Sample Curriculum: Chemistry Major-Biochem Track 1

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<th>Year 1</th>
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<td><strong>Fall Term</strong></td>
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| General Chemistry: CHEM 1230 and CHEM 1240 or CHEM 1350 (1350 recommended)  
*Prereq: High School Chem or CHEM 1090. Math 1220 or Math Placement Score of 41* | 4+1 or 5 | General Chemistry and General Chemistry Laboratory: CHEM 1270 or CHEM 1370 (1370 recommended) and CHEM 1280 or CHEM 1380 (1380 recommended).  
*Prereq: C or better in CHEM 1230/1240 or 1350.* |
| Calculus and Analytic Geometry IA: MATH 1340*  
*Prereq: C or better in Math 1280 or Math Placement Score of 61* | 3 | Calculus and Analytic Geometry IB: MATH 1350*  
*Prereq: C or better in Math 1340* |
| Introduction to Academic Writing: GSW 1110  
*Prereq: Placement Score* | 3 | Academic Writing: GSW 1120  
*Prereq: Placement Score or GSW 1110* |
| General Psychology: PSYC 1010 or Principles of Sociology: SOC 1010 | 3-4 | General Psychology: PSYC 1010 or Principles of Sociology: SOC 1010 |

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| Organic Chemistry: CHEM 3410  
*Prereq: CHEM 1270 or 1370 and CHEM 1280 or 1380* | 5 | Organic Chemistry: CHEM 3440 and Organic Chemistry Laboratory: CHEM 3450  
*Prereq: C or better in CHEM 3410* |
| College Physics I or University Physics I: PHYS 2010 or 2110  
*Prereq 2010: Math Placement or C or better in MATH 1200 or higher  
Prereq or Coreq 2110: MATH 1310 or 1350* | 5 | College Physics II or University Physics II: PHYS 2020 or 2120  
*Prereq 2020: PHYS 2010  
Prereq 2120: PHYS 2110  
Prereq or Coreq 2120: MATH 2320* |
| Calculus and Analytic Geometry II: MATH 2320  
*Prereq: C or better in MATH 1310 or 1350* | 5 | Concepts in Biology II: BIOL 2050 |
|  |  | Quantitative Chemical Analysis: CHEM 2010  
*Prereq: CHEM 1270 or CHEM 1370 and CHEM 1280 or CHEM 1380* |

*An alternative to the two-semester calculus sequence of MATH 1340 (3 credits) and MATH 1350 (3 credits) is the one semester course, MATH 1310 (5 credits)*
**Year 3**

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| General Biochemistry: CHEM 4450 and General Biochemistry Laboratory: CHEM 4460  
  Prereq: CHEM 3440 and CHEM 3450                                        | General Biochemistry: CHEM 4470  
  Prereq: CHEM 4450                                                          |
| Concepts in Biology I: BIOL 2040  
  Prereq 3130: CHEM 1230/1240 or CHEM 1350 and BIOL 2050                | BIOL 3130: Microbiology  
  Prereq: CHEM 1230/1240 or CHEM 1350 and BIOL 2050                      |
| Human Anatomy and Physiology I: BIOL 3310  
  Prereq: BIOL 1040 or BIOL 2050                                        | Human Anatomy and Physiology II: BIOL 3320  
  Prereq: BIOL 1040 or BIOL 2050                                          |
| Undergraduate Research: CHEM 4130  
  Prereq: Department Consent                                                 | Undergraduate Research: CHEM 4130  
  Prereq: Department Consent                                                 |
| Multidisciplinary Component                                               | Multidisciplinary Component                                                 |

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| Physical Chemistry: CHEM 4050  
  Prereq: MATH 2320 and CHEM 1270 or 1370 and PHYS 2020 or 2120      | Physical Chemistry: CHEM 4060  
  Prereq: CHEM 4050                                                        |
| Integrated Analytical and Physical Laboratory: CHEM 4070  
  Prereq or Coreq: CHEM 2010 and CHEM 4050                            | Integrated Analytical and Physical Laboratory: CHEM 4070  
  Prereq or Coreq: CHEM 2010 and CHEM 4050                              |
| Introduction to Statistics: Math 1150 or Fundamentals of Statistics: MATH 2470 or Quantitative Methods 1: PSYC 2700  
  Prereq 2470: C or better in MATH 1310 or MATH 1350  
  Prereq 2700: PSYC 1010 and MATH 1220                                  | BGP Arts/Humanities                                                     |
| Undergraduate Research: CHEM 4130  
  Prereq: Department Consent                                                 | Undergraduate Research: CHEM 4130  
  Prereq: Department Consent                                                 |
| BGP Arts/Humanities                                                    | Multidisciplinary Component                                              |
| International Perspective or Cultural Diversity**                     | International Perspective or Cultural Diversity**                        |

**An International Perspective (IP) course and a Cultural Diversity (CD) course need to be completed. Designated courses can simultaneously fulfill the IP or CD requirement and a BGP Arts & Humanities or BGP Social Science requirement.**

- A total of 122 units need to be completed for graduation.
- A foreign language requirement needs to be fulfilled either through high school credits or completion of appropriate BGSU courses. For those in the
Spanish track, SPAN 2030, Intermediate Spanish for the Professions, is recommended.

- Prepharmacy students should also take ECON 2020 (Principles of Microeconomics, which can count as a Multidisciplinary Component).
- Two approved BGP courses in the Arts and Humanities need to be completed.
- Two approved BGP courses in the Social Sciences need to be completed. These requirements can be fulfilled with SOC 1010 and PSYC 1010 which should be taken for MCAT preparation.
- A total of 4 classes are needed for the multidisciplinary component. One course can include Human Anatomy and Physiology I. Three more are needed from different disciplines. One more course needs to be at the 3000/4000 level.
- A total of 40 units at the 3000/4000 level needs to be completed for graduation. This requirement is fulfilled by completing the course plan listed above including the second multidisciplinary course at the 3000/4000 level.
- The following courses should ideally be completed by the end of Year 1: GSW 1110. GSW 1120. CHEM 1230 or CHEM 1350. CHEM 1270 or CHEM 1370.
- The following courses should be ideally completed at minimum by the end of Year 2: MATH 1310 or MATH 1350. CHEM 3410. CHEM 3440. CHEM 3450. PHYS 2010 or PHYS 2110. PHYS 2020 or PHYS 2120. Foreign Language Requirement. BIOL 2040. BIOL 2050.
- The following courses should be ideally completed at minimum by the end of Year 3: CHEM 2010. BIOL 3310. BIOL 3320. CHEM 4450. CHEM 4460. CHEM 4470. PSYC 1010. SOC 1010. MATH 2320.