



**MONTANA STATE UNIVERSITY-BILLINGS
 BACHELOR OF SCIENCE MAJOR IN BIOLOGY
 ENVIRONMENTAL SCIENCES OPTION
 GENERAL BULLETIN 2005-2007**

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)					
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.

Reviewed:

CATEGORY I: WRITING 6
University Honors Program students taking HIST 106 and 107 and HON 181 and 182 are credited with 3 credits of either ENGL 150 or ENGL 226.

ENGL 150	College Composition	3
ENGL 210	Technical Writing	3
ENGL 226	Research Writing	3
ENGL 301	Business Communications	3
ENGL 140	Business Writing	3
ENGL 145	Technical Communication	3

CATEGORY II: ORAL SKILLS 3

COMT 109	Human Relations	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

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 122	College Mathematics for Technology	3
MATH 141	Contemporary Mathematics	3
MATH 161	Mathematics for Health Sciences	4
MATH 202	Math for Elementary Education II	3
STAT 141	Introduction to Statistics	3
STAT 241	Statistical Methods	4

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 101	Survey of Biology	3
BIOL 115	Survey of Biology Lab	1
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
PSSC 101	Physical World Around Us	3
PSSC 102	Physical World Around Us 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 1500	3
HIST 107	Honors: History of Western Civ since 1500	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
COMT 160	Introduction to Intercultural Communication	3
GEOG 102	World Geography	3
GEOG 120	Environment and Culture	3
HIST 451	History of Islamic Civilization	3
HIST 453	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	Philosophies & 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

University Honors Program students taking HIST 106 and 107 and HON 181 and 182 count 3 of those credits toward the Fine Arts Category.

ART 101	Fundamentals of Art for Elem Teachers	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 Theatre and Performance	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
DSGN 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
Biology Requirements					
*BIOL	178	Principles of Biology	3		
*BIOL	188	Principles of Biology Lab	1		
BIOL	179	Biodiversity	3		
BIOL	189	Biodiversity Lab	1		
BIOL	263	Introduction to Cell Biology	3		
BIOL	273	Introduction to Cell Biology Lab	1		
BIOL	315	Plant Systematics	2		
BIOL	325	Plant Systematics Lab	2		
BIOL	340	General Microbiology	3		
BIOL	350	General Microbiology Lab	1		
BIOL	353	Genetics	3		
BIOL	354	Genetics Lab	1		
BIOL	355	Ecology and Evolution	3		
BIOL	356	Ecology and Evolution Lab	1		
BIOL	456	Advanced Ecology	3		
BIOL	457	Advanced Ecology Lab	1		
BIOL	495/490	Biological Research/Internship	2		
BIOL	498	Capstone Seminar	1		

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	220	Principles of Organic Chemistry	3		
CHEM	221	Principles of Organic Chemistry Lab	1		
CHEM	320	Quantitative Chemical Analysis	3		
CHEM	325	Quantitative Chemical Analysis Lab	1		
CHEM/ BIOL	361	Biochemistry	3		
CHEM/ BIOL	371	Biochemistry Lab	1		

Mathematics or Statistics Requirement (choose two of the following)

*MATH	112	Calculus I	4		
MATH	113	Calculus II	4		
*STAT	241	Statistical Methods	4		
STAT	242	Statistical Methods II	4		

Physics Requirement (choose one Physics sequence)

PHYS	110/111	College Physics I/Lab F	4		
PHYS	120/121	College Physics II/Lab S	4		
PHYS	210/211	University Physics I/Lab F	4		
PHYS	220/221	University Physics II/Lab S	4		

Earth Science and Geography Requirements

EASC	100	Lithosphere and Hydrosphere	3			
EASC	101	Lithosphere and Hydrosphere Lab	1			
EASC	200	Mineralogy	3			
EASC	300	Structures and Plate Tectonics	3			
EASC	320	Sedimentation and Stratigraphy	3			
EASC	400	Geomorphology and Quaternary Geology	3			
GEOG	201	Mapping Techniques	3			

*Satisfy General Education requirements

Electives - Recommended courses:

EVST	360	Environmental Impact and Policy Analysis	3			
PHIL	311	Environmental Ethics	3			
BIOL/ CHEM	363	Molecular Biology	3			
BIOL/ CHEM	373	Molecular Biology Lab	1			
BIOL	424	Animal Physiology	3			
BIOL	434	Animal Physiology Lab	1			
BIOL	465	Plant Physiology	3			
BIOL	475	Plant Physiology Lab	1			

BACHELOR OF SCIENCE DEGREE IN BIOLOGY – ENVIRONMENTAL SCIENCES OPTION

Categories	Credits	Earned
General Education	37	_____
Biology Major	86	_____
Electives (variable)	V	_____
Total	120	_____

It is the student’s responsibility to know and meet the requirements for graduation. A minimum of 36 credits must be upper division classes (300 and above).

Notes: