

AMERICAN CHEMICAL SOCIETY (ACS) MAJOR

Major Requirements

The department also offers an American Chemical Society (ACS) major in chemistry, which is of value for students pursuing a career in chemistry and/or an advanced degree in chemistry or a related field. Within the ACS major students may choose to focus on various concentrations.

The concentrations available are called traditional, biochemistry or neurochemistry. Students typically choose an ACS major with the traditional concentration if they are interested in a professional career in chemistry or an allied field. Students specifically interested in working in the area of neuroscience or biochemistry are encouraged to consider these concentrations.

The requirements for an **ACS major in chemistry** are 62 to 70 credits:

Code	Title	Hours
General Training		
CHEM 127 & CHEM 128	General Chemistry I and General Chemistry II	8
MATH 121 & MATH 122	Calculus I and Calculus II	8
Select one of the following:		8
PHYS 111 & PHYS 112	General College Physics I and General College Physics II	
PHYS 128 & PHYS 211	Physics for Scientists and Engineers and Physics for Scientists and Engineers II	
CHEM 330	Analytical Chemistry I	4
CHEM 341	Organic Chemistry I	4
CHEM 342	Organic Chemistry II	4
CHEM 351	Physical Chemistry I	4
CHEM 373	Biochemistry I	4
CHEM 462	Advanced Inorganic Chemistry	4
CHEM 403 & CHEM 404	Senior Seminar I and Senior Seminar II	2
Concentration		
Select a concentration from Traditional, Biochemistry or Neurochemistry		14-23
Total Hours		64-73

Concentrations for an American Chemical Society (ACS) Major in Chemistry

Traditional Concentration

In-depth Training

Code	Title	Hours
CHEM 352	Physical Chemistry II	4
CHEM 397	ACS Research	0
CHEM 431	Analytical Chemistry II	4
Select 4 credits from the following:		4
CHEM 344	Spectroscopy	
CHEM 374	Biochemistry II	
CHEM 445	Organic Chemistry III	

CHEM/NEU 475	Neurochemistry	
Total Hours		12

Biochemistry Concentration

Code	Title	Hours
BIOL 121	Cell Biology	4
CHEM 374	Biochemistry II	4
CHEM 398	ACS Research	0
CHEM/NEU 475	Neurochemistry	4
4 additional credits from biology		4
Select 4 credits from the following:		4
CHEM 344	Spectroscopy	
CHEM 352	Physical Chemistry II	
CHEM 431	Analytical Chemistry II	
CHEM 445	Organic Chemistry III	
Total Hours		20

Neurochemistry Concentration

Code	Title	Hours
CHEM 374	Biochemistry II	4
CHEM 398	ACS Research	0
CHEM/NEU 475	Neurochemistry	4
NEU 109	Introduction to Neuroscience	4
NEU 252	Physical Neuroscience	4
Select 4 credits from the following:		4
CHEM 344	Spectroscopy	
CHEM 352	Physical Chemistry II	
CHEM 431	Analytical Chemistry II	
CHEM 445	Organic Chemistry III	
Total Hours		20

Degree and Graduation Requirements

In addition to the program-specific requirements listed above, all students must complete the graduation requirements specified for their degree. See the Degree and Graduation Requirements (<https://catalog.concordiacollege.edu/undergraduate-academic-community/degree-graduation-requirements/>) section for more information.