

CHEMISTRY B.S.

Overview

The chemistry major at D'Youville prepares students in the traditional foundational areas of chemistry: inorganic, organic, physical, analytical and biochemistry. A degree in chemistry offers a wide variety of career opportunities. You may use your degree to teach high school, enter directly into industry or go to graduate school and become a university professor or a senior researcher in an industrial R&D laboratory. A chemistry degree can also prepare you for post-graduate work in medicine, dentistry, business or law. Fields such as patent law, international law, environmental law, pharmaceutical sales and management are all accessible to students who begin their education with a chemistry degree.

B.S. Program

Students are required to take the following courses with their corresponding laboratories: General Chemistry I (CHE-101), General Chemistry II (CHE-102), Organic Chemistry (CHE-219), Organic Chemistry II (CHE-220), Biochemistry (CHE-303), Physical Chemistry I (CHE-311), Physical Chemistry II (CHE-312), Analytical Chemistry (CHE-331), Instrumental Analysis (CHE-332) and Inorganic Chemistry (CHE-401). In addition, the student must choose to take either Spectroscopy (CHE-412) or Survey of Organometallic Chemistry (CHE-421). Other required courses include the following: General Physics I (PHY-101), Gen Physics Lab I (PHY-101L), General Physics II (PHY-102), Gen Physics Lab II (PHY-102L), Calculus I (MAT-125), Calculus II (MAT-126), Calculus III (MAT-202) and a CSC course.

A chemistry degree combined with a biology minor is an excellent gateway into the medical profession. Many medical school applicants possess chemistry degrees coupled with key biology courses to enhance their submission. These courses are also available to you at D'Youville (e.g., human gross anatomy). Since the chemistry major is housed within the department of math and natural sciences, chemistry students are provided all of the graduate school and medical school entrance examination support as well as the utilization of the pre-medical advisory committee in the department.

Program Requirements

Students within the department must maintain a minimum of 2.0 G.P.A. in courses taken at D'Youville in coursework required for their major. Students who fail to earn this G.P.A. will be placed on probation in the major. Probation may continue for a maximum of three consecutive semesters or a total of four nonconsecutive semesters. Students who exceed these limits will be dismissed from the major. Students may appeal these decisions on academic status by submitting, in writing to the department chairperson, reasons why exceptional consideration may be justified.

Course Requirements for the Major

Code	Title	Credits
	General Education Requirements	30
	Chemistry courses	45
	Additional mathematics and natural science courses	20
	Liberal Arts and Science Electives	27
	Total Credits	122

In the Specific Areas of Concentration

Code	Title	Credits
CHE-101	General Chemistry I	3
CHE-101L	General Chemistry Laboratory	1
CHE-102	General Chemistry II	3
CHE-102L	General Chemistry Laboratory II	1
CHE-219	Organic Chemistry	3
CHE-219L	Organic Chemistry Lab	1
CHE-220	Organic Chemistry II	3
CHE-220L	Organic Chemistry II Lab	1
CHE-303	Biochemistry	3
CHE-303L	Biochemistry Laboratory	1
CHE-311	Physical Chemistry I	3
CHE-311L	Physical Chemistry I Lab	1
CHE-312	Physical Chemistry II	3
CHE-312L	Physical Chemistry II Lab	1
CHE-331	Analytical Chemistry	4
CHE-332	Instrumental Analysis	4
CHE-401	Inorganic Chemistry	3
Select two of the following electives:		6
CHE-351	Medicinal Chemistry	
CHE-412	Spectroscopy	
CHE-421	Survey of Organometallic Chemistry	
CHE-499	Capstone Experience	
Total Credits		45

In Other Academic Areas Required for the Major

Code	Title	Credits
PHY-101	General Physics I	3
PHY-101L	Gen Physics Lab I	1
PHY-102	General Physics II	3
PHY-102L	Gen Physics Lab II	1
MAT-125	Calculus I	4
MAT-126	Calculus II	4
MAT-202	Calculus III	4
Total Credits		20

Chemistry/MBA option

Code	Title	Credits
General Education Requirements and other Electives		33
CHE-101	General Chemistry I	3
CHE-101L	General Chemistry Laboratory	1
CHE-102	General Chemistry II	3
CHE-102L	General Chemistry Laboratory II	1
CHE-219	Organic Chemistry	3
CHE-219L	Organic Chemistry Lab	1
CHE-220	Organic Chemistry II	3
CHE-220L	Organic Chemistry II Lab	1
CHE-303	Biochemistry	3
CHE-303L	Biochemistry Laboratory	1
CHE-311	Physical Chemistry I	3
CHE-311L	Physical Chemistry I Lab	1

CHE-312	Physical Chemistry II	3
CHE-312L	Physical Chemistry II Lab	1
CHE-331	Analytical Chemistry	4
CHE-332	Instrumental Analysis	4
CHE-401	Inorganic Chemistry	3
Take 2 of the following 4 courses		6
CHE-351	Medicinal Chemistry	
CHE-412	Spectroscopy	
CHE-421	Survey of Organometallic Chemistry	
CHE-499	Capstone Experience	
In other areas:		
MAT-125	Calculus I	4
MAT-126	Calculus II	4
MAT-202	Calculus III	4
PHY-101	General Physics I	3
PHY-101L	Gen Physics Lab I	1
PHY-102	General Physics II	3
PHY-102L	Gen Physics Lab II	1
In Business Department (during years 1-4)		
ACC-211	Principles of Accounting I	3
ACC-212	Principles of Accounting II	3
ECO-201	Macroeconomics	3
ECO-202	Microeconomics	3
MGT-305	Principles of Management	3
MBA-501	Business Methods Statistics	3
MBA-604	Human Resources Management	3
MBA-603	Financial & Management Accounting	3
MBA Courses (year 5)		
MBA-602	Theories of Economics	3
MBA-606	Operations Management	3
MBA-611	Organizational Leadership	3
MBA-612	Legal Environment in Business	3
MBA-615	Marketing Management	3
MBA-616	Corporate Finance	3
MBA-623	Special Topics in Business Management	3
MBA-624	Global Supply Chain Management	3
MBA-655	Strategic Management	3
Total Credits		149

Admission into the B.S. in chemistry program requires a minimum high school average of 85 percent and a rank in the top 50 percent of one's class. Transfer students are required to have a minimum G.P.A. of 2.5.