

# SAMPLE Four-Year Plan

## B.S. Chemistry - Analytical/Instrumental Emphasis

### FALL 2023 Requirements

The curriculum in the chemistry major is flexible and allows students to move through the coursework in many ways. This four-year plan illustrates one possible path a new freshman 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 Academic Advising Report for specific graduation requirements. Courses in bold indicate major-based coursework that is completed in the first year.

#### First Year

Fall Semester	Units	Spring Semester	Units
English 101 Intro to College Writing and Reading	3	English 102 Intro to College Writing, Reading, Research	3
<b>Math 142 College Algebra</b>	4	<b>Math 151 Trigonometry</b>	3
<b>Chemistry 102 General Chemistry I</b>	5	<b>Chemistry 104 General Chemistry II</b>	5
<b>Chemistry 184 Introduction to Chemistry</b>	1	Gened CORE 130 Individual and Society	3
Intrauniversity 104 New Student Seminar	1	PEGNRL 192 Personal Health and Fitness for Life	1
<b>Total Credits</b>	<b>14</b>	<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. 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	Spring Semester	Units
Math 253 Calculus & Analytical Geometry I	5	Math 254 Calculus and Analytical Geometry II	4
Chemistry 352 Quantitative Analysis	5	Chemistry 251 Organic Chemistry I	3
Physics 140 (algebra) or 180 (calculus) Physics I	5	Chemistry 261 Organic Chemistry Lab I	2
		Physics 141 (algebra) or 181 (calculus) Physics II	5
		Gened CORE 110 World or the Arts	3
<b>Total Credits</b>	<b>16</b>	<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.



University of Wisconsin  
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### Third Year

Fall Semester	Units
Chemistry 252 Organic Chemistry II	3
Chemistry 370 Physical Chemistry I	5
Chemistry 470 Experimental Physical Chemistry I	1
Chemistry 454 Biochemistry of Macromolecules	3
Physics 221 Intermediate Laboratory	3
<b>Total Credits</b>	<b>15</b>

Spring Semester	Units
Chemistry 371 Physical Chemistry II	3
Chemistry 260 Inorganic Chemistry	4
Physics 324 Methods of Theoretical Physics	4
Gened CORE 140 Global or 120 Historical Perspectives	3
Communication 110 Intro to Human Communication	3
<b>Total Credits</b>	<b>17</b>

**Notes:** This major does require a minor and students can choose any approved minor. However, students in this major complete a Physics minor through completion of the physics courses required in this program.

**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 480 Instrumental Methods of Analysis	4
Physics 330, 344, 360 (select two)	4
Gened CORE 390 World of Ideas	3
U.S. Racial/Ethnic Diversity Course	3
General Education elective	3
<b>Total Credits</b>	<b>17</b>

Spring Semester	Units
Chemistry 481 Instrumental Design and Maintenance	1
Chemistry 484 Topics in Chemistry	1
Physics 330, 344, 360 (select two)	4
General Education elective	3
Elective course (if needed)	3
<b>Total Credits</b>	<b>12</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.

*Curriculum effective date: Fall 2020*



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