**Required Chemistry Courses: 54 Total Credits**

Please note that a grade of “C” or higher is required for all courses in the major.

<table>
<thead>
<tr>
<th>Course Prefix &amp; Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Pre-requisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ CHM 2045 □ CHM 2045L</td>
<td>General Chemistry I &amp; Lab</td>
<td>3/1</td>
<td>MAC 1105 and 1 year of High School Chemistry or CHM 2023</td>
</tr>
<tr>
<td>□ CHM 2046 □ CHM 2046L</td>
<td>General Chemistry II &amp; Lab</td>
<td>3/1</td>
<td>CHM 2045 &amp; Lab</td>
</tr>
<tr>
<td>□ CHM 2210 □ CHM 2210L</td>
<td>Organic Chemistry I &amp; Lab</td>
<td>4/1</td>
<td>CHM 2046 &amp; Lab</td>
</tr>
<tr>
<td>□ CHM 2211 □ CHM 2211L</td>
<td>Organic Chemistry II &amp; Lab</td>
<td>4/1</td>
<td>CHM 2210 &amp; Lab</td>
</tr>
<tr>
<td>□ CHM 3120C</td>
<td>Elementary Analytical Chemistry</td>
<td>4</td>
<td>CHM 2046 &amp; Lab</td>
</tr>
<tr>
<td>□ CHM 3610 □ CHM 3610L</td>
<td>Intermediate Inorganic Chemistry &amp; Lab</td>
<td>3/1</td>
<td>CHM 2046 &amp; Lab</td>
</tr>
<tr>
<td>□ BCH 4033 (Fall only)</td>
<td>Advanced Biochemistry I</td>
<td>3</td>
<td>CHM 2211, BSC 2010</td>
</tr>
<tr>
<td>□ CHM 3415C (Fall only)</td>
<td>Physical Chemistry Methods</td>
<td>4</td>
<td>CHM 2046/L and MAC 2312</td>
</tr>
<tr>
<td>□ CHM 4060</td>
<td>Use of Chemical Literature</td>
<td>1</td>
<td>CHM 2211</td>
</tr>
<tr>
<td>□ CHM 4410 (Fall only)</td>
<td>Physical Chemistry</td>
<td>4</td>
<td>CHM 2046/L, MAC 2312 &amp; PHY 2049/L</td>
</tr>
<tr>
<td>□ CHM 4410L</td>
<td>Physical Chemistry Lab</td>
<td>1</td>
<td>CHM 4410</td>
</tr>
<tr>
<td>□ CHM 4411 (Spring only)</td>
<td>Physical Chemistry II</td>
<td>4</td>
<td>CHM 2046 &amp; lab, MAC 2312, AND PHY 2054 &amp; lab or PHY 2049 &amp; lab</td>
</tr>
<tr>
<td>□ CHM 4611(Spring only)</td>
<td>Advanced Inorganic Chemistry</td>
<td>3</td>
<td>CHM 3610, CHM 4410 or Consent of Instructor</td>
</tr>
<tr>
<td>□ CHM 4130C (Fall only)</td>
<td>Methods of Chemical Analysis I</td>
<td>4</td>
<td>CHM 2211/L, CHM 3120C, CHM 4060 and CHM 4410</td>
</tr>
<tr>
<td>□ CHM 4131C (Spring only)</td>
<td>Methods of Chemical Investigation II</td>
<td>4</td>
<td>CHM 4130C</td>
</tr>
</tbody>
</table>

**Upper-Division Residency Requirement:** At least 9 credit hours of major-applicable upper-level courses must be completed at USF.

**Required Supporting Courses: 22 Credits**

It is suggested that B.S. students complete their Math and Physics requirements prior to their junior year.

**Mathematics Courses: 8 Credits**
- □ MAC 2311 Calculus I or MAC 2281 Engineering Calculus I
- □ MAC 2312 Calculus II or MAC 2282 Engineering Calculus II

**Physics Courses: 8 Credits**
- □ PHY 2048 & □ PHY 2048L Physics I and Lab
- □ PHY 2049 & □ PHY 2049L Physics II and Lab

**Required Natural Science Courses: 6 Credits**
- □ BSC 2010 Cellular Processes (3cr) *required*
- AND
- □ One (3cr) 3000/40000 level course applicable to a major in a Natural Science or Engineering Department such as: Biology, Geology, Math, Physics, Environmental Science, etc.
- OR
- □ One (3cr) 2000 level natural science course such as: BSC 2111, GLY 2010, EVR 2001, CGS 2060, EGN 2210

**Suggested Additional Electives – Do Not Count Towards The Major!**
- □ CHM 4932 Selected Topics in Chemistry (1-3cr)
- □ BCH 3023L Biochemistry Lab (2cr)
- □ CHM 4070 Historical Perspectives in Chemistry (3cr)
Students should regularly review their DegreeWorks audit to ensure they are on track to complete all graduation Requirements, and in preparation for all advising appointments.

If you are already declared as a Chemistry BS major, follow these steps to review your Degree Works report online:
- Go to http://Degreeworks.usf.edu
- Type in NetID and password
- View your degree audit! (DegreeWorks can also be accessed through Canvas and OASIS)

### General Education Common Core & Additional USF Enhanced General Education courses:

- **ENC 1101 (3cr)**
- **ENC 1102 (3cr)**
- **Gen Ed Core Social/Behavioral Sciences (3cr)**
  - (Select from: AMH 2020, ANT 2000, ECO 2013, POS 2041, PSY 2012, and SYG 2000)
- **Gen Ed Core Humanities (3cr)**
- **Enhanced General Education—Information & Data Literacy (3cr)**
- **Enhanced General Education – Ethical Reasoning & Civic Engagement (3cr)**
- **Enhanced General Education – Creative Thinking (3cr)**
- **Enhanced General Education – Human/Cultural Diversity (3cr)**
- **Enhanced General Education—High Impact Practice (3cr)**

### Civics Literacy Requirement
- Select from: AMH 2020: American History II (3cr) or POS 2041: American National Government (3cr)
- OR Complete the online Canvas test (pass with 60% or higher)

**120 credits:** A Bachelor’s degree requires a minimum of 120 credit hours.

**42 upper level credits:** All students are required to take at least 42 credits at the 3000 & 4000 level. Please note: The Chemistry BS major courses will satisfy _____ credits of the required 42 credits. Based on the number of upper level credits you have already taken, you have _____ upper level credits remaining, outside of the major courses.

**9 credit summer rule:** All students who enter USF with fewer than 60 credits are required to take at least 9 credits of course work in the summer at a State University System (SUS) 4-year University.

**12 cr of Gordon Rule Writing** ENC 1101 & ENC 1102, and two additional courses ______ & ______

**FLENT:** Foreign Language Entrance Requirement: All students must have two years of the same foreign language in high school. Students without this requirement must take two semesters of foreign language in college.

See the USF catalog for a complete list of graduation requirements. The final responsibility for meeting all graduation requirements stated in the catalog rests with the student. This sheet is not meant to be a complete list of University Graduation requirements.