

B.S. in Chemistry, Premedical/Biomedical Science & Technology 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	BIOL 150* - General Biology I	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 130/230* - Intro./Gen. Physics I	4
BIOL 151* - General Biology II	4	LS, elective or ENGL 202	3
LS, elective or ENGL 202	3	LS or elective	3
<i>total</i>	15	<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
BIOL 240* - Introduction to Genetics	4	†CHEM 370* - Instrumental Analysis I	4
†PHYS 131/231* - Intro./Gen. Phys. II	4	LS or elective	3
CHEM 495 - Seminar in Chemistry	1	LS or elective	3
LS or elective	3	LS or elective	4
<i>total</i>	15	<i>total</i>	17

Senior Year

Fall		Spring	
<i>Course</i>	<i>Credits</i>	<i>Course</i>	<i>Credits</i>
BIOL 333* - Cell and Molecular Biology	4	†CHEM 361 - Principles of Biochemistry	3
†CHEM 372 – Chem. Therm. Lab*	1	Chemistry/Biology elective	4
LS or elective	3	LS or elective	3
LS or elective	3	LS or elective	3
LS or elective	3	LS or elective	4
<i>total</i>	14	<i>total</i>	17

† Courses are offered every semester

* This course has a laboratory component.

** LS = liberal studies course

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Program Requirements (Effective Fall 2025)

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 or Biol 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	1
		MATH 153 - Calculus I (MATH146 or placement required)	4
		PHYS 130 or 230 – Introductory/General Physics I (MATH152 or MATH153 required for PHYS230)	4
		PHYS 131 or 231 – Introductory/General Physics II (Passing grade in PHYS130 required for PHYS131; Passing grade in PHYS230 required for PHYS231)	4

Premedical/Biomedical Science & Technology Concentration (8 hours from elective choices (at least 3 hours must be CHEM): BIOL 311 (3), BIOL 412 (3), BIOL 413 (4), BIOL 414 (2), BIOL 418 (4), BIOL 419 (3), BIOL 421 (4), BIOL 423 (3), BIOL 424 (3), BIOL 461 (3), BIOL 467 (3), BIOL 474 (4), BIOL 478 (3), 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 455 (3), CHEM 461 (3), CHEM 462 (3), CHEM 463 (3), CHEM 464 (3), CHEM 465 (4), CHEM 471 (1), CHEM 472 (1), CHEM 473 (1), CHEM 475 (1), CHEM 493 (1-3), HSCC 322, HSCC 330, PAR 332, PAR 333			24
		BIOL 150 - General Biology I	4
		BIOL 151 - General Biology II (Passing grade in CHEM 139 required)	4
		BIOL 240 - Introduction to Genetics (C- or better in BIOL151 lecture required)	4
		BIOL 333 - Cell and Molecular Biology (C- or better in BIOL 240 lecture required)	4
		Elective (see above)	4
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General Electives [†] (Suggested Electives: concentration electives listed above, PAR 230 (3), BIOL 241 (4), BIOL 291 (4), BIOL 292 (4), MATH 255 (4), MATH 270 (3), CS 150 (4))			16

Graduation Check

- 0 30 hours of 300-400 level classes at WCU
- 0 Upper-level perspective

- 0 GPA in major ;: 2.0
- 0 120 total hours