

CHEMISTRY

Dual Degree Engineering Program Bachelor of Science Degree in DDEP-Chemistry

Credits: 122

CIP Code: 400501

Code	Title	Hours
Required Courses		
Select 52 credits ¹		52
Cognate Courses		
CMAT 112	Calculus II	4
CMAT 211	Calculus III	4
CBIO 112	General Biology II & Lab	4
CBIO 112L	General Biology II Lab	0
CMAT 212	Differential Equations	3
CPHY 121	Physics I: Mechanics	3
CPHY 121L	Physics I: Mechanics Lab	1
CPHY 123	Physics III: Optics/Modern Phys	3
CPHY 123L	Physics III: Optics&Mod.PhyLab	1
Total Hours		75

¹ Includes transfer credits from partner institution. Please refer to Chemistry catalog entry for listing of major courses required.

General Education Courses

Code	Title	Hours
Area A: Humanities/Fine Arts		
CHIS 211	History of the United States	3
or CHIS 212	History of the United States	
Area B: Social/Behavioral Sciences		
CPSY 211	General Psychology	3
Select one of the following:		3
CPSY 218	Human Growth & Development	
CEDU 301		
CSCJ 215	Intro. to Sociology	
CSCJ 216	Intro. to Anthropology	
CSCJ 218	Contemporary Social Problems	
Area C: Natural Sciences/Mathematics/Statistics		
CMAT 111	Calculus I	4
CBIO 111	General Biology I & Lab	4
Area D: Communications		
CENG 105	College Composition I	3
CENG 106	College Composition II	3
Area E: Financial/Technological		
CCIS 105	Programming Principles I	3
CECO 107	Introduction to Economics	3
Core Elective		
A student can take a 3.0 credit elective in AREAs A, or B, or D or E from above		3
Total Hours		32

Other University Requirements

Code	Title	Hours
CGED 100	First Year Seminar	1
CGED 101	1st-Year Seminar	1
Total Hours		2

Free Electives: 15 (includes transfer credits from partner institution)

Note: Free Electives should be chosen in consultation with the advisor, depending on the choice of minor or stackable credentials.

Dual Degree Engineering Program Plan of Study for Bachelor of Science Degree in DDEP-Chemistry

Course	Title	Hours
First Year		
First Semester		
CBIO 111 & 111L	General Biology I & Lab and (Area C)	4
CMAT 111	Calculus I	4
CENG 105	College Composition I (Area D)	3
CGED 100	First Year Seminar	1
CCHE 111 & 111L	Gen Chem 1 & Recitation and General Chemistry Lab	4
Hours		16
Second Semester		
CBIO 112 & 112L	General Biology II & Lab and General Biology II Lab	4
CCHE 112	Gen Chem II Lec & Recitation	4
CMAT 112	Calculus II	4
CENG 106	College Composition II (Area D)	3
CGED 101	1st-Year Seminar	1
Hours		16
Second Year		
First Semester		
CEGR 101 & 101L	Introduction to Engineering and Intro to Engineering Lab	3
CMAT 211	Calculus III	4
CPHY 121 & 121L	Physics I: Mechanics and Physics I: Mechanics Lab	4
CCHE 231	Organic Chemistry	4
CCHE 231L	Organic Chemistry Lab	0
CCHE 231R	Organic Chemistry Recitation	0
CHIS 211 or CHIS 212	History of the United States or History of the United States	3
Hours		18
Second Semester		
CEGR 110 & 110L	Engineering Graphics and Engineering Graphics Lab	3
CCHE 231	Organic Chemistry	4
CCHE 231L	Organic Chemistry Lab	0
CCHE 231R	Organic Chemistry Recitation	0

CPHY 122 & 122L	Physics II: Elec & Magnetism and Physics II:Electricity&Mag.Lab	4
CMAT 212	Differential Equations	3
CBUS XXX	Business Elective	3
Hours		17

Third Year**First Semester**

CMAT 214	Linear Algebra	3
CCHE 211 & 211L	Analytical Chemistry I and Analytical Chemistry Lab	4
CCHE 341	Physical Chemistry I	3
CCHE 341L	Physical Chemistry Lab	1
CCHE 341R	Physical Chemistry Recitation	0
CPHY 211	Modern Physics	3
CCIS 105 & 105L	Programming Principles I and Programming Principles I Lab	4
CCHE 381	Chemistry Seminar	0
Hours		18

Second Semester

CEGR 211	Engineering Statics	3
CCHE 342	Physical Chemistry II	3
CCHE 342L	Physical Chemistry Lab	1
CCHE 342R		0
CCHE 400	Undergraduate Research	0-3
Core Elective	Humanities/Social Science/Comm (Area A,B,D, or E)	3
CCIS 106 & 106L	Programming Principles II and Programming Principles II Lab	4
CCHE 382	Chemistry Seminar	1
Hours		15-18

Fourth Year**First Semester****Courses to be Completed at Partner Institution 4th & 5th Year**

Additional hours needed to satisfy degree requirements can be taken (or transfer equivalent) at and transferred from partner institution beyond Junior Year

ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
CCHE 421	Advanced Inorganic Chemistry (or transfer equivalent)	3
CCHE 431 & 431L	Advanced Organic Chemistry and Advanced Organic Chemistry Lab (or transfer equivalent)	4
Hours		16

Second Semester

ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
CCHE 412 & 412L	Instrumental Methods and Instrumentation Lab (or transfer equivalent)	4

CCHE 432 & 432L	Methods of Structure Determination and Methods of Structural Det Lab (or transfer equivalent)	4
Hours		17

Fifth Year**First Semester**

ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
CCHE 480	Special Topics in Chemistry (or transfer equivalent)	4
CCHE 481	Chemistry Seminar (or transfer equivalent)	0
CCHE 400	Undergraduate Research (or transfer equivalent)	2-3
Hours		15-16

Second Semester

ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
ENGR XXX	Engineering Course	3
CCHE 482	Chemistry Seminar (or transfer equivalent)	1
CCHE 400	Undergraduate Research (or transfer equivalent)	1-3
Hours		14-16

Total Hours **162-168**