Department of Chemistry

Dr. Jessica Epstein, *Chairperson*

The Chemistry Department offers an American Chemistry Society approved Chemistry degree, Bachelor of Science (BS), or the Bachelor of Arts (BA) degree. Students can also select a concentration in Forensic Science or Medicinal Chemistry as well as a minor in Chemistry or Medicinal Chemistry.

Chemistry Major (BS)

Degree of Bachelor of Science

CH-131	General Chem and Qualitative Analysis 1 (Core Natural Science)	3
CH-131L	Gen Chem and Qualitative Analysis 1 Lab	1
CH-132	General Chem and Qualitative Analysis 2 (Core Natural Science)	3
CH-132L	Gen Chem and Qualitative Analysis 2 Lab	1
CH-251	Organic Chemistry I	3
CH-251L	Organic Chemistry I Lab	1
CH-252	Organic Chemistry II	3
CH-252L	Organic Chemistry II Lab	1
CH-329	Analytical Chemistry	3
CH-329L	Analytical Chemistry Lab	1
CH-365	Physical Chemistry I	3
CH-365L	Physical Chemistry I Lab	1
CH-366	Physical Chemistry II	3
CH-366L	Physical Chemistry II Lab	1
CH-449	Inorganic Chemistry	3
CH-449L	Inorganic Chemistry Lab	1
CH-460	Instrumental Analysis	3
CH-499	Research in Chemistry (Capstone, WI)	3
MA-143	Differential Calculus (Core Math)	4
MA-144	Integral Calculus (Core Math)	4
MA-273	Multivariable Calculus I	4
PC-185	General Physics I	3
PC-187	General Physics Laboratory I	1
PC-186	General Physics II	3
PC-188	General Physics Laboratory II	1
Total Credits		58

Chemistry Major with a Concentration in Forensic Science (BS)

CH-131	General Chem and Qualitative Analysis 1 (Core Natural Science)	3
CH-131L	Gen Chem and Qualitative Analysis 1 Lab	1
CH-132	General Chem and Qualitative Analysis 2 (Core Natural Science)	3
CH-132L	Gen Chem and Qualitative Analysis 2 Lab	1
CH-251	Organic Chemistry I	3
CH-251L	Organic Chemistry I Lab	1
CH-252	Organic Chemistry II	3
CH-252L	Organic Chemistry II Lab	1
CH-329	Analytical Chemistry	3
CH-329L	Analytical Chemistry Lab	1

CH-365	Physical Chemistry I	3
CH-365L	Physical Chemistry I Lab	1
CH-366	Physical Chemistry II	3
CH-366L	Physical Chemistry II Lab	1
CH-460	Instrumental Analysis	3
CH-499	Research in Chemistry (Capstone, WI)	3
MA-143	Differential Calculus (Core Math)	4
MA-144	Integral Calculus (Core Math)	4
MA-273	Multivariable Calculus I	4
PC-185	General Physics I	3
PC-187	General Physics Laboratory I	1
PC-186	General Physics II	3
PC-188	General Physics Laboratory II	1
Additional courses:		
BI-183	General Biology I	3
BI-185	General Biology I Lab	1
CH-361	Criminalistics & Forensic Science	3
CH-442	Biochemistry I	3
CJ-170	Intro to Criminal Justice	3
CJ-405	Crime Investigation	3
Total Credits		70

Special Notes on Requirements for Chemistry Majors

[1] CH-361/BI-361 Criminalistics & Forensic Science is required for the concentration in Forensic Science is a cross-listed course, team-taught by members of the Chemistry and Biology Departments.

[2] CH-499 Research in Chemistry is a senior research course. For students with a concentration in Forensic Science, this course would be satisfied by an internship in a forensic science laboratory (preferred) or by research on a forensic science topic.

Chemistry Major (BA)

Degree of Bachelor of Arts

CH-131	General Chem and Qualitative Analysis 1 (Core Natural Science)	3
CH-131L	Gen Chem and Qualitative Analysis 1 Lab	1
CH-132	General Chem and Qualitative Analysis 2 (Core Natural Science)	3
CH-132L	Gen Chem and Qualitative Analysis 2 Lab	1
CH-251	Organic Chemistry I	3
CH-251L	Organic Chemistry I Lab	1
CH-252	Organic Chemistry II	3
CH-252L	Organic Chemistry II Lab	1
CH-329	Analytical Chemistry	3
CH-329L	Analytical Chemistry Lab	1
CH-347	Principles of Physical Chemistry	3.00
CH-442	Biochemistry I	3
CH-442L	Biochemistry 1 Lab	1
CH Elective (choose any 300 or 400 level course) [1]		3
MA-132	Statistics for Life Sciences (Core Math) [2]	3
MA-133	Calculus for the Life Sciences (Core Math) [2]	4
BI-183	General Biology I	3

BI-185	General Biology I Lab	1
BI-184	General Biology II	3
BI-186	General Biology II Lab	1
PC-185	General Physics I	3
PC-187	General Physics Laboratory I	1
PC-186	General Physics II	3
PC-188	General Physics Laboratory II	1
Total Credits		53

Special Note on Requirements

1 Choose any 300 or 400 level Chemistry course as an elective. CH-353 Medicinal Chemistry, CH-443 Biochemistry II, CH-449 Inorganic Chemistry, CH-460 Instrumental Analysis or CH-499 Research in Chemistry. (capstone, WI).

2 Students may substitute MA-143 Differential Calculus and MA-144 Integral Calculus.

Medicinal Chemistry Major

Degree of Bachelor of Science

CH-131	General Chem and Qualitative Analysis 1 (Core Natural Science)	3
CH-131L	Gen Chem and Qualitative Analysis 1 Lab	1
CH-132	General Chem and Qualitative Analysis 2 (Core Natural Science)	3
CH-132L	Gen Chem and Qualitative Analysis 2 Lab	1
CH-251	Organic Chemistry I	3
CH-251L	Organic Chemistry I Lab	1
CH-252	Organic Chemistry II	3
CH-252L	Organic Chemistry II Lab	1
CH-329	Analytical Chemistry	3
CH-329L	Analytical Chemistry Lab	1
CH-347	Principles of Physical Chemistry	3
CH-353	Medicinal Chemistry	3
CH-442	Biochemistry I	3
CH-442L	Biochemistry 1 Lab	1
CH-443	Biochemistry II	3
CH-443L	Biochemistry II Lab	1
CH-449	Inorganic Chemistry	3
CH-449L	Inorganic Chemistry Lab	1
CH-460	Instrumental Analysis	3
CH-499	Research in Chemistry (Capstone, WI)	3
PC-185	General Physics I	3
MA-132	Statistics for Life Sciences	3
MA-133	Calculus for the Life Sciences	4
PC-187	General Physics Laboratory I	1
PC-186	General Physics II	3
PC-188	General Physics Laboratory II	1
Total Credits		59

Chemistry Minor

CH-131	General Chem and Qualitative Analysis 1 (Core Natural Science)	3
CH-131L	Gen Chem and Qualitative Analysis 1 Lab	1

CH-132	General Chem and Qualitative Analysis 2 (Core Natural Science)	3
CH-132L	Gen Chem and Qualitative Analysis 2 Lab	1
CH-251	Organic Chemistry I	3
CH-251L	Organic Chemistry I Lab	1
CH-252	Organic Chemistry II	3
CH-252L	Organic Chemistry II Lab	1
Choose 3 courses (7 credits)	300 or 400 level chemistry courses 2 lectures and 1 lab	7
Total Credits		23

Medicinal Chemistry Minor (26 Credits)

CH-131	General Chem and Qualitative Analysis 1	3
CH-131L	Gen Chem and Qualitative Analysis 1 Lab	1
CH-132	General Chem and Qualitative Analysis 2	3
CH-132L	Gen Chem and Qualitative Analysis 2 Lab	1
CH-251	Organic Chemistry I	3
CH-251L	Organic Chemistry I Lab	1
CH-252	Organic Chemistry II	3
CH-252L	Organic Chemistry II Lab	1
CH-329	Analytical Chemistry	3
CH-329L	Analytical Chemistry Lab	1
CH-353	Medicinal Chemistry	3
CH-442	Biochemistry I	3
Total Credits		26

Special Note on Requirements

[1] Biochemistry and Biotechnology majors who choose to minor in Medicinal Chemistry select an additional 4 credit 300 or 400 level chemistry course not indicated on this list. CH-460 or CH-449 with CH-449L is suggested.