

**B.S. in Chemistry, ACS-Certified Concentration (4+1 option)****Suggested Course Sequence for 8-semester plan**

See catalog for additional guidelines and requirements.

**Freshman Year**

<b>Fall</b>		<b>Spring</b>	
<i>Course</i>	<i>Credits</i>	<i>Course</i>	<i>Credits</i>
CHEM 139* - General Chemistry I	4	CHEM 140* - Advanced General Chemistry	4
MATH 153 - Calculus I	4	MATH 255 - Calculus II	4
1 <sup>st</sup> yr. seminar or ENGL 101	3	1 <sup>st</sup> yr. seminar or ENGL 101	3
LS** or elective	3	LS or elective	3
<i>total</i>	14	<i>total</i>	14

**Sophomore Year**

<b>Fall</b>		<b>Spring</b>	
<i>Course</i>	<i>Credits</i>	<i>Course</i>	<i>Credits</i>
CHEM 232* - Quantitative Analysis	4	CHEM 242 - Organic Chemistry II	3
CHEM 241 - Organic Chemistry I	3	CHEM 272* - Organic Chemistry Lab	2
MATH 256 - Calculus III	4	PHYS 230* - General Physics I	4
LS, elective or ENGL 202	3	LS, elective or ENGL 202	3
		LS or elective	3
<i>total</i>	14	<i>total</i>	15

**Junior Year**

<b>Fall</b>		<b>Spring</b>	
<i>Course</i>	<i>Credits</i>	<i>Course</i>	<i>Credits</i>
CHEM 321 - Inorganic Chemistry	3	CHEM 352 - Physical Chemistry I	3
CHEM 380* - Research in Chemistry	2	CHEM 370* - Instrumental Analysis I	4
PHYS 231* - General Physics II	4	CHEM 380* - Research in Chemistry	2
LS or elective	3	CHEM 495 - Seminar in Chemistry	1
LS or elective	3	LS or elective	3
		LS or elective	3
<i>total</i>	15	<i>total</i>	16

**Senior Year**

<b>Fall</b>		<b>Spring</b>	
<i>Course</i>	<i>Credits</i>	<i>Course</i>	<i>Credits</i>
CHEM 535* - Instrumental Analysis II	3	CHEM 361 - Principles of Biochemistry	3
CHEM 553 - Physical Chemistry II	3	CHEM 371* - Chemical Dynamics	2
CHEM 572* - Chemical Syntheses	2	LS or elective	3
LS or elective	3	LS or elective	3
LS or elective	3	LS or elective	4
LS or elective	3		
<i>total</i>	17	<i>total</i>	15

\* This course has a laboratory component.

\*\* LS = liberal studies course

**B.S. in Chemistry, ACS-Certified Concentration (4+1 option)****Program Requirements (Effective Fall 2011)***See catalog for additional guidelines and requirements.*

Term	Grade	Course	Hours
<b>Liberal Studies (C2 and C5 courses are met with major requirements)</b>			<b>33</b>
		First Year Seminar, 190 or 191	3
		C1: ENGL 101 - Writing and Rhetoric	3
		C1: ENGL 202 - Writing and Critical Inquiry	3
		C3: CMHC 201 - Intro. to Speech Communication	3
		C4: Wellness	3
		*P1: Social Science, course 1	3
		*P1: Social Science, course 2 ( <i>must be from a different discipline than course 1</i> )	3
		*P3: History	3
		*P4: Humanities	3
		*P5: Fine & Performing Arts	3
		*P6: World Cultures	3
		<i>*Note: at least one of the LS perspectives must be at the junior-senior level</i>	

<b>Chemistry Core</b>			<b>45</b>
		CHEM 139 - General Chemistry I	4
		CHEM 140 - Advanced General Chemistry	4
		CHEM 232 - Quantitative Analysis	4
		CHEM 241 - Organic Chemistry I	3
		CHEM 242 - Organic Chemistry II	3
		CHEM 272 - Organic Chemistry Lab	2
		CHEM 352 - Physical Chemistry I	3
		CHEM 361 - Principles of Biochemistry	3
		CHEM 370 - Instrumental Analysis I	4
		CHEM 371 - Chemical Dynamics	2
		CHEM 495 - Seminar in Chemistry	1
		MATH 153 - Calculus I	4
		PHYS 230 - General Physics I	4
		PHYS 231 - General Physics II	4

<b>ACS-Certified Concentration</b>			<b>23</b>
		CHEM 321 - Inorganic Chemistry	3
		CHEM 380 - Research in Chemistry (take two 2-credit sections)	4
		CHEM 535 - Instrumental Analysis II	3
		CHEM 553 - Physical Chemistry II	3
		CHEM 572 - Chemical Syntheses	2
		MATH 255 - Calculus II	4
		MATH 256 - Calculus III	4

<b>General Electives (Suggested Electives: PAR 230 (3), MATH 270 (3), ENGL 305 (3), CS 150 (4), CS 151 (4), additional 500-level chemistry courses, additional CHEM 380 sections)</b>			<b>19</b>

*Graduation Check*

- |   |  |
|---|--|
| <input type="checkbox"/> 30 hours of 300-400 level classes at WCU | <input type="checkbox"/> GPA in major $\geq 2.0$ |
| <input type="checkbox"/> Upper level perspective                  | <input type="checkbox"/> 120 total hour          |