CHEMISTRY - PRE-HEALTH PROFESSIONS CONCENTRATION (CHM-PM)

Department: Chemistry and Biochemistry (https://catalog.bradley.edu/undergraduate/liberal-arts-sciences/chemistry-biochemistry/)

This concentration is designed to provide curricular flexibility to students who are interested in studying chemistry while preparing to attend medical (allopathic, osteopathic, or veterinary), pharmacy, optometry, or dental school. Students in this concentration will work closely with their departmental advisor and a University Health Professions Advisor to select elective courses that best meet their career objectives.

All students must complete the Chemistry and Biochemistry Common Curriculum Requirements and Concentration Requirements (below).

Chemistry and Biochemistry Common Curriculum

Code	Title	Hours
CHM 110	General Chemistry I	3.0
CHM 111	General Chemistry I Lab	1.0
CHM 114	Chemistry of the Elements	1.0
CHM 116	General Chemistry II	3.0
CHM 117	General Chemistry II Laboratory	1.0
CHM 252	Organic Chemistry I	3.0
CHM 253	Organic Chemistry Laboratory I	2.0
CHM 256	Organic Chemistry II	3.0
CHM 257	Organic Chemistry Laboratory II	1.0
CHM 320	Quantitative Analysis	3.0
CHM 321	Quantitative Analysis Laboratory	1.0
CHM 360	Biochemistry	3.0
CHM 380	Junior Seminar in Chemistry and Biochemistry	1.0
CHM 480	Senior Seminar in Chemistry and Biochemistry	1.0
BIO 151	Molecules to Cells	3.0
Total Hours		**30**

Concentration Requirements

Code	Title	Hours
CHM 361	Biochemistry Laboratory	1.0
Select one of the following:		3.0
CHM 370	Principles of Physical Chemistry	
CHM 470	Physical Chemistry I	
CHM 570	Physical Chemistry I	
CHM 476	Physical Chemistry II	
CHM 576	Physical Chemistry II	
CHM 436	Inorganic Chemistry	3.0
or CHM 536	Inorganic Chemistry	
BIO 152	Molecules to Cells Laboratory	1.0
BIO 230	Human Anatomy and Physiology I (Lecture)	3.0
BIO 232	Human Anatomy and Physiology II (Lecture)	3.0
Select one year of college-level physics:		8.0
PHY 110 & PHY 201	University Physics I and University Physics II	
PHY 107 & PHY 108	General Physics I and General Physics II	
Select two semesters of calculus:		7.0-8.0
MTH 121 & MTH 122	Calculus I and Calculus II	
MTH 115 & MTH 116	Brief Calculus With Applications I and Brief Calculus With Applications II	
Select one of the following Statistics options:		3.0
Option A. Select one of the following:		
MTH 111	Elementary Statistics	
MTH 325	Probability and Statistics I	
PSY 205	Quantitative Methods	
Option B. Complete both the following:		
BIO 260	Biological Statistics I	
BIO 261	Biological Statistics II	
Select 19-20 additional elective hours with courses from each of the following Pools:		
Elective Pool A		
Select two of the following:		6.0
ECO 221	Principles of Microeconomics	
or ECO 222	Principles of Macroeconomics	
PSY 101	Principles of Psychology	
SOC 100	The Sociological Perspective	
Elective Pool B (1 course with lab)		
Select one of the following:		4.0
BIO 310 & BIO 311	Genetics and Genetics laboratory	
BIO 406	General Microbiology	
Elective Pool C		
Select 9-10 hours of additional CHM/BIO electives		
Select one of the following:		1.0-4.0
CHM 417	Experimental Design Laboratory	
or CHM 517		
CHM 420	Instrumental Analysis	
or CHM 520	Instrumental Analysis	
CHM 499	Directed Studies in Chemistry and Biochemistry	
The remaining hours can be additional CHM courses (numbered above CHM 301) or biology courses selected from the list below:		
BIO 231	Human Anatomy and Physiology Laboratory I	
BIO 233	Human Anatomy and Physiology Laboratory II	
BIO 250	Organismal Biology	
BIO 251	Ecology, Evolution and Biodiversity	
BIO 252	Ecology, Evolution and Biodiversity Laboratory	
BIO 310	Genetics	
BIO 311	Genetics laboratory	
BIO 351	Human Histology	
BIO 406	General Microbiology	
BIO 408	Bacterial Pathogenesis	
BIO 464	Cell Biology	
BIO 468	Immunology of Host Defense	
BIO 482	Endocrinology	

BIO 484	Neurophysiology	
Total Hours		**43-47**

Total hours required for the CHM-PM concentration: 81-83.