Access & Excellence

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MONTANA STATE UNIVERSITY-BILLINGS
BACHELOR OF SCIENCE MAJOR IN BIOLOGY
MOLECULAR LIFE SCIENCES TRACK
GENERAL BULLETIN 2003-2005

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.

CATEGORY I: WRITING			6
ENGL	***150***	***College Composition***	***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
MATH	202	Math for Elementary Education II	3
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	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 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	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 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
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	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: