

# LEADERS CAN START ANYWHERE... AND FINISH THEIR DEGREE AT UND

When you begin your Chemistry degree at Northland Community and Technical College.

Courses are sequenced to provide guidance and to help ensure that prerequisites are met.

Catalog Year: 2022-2023

## Plan of Study: BS/MS Accelerated (ABM) Degree in Chemistry (4+1 accelerated plan)

Begin courses at Northland Community & Technical College		
<b>First Year   First Semester</b>		
	FYEC 1111: Pathways to Success	1
	ENGL 1111: Composition I	3
	MATH 1113: Pre-Calculus	5
	First semester language course (other than English) <i>Sign Language is accepted to meet this requirement</i>	4
	MNTC Goal 5 course	3
	MNTC Goal 6 course	3
	<b>Total Credits</b>	<b>19</b>
<b>First Year   Second Semester</b>		
	ENGL 1112: Composition II	3
	SPCH 1101: Intro to Public Speaking	3
	Second semester language course (other than English) <i>Sign Language is accepted to meet this requirement</i>	4
	MNTC Goal 6 course that also meets MNTC Goal 7, 8, 9, or 10	3
	MATH 165: Calculus I <i>Taken through UND (online or on-campus)</i>	4
	<b>Total Credits</b>	<b>17</b>
<b>Second Year   First Semester</b>		
	MNTC Goal 5 course that also meets MNTC Goal 7, 8, 9, or 10	3
	CHEM 221 & 221L: Fundamentals of Chemistry Concepts & Lab <i>Taken through UND</i>	4
	MATH 166: Calculus II <i>Taken through UND (online or on-campus)</i>	4
	MNTC Goal 7-10 or Elective of interest	3
	<b>Total Credits</b>	
<b>Apply to UND by April 15</b>		
<ul style="list-style-type: none"> <li>Complete online application at <a href="https://www.und.edu/transfer">UND.edu/transfer</a></li> <li>Request transcripts to be sent to UND <a href="#">from NCTC</a>.</li> </ul>		
<b>Apply for scholarships at UND by March 1</b>		
<ul style="list-style-type: none"> <li>After admission submit application for campus-wide scholarships in UND's <a href="#">Scholarship Central</a></li> </ul>		
<b>Second Year   Second Semester</b>		
	MNTC Goal 5 course that also meets MNTC Goal 7, 8, 9, or 10	3
	MNTC Goal 6 course that also meets MNTC Goal 7, 8, 9, or 10	3
	CHEM 254 & 254L: Inorganic Chemistry I & Lab <i>Taken through UND</i>	4
	MATH 265: Calculus III <i>Taken through UND (online or on-campus)</i>	4
	<b>Total Credits</b>	<b>14</b>
<b>Take next steps to begin at UND</b>		
<ul style="list-style-type: none"> <li>Begin new student checklist at <a href="https://www.und.edu/admitted">UND.edu/admitted</a></li> <li>Attend UND Transfer Student Orientation at <a href="https://www.und.edu/orientation">UND.edu/orientation</a></li> </ul>		

<b>Third Year   First Semester</b>		
	CHEM 101: Orientation to Chemistry	1
	CHEM 341 & 341L: Organic Chemistry I & Lab	4
	CHEM 361: Problem Solving in Organic Chemistry I	1
	CHEM 333 & 333L: Analytical Chemistry & Lab	4
	PHYS 251: University Physics I	4
<b>Total Credits</b>		<b>14</b>
<b>Apply to UND Graduate School</b>		
<ul style="list-style-type: none"> <li>If admitted, students are able to dual-count up to 12 credits of undergraduate coursework towards graduate credit. Work with your graduate advisor to determine which courses to dual-count.</li> </ul>		
<b>Third Year   Second Semester</b>		
	CHEM 342 & 342L: Organic Chemistry II & Lab	4
	CHEM 362: Problem Solving in Organic Chemistry II	1
	PHYS 252: University Physics II	4
	BIMD 301: Biochemistry	3
	Elective of interest	3
<b>Total Credits</b>		<b>15</b>
<b>Fourth Year   First Semester</b>		
	CHEM 454 & 454L: Inorganic Chemistry II & Lab	4
	CHEM 470 & 470R: Thermodynamics & Kinetics and Recitation	4
	CHEM 443: Instrumental Analysis III Chromatography/Mass Spectrometry	2
	CHEM 492: Senior Research	3
	Elective of interest	3
<b>Total Credits</b>		<b>16</b>
<b>Apply to graduate from UND</b>		
<ul style="list-style-type: none"> <li>After registering for your last semester of courses, apply at <a href="http://UND.edu/commencement">UND.edu/commencement</a></li> </ul>		
<b>Fourth Year   Second Semester</b>		
	CHEM 441: Instrumental Analysis I – Spectroscopy	2
	CHEM 442: Instrumental Analysis II - Electrochemistry	2
	CHEM 471 & 471R: Quantum Mechanics & Spectroscopy and Recitation	4
	CHEM 462: Physical Chemistry Laboratory	3
	CHEM 495: Chemistry Capstone	3
<b>Total Credits</b>		<b>13</b>
<b>Fourth Year   Second Semester</b>		
	CHEM 509: Graduate Seminar	1
	Graduate Chemistry course	3
	Graduate Chemistry Electives	9
<b>Total Credits</b>		<b>13</b>
<b>TOTAL CREDITS TO GRADUATE</b>		

*This information is provided as guide only. Students are strongly encouraged to meet with their major specific UND advisor.*

*Recommended for students to choose courses within MNTC Goals 5 & 6 that also satisfy Goals 7-10, if possible.*

*An official evaluation of transfer credit will be done upon admission to the university. Transfer credits will be evaluated and applied according to the current catalog and the approved Essential Studies list at the first semester of enrollment at UND.*

*Transfer credit for courses other than those listed above will be evaluated on a course-by-course basis.*

*Students are required to fulfill UND graduation and GPA requirements to receive a degree and should consult with their UND advisor and the undergraduate catalog for details.*