses completed for the Minor (19 credits).

Core Courses:

- [BISC 207 - Introductory Biology I](#) **Credit(s): 4** LL Tech Elective
- [BISC 401 - Molecular Biology of the Cell](#) **Credit(s): 3** UL Tech Elective
- [CHEG 420 - Biochemical Engineering](#) **Credit(s): 3** CHEG Elective

- CHEM 527 - Introduction to Biochemistry Normally taken Spring Junior year
or
- CHEM 641 - Biochemistry I requires 2 semesters of orgo (CHEM331 and 332)
- CHEM 642 - Biochemistry II (sequence may substitute for CHEM 527)

Two of the following:

- [BISC 300 - Introduction to Microbiology](#) **Credit(s): 4** UL Tech Elective
- [BISC 403 - Genetics](#) **Credit(s): 3** UL Tech Elective
- [BISC 411 - Experimental Molecular Biology](#) **Credit(s): 4** UL Tech Elective
- [BISC 471 - Introductory Immunology](#) **Credit(s): 3** UL Tech Elective
- [BISC 484 - Computer Based Genetics Laboratory](#) **Credit(s): 3**
- BISC 612 - Advanced Cell Biology
- [BMEG 471 - Mathematical Physiology](#) **Credit(s): 3** UL Tech Elective
- MAST 625 - Microbial Physiology and Diversity UL Tech Elective

- MAST 694 - Systems Biology I UL Tech Elective

or

- BINF 694 - Systems Biology I
- [CIEG 444 - Microbiology of Engineered Systems](#) **Credit(s): 4** **UL Tech Elective**
- or
- CIEG 644 - Microbiology of Engineered Systems **UL Tech Elective**
- CIEG 867 - Bioengineering and Molecular Genetics **Also these count for both minor and as CHEG electives**
- CHEG 621 - Metabolic Engineering **CHEG Elective**
- CHEG 648 - Biomaterials for Drug and Gene Delivery **CHEG Elective** CHEG 667-13 Experimental Methods in Biomolecular Engineering
- CHEG 650 - Biomedical Engineering CHEG 667-17 Vaccines and ImmunoEngineering
- CHEG 660 - Systems Biology **UL Tech Elective**
- CHEG 667 - Cell Culture Biomanufacturing **CHEG Elective** CHEG 667-20 Biopharmaceutical Manufacturing
- CHEM 643 - Intermediary Metabolism **UL Tech Elective**
- CHEM 644 - Mechanisms of Enzyme Catalysis **UL Tech Elective**
- CHEM 645 - Protein Structure and Function **UL Tech Elective**
- CHEM 646 - DNA-Protein Interactions **UL Tech Elective**
- CHEM 648 - Membrane Biochemistry
- CHEM 649 - Molecular Biophysics
- CHEM 686 - Biophysical Chemistry **UL Tech Elective**
- [MATH 460 - Introduction to Systems Biology](#) **Credit(s): 3** **UL Tech Elective**
- [MEEG 484 - Biomaterials and Tissue Eng App](#) **Credit(s): 3** **UL Tech Elective**
- [MEEG 486 - Cell and Tissue Transport](#) **Credit(s): 3** **UL Tech Elective**
- [MSEG 460 - Biomaterials and Tissue Engineering](#) **Credit(s): 3** **UL Tech Elective**
- [UNIV 401 - Senior Thesis](#) **Credit(s): 2-4** **CHEG Elective**
- or
- [CHEG 473 - Chemical Engineering Projects](#) **Credit(s): 3** (three credits, upon minor advisor approval) **CHEG Elective**

Note:

Other courses in engineering, science, and mathematics may be included in the list with the prior approval of the Minor Advisor at (302) 831-2543 or che-info@udel.edu.

Credits to Total a Minimum of 19
