

# CHEMISTRY

## CHEMISTRY PROGRAM - PROFESSIONAL OPTION

The Professional option is especially recommended for students who plan to pursue graduate studies in chemistry or related fields or those persons wishing to seek employment in industry as chemists.

### Curriculum

The matrix below is a sample plan for all coursework required for this program.

#### Freshman

Fall	Credits
ENGL 1013 Composition I <sup>1</sup>	3
SS 1XXX Social Science Courses <sup>1</sup>	3
MATH 2914 Calculus I	4
PHSC 1001 Orientation to Physical Science	1
CHEM 2124 General Chemistry I and CHEM 2120 General Chemistry I Lab	4
<b>Total Hours</b>	<b>15</b>

Spring	Credits
ENGL 1023 Composition II <sup>1</sup>	3
BIOL 1114 Principles of Biology	4
MATH 2924 Calculus II	4
PHSC 1011 Orientation to Physical Science II	1
CHEM 2134 General Chemistry II and CHEM 2130 General Chemistry II Lab	4
<b>Total Hours</b>	<b>16</b>

#### Sophomore

Fall	Credits
SS 1XXX Social Science Courses <sup>1</sup>	3
PHYS 2114 Calculus-Based Physics I and PHYS 2000 Physics Laboratory I	4
MATH 2934 Calculus III	4
COMS 2003 Microcomputer Applications or COMS 2803 Programming in C	3
CHEM 3254 Fundamentals of Organic Chemistry	4
<b>Total Hours</b>	<b>18</b>

Spring	Credits
USHG 1XXX U S HISTORY & GOVERNMENT <sup>1</sup>	3

Spring	Credits
PHYS 2124 Calculus-Based Physics II and PHYS 2010 Physics Laboratory II	4
CHEM 3245 Quantitative Analysis	5
CHEM 3264 Mechanistic Organic Chemistry	4
<b>Total Hours</b>	<b>16</b>

**Junior**

Fall	Credits
FAH 1XXX Fine Arts and Humanities Courses <sup>1</sup>	3
CHEM 3301 Chemistry Seminar	1
CHEM 3324 Physical Chemistry I	4
CHEM 3423 Descriptive Inorganic Chemistry	3
CHEM Elective <sup>2</sup>	3
<b>Total Hours</b>	<b>14</b>

Spring	Credits
FAH 1XXX Fine Arts and Humanities Courses <sup>1</sup>	3
SFHS 1XXX Social Sciences/Fine Arts/Humanities/Communication Courses <sup>1</sup>	3
CHEM 3334 Physical Chemistry II	4
Elective <sup>3</sup>	6
<b>Total Hours</b>	<b>16</b>

**Senior**

Fall	Credits
CHEM 3344 Principles of Biochemistry	4
CHEM 4401 Chemistry Seminar	1
CHEM 4414 Instrumental Analysis	4
CHEM 4433 Advanced Topics in Chemistry	3
<b>Total Hours</b>	<b>12</b>

Spring	Credits
CHEM 4424 Advanced Inorganic Chemistry	4
CHEM 4952 Undergraduate Research in Chemistry-4 or CHEM 4992 Special Problems in Chemistry-4	2-4
Elective <sup>3</sup>	7-5
<b>Total Hours</b>	<b>13</b>

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<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>2</sup>Excluding CHEM 1113 A Survey of Chemistry and CHEM 2204 Organic Physiological Chemistry.

<sup>3</sup>German, Statistics, and Technical Communications are encouraged. (Electives must include sufficient upper division courses to result in 40 upper division hours) (upper division = 3000-4000 level)