



**MONTANA STATE UNIVERSITY-BILLINGS
BACHELOR OF SCIENCE MAJOR IN CHEMISTRY
GENERAL BULLETIN 2003-2005**

Access & Excellence

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Name _____

Student ID # _____

GENERAL EDUCATION REQUIREMENTS - SEE PAGE 4 FOR SPECIFIC COURSES

General Education Category	Course #	Credits	Grade	Semester	Equivalent
Category I: Writing (6 cr.)	ENGL 150				
Category II: Oral Skills (3 cr.)					
Category III: Mathematics (3 cr.)					
Category IV: Natural Sciences (7 cr.) (1 life science/1 physical science/1 lab)	BIOL 178				
	BIOL 188				
Category V: Social Sciences (6 cr.) (2 courses from separate prefixes)					
Category VI: History (3 cr.)					
Category VII: Cultural Diversity (3 cr.)					
Category VIII: Fine Arts (3 cr.)					
Category IX: Integrated Humanities (3 cr.)					

Students should consult with their advisors to determine if specific courses are necessary in order to satisfy the General Education requirements within this program.

Certain courses in this program have prerequisites; students should check the course descriptions for required prerequisites.

CATEGORY I: WRITING			6
<i>ENGL</i>	<i>150</i>	<i>College Composition</i>	3
ENGL	210	Technical Writing	3
ENGL	226	Research Writing	3
ENGL	301	Business Communications	3
CTCM	202	Business Communication	3
CTCM	203	Technical Communication	3

CATEGORY II: ORAL SKILLS			3
COMT	101	Fundamentals of Communication	3
COMT	110	Interpersonal Communication	3
COMT	130	Introduction to Public Speaking	3
FREN	202	Intermediate French II	3
GERM	202	Intermediate German II	3
SPAN	202	Intermediate Spanish II	3
CTCM	109	Human Relations	3
CTCM	130	Introduction to Public Speaking	3

CATEGORY III: MATHEMATICS			3
FIN 201, 202, 203		Personal Financial Planning	3
MATH	106	College Algebra	3
MATH	107	Precalculus	5
MATH	112	Calculus I	4
MATH	121	Finite Mathematics	4
MATH	141	Contemporary Mathematics	3
MATH	161	Mathematics for Health Sciences	4
STAT	141	Introduction to Statistics	3
STAT	241	Statistical Methods	4
CTCM	122	College Mathematics for Technology	3

CATEGORY IV: NATURAL SCIENCE 7

Students are required to take one course from each subcategory and at least one corresponding lab or SCIN 101, 102 & 103

Subcategory A – Life Sciences

BIOL	178	Principles of Biology	3
BIOL	188	Principles of Biology Lab	1

Subcategory B – Physical Sciences

CHEM	104	Fund of General & Organic Chemistry	3
CHEM	105	Fund of General & Organic Chem Lab	1
CHEM	115	General Chemistry I	3
CHEM	118	General Chemistry I Lab	1
EASC	100	Lithosphere and Hydrosphere	3
EASC	101	Lithosphere and Hydrosphere Lab	1
EASC	120	Historical Geology & Paleontology	3
EASC	121	Historical Geology & Paleontology Lab	1
GEOG	100	Physical Geography Lab	1
GEOG	101	Physical Geography	3
PHYS	101	Earth, Air, Fire and Water	3
PHYS	102	Earth, Air, Fire and Water Lab	1
PHYS	110	College Physics I	3
PHYS	111	College Physics I Lab	1
PHYS	201	Introduction to Astronomy	3
PHYS	203	Introduction to Astronomy Lab	1
SCIN 101, 102, 103		Integrated Science I, II, III	3, 1, 3

CATEGORY V: SOCIAL SCIENCE 6

Two courses from separate prefixes

BUS	101	Introduction to Business	3
ECON	200	Principles of Microeconomics	3
ECON	201	Principles of Macroeconomics	3
EDF	100	Educ Persons for a Democratic Society	3
POLS	101	Introduction to Government	3
POLS	212	United States Government	3
PSYC	101	General Psychology	3
SOCL	101	Introduction to Sociology	3
SOCL	212	Physical Anthropology & Archeology	3
SOCL	221	Social Problems	3

CATEGORY VI: HISTORY			3
HIST	104	History of World Civilization to 1500	3
HIST	105	History of World Civilization Since 1500	3
HIST	106	Honors: History of Western Civ to 1648	3
HIST	107	Honors: History of Western Civ since 1648	3
HIST	109	Current World Problems	3
HIST	204	United States History to 1877	3
HIST	205	United States History Since 1877	3
POLS	221	International Relations	3

CATEGORY VII: CULTURAL DIVERSITY 3

ART	131	Global Visual Culture	3
A&SC/SOCL 250		Women, Culture and Society	3
GEOG	102	World Geography	3
GEOG	120	Environment and Culture	3
HIST	351	History of Islamic Civilization	3
HIST	353	The Middle East in the Twentieth Century	3
MUSC	150	Musics of the World	3
NAMS	181	Introduction to Native American Studies	3
NAMS	211	Social Issues of the Native American	3
PHIL	105	The Religious Quest	3
PHIL	233	Phil & Religions of India	3
PHIL	234	Phil & Religions of China, Tibet & Japan	3
SOCL	211	Cultural Anthropology	3
SPAN	150	The Hispanic Tradition	3

CATEGORY VIII: FINE ARTS 3

ART	110	Art Studio Essentials for Non-Art Majors	3
ART	142	Introduction to Pottery	3
ART	161	Introduction to Drawing	3
COMT	150	Introduction to Theater	3
COMT	155	Global Cinema	3
COMT	250	Introduction to Acting	3
ENGL	160	Reading and Responding to Literature	3
ENGL	204	Fundamentals of Creative Writing	3
ENGL	280	Fiction into Film	3
MUSC	100	Music Appreciation	3
MUSC 160/360		Symphonic Band	1
MUSC 162/362		Concert Choir	1
MUSC 168/368		Jazz Ensemble	1
PHIL	303	Classical Mythology	3
CTDR	248	CAD Presentations	3

CATEGORY IX: INTEGRATED HUMANITIES 3

ART	132	Art History Survey	3
ENGL	260	World Foundations of Literature	3
HON	181	The Ancient and Medieval Worlds	3
HON	182	The Renaissance and Modern Worlds	3
MUSC	340	Music History to 1750	3
MUSC	341	Music History 1750 to the Present	3
PHIL	107	Philosophical Inquiry	3
PHIL	115	Ethics	3
PHIL	117	Philosophies of Life	3
PHIL/ENGL 240		The Bible as Literature	3
PHIL	250	Christianity	3
PHIL	301	Death, Dying, and Medical Ethics	3
PHIL	311	Environmental Ethics	3
PHIL	314	Business Ethics	3

Course			Credits	Grade	Semester	Equivalent
Chemistry Requirements						
*CHEM	115	General Chemistry I	3			
*CHEM	118	General Chemistry I Lab	1			
CHEM	116	General Chemistry II	3			
CHEM	119	General Chemistry II Lab	1			
CHEM	320	Quantitative Chemical Analysis	3			
CHEM	325	Quantitative Chemical Analysis Lab	1			
CHEM	330	Organic Chemistry I	3			
CHEM	331	Organic Chemistry I Lab	1			
CHEM	334	Organic Chemistry II	3			
CHEM	335	Organic Chemistry II Lab	1			
CHEM	340	Physical Chemistry I	3			
CHEM	341	Physical Chemistry I Lab	1			
CHEM	344	Physical Chemistry II	3			
CHEM	345	Physical Chemistry II Lab	1			
CHEM/ BIOL	361	Biochemistry	3			
CHEM/ BIOL	371	Biochemistry Lab	1			
CHEM	420	Instrumental Analysis	3			
CHEM	421	Instrumental Analysis Lab	1			
CHEM/ BIOL	463	Advanced Biochemistry	3			
CHEM/ BIOL	473	Advanced Biochemistry Lab	1			
CHEM	475	Senior Seminar	1			
CHEM	490	Internship	1			
CHEM	499	Chemical Research	2			
Chemistry Electives (4 credits):						

Mathematics Requirement

*MATH	112	Calculus I	4			
MATH	113	Calculus II	4			
6 additional credits chosen with advisor						

*May satisfy General Education Requirements.

