

Introductory Courses - All Required				
Course Code	Course Title	Credits	Pre/Co-reqs	Semester Offered
CH142	Integrated Chemistry - Principles I	3		F,S
CH143	Integrated Chemistry - Principles I Lab	1	CH142	F,S
CH144	Integrated Chemistry - Principles II	3	CH142	F,S
CH145	Integrated Chemistry - Principles II Lab	1	CH144	F,S
CH210	Chemistry and Biochemistry Seminar	1	SO standing	F
		TOTAL:	9	

Foundational Courses - All Required				
Course Code	Course Title	Credits	Pre/Co-reqs	Semester Offered
CH222	Inorganic Chemistry (w/ Lab)	4	CH144	S
CH232	Organic Chemistry I	3	CH144	F
CH233	Organic Chemistry I Lab	1	CH232	F
CH252	Analytical Chemistry (w/ Lab)	4	CH144	S - EOY (odd years)
CH312	Biochemistry	3	CH232	F,S
CH247	Bioanalytical Lab (Biochemistry Lab)	1	CH232	F,S
CH352	Physical Chemistry I	3	CH144, MA130, PC200 or 202	F
CH353	Physical Chemistry Lab	1	CH352	F
		TOTAL:	20	

In-Depth Courses - ≥9 Credits Required				
Course Code	Course Title	Credits	Pre/Co-reqs	Semester Offered
CH332	Organic Chemistry II (w/ Lab)	4	CH232	S
CH354	Physical Chemistry II	3	CH352, PC201 or 203, MA230	S - EOY (odd)
CH372	Instrumental Methods	3	CH252	F - EOY (odd)
CH401	Advanced Organic Chemistry	3	CH332	S - EOY (even)
CH406	Advanced Inorganic Chemistry	3	CH222	F - EOY (even)
CH418	Advanced Biochemistry	3	CH312	F - EOY (odd)
CHX99	Special Topics Courses			
		TOTAL:	9	

Capstone Experiences - All required				
Course Code	Course Title	Credits	Pre/Co-reqs	Semester Offered
CH385	Advanced Chemistry Lab	2	Jr or Sr	S
CH489	Chemistry and Biochemistry Capstone	3	SR standing	F
		TOTAL:	5	

Support Courses - All Required				
Course Code	Course Title	Credits	Pre/Co-reqs	Semester Offered
MA130	Calculus I	4		F,S
PC-200/202	General Physics I/Intro. Physics I	3		F
PC-200L/202L	General Physics I/Intro. Physics I Lab	1		F
		TOTAL:	8	

POE TOTAL: 51

Preparation for graduate school

If you are interested in applying for graduate school in Chemistry, we highly recommend including:

Calculus II

Physics II with lab (Intro or General, Intro preferred)

CH 332 Organic Chemistry II

CH 354 Physical Chemistry II

ACS Certification

Juniata's Chemistry program is certified by the American Chemical Society, showing that it is a high quality program that prepares you for a career in the field. However, you may choose to earn ACS certification for your degree by taking some additional courses. You will need to take all the required courses, plus

Four in-depth courses (instead of three)

Calculus II

Physics II with lab (Intro or General)

Have at least 400 hours of lab.