

## B.S. Computational Chemistry and Chemical Informatics Degree (SCCC)

*This is not an official list of degree requirements. Adjustments may be required due to curriculum changes.*

### First Year

Fall

Course	Credit
CH 1150 University Chemistry I AND	3
CH 1151 University Chemistry Lab 1 AND	1
CH 1153 University Chemistry I Recitation	1
CH 1130 PFDC 1: Orientation	1
PH 1100 Physics by Inquiry I	1
MA 1160 Calculus with Technology I	4
CS 1121 Intro to Programming I	3
UN 1015 Composition (OR UN 1025 Global Issues)	3
<b>Total</b>	<b>17</b>

Spring

Course	Credit
CH 1160 University Chemistry II AND	3
CH 1161 University Chemistry Lab II. AND	1
CH 1163 University Chemistry II Recitation	1
CS 1122 Intro to Programming II	3
MA 2160 Calculus with Technology II	4
PH 2100 University Physics I – Mechanics	3
UN 1025 Global Issues (OR UN 1015 Composition)	3
<b>Total</b>	<b>18</b>

### Second Year

Fall

Course	Credit
CH 2130 PDFC 2: Career Planning	2
CH 2430 Mechanistic Organic Chemistry	3
CH 2411 Organic Chemistry Lab I	1
MA 2321 Elementary Linear Algebra	2
PH 1200 Physics by Inquiry II	1
PH 2200 University Physics II – E&M	3
General Education: Critical & Creative Thinking	3
<b>Total</b>	<b>15</b>

Spring

Course	Credit
CH 2440 Synthetic Organic Chemistry	3
CH 2510 Introduction to Computational Chemistry and Chemical Informatics	3
CS 2321 Data Structures	3
General Education: Social Responsibility & Ethical Reasoning	3
General Education HASS	3
<b>Total</b>	<b>15</b>

### Third Year

Fall

Course	Credit
CH 3510 Physical Chemistry I	3
CH 4710 Biomolecular Chemistry I OR CH 4310 Inorganic Chemistry I	3
CS 2311 Discrete Structures	3
CS 1142 Programming at HW/SW Interface	3
MA 3520 Elementary Differential Equations	2
<b>Total</b>	<b>14</b>

Spring

Course	Credit
CH 3130 PDFC 3: Communication	1
CH 3520 Physical Chemistry II	3
MA 3160 Multivariable Calculus with Technology	4
CH 2212 Quantitative Analysis (5 cr.) or MA 2720 Statistical Methods (4 cr.)	4 or 5
General Education HASS	3
<b>Total</b>	<b>15 or 16</b>

### Fourth Year

Fall

Course	Credit
CS 4321 Introduction to Algorithms	3
Major-Approved Electives	6
Free Electives	3
General Education HASS	3
<b>Total</b>	<b>15</b>

Spring

Course	Credit
CH 4130 PDFC 4: Senior Seminar	2
CS 3425 Intro to Database Systems	3
Major-Approved Elective	3
Free Electives	4-5
General Education HASS	3
<b>Total</b>	<b>15-16</b>

**Grand Total = 125 Credits**

#### NOTES

Major-Approved Electives must be chosen from the specified Major Approved Elective list. CH 4990 Undergraduate Research is strongly recommended.

Free Electives – CH 4412 Spectroscopy of Organic Chemistry is recommended for 3 of these credits.

3 Units of co-curricular activities are required for degree program

By taking CS 3141 Team Software Project in addition to all CS courses required for this degree program, a minor in Computer Science can be completed.

Revised 08/17/2020