

Roadmap: Biotechnology - Bachelor of Science
[AS-BS-BTEC]
College of Arts and Sciences
Department of Biological Sciences and Department of Chemistry
Catalog Year: 2009-2010

Critical requirements are boldface in shaded areas

| Course Subject and Title | Credit Hours | Upper Division | Min. Grade | Important Notes | |
|--|-----------------|-------------------|---------------|---|--|
| Semester One: [14-15 Credit Hours] | Hours | DIVISION | Grade | | |
| BSCI 10120 Biological Foundations | 4 | | | Fulfills LER Additional | |
| CHEM 10060 General Chemistry I | 4 | | | T dillio EEL () dallo i di | |
| CHEM 10062 General Chemistry I Laboratory | 1 | | | Fulfills LER Basic Sciences | |
| MATH 12002 Analytic Geometry and Calculus I or MATH 12021 Calculus for Life Sciences | 4-5 | | | | |
| US 10097 Destination Kent State: FYE | 1 | | | Not required for transfer students with 25 credits | |
| Semester Two: [15 Credit Hours] | | | | | |
| BSCI 30140 Cell Biology | 4 | • | | | |
| BTEC 10210 Introduction to Biotechnology | 3 | | | | |
| CHEM 10061 General Chemistry II | 4 | | | | |
| CHEM 10063 General Chemistry II Laboratory | 1 | | | | |
| ENG 11011 College Writing I | 3 | | | Enrollment based on placement tests; fulfills LER Composition | |
| Semester Three: [18-19 Credit Hours] | | | | | |
| Foreign Language (Elementary I) | 4-5 | | | | |
| BSCI 30171 General Microbiology | 4 | • | | | |
| CHEM 20481 Basic Organic Chemistry I | 4 | | | | |
| ENG 21011 College Writing II <i>or</i> LER Humanities or Fine Arts | 3 | | | Fulfills LER Composition | |
| PHIL 21001 Introduction to Ethics | 3 | | | Fulfills LER Humanities and global diversity requirements | |
| Semester Four: [16-17 Credit Hours] | | | | | |
| Foreign Language (Elementary II) | 4-5 | | | | |
| BSCI 30156 Elements of Genetics | 3 | | | | |
| CS 10051 Introduction to Computer Science | 4 | | | Fulfills LER Mathematics and Critical Reasoning | |
| PHY 13001 General College Physics I | 4 | | | Fulfills LER Basic Sciences | |
| PHY 13021 General College Physics Laboratory I | 1 | | | Tulling LETY Dasic Sciences | |
| Semester Five: [15 Credit Hours] | | | | | |
| BUS 10123 Exploring Business | 3 | | | | |
| MATH 30011 Basic Probability and Statistics or MATH 12022 Probability and Statistics for Life Sciences | 3 | | | Take MATH 30011 if MATH 12002 was taken; take MATH 12022 if MATH 12021 was taken | |
| PHIL 30015 Medicine and Morality | 3 | • | | | |
| LER Humanities or Fine Arts <i>or</i> ENG 21011 College Writing II | 3 | | | Should fulfill domestic diversity requirement; visit www.kent.edu/catalog and search "LER" | |
| LER Social Sciences | 3 | | | and "diversity" for course lists | |
| Semester Six: [16 Credit Hours] | | | | | |
| BSCI 40158 Molecular Biology | 3 | • | | | |
| CHEM 30284 Introductory Biological Chemistry | 4 | • | | | |
| LER Fine Arts | 3 | | | Should fulfill domestic diversity requirement if | |
| LER Social Sciences | 3 | | | not satisfied earlier; visit www.kent.edu/catalog and search "LER" and "diversity" for course lists | |
| Approved Elective (upper-division) | 3 | • | | See note on page 2 | |
| | • | | | | |



Roadmap: Biotechnology - Bachelor of Science

[AS-BS-BTEC]

College of Arts and Sciences

Department of Biological Sciences and Department of Chemistry Catalog Year: 2009-2010

See note below

| Course Subject and Title | Credit Hours | Upper Division | Min. Grade | Important Notes |
|--|-----------------|-------------------|---------------|---|
| Summer III: [3-6 Credit Hours] | | | | |
| BTEC 40192 Internship in Biotechnology or BTEC 40196 Individual Investigation in Biotechnology | 3-6 | • | | Registration for internship requires program director approval and is dependent on the availability of internship sites |
| Semester Seven: [16 Credit Hours] | | | | |
| BTEC 40191 Seminar: Recent Developments in Biotechnology | 1 | | | |
| BTEC 40210 Case Studies in Biotechnology | 3 | - | | |
| BTEC 40220 Bioinformatics | 2 | | | |
| CHEM 40248 Advanced Biological Chemistry | 4 | | | |
| LER Additional | 3 | | | Should fulfill domestic diversity requirement if not satisfied earlier; visit www.kent.edu/catalog and search "LER" and "diversity" for course lists |
| Approved Elective (upper-division) | 3 | | | See note below |
| Semester Eight: [8-11 Credit Hours] | | | | |
| BTEC 40192 Internship in Biotechnology or BTEC 40196 Individual Investigation in Biotechnology | 3-6 | • | | Registration for internship requires program director approval and is dependent on the availability of internship sites |
| CHEM 40251 Advanced Biological Chemistry Laboratory | 2 | | С | Fulfills writing-intensive course requirement |

Graduation Requirements Summary

Approved Elective (upper-division)

| | Total Hours | Upper-Division Liberal Education | | Diversity Course | Writing Intensity | Minimum | |
|--|-------------|----------------------------------|-------------------|-------------------|-------------------|-------------|-----|
| | Total Hours | Hours Requirements Hours | Global / Domestic | Writing-Intensive | Major GPA | Overall GPA | |
| | 121 | 42 | 45 | LER | CHEM 40251 | 2.0 | 2.0 |

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Note: Approved electives (9 credit hours, choose from the following:

| BSCI 40143 Eukaryotic Cell Biology | 3 | CHEM 30107 Analytical Chemistry Laboratory I | 1 | |
|--|---|---|-----|--|
| BSCI 40164 Molecular Systematics and Phylogenetics | 4 | CHEM 30301 Inorganic Chemistry I | | |
| | 4 | CHEM 30475 Organic Chemistry Laboratory I | 1 | |
| BSCI 40174 Immunology | 3 | CHEM 40567 Basic Concepts in Physical Chemistry | 4 | |
| BSCI 40556 Vertebrate Anatomy | 4 | PSYC 41363 Biopsychology | 3 | |
| CHEM 30105 Analytical Chemistry I | 2 | Upper-division courses approved by program director | 1-9 | |

Liberal Education Requirements (LER)

Students must complete a minimum 36 credit hours of Liberal Education Requirements. Colleges or degree programs may specify certain courses to fulfill the requirements. Courses in the students' major field will not count toward the completion of any LER. Honors equivalents shall satisfy the LER. None of the courses on the LER list may be taken with a pass/fail grade.

Diversity Course Requirement

Students must complete a two-course diversity requirement, consisting of one with a domestic focus and one with a global focus. One course must be come from the LER and cannot be in the student's major. The second course may be taken as a second LER; or within a major or minor; or as a general elective; or, with dean's approval, by completing one semester of study in another country.

Writing-Intensive Course Requirement

Students must complete a one-course writing-intensive requirement in their major and earn minimum C (2.00) grade.

Upper-Division Requirement

In general, baccalaureate programs require the successful completion of at least 39 upper-division (numbered 30000 to 49999) credit hours of coursework. Programs in the College of Arts and Sciences require a minimum of 42 hours of upper-division coursework.