

## SAMPLE Four-Year Plan

# B.S. Chemistry - Professional ACS Approved

The curriculum in the chemistry major is somewhat flexible in that there are some required sequences and it allows students to move through other coursework in many ways. This four-year plan illustrates one possible path a new student could take to complete a degree in four years. This is not an official document and is not the only way that a chemistry degree can be completed in four years. Current students should refer to their individual degree audit for specific graduation requirements. Courses in bold indicate major-based coursework that is completed in the first year.

### First Year

| Fall Semester                                    | Units     |
|--------------------------------------------------|-----------|
| English 101 Intro to College Writing and Reading | 3         |
| <b>Math 142 College Algebra</b>                  | 4         |
| <b>Chemistry 102 General Chemistry I</b>         | 5         |
| <b>Chemistry 184 New Chemist Seminar</b>         | 1         |
| Intrauniversity 104 New Student Seminar          | 1         |
| <b>Total Credits</b>                             | <b>14</b> |

| Spring Semester                                         | Units     |
|---------------------------------------------------------|-----------|
| English 102 Intro to College Writing, Reading, Research | 3         |
| <b>Math 151 Trigonometry</b>                            | 3         |
| <b>Chemistry 104 General Chemistry II</b>               | 5         |
| CORE 120 Historical or 140 Global Perspectives          | 3         |
| PEGNRL 192 Personal Health and Fitness for Life         | 1         |
| <b>Total Credits</b>                                    | <b>15</b> |

**Notes:** The math and English courses you will take during your first year will depend on UW System placement exam scores or ACT/SAT sub-scores. This four-year plan reflects the math and English courses most common for students in this major. All students are encouraged to complete placement testing prior to attending Warhawks SOAR (Student Orientation, Advising, and Registration).

**Opportunities:** Joining a university-sponsored club and actively participating is strongly encouraged. Involvement in a club or activity will help you develop interpersonal skills, give you the opportunity to learn and practice leadership skills, and adds to your resume.

### Second Year

| Fall Semester                                     | Units     |
|---------------------------------------------------|-----------|
| Math 253 Calculus and Analytic Geometry I         | 5         |
| Chemistry 251 Organic Chemistry I                 | 3         |
| Chemistry 261 Organic Chemistry Laboratory I      | 2         |
| Physics 140 (algebra) or 180 (calculus) Physics I | 5         |
| <b>Total Credits</b>                              | <b>15</b> |

| Spring Semester                                    | Units     |
|----------------------------------------------------|-----------|
| Math 254 Calculus and Analytic Geometry II         | 4         |
| Chemistry 252 Organic Chemistry II                 | 3         |
| Chemistry 262 Organic Chemistry Lab II             | 2         |
| Physics 141 (algebra) or 181 (calculus) Physics II | 5         |
| CORE 110 World or the Arts                         | 3         |
| <b>Total Credits</b>                               | <b>17</b> |

**Notes:** By completing the requirements of the Chemistry major, students complete the Bachelor of Science degree requirements. There are two different options for the two-semester physics sequence: Physics 140 Principles of Physics I and 141 Principles of Physics II (algebra-based) and Physics 180 Physics for Scientists and Engineers I and 181 Physics for Scientists and Engineers II (calculus-based). Your advisor can assist you in determining which sequence will be most appropriate for you based upon your future goals.

**Opportunities:** Undergraduate research is not required as part of the chemistry program but is highly recommended for students who have an interest in attending graduate school in the future. Completing a directed research project with a faculty mentor has many benefits: it develops a student's critical thinking and writing abilities, signals to graduate school programs that a student is prepared for independent research of their own, and it can provide a student with financial support since many undergraduate research opportunities are paid.



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**Third Year**

| Fall Semester                                   | Units     |
|-------------------------------------------------|-----------|
| Chemistry 352 Quantitative Analysis             | 5         |
| Chemistry 370 Physical Chemistry I              | 3         |
| Chemistry 470 Experimental Physical Chemistry I | 1         |
| CORE 130 Individual and Society                 | 3         |
| General Education elective                      | 3         |
| <b>Total Credits</b>                            | <b>15</b> |

| Spring Semester                                  | Units     |
|--------------------------------------------------|-----------|
| Chemistry 260 Inorganic Chemistry                | 4         |
| Chemistry 371 Physical Chemistry II              | 3         |
| Chemistry 471 Experimental Physical Chemistry II | 1         |
| Chemistry 480 Instrumental Methods of Analysis   | 4         |
| Communication 110 Intro to Human Communication   | 3         |
| <b>Total Credits</b>                             | <b>15</b> |

**Notes:** Many students in this major elect to complete a Mathematics minor though no minor is required. In addition to the math courses required in this major, students complete Math 255, 280 or 355, and six credits of math electives to complete the Mathematics minor.

**Opportunities:** An internship is not required for the chemistry major but can be a great opportunity for practical experience. An internship is an experiential learning opportunity that provides students with hands-on experience in a potential career field, supervision and coaching from prospective employers, and the ability to learn professional norms and behaviors. In addition, completing an internship allows students to differentiate themselves in a competitive job market. Students should begin planning for an internship by the beginning of the junior year and can complete the internship in the junior or senior year.

**Fourth Year**

| Fall Semester                                | Units        |
|----------------------------------------------|--------------|
| Chemistry 270, 455, 456, or 460              | 3-4          |
| Chemistry 454 Biochemistry of Macromolecules | 4            |
| Chemistry 484 Topics in Chemistry            | 1            |
| CORE 390 World of Ideas                      | 3            |
| U.S. Racial/Ethnic Diversity Requirement     | 3            |
| <b>Total Credits</b>                         | <b>14-15</b> |

| Spring Semester                    | Units        |
|------------------------------------|--------------|
| General Education elective         | 3            |
| General Education elective         | 3            |
| Electives to total 120 (if needed) | 6-9          |
|                                    |              |
|                                    |              |
| <b>Total Credits</b>               | <b>12-15</b> |

**Notes:** All students must earn 120 credits to earn a bachelor's degree and all requirements in this program can be completed in fewer than 120 credits. Most students have the opportunity to choose additional courses in the fourth year to expand skills, explore interests, or try something new.

**Opportunities:** LSINDP 399: Career Information in Letters and Sciences is a 1-credit course that focuses on career and graduate school opportunities; identifying skills, strengths, and work values; creating effective job search materials; developing a networking strategy; and planning for a successful post-graduation transition.

**Planning for Graduation:** Students are encouraged to apply for graduation one full semester prior to their intended graduation date. Information about commencement is on the Registrar's Office website (<http://www.uww.edu/registrar/graduation>) and the application for graduation is available to students in the WINS Student Information System.

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