

Name: _____

NORTH DAKOTA STATE UNIVERSITY

College of Science & Mathematics

Chemistry

Fall 2012

ID: _____

GENERAL EDUCATION REQUIREMENTS - 40 Credits Required					MAJOR CREDIT REQUIREMENTS - A Minimum of 49 Credits Required				
Course	Number	Course Title	Credits	Grade	Select One Option				
First Year Experience (F)			1 credit		<input type="checkbox"/> OPTION 1: ACS Certified Chemistry				
UNIV	189 ¹	Skills for Academic Success	1		<input type="checkbox"/> OPTION 2: ACS Certified Biochemistry				
Communications (C)			12 credits		<input type="checkbox"/> OPTION 3: Coatings & Polymeric Materials				
ENGL	110	College Composition I	3		<input type="checkbox"/> OPTION 4: Pre-professional Chemistry				
ENGL	120	College Composition II	3		<input type="checkbox"/> OPTION 5: Chemistry Pre-Education*				
COMM	110	Fundamentals of Public Speaking	3		Course	Number	Course Title	Credits	Grade
ENGL	321 or 324	(Upper-Division Writing)	3		CHEM	341	Organic Chemistry I	3	
Quantitative Reasoning (R)			3 credits		CHEM	353	Majors Organic Chem I Lab	1	
MATH	165	Calculus I	4		CHEM	342	Organic Chemistry II	3	
Science & Technology (S) (One course w/ co-requisite lab)			10 credits		CHEM	354	Majors Organic Chem II Lab	2	
CHEM	150/160 or 121/121L	Principles of Chemistry I/Lab OR General Chemistry I/Lab	3/1		CHEM	364	Physical Chemistry I	3	
CHEM	151/161 or 122/122L	Principles of Chemistry II/Lab OR General Chemistry II/Lab	3/1		CHEM	365	Physical Chemistry II	3	
PHYS	251/251L	University Physics I/Lab	4/1		CHEM	380	Chemistry Junior Seminar	1	
Humanities & Fine Arts (A) (Max of 3 cr in fine arts perform)			6 credits		CHEM	431/L	Analytical Chemistry I/Lab	3/2	
			3		CHEM	471*	Physical Chemistry Lab	2	
			3		* Not required for Pre-professional and Chemistry Education Options				
			3		CHEM	491	Sr. Capstone Seminar	2	
Social & Behavioral Sciences (B)			6 credits		BIOC	460	Found/Biochem & Molecular Biol I	3	
			3		BIOC	460L	Found of Biochem I Lab	1	
			3		OPTION 1: ACS CERTIFIED CHEMISTRY: 12 Credits Required				
Wellness (W)			2 credits		CHEM	425/429	Inorganic Chemistry I/Lab	3/2	
			2		CHEM	432/432L	Analytical Chemistry II/Lab	3/1	
Cultural Diversity (D)					MATH	266	Introduction to Differential Equations	3	
Global Perspectives (G)					OPTION 2: ACS CERTIFIED w/BIOCHEMISTRY OPTION: 32 Credits Required				
COLLEGE REQUIREMENTS for a BS or BA Degree					CHEM	425/429	Inorganic Chemistry I/Lab	3/2	
The College of Science & Mathematics requires an additional 6 credits in Humanities or Social Sciences for the BS degree and an additional 12 credits for the BA degree and two years proficiency of a modern foreign language.					BIOC	461	Found/Biochem & Molecular Biol II	3	
BA Degree Requirements:					BIOC	473	Methods of Biochemical Research	3	
2nd Yr Lang Proficiency					BIOC	474	Methods/Recombinant DNA Technology	3	
HUM or Soc Sci			3		MATH	266	Introduction to Differential Equations	3	
HUM or Soc Sci			3		MICR	350/350L	Gen Microbiology/Lab	3/2	
HUM or Soc Sci			3		BIOL	150/150L	General Biology I/Lab	3/1	
HUM or Soc Sci			3		6 credits of Biology electives to be chosen from:				
BS Degree Requirements:					BIOL	315/315L	Genetic/Lab	3/1	
HUM or Soc Sci			3		BOT	380	Plant Physiology	4	
HUM or Soc Sci			3		MICR	352	Gen. Microbiology II	3	
HUM or Soc Sci			3		ZOO	370	Cell Biology	3	
OPTION 3: COATINGS & POLYMERIC MATERIALS: 27 Credits Required					CPM	473	Polymers Synthesis	3	
OPTION 1: ACS CERTIFIED CHEMISTRY: 12 Credits Required					CPM	474/484	Coatings I/Lab	3/2	
OPTION 2: ACS CERTIFIED w/BIOCHEMISTRY OPTION: 32 Credits Required					CPM	475/485	Coatings II/Lab	3/2	
OPTION 3: COATINGS & POLYMERIC MATERIALS: 27 Credits Required					CHEM	425/429	Inorganic Chemistry I/Lab	3/2	
OPTION 1: ACS CERTIFIED CHEMISTRY: 12 Credits Required					CHEM	471	Physical Chemistry Lab	2	
OPTION 2: ACS CERTIFIED w/BIOCHEMISTRY OPTION: 32 Credits Required					CHEM	432/432L	Analyt Chemistry II/Lab	3/1	
OPTION 3: COATINGS & POLYMERIC MATERIALS: 27 Credits Required					MATH	266	Introduction to Differential Equations	3	

¹Students transferring in 24 or more credits do not need to take UNIV 189.**ALL COURSES ON THIS CURRICULUM GUIDE ARE REQUIRED FOR THE MAJOR**

CHEMISTRY CURRICULUM - Continued on the back

OPTION 4: PRE-PROFESSIONAL OPTION: 23 Credits Required					RELATED REQUIRED COURSES: 13 Credits Required				
CHEM	425	Inorganic Chemistry I	3		MATH	166	Calculus II	4	
MICR	350/350L	Gen Microbiology/Lab	3/2		MATH	128	Intro to Linear Algebra	1	
BIOL	150/150L	General Biology I/Lab	3/1		MATH	259	Multivariate Calculus	3	
BIOL	220/220L	Human Anatomy & Physiology I/Lab	3/1		PHYS	252/L	Univ Physics II/Lab	4/1	
BIOL	221/221L	Human Anatomy & Physiology II/Lab	3/1		ELECTIVES: Up to 18 Credits to Reach 122				
MATH	266 or	Introduction to Differential Equations OR	3						
STAT	330	Introductory Statistics							
OPTION 5: CHEMISTRY PRE-EDUCATION: 19 Credits Required									
*Application must be made to the School of Education in order to obtain a teaching degree									
CHEM	425	Inorganic Chemistry I	3						
EDUC	321	Intro to Teaching	3						
EDUC	322	Educational Psychology	3						
BIOL	150/150L	General Biology/Lab	3/1						
PHYS			3		UNIVERSITY GRADUATION REQUIREMENTS				
MATH	266 or	Introduction to Differential Equations OR	3		Residency at NDSU (15 cr. @ NDSU):			36 Credits	
STAT	330	Introductory Statistics			Credits at 4-year University:			60 Credits	
Recommended for Education Option					Courses numbered 300+ (Min. 15 cr @ NDSU):			37 Credits	
BIOL	151/151L	Gen Biology II/Lab	3/1		Total Credits Required:			122 Credits	
GEOL	105/105L	Physical Geology/Lab	3/1						