

## B.S. in Chemical Engineering from UND and B.A. in Chemistry from Adrian College (AC)

FIRST YEAR FALL	Credits	Taken	UND Course
CHEM 105: General Chemistry I	3	AC	CHEM 121
CHEM 117: General Chemistry I Lab	1	AC	CHEM 121L
Distribution/Skills/Writing	3	AC	
MATH 115: Precalculus	4	AC	
CCC 101: College Writing and Inquiry	3	AC	

FIRST YEAR SPRING	Credits	Taken	UND Course
CHEM 106: General Chemistry II	3	AC	CHEM 122
CHEM 118: General Chemistry II Lab	1	AC	CHEM 122L
Distribution/Skills/Writing	3	AC	
MATH 135: Calculus I	4	AC	MATH 165
CCC 102: Public Speaking	3	AC	
ESAT 100: Principles of Fitness	2	AC	

SECOND YEAR FALL	Credits	Taken	UND Course
CHEM 224: Organic Chemistry I	3	AC	CHEM 341
CHEM 226: Organic Chemistry I Lab	1	AC	CHEM 341L
MATH 205: Calculus II	4	AC	MATH 166
PHYS 205: General Physics I <sup>1</sup>	3	AC	see NOTES <sup>1</sup>
PHYS 209: General Physics I Lab <sup>1</sup>	1	AC	see NOTES <sup>1</sup>
CHE 102: Introduction to Chemical Engineering	2	UND	

SECOND YEAR SPRING	Credits	Taken	UND Course
CHEM 225: Organic Chemistry II	3	AC	ACS Elective
CHEM 227: Organic Chemistry II Lab	1	AC	ACS Elective
PHYS 206: General Physics II <sup>1</sup>	3	AC	see NOTES <sup>1</sup>
PHYS 210: General Physics II Lab <sup>1</sup>	1	AC	see NOTES <sup>1</sup>
MATH 215: Calculus III	4	AC	MATH 265
CHE 103: Computing Tools for Chemical Engineers	3	UND	

THIRD YEAR FALL	Credits	Taken	UND Course
CHEM 303: Analytical Chemistry I	3	AC	ACS Elective
CHEM 305: Analytical Chemistry I Lab	1	AC	ACS Elective
MATH 305: Differential Equations	3	AC	MATH 266
CHEM 321: Physical Chemistry I: Thermodynamics	3	AC	CHEM 466 (substitute)
Distribution/Skills/Writing	3	AC	
CHE 201: Chemical Engineering Fundamentals	3	UND	

THIRD YEAR SPRING	Credits	Taken	UND Course
CHEM 325: Physical Chemistry Lab	1	AC	CHEM 466 (substitute)
CHEM 401: Seminar	1	AC	
Distribution/Skills/Writing	3	AC	
CHE 206: Unit Operations in Chemical Engineering	3	UND	
CHE 315: Engineering Statistics and Design of Experiments	3	UND	
Distribution/Skills/Writing	3	AC	

FOURTH YEAR FALL	Credits	Taken	UND Course
CHEM 470: Capstone	2	AC	
MLC XXX: Approved Language Skills I	4	AC	
CHE 301: Introduction to Transport Phenomena	4	UND	
CHE 303: Chemical Engineering Thermodynamics	4	UND	

FOURTH YEAR SPRING	Credits	Taken	UND Course
MLC XXX: Approved Language Skills II	4	AC	
CHEM 3XX/4XX: Chemistry B.A. Elective	4	AC	Technical Elective
CHE 305: Separations	3	UND	
CHE 321: Chemical Engineering Reactor Design	3	UND	

<b>FIFTH YEAR FALL</b>	Credits	Taken	UND Course
PHIL 304: Ethics	3	AC	ENGR 340
CHE 408: Process Dynamics and Control	3	UND	
CHE 411: Plant Design I: Process Design and Economics	4	UND	
Material Science Elective	3	UND	

<b>FIFTH YEAR SPRING</b>	Credits	Taken	UND Course
Distribution/Skills/Writing	3	AC	
CHE 413: Plant Design II: Preliminary Process Project Engineering	3	UND	
CHE 416: Chemical Product Design	3	UND	
ENGR 206: Fundamentals of Electrical Engineering	3	UND	
LEAD 101: Learning Leadership	3	UND	

<b>SUMMER LABS (ON UND CAMPUS)</b>	Credits	When to Take
CHE 235: Chemical Engineering Summer Lab I	3	After Fourth Year Spring
CHE 335: Chemical Engineering Summer Lab II	3	After Fourth Year Spring
CHE 431: Chemical Engineering Lab IV	3	After Fifth Year Spring
Note: CHE 235 and 335 must be approved to take in same summer semester per department.		

<b>SUMMER COURSES (REMOTE)</b>	Credits	When to Take
CHE 414: Plant Design II: Conceptual Process Project Engr	2	After Fifth Year Spring

NOTES	<sup>1</sup> Adrian students are recommended to take Physics 205/209 and 206/210 in order to meet the minimum Physics requirement for the UND Chemical Engineering degree.
	<i>The above plan may not reflect the only path to graduation, nor should it be used as the sole advising document. Students are required to complete all requirements as listed in the UND Academic Catalog for graduation purposes and should work with their UND advisor to confirm progress towards completion.</i>