

# CHEMISTRY, BACHELOR OF ARTS (BA)

## Recommended Four-Year Plan

Course	Title	Hours
<b>First Year</b>		
<b>Fall</b>		
CHEM 107 & CHEM 111	General Chemistry I and General Chemistry I Lab	4
BIOL 114	Biology II: Foundations of Molecules, Genes and Cells with Lab	4
ENGL 102	Critical Writing	3
ESAP 101	FYRST Seminar *	1
Select one of the following:		3-4
MATH 120	Intermediate Algebra (if necessary)	
MATH 125	Precalculus (if necessary)	
MATH 225	Calculus I (if necessary)	
MATH 230	Calculus II	
<b>Hours</b>		<b>15-16</b>
<b>Spring</b>		
CHEM 108 & CHEM 112	General Chemistry II and General Chemistry II Lab	4
Select one of the following:		4
MATH 125	Precalculus (if necessary)	
MATH 225	Calculus I (if necessary)	
MATH 230	Calculus II	
Inquiry/Thread/Elective ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		3
SUBJ 139	Foundations of Academic Discovery	3
<b>Hours</b>		<b>14</b>
<b>Second Year</b>		
<b>Fall</b>		
CHEM 201 & CHEM 211	Organic Chemistry I and Organic Chemistry Laboratory I	4
Select one of the following:		4
MATH 225	Calculus I (if necessary)	
MATH 230	Calculus II	
PHYS 216	University Physics 1 with Lab	4
ENGL 104	Critical Reading	3
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
CHEM 202 & CHEM 212	Organic Chemistry II and Organic Chemistry Laboratory II	4
MATH 230	Calculus II	4
PHYS 217	University Physics 2 with Lab	4
Civil Discourse Requirement - select one		3
COMM 200	Civil Discourse: Theory & Practice	
PHIL 110	Ethics and Civil Discourse	
POLS 235	Civil Discourse and Democracy	

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**Hours** **18**

### Third Year

#### Fall

Select one of the following based on even or odd year: 7-8

In even years, select:

CHEM 335 Biochemistry I  
& CHEM 336 and Biochemistry Laboratory I

CHEM 442 Inorganic Chemistry

In odd years, select:

CHEM 301 Physical Chemistry 1  
& CHEM 321 and Physical Chemistry Laboratory I

CHEM 350 Analytical Chemistry  
& CHEM 351 and Analytical Chemistry Lab

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**Hours** **16-17**

#### Spring

Select one of the following: 7

In odd numbered years, select:

CHEM 452 Physical Inorganic Chemistry Laboratory

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In even years, select:

CHEM 302 Physical Chemistry II

CHEM 425 Instrumental Analysis  
& CHEM 426 and Instrumental Analysis Laboratory

Select one of the following In Depth Chemistry Electives (1 lecture and 1 lab): 4

CHEM 337 Biochemistry II  
& CHEM 338 and Biochemistry Laboratory II

CHEM 340 Air Quality Assessment

CHEM 370 Water Quality Assessment

CHEM 415 Forensic Analysis  
& CHEM 416 and Forensic Analysis Lab

CHEM 460 Materials Chemistry

CHEM 475 Advanced Organic Synthesis

CHEM 490 Independent Study

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**Hours** **17**

### Fourth Year

#### Fall

Select one of the following: 7-8

In even years, select:

CHEM 335 & CHEM 336	Biochemistry I and Biochemistry Laboratory I	
CHEM 442	Inorganic Chemistry	
In odd years, select:		
CHEM 301 & CHEM 321	Physical Chemistry 1 and Physical Chemistry Laboratory I	
CHEM 350 & CHEM 351	Analytical Chemistry and Analytical Chemistry Lab	
Inquiry/Thread/Elective ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		3
Inquiry/Thread/Elective ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		3
Inquiry/Thread/Elective ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		3
<b>Hours</b>		<b>16-17</b>
<b>Spring</b>		
Select one of the following:		7
In odd numbered years, select:		
CHEM 452	Physical Inorganic Chemistry Laboratory	
Inquiry/Thread/Elective ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		
Inquiry/Thread/Elective ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		
In odd years, select:		
CHEM 302	Physical Chemistry II	
CHEM 425 & CHEM 426	Instrumental Analysis and Instrumental Analysis Laboratory	
Select one of the following In Depth Chemistry Electives (1 lecture and 1 lab):		4
CHEM 337 & CHEM 338	Biochemistry II and Biochemistry Laboratory II	
CHEM 340	Air Quality Assessment	
CHEM 370	Water Quality Assessment	
CHEM 415 & CHEM 416	Forensic Analysis and Forensic Analysis Lab	
CHEM 460	Materials Chemistry	
CHEM 475	Advanced Organic Synthesis	
CHEM 490	Independent Study	
Inquiry/Thread/Elective ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		3
Inquiry/Thread/Elective ( <a href="https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/">https://catalog.sru.edu/undergraduate/rock-studies/rock-studies-program/</a> )		3
<b>Hours</b>		<b>17</b>
<b>Total Hours**</b>		<b>128-131</b>

<sup>1</sup> Course offered in multiple subjects; cannot take in first major subject

\* Students are encouraged to take ESAP 101 as a Free Elective.

**\*\* This document is meant to serve as a guide. Some planners may show more than 120 credits because faculty have created flexibility in choosing courses. However, only 120 credits are required to obtain a degree. Please consult with your academic adviser and refer to your curriculum guide prior to registering for courses. This plan should be reviewed, and verified, by you and your academic adviser at least once each academic year.**