This program map is intended ONLY as a guide for students to plan their course of study. It does NOT replace any information in the Undergraduate Catalog, which is the official guide for completing degree requirements.
# Program Map

## Year 1

### Term 1: Fall

<table>
<thead>
<tr>
<th>Course/Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1: ENGL 1101 English Composition I</td>
<td>3</td>
</tr>
<tr>
<td>A2: MATH 1113 Precalculus</td>
<td>4</td>
</tr>
<tr>
<td>B1: XIDS 2002 First Year Seminar Course</td>
<td>2</td>
</tr>
<tr>
<td>B1: MATH 1634 Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>F: CHEM 1211/1211L Principles of Chemistry I + Lab</td>
<td>4</td>
</tr>
</tbody>
</table>

**Milestones:**
- Complete ENGL 1102 C or better
- Complete Chemistry II B or better

### Term 2: Spring

<table>
<thead>
<tr>
<th>Course/Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1: ENGL 1102 English Composition II</td>
<td>3</td>
</tr>
<tr>
<td>D1: MATH 1634 Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>F: CHEM 1212/1212L Principles of Chemistry 2 + Lab</td>
<td>4</td>
</tr>
<tr>
<td>B1, C, or E</td>
<td>3</td>
</tr>
</tbody>
</table>

**Milestones:**
- Complete ENGL 1102 C or better
- Complete Chemistry II B or better

16 Fall Credit Hours + 14 Spring Credit Hours = 30 Credit Hours

## Year 2

### Term 1: Fall

<table>
<thead>
<tr>
<th>Course/Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>F: MATH 2644 Calculus II</td>
<td>4</td>
</tr>
<tr>
<td>F: CHEM 2411/2411L Organic Chemistry I + Lab</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 2130 Sophomore Chemistry Seminar</td>
<td>1</td>
</tr>
<tr>
<td>D1: PHYS 2211/2211L Introductory Principles of Physics I + Lab</td>
<td>4</td>
</tr>
<tr>
<td>B1, C, or E</td>
<td>3</td>
</tr>
</tbody>
</table>

**Milestones:**
- Explore research projects/professors

### Term 2: Spring

<table>
<thead>
<tr>
<th>Course/Description</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 3422/3422L Organic Chemistry II + Lab</td>
<td>4</td>
</tr>
<tr>
<td>D1: PHYS 2212/2212L Principles of Physics II + Lab</td>
<td>4</td>
</tr>
<tr>
<td>B1, C, or E</td>
<td>3</td>
</tr>
<tr>
<td>ELECTIVE</td>
<td>3</td>
</tr>
</tbody>
</table>

**Milestones:**
- Complete Organic II and Physics II by the end of Year 2.

16 Fall Credit Hours + 14 Spring Credit Hours = 30 Credit Hours

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**Key**
- **Color:** Core Area and Credit Hours
- **Color:** Physical Chemistry Course
- **Color:** Chemistry Course
- **Color:** Elective Course
### Year 3

#### Term 1: Fall

- **CHEM 3310K**
  - Analytical Chemistry
  - 4 credit hours

- **CHEM 35XX**
  - Physical Chemistry (see note below)
  - 3 credit hours

- **CHEM 4083**
  - Faculty Directed Research
  - 1 credit hour

- **Bl. C. or E**
  - Elective
  - 3 credit hours

**Milestones:**
- CHEM 3310K may be taken in Year 2 summer

#### Term 2: Spring

- **CHEM 4330K**
  - Instrumental Analysis
  - 4 credit hours

- **CHEM 35XX**
  - Physical Chemistry (see note below)
  - 3 credit hours

- **CHEM 4083**
  - Faculty Directed Research
  - 1 credit hour

- **CHEM 4711**
  - Biochemistry
  - 3 credit hours

- **Elective**
  - 3 credit hours

**Milestones:**
- Complete two semesters CHEM 4083

14 Fall Credit Hours + 14 Spring Credit Hours = 28 Credit Hours

### Year 4

#### Term 1: Fall

- **CHEM 4610**
  - Inorganic Chemistry
  - 3 credit hours

- **CHEM 3550L**
  - Physical Chemistry Lab
  - 2 credit hours

- **CHEM 4083**
  - Faculty Directed Research
  - 1 credit hour

- **Bl. C. or E**
  - Elective
  - 3 credit hours

- **CHEM Elective**
  - 3 credit hours

- **Elective**
  - 4 credit hours

**Milestones:**
- Complete 4 credit hours of research (CHEM 4083)
- Complete thesis and oral presentation (CHEM 4084)

#### Term 2: Spring

- **CHEM 4913L**
  - Advanced Synthesis Laboratory
  - 2 credit hours

- **CHEM 4084**
  - Senior Seminar
  - 1 credit hour

- **CHEM 4083**
  - Faculty Directed Research
  - 1 credit hour

- **Bl. C. or E**
  - Elective
  - 3 credit hours

- **CHEM Elective**
  - 3 credit hours

- **Elective**
  - 3 credit hours

**Milestones:**
- Complete 4 credit hours of research (CHEM 4083)
- Complete thesis and oral presentation (CHEM 4084)

16 Fall Credit Hours + 16 Spring Credit Hours = 32 Credit Hours

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**Additional Information**
- **Physical Chemistry Courses:** Anywhere you see 35XX above, students can choose between Quantum Chemistry, Chemical Thermodynamics, and Structure, Bonding, & Reactivity with advisor approval/advice.
- **For Chemistry Electives:** Students are required to choose from: Advanced Organic, Spectroscopy, Materials Chemistry, Green Chemistry, and Physical Biochemistry.
- **All Other Electives:** Math and Science Electives are preferred. Students should work with their advisor to choose electives that will support and complement their life goals.
### READY

**FIRST YEAR**
- Choose Concentration (ACS track recommended)

**MIDDLE YEARS**
- Take Sophomore Seminar
- Complete Organic Chemistry sequence
- Complete Analytical Chemistry
- Complete other supporting courses (see Advisor to have a clear roadmap)

**LAST YEAR**
- Take Senior Seminar
- Take senior capstone course(s) and complete a senior project
- Complete all required courses for a degree

### SET

**FIRST YEAR**
- Connect with your faculty mentor
- Join clubs (Chemistry Association or Emerging Healthcare Leaders recommended)

**MIDDLE YEARS**
- Join a research group or seek for student employment (workshop leader, laboratory assistant)
- Attend program/department/college events
- Attend senior research presentations and on-campus conferences
- Study and hang out in the student lounge (TLC 2116)

**LAST YEAR**
- Attend program/department/college events
- Attend on-campus conferences
- Study and hang out in the student lounge (TLC 2116)

### GO

**FIRST YEAR**
- Look at the Chemistry Careers page on the American Chemical Society’s webpage

**MIDDLE YEARS**
- Explore internships or part-time jobs in career-related areas (industry, pharmacy, etc)
- Explore summer internships or REU programs
- Explore volunteer opportunities with a club or in career-related areas

**LAST YEAR**
- Re-examine career paths with a chemistry degree (ACS Career page, alumni connections, your own aptitude and interest)

### CRUSH YOUR COURSEWORK

**FIRST YEAR**
- Sign up for Handshake through Career Services

**MIDDLE YEARS**
- Sign up for Handshake through Career Services
- Create an account in LinkedIn
- Talk to alumni guest speakers and make connections

**LAST YEAR**
- Talk to alumni in a career field of interest, matched by your faculty mentor

### FIND YOUR PLACE

**FIRST YEAR**
- Look into on-campus self-care and stress resources especially Campus Center, Health Services, and Counseling Center
- Find study buddies
- Go to events, have fun (balance time between study, work, and fun)

**MIDDLE YEARS**
- Talk to your faculty mentor
- Look into on-campus self-care and stress resources especially Campus Center, Health Services, and Counseling Center
- Find study buddies
- Go to events, have fun (balance time between study, work, and fun)

**LAST YEAR**
- Talk to your faculty mentor
- Look into on-campus self-care and stress resources especially Campus Center, Health Services, and Counseling Center
- Find study buddies
- Go to events, have fun (balance time between study, work, and fun)

### BROADEN YOUR PERSPECTIVES

**FIRST YEAR**
- Look at the Careers page on the American Chemical Society’s webpage

**MIDDLE YEARS**
- Write preliminary resume
- Seek for resume-building opportunities related to your career goal (employment, research, activities, volunteering)

**LAST YEAR**
- Build hands-on experience through research and/or internships
- Update your resume or CV
- Apply for graduate schools, professional school, or jobs
- Make sure to get help from Career Services for cover letters, resume, application, and interviews

### CONNECT OFF-CAMPUS

**FIRST YEAR**
- Connect with your faculty mentor
- Join clubs (Chemistry Association or Emerging Healthcare Leaders recommended)

**MIDDLE YEARS**
- Join a research group or seek for student employment (workshop leader, laboratory assistant)
- Attend program/department/college events
- Attend senior research presentations and on-campus conferences
- Study and hang out in the student lounge (TLC 2116)

**LAST YEAR**
- Attend program/department/college events
- Attend on-campus conferences
- Study and hang out in the student lounge (TLC 2116)

### TAKE CARE OF YOURSELF

**FIRST YEAR**
- Sign up for Handshake through Career Services

**MIDDLE YEARS**
- Sign up for Handshake through Career Services
- Create an account in LinkedIn
- Talk to alumni guest speakers and make connections

**LAST YEAR**
- Talk to alumni in a career field of interest, matched by your faculty mentor

### PAVE YOUR PATH

**FIRST YEAR**
- Look at the Chemistry Careers page on the American Chemical Society’s webpage

**MIDDLE YEARS**
- Write preliminary resume
- Seek for resume-building opportunities related to your career goal (employment, research, activities, volunteering)

**LAST YEAR**
- Build hands-on experience through research and/or internships
- Update your resume or CV
- Apply for graduate schools, professional school, or jobs
- Make sure to get help from Career Services for cover letters, resume, application, and interviews
WHERE CAN YOU GO WITH THIS DEGREE?

- Analytical Chemist
- Chemical Engineer
- Geochemist
- Hazardous Waste Chemist
- Organic Chemist
- Pharmacologist
- Quality Control Chemist
- Synthetic Chemist
- Toxicologist
- Water Chemist