

B.S. in Chemistry, General Concentration
Suggested Course Sequence for 8-semester plan
See catalog for additional guidelines and requirements (catalog.wcu.edu)

Freshman Year

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

Sophomore Year

Fall		Spring	
<i>Course</i>	<i>Credits</i>	<i>Course</i>	<i>Credits</i>
†CHEM 232* - Quantitative Analysis	4	†CHEM 242* - Organic Chemistry II	4
†CHEM 241* - Organic Chemistry I	4	†PHYS 230* - General Physics I	4
LS, elective or ENGL 202	3	LS, elective or ENGL 202	3
LS or elective	3	LS or elective	3
LS or elective	3		
<i>total</i>	17	<i>total</i>	14

Junior Year

Fall		Spring	
<i>Course</i>	<i>Credits</i>	<i>Course</i>	<i>Credits</i>
CHEM 352 - Physical Chem.: Thermo.	3	†CHEM 321 - Inorganic Chemistry	3
†PHYS 231* - General Physics II	4	†CHEM 370* - Instrumental Analysis I	4
CHEM 495 - Seminar in Chemistry	1	LS or elective	3
LS or elective	3	LS or elective	3
LS or elective	3	LS or elective	3
<i>total</i>	14	<i>total</i>	16

Senior Year

Fall		Spring	
<i>Course</i>	<i>Credits</i>	<i>Course</i>	<i>Credits</i>
CHEM 472* - Chemical Syntheses	1	†CHEM 361 - Principles of Biochemistry	3
†CHEM 372 – Chem. Therm. Lab*	1	CHEM 471* - Inorganic Syntheses	1
Chemistry elective	4	Chemistry elective	3
LS or elective	3	LS or elective	3
LS or elective	3	LS or elective	3
LS or elective	3	LS or elective	3
<i>total</i>	15	<i>total</i>	16

† This course is offered every semester

* This course has a laboratory component

** LS = liberal studies course

B.S. in Chemistry, General Concentration
Program Requirements (Effective Fall 2025)

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Term	Grade	Course	Hours
Liberal Studies (C2 and C5 courses are met with major requirements)			33
		First Year Seminar, 19X	3
		C1: ENGL 101 - Writing and Rhetoric	3
		C1: ENGL 202 - Writing and Critical Inquiry	3
		C3: COMM 201 - Foundations 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> <i>*Students entering WCU Fall 2025 and later must take either HIST 131(P1) or PSC 101(P1) to fulfill the Foundations of American Democracy requirement.</i>	

Chemistry Core			47
		CHEM 139 - General Chemistry I	4
		CHEM 140 - General Chemistry II (C- or better in CHEM139 lecture or B or better in CHEM132 required)	4
		CHEM 232 - Quantitative Analysis (passing grade in either MATH146 or MATH153 and a C- or better in CHEM140 lecture required)	4
		CHEM 241 - Organic Chemistry I (C- or better in CHEM140 lecture required)	4
		CHEM 242 - Organic Chemistry II (C- or better in CHEM241 lecture required)	4
		CHEM 321 - Inorganic Chemistry (C- or better in CHEM140 lecture required)	3
		CHEM 352 - Physical Chemistry: Chemical Thermodynamics (C- or better in CHEM232 and C- or better MATH153 required)	3
		CHEM 361 - Principles of Biochemistry (C- or better in CHEM242 lecture required)	3
		CHEM 370 - Instrumental Analysis I (C- or better in both CHEM232 and CHEM241(lecture) required)	4
		CHEM 372 – Chemical Thermodynamics Laboratory (Simultaneous enrollment or passing grade in CHEM352 required)	1
		CHEM 495 - Seminar in Chemistry	1
		MATH 153 - Calculus I (MATH146 or placement required)	4
		PHYS 230 - General Physics I (MATH152 or MATH153 required)	4
		PHYS 231 - General Physics II (Passing grade in PHYS230 required)	4

General Concentration (10 hours from elective choices (at least 6 hours must be CHEM): CHEM 330 (4), CHEM 411 (3), CHEM 421 (3), CHEM 435 (3), CHEM 440 (3), CHEM 441 (3), CHEM 442 (3), CHEM 445 (3), CHEM 450 (3), CHEM 453 (3), CHEM 454 (3), CHEM 455 (3), CHEM 461 (3), CHEM 462 (3), CHEM 463 (3), CHEM 464 (3), CHEM 465 (4), CHEM 473 (1), CHEM 475 (1), CHEM 493 (1-3) ENVH 310 (3), ENVH 311 (1), ENVH 312 (3), ENVH 375 (3), ENVH 440 (3), GEOL 423 (3), GEOL 465 (3), MATH 320 (3), MATH 340 (3), PHYS 310 (3), PHYS 322 (3), PHYS 493 (1-3))			16
		CHEM 471 - Inorganic Syntheses (C- or better in both CHEM242 (lecture and lab) and CHEM321 required)	1
		CHEM 472 – Organic Syntheses (C- or better in CHEM242 (lecture and lab) required)	1
		MATH 255 - Calculus II (Passing grade in MATH153 required)	4
		Elective I (see above)	3
		Elective II (see above)	3
		Elective III (4 credit) <i>or</i> Elective III (3 credit) and Elective IV (1 credit) (see above)	4

General Electives			24
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Graduation Check

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| ☐ 30 hours of 300-400 level classes at WCU | ☐ GPA in major ≥ 2.0 |
| ☐ Upper-level perspective | ☐ 120 total hours |