



**MONTANA STATE UNIVERSITY-BILLINGS**  
**BACHELOR OF SCIENCE MAJOR IN BIOLOGY**  
**MOLECULAR LIFE SCIENCES TRACK**  
**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:**

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**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
<b>Biology Requirements</b>						
*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	340	General Microbiology	3			
BIOL	350	General Microbiology Lab	1			
BIOL	353	Genetics	3			
BIOL	354	Genetics Lab	1			
BIOL/ CHEM	361	Biochemistry	3			
BIOL/ CHEM	371	Biochemistry Lab	1			
BIOL/ CHEM	363	Molecular Biology	3			
BIOL/ CHEM	373	Molecular Biology Lab	1			
BIOL/ CHEM	463	Advanced Biochemistry	3			
BIOL/ CHEM	473	Advanced Biochemistry Lab	1			
BIOL	495	Biological Research	2			
BIOL	498	Capstone Seminar	1			

**Biology electives (7 cr.) selected in consultation with advisor from the following:**

BIOL	355	Ecology and Evolution	3			
BIOL	356	Ecology and Evolution Lab	1			
BIOL	424	Animal Physiology	3			
BIOL	434	Animal Physiology Lab	1			
BIOL	430	Developmental Biology	3			
BIOL	440	Developmental Biology Lab	1			
BIOL	443	Immunology	3			
BIOL	452	Medical Microbiology	3			
BIOL	465	Plant Physiology	3			
BIOL	475	Plant Physiology Lab	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	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			

**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			

\*Satisfy General Education CAT IV. Natural Sciences (7 credits)

**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			

**Electives**


**BACHELOR OF SCIENCE DEGREE IN BIOLOGY – MOLECULAR LIFE SCIENCES TRACK**

Categories	Credits	Earned
General Education	37	_____
Biology Major	78	_____
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:**