Chemistry- Bachelor of Science

For information, contact the Department of Chemistry and Biochemistry, 160 Hughes Laboratories, 513-529-2813.

This program is usually chosen by students who want to enter the chemical industry or graduate school in chemistry, biochemistry, or related areas. Chemistry and required related courses cannot be taken on a credit/no-credit basis.

Program Requirements

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(45-46 semester hours, plus 21-23 related hours)

Code	Title	Credit Hours
Core courses		
Select one of the following:		3-4
CHM 141	College Chemistry	
CHM 141H	College Chemistry	
CHM 141R	College Chemistry	
Select one of the following:		3
CHM 142	College Chemistry	
CHM 142M	College Chemistry for Majors	
CHM 142H	College Chemistry	
Select one of the following:		2
CHM 144M	College Chemistry Laboratory for Majors	
CHM 144	College Chemistry Laboratory (with approval)	
Select one of the following:		2
CHM 145M	College Chemistry Laboratory	
CHM 145	College Chemistry Laboratory (with approval)	
Select the following:		
CHM 251 & CHM 252	Organic Chemistry for Chemistry Majors and Organic Chemistry for Chemistry Majors	6
or CHM 241 & CHM 242	Organic Chemistry and Organic Chemistry	
CHM 254 & CHM 255	Organic Chemistry Laboratory for Chemistry Majors and Organic Chemistry Laboratory for Chemistry Majors	4
CHM 375	Analytical Chemistry for Majors	3
CHM 451	Physical Chemistry for Chemistry Majors [1]	3
or CHM 471	Biophysical Chemistry I	
CHM 452	Physical Chemistry for Chemistry Majors [1]	3
or CHM 472	Biophysical Chemistry II	
CHM 491	Chemistry in Societal Issues	3
or CHM 492	Independent Research Capstone in Chemistry	
Advanced Chemistry Coursework		
Select 10 advanced credit hours in CHM at the 200 level or above. At least one advanced class must be an advanced lab courses (2 credits).		10
Advanced lab courses. Select one.		
CHM 419	Synthesis Lab	
CHM 456	Chemical Measurements II	
CHM 438	Biochemistry Laboratory	
Select at least eight additional hours from the following:		
CHM 417	Advanced Inorganic Chemistry	
CHM 411	Learning Theories in Chemistry	
CHM 415	Misconceptions in Chemistry	
CHM 425	Advanced Organic Chemistry	
CHM 426	Spectroscopic Identification of Structure	
CHM 429	Polymer Chemistry	
CHM 430	Topics in Biochemistry	
CHM 432	Fundamentals of Biochemistry	
CHM 450	Topics in Organic Chemistry	
CHM 454	Instrumental Analysis	
CHM 460	Topics in Analytical Chemistry	
Advanced Cognate Coursework		**3**
Select three credit hours at 200 level or above in any of the following departments: BIO, CHM (not including CHM 277, 377, 477, or 480), CPB, CSE, GLG, ISA, MBI, MME, or PHY. Courses can be selected from MTH or STA but must not include the required courses (Calc I, Calc II, plus one other MTH/STA) listed below.		
Choices can also be made from the following:		
ACC 211	Accounting for the Non-Business Major (Advanced Chemistry/Cognate Coursework)	
CJS 235	Forensic Science Survey	
CJS 272	Forensic and Crime Scene Evidence	
ECO 201	Principles of Microeconomics	
Related Hours (21-23 required)		
MTH 151	Calculus I	4
MTH 251	Calculus II	4-5
or MTH 249	Calculus II	
PHY 181 & PHY 183	General Physics I and General Physics Laboratory I	5
PHY 182 & PHY 184	General Physics II and General Physics Laboratory II	5
Additional Courses (minimum of 3 hours in mathematics or statistics):		3-4
MTH 222	Introduction to Linear Algebra	
MTH 231	Elements of Discrete Mathematics	
MTH 245	Differential Equations for Engineers	
MTH 252	Calculus III	
MTH 347	Differential Equations	
STA 301	Applied Statistics	
or STA 333	Nonparametric Statistics	

	or STA 363 Introduction to Statistical Modeling	
Total Credit Hours		**66-69**

[1] CHM 451 and CHM 452 are preferred.