B.S. in BIOTECHNOLOGY

CLINICAL LABORATORY SCIENCE OPTION

MAJOR REQUIREMENTS

PRESCRIBED COURSES-C OR HIGHER¹

- CHEM 110, 3 units²
- CHEM 111, 1 unit²
- CHEM 112, 3 units³
- MATH 140, 4 units³

A “C” or better is required in 2 of the following 3 courses.  All 3 courses required:

- BMB/MICRB 251, 3 units
- BMB/MICRB 252, 3 units
- MICRB 201, 3 units

PRESCRIBED COURSES

- BIOL 322 or 222, 3 units
- BMB 211, 3 units
- BMB 221, 2 units
- CHEM 113, 1 unit
- CHEM 202, 3 units
- CHEM 203, 3 units
- MATH 141, 4 units
- MICRB 202 or 203, 2 units
- MICRB 410, 3 units
- MICRB 421W, 3 units
- PHYS 250, 4 units
- PHYS 251, 4 units

OPTION REQUIREMENTS (CLS)

- BMB 212, 1 units
- MICRB 405A, 8 units
- MICRB 405B, 1 unit
- MICRB 405C, 6 units
- MICRB 405D, 5 units
- MICRB 405E, 7 units
- MICRB 405F, 3 units
- MICRB 412, 3 units
- MICRB 422, 2 units

LIST C FREE ELECTIVES³

Select 1-3 units from department list:

- ____________________
- ____________________
- ____________________

Minimum overall GPA requirement for graduation must be ≥ 2.0.  Total units earned (less repeats and remedial) must equal 125 to graduate.  At least 36 of the last 60 units must be completed at the university, and the last 60 units within the past 5 calendar years.

¹A student enrolled in this major must receive a grade of “C” or better in the courses listed in this category specified by Senate Policy 82-44.

²Course is ETM Requirement.  Students must receive a C or better grade in all ETM courses prior to entering the major in addition to having a GPA of 2.0 or better.

³With the EXCEPTION of the courses listed below, ALL courses appearing in the University Bulletin are acceptable as elective courses: 6 units of ROTC may be applied toward graduation requirements.  Students MAY NOT fulfill this requirement with lower level or general education courses in math and science (including but not limited to examples such as: any BI SC course, any B M B course below the 100 level, MATH 110 and 111, and the like).  Students MAY NOT fulfill this requirement with courses that significantly repeat material from courses required for the major, (including but not limited to examples such as: CHEM 202 or 203 after taking CHEM 210 or 212, or vice-versa; PHYS 250 or 251 after taking PHYS 211, 212, 213, and 214, or vice-versa; and so forth).  Students MAY NOT fulfill this requirement with remedial courses (including but not limited to examples such as: LL ED 5 and 10; ENGL 4, 5, and 6; ESL 4 and 5; CHEM courses below CHEM 110; MATH courses below MATH 110; STAT 100; PHYS courses below PHYS 211; and the like).
PENN STATE UNIVERSITY | EBERLY COLLEGE OF SCIENCE
EFFECTIVE SUMMER 2018 OR LATER

GENERAL EDUCATION REQUIREMENTS

KNOWLEDGE DOMAINS (must total 30 units)

Natural Sciences (GN), 9 units
- CHEM 110 & 111, 4 units
- CHEM 112 & 113, 4 units
- PHYS 211 or 250, 4 units

Arts (GA), 6 units†
(3 units must NOT be inter-domain*)
- __________________________ GA
- __________________________

Humanities (GH), 6 units†
(3 units must NOT be inter-domain*)
- __________________________ GH
- __________________________

Social and Behavioral Sciences (GS), 6 units†
(3 units must NOT be inter-domain*)
- __________________________ GS
- __________________________

Health and Wellness (GHW), 3 units†
(3 units must NOT be inter-domain*)
- __________________________ GHW
- __________________________

Additional Knowledge Domain Courses, 0-6 units*
- __________________________
- __________________________

FOUNDATIONS  Grades of C or better required

Writing and Speaking (GWS), 9 units
- ENGL 15, 3 units
- CAS 100, 3 units
- ENGL 202 (C preferred), 3 units

Quantification (GQ), 6 units
- MATH 140, 4 units
- MATH 141, 4 units

ADDITIONAL UNIVERSITY REQUIREMENTS

The following requirements can overlap/double count with Knowledge Domain Courses or major requirements.

First-Year Seminar (FYS), 1 unit
- PSU 16, 1 unit

US Cultures (US), 3 units
- __________________________

International Cultures (IL), 3 units
- __________________________

Writing Across the Curriculum (WAC), 3 units
- __________________________

Integrative Studies (IS), 6 units
Must be two (paired) Linked courses (Z-suffix), or two (distinct) Inter-domain* courses (N-suffix)
- __________________________
- __________________________

*Inter-domain courses span across two different Knowledge Domains. One inter-domain course may count as 3 units toward each Domain, but 30 distinct units of Knowledge Domain courses (GN/GA/GH/GS/GHW) are required in total.

†Move-3 Substitution: A student may choose to shift 3 units of courses from the GN, GA, GH, or GS categories to either GN, GA, GH, GS, or GHW categories with the approval of an Academic Adviser.