

Department of Chemistry | Engineering Dual Degree Curriculum
 Example Course Plan for B.A. in Chemistry + B.S. in Chemical Engineering from UND

ADRIAN COLLEGE

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First Year Fall				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
CCC 100	Introduction to College Writing	3	AC	
MATH 135	Calculus I ¹	4	AC	MATH115
CHEM 105/117	General Chemistry I & Lab	4	AC	MATH101
CHE 102	Introduction to Chemical Engineering	2	UND	
GCON XXX	Great Conversation Course	3	AC	

Second Year Fall				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
GCON XXX	Great Conversation Course	3	AC	
CHEM 224/226	Organic Chemistry I & Lab	4	AC	CHEM106/118
PHYS 202/204	General Phys: Thermodynamics and Electromagnetism & Lab ²	4	AC	PHYS201, PHYS203
MATH 215	Calculus III	4	AC	
CHE 201	Chemical Engineering Fundamentals	3	UND	CHEM106, CHEM118

Third Year Fall				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
CHEM 304/306	Quantitative Chemical Analysis & Lab	4	AC	MATH115, CHEM106/118
CHEM 321	Physical Chemistry I: Thermodynamics ⁴	3	AC	MATH135, PHYS201/CHEM304/306
CHE 301	Introduction to Transport Phenomena	4	UND	CHE201, MATH305
CHE 303	Chemical Engineering Thermodynamics	4	UND	CHE201

Fourth Year Fall				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
CHEM 472	Capstone (WID)	3	AC	CHEM403
PHIL 304	Ethics	3	AC	
CHE 408	Process Dynamics Control	3	UND	CHE206, CHE305, CHE321
CHE 411	Plant Design I: Process Design & Economics	4	UND	CHE303
	Material Science Elective	3	UND	

SUMMER COURSES (Remotely)	Credits	When to Take
CHE 414: Plant Design II	2	After fourth Year Spring

SUMMER LABS (On UND Campus)	Credits	When to Take
CHE 235: Chemical Engineering Summer Lab I	3	After Third Year Spring
CHE 335: Chemical Engineering Summer Lab II	3	After Fourth Year Spring
CHE 431: Chemical Engineering Summer Lab IV	3	After Fourth Year Spring

First Year Spring				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
CCC 102	Public Speaking	3	AC	
MATH 205	Calculus II ¹	4	AC	MATH135
CHEM 106/118	General Chemistry II & Lab	4	AC	CHEM105
PHYS 201/203	General Phys: Mechanics & Lab ²	4	AC	MATH135/MATH205
CHE 103	Computing Tools for Chemical Engineers	3	UND	MATH135

Second Year Spring				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
MATH 305	Differential Equations	3	AC	
CHEM 225/227	Organic Chemistry II & Lab	4	AC	CHEM224/226
GCON XXX	Great Conversation Course	3	AC	
CHE 206	Unit Operations in Chemical Engineering	3	UND	CHE201
CHE 315	Engineering Statistics & Design of Experiments	3	UND	MATH215

Third Year Spring				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
CHEM 325	Physical Chemistry Lab	1	AC	CHEM304/306, CHEM321
CHEM 403	Seminar (EXP)	2	AC	CHEM304/306
GCON XXX	Great Conversation Course	3	AC	
GCON XXX	Great Conversation Course	3	AC	
CHE 305	Separations	3	UND	CHE201, CHE303/CHE206
CHE 321	Chemical Engineering Reactor Design	3	UND	CHE206, CHE201, MATH305

Fourth Year Spring				
Course #	Course Name	Credits	Where	Prereqs/Coreqs
CHEM 3XX/4XX	Elective	4	AC	
CHE 413	Plant Design II: Preliminary Process Proj. Eng.	3	UND	CHE411, CHE408
CHE 416	Chemical Product Design ³	3	UND	(see note below)
ENGR 206	Fundamentals of Electrical Engineering	3	UND	
LEAD 101	Learning Leadership	3	UND	

Notes
¹ MATH 135 and MATH 205 combine for equivalency to MATH 165 and 166 at UND.
² PHYS 201, 202, 203, & 204 satisfies UND's PHYS 251 and PHYS 252 requirement.
³ Prerequisite: CHE 411, CHEM 340 and CHEM 340L or CHEM 341 and CHEM 341L Chemical Engineering majors only or permission of instructor
⁴ CHEM304/306 is a corequisite for CHM321, students can also enrol with the permission of the instructor.