ADVISING WORKSHEET

BACHELOR OF SCIENCE DEGREE
MAJOR IN BROADFIELD SCIENCE
General Bulletin 2024-2025

TRANSFER INSTITUTION(S):

_____
_____
_____
_____

Montana State University Billings
Advising Center
Phone: 406-657-2240
Fax: 406-657-2302
advising@msubillings.edu
www.msubillings.edu/advise/

Name _____

Student ID # _____

GENERAL EDUCATION REQUIREMENTS – SEE ATTACHED PAGE FOR SPECIFIC COURSES

General Education Category	Course #	Credits	Grade	Semester	Equivalent
Category I: Global Academic Skills (9 credits) A. Mathematics (3 credits) *M 171 is a major requirement*					
B. English (3 credits)					
C. Communication & Information Literacy (3 credits)					
Category II: Natural Sciences (7 credits) 2 lectures (6 credits) & 1 lab (1 credit) (1 life science & 1 physical science & 1 lab)					
BIOB 160/161 & CHMY 141 – Major requirements					
Category III: Social Sciences and History (6 credits) A. Social Science (3 credits)					
B. History (3 credits)					
Category IV: Cultural Diversity (3 credits)					
Category V: Arts & Humanities (6 credits) A. Fine Arts (3 credits)					
B. Humanities (3 credits)					

A minimum grade of "C-" required in all General Education courses.
Note: Certain degrees may require a minimum grade of "C" in General Education courses.
Certain courses in this program have prerequisites; students should check course descriptions for required prerequisites.

Reviewed:

_____
_____
_____
_____

GENERAL EDUCATION REQUIREMENTS

CATEGORY I: GLOBAL ACADEMIC SKILLS — 9 credits

Students are required to take one course from each subcategory

Subcategory A - Mathematics			**3 credits**
M	105	Contemporary Mathematics	3
M	114	Extended Technical Mathematics	3
M	121	College Algebra	3
M	122	College Trigonometry	3
M	130	Mathematics for Elementary Teachers I	3
M	140	College Math for Healthcare	3
M	143	Finite Mathematics	4
M	161	Survey of Calculus	3
M	***171***	***Calculus I***	***4***
STAT	141	Introduction to Statistical Concepts	3
STAT	216	Introduction to Statistics	4

Subcategory B - English			**3 credits**
WRIT	101	College Writing I	3
WRIT	121	Introduction to Technical Writing	3
WRIT	122	Introduction to Business Writing	3

Subcategory C- Communication & Information Literacy			**3 credits**
BMIS	150	Cyber Security and Electronic Communication	3
COMX	111	Introduction to Public Speaking	3
COMX	115	Introduction to Interpersonal Communication	3
COMX	210	Communication in Small Groups	3
LSCI	125	Research in the Information Age	3

CATEGORY II: NATURAL SCIENCES — 6 cr. lecture & 1 cr. lab

Students are required to take one course from each subcategory and at least one corresponding lab or Integrated Sciences

Subcategory A – Life Sciences			**3-4 credits**
BIOB	121	Fundamentals of Biology for Allied Health	3
BIOB	123	Fund of Biology: The Nature of Nutrition	3
BIOB	***160***	***Principles of Living Systems***	***3***
BIOB	***161***	***Principles of Living Systems Lab***	***1***
SCIN	101	Integrated Science I	3
SCIN	102	Integrated Science I Lab	1

Subcategory B – Physical Sciences			**3-4 credits**
ASTR	110	Introduction to Astronomy	3
ASTR	111	Introduction to Astronomy Lab	1
CHMY	121	Introduction to General Chemistry	3
CHMY	122	Introduction to General Chemistry Lab	1
CHMY	***141***	***College Chemistry I***	***4***
CHMY	***142***	***College Chemistry Laboratory I***	***1***
GEO	101	Introduction to Physical Geology	3
GEO	102	Introduction to Physical Geology Laboratory	1
GPHY	262	Spatial Sciences Technology & Applications	3
GPHY	263	Spatial Sciences & Technology Lab	1
PHSX	103	Our Physical World	3
PHSX	104	Our Physical World Lab	1
PHSX	205	College Physics I	3
PHSX	206	College Physics I Lab	1
SCIN	103	Integrated Science II	3

CATEGORY III: SOCIAL SCIENCES AND HISTORY — 6 CREDITS

Students are required to take one course from each subcategory

Subcategory A – Social Sciences			**3 credits**
BGEN	105	Introduction to Business	3
COMX	106	Communicating in a Dynamic Workplace	3
ECNS	201	Principles of Microeconomics	3
ECNS	202	Principles of Macroeconomics	3
EDU	105	Education and Democracy	3
HTH	110	Personal Health and Wellness	3
PSCI	210	Introduction to American Government	3
PSCI	220	Introduction to Comparative Government	3
PSYX	100	Introduction to Psychology	3
SOCI	101	Introduction to Sociology	3
SOCI	201	Social Problems	3

Subcategory B - History			**3 credits**
HSTA	101	American History I	3
HSTA	102	American History II	3
HSTR	159	World History to 1500 CE	3
HSTR	160	Modern World History	3
PSCI	230	Introduction to International Relations	3

CATEGORY IV: CULTURAL DIVERSITY — *3 credits*

ANTY	220	Culture and Society	3
ARTH	160	Global Visual Culture	3
COMX	212	Intro to Intercultural Communication	3
GPHY	121	Human Geography	3
HTH	270	Global Health Issues	3
LIT	230	World Literature Survey	3
MUSI	207	World Music	3
NASX	105	Introduction to Native American Studies	3
NASX	205	Native Americans in Contemporary Society	3
REHA	201	Introduction to Diversity in Counseling	3
RLST	170	The Religious Quest	3
SPNS	150	The Hispanic Tradition	3
WGSS	274	Women, Culture, and Society	3

CATEGORY V: ARTS & HUMANITIES — 6 credits

Students are required to take one course from each subcategory

Subcategory A – Fine Arts			**3 credits**
ARTZ	105	Visual Language-Drawing	3
ARTZ	106	Visual Language-2-D Foundations	3
ARTZ	108	Visual Language-3-D Foundations	3
ARTZ	131	Ceramics for Non-majors	3
CRWR	240	Intro Creative Writing Workshop	3
FILM	160	Introduction to World Cinema	3
LIT	270	Film & Literature	3
MUSI	101	Enjoyment of Music	3
MUSI	114	Band: MSUB Symphonic	1
MUSI	131	Jazz Ensemble I: MSUB	1
MUSI	147	Choral Ensemble: University Chorus	1
PHOT	154	Exploring Digital Photography	3
THTR	101	Introduction to Theatre	3

Subcategory B - Humanities			**3 credits**
ARTH	150	Introduction to Art History	3
HONR	111	Perspectives and Understanding	3
LIT	110	Introduction to Literature	3
LIT	213	Montana Literature	3
PHL	110	Introduction to Ethics	3
PHL	111	Philosophies of Life	3
PHL	254	People and Politics	3

Course			Credits	Grade	Semester	Equivalent
A minimum grade of C- or better is required in all major coursework						
Biology Requirements						
*BIOB	160	Principles of Living Systems	3			
* BIOB	161	Principles of Living Systems Lab	1			
BIOB	170	Principles of Biological Diversity	3			
BIOB	171	Principles of Biological Diversity Lab	1			
BIOB	260	Cellular and Molecular Biology	3			
BIOB	261	Cellular and Molecular Biology Lab	1			
		Biology Total	**12**			
Chemistry Requirements						
*CHMY	141	College Chemistry I	4			
*CHMY	142	College Chemistry Laboratory I	1			
CHMY	143	College Chemistry II	4			
CHMY	144	College Chemistry Laboratory II	1			
Select One of the following:						
CHMY & CHMY	211 212	Elements of Organic Chemistry Elements of Organic Chemistry Lab	3 1			
CHMY & CHMY	311 312	Analytical Chem-Quant Analysis Analytical Chem Lab – Quant Analysis	3 1			
CHMY & CHMY	321 322	Organic Chemistry I Organic Chemistry Lab	3 1			
		Chemistry Total	**14**			
Earth Science Requirements						
*GEO	101	Introduction to Physical Geology	3			
*GEO	102	Introduction to Physical Geology Laboratory	1			
GEO	205	Mineralogy	4			
GEO	211	Earth History and Evolution	3			
GEO	212	Earth History and Evolution Laboratory	1			
		Earth Science Total	**12**			

Select either Physics or Geography/Geographic Information Systems

Physics

*ASTR & *ASTR	110 111	Introduction to Astronomy Introduction to Astronomy Laboratory	3 1			
Choose either PHSX 205/206 and PHSX 207/208 **OR** PHSX 220/221 and PHSX 232/233						
PHSX & PHSX	205 206	College Physics I College Physics I Lab	3 1			
PHSX & PHSX	207 208	College Physics II College Physics II Lab	3 1			
OR						
PHSX & PHSX	220 221	Physics I Physics I Lab	4 1			
PHSX & PHSX	232 233	Physics II and Thermodynamics Physics II and Thermodynamics	4 1			
		Physics Total	**12-14**			

Geography/Geographic Information System

*GPHY & *GPHY	262 263	Spatial Sciences Tech and Applications Spatial Sciences Tech Lab	3 1			
GPHY	282	Mapping Techniques	3			
GPHY	380	Principles of GIS	3			
GPHY	484	Applied GIS/Spatial Analysis	3			

Geography/Geographic Information System 13

Track Options – **Complete 18 credits** from one of the following concentrations:

I. Concentration in Environmental Social Science

BIOB	375	General Genetics	3			
BIOB	376	General Genetics Lab	1			
BIOB	490	Undergraduate Research	3			
BIOB	498	Internship/Cooperative Education	3			
BIOE	370	General Ecology	3			
BIOE	371	General Ecology Lab	1			
BIOE	483	Evolution and Ecology	3			
BIOE	484	Evolution and Ecology	1			
BIOM	360	General Microbiology	3			
BIOM	361	General Microbiology Lab	1			
BIOO	320	General Botany	3			
BIOO	321	General Botany Lab	1			
BIOO	433	Plant Physiology	3			
BIOO	434	Plan Physiology Lab	1			
BIOO	435	Plant Systematics	2			
BIOO	436	Plant Systematics Lab	2			
BIOO	450	Vertebrate Zoology	3			
BIOO	451	Vertebrate Zoology Lab	1			
CHMY	311	Analytical Chem-Quant Analysis	3			
CHMY	312	Analytical Chem Lab-Quant Analysis	1			
CHMY	490	Undergraduate Research	V			
CHMY	498	Internship/Cooperative Education	V			
ERTH	303	Weather and Climate	4			
ERTH	498	Internship/Cooperative Education	V			
GEO	309	Undergraduate Research	V			
GEO	490	Undergraduate Research	V			
GEO	498	Cooperative Education/Internship	V			

II. Concentration in Physical Science

CHMY	311	Analytical Chem-Quant Analysis	3			
CHMY	312	Analytical Chem-Quant Analysis Lab	1			
CHMY	371	Phys Chem-Quantum Chemistry & Spctrscpy	3			
CHMY	372	Physical Chemistry Lab I	3			
CHMY	373	Phys Chem-Kntcs & Thermodynamics	3			
CHMY	374	Physical Chemistry Lab	1			

CHMY	401	Advanced Inorganic Chemistry	3			
CHMY	402	Advanced Inorganic	1			
CHMY	421	Advanced Instrument Analysis	3			
CHMY	422	Advanced Instrument Analysis Lab	1			
CHMY	490	Undergraduate Research	V			
CHMY	498	Internship/Cooperative Education	V			
ERTH	303	Weather and Climate	3			
ERTH	498	Internship/Cooperative Education	V			
GEO	309	Sedimentation and Stratigraphy	3			
GEO	315	Structural Geology	3			
GEO	490	Undergraduate Research	V			
GEO	498	Cooperative Education/Internship	V			
PHSX	343	Modern Physics	3			
PHSX	344	Modern Physics Lab	1			
PHSX	490	Undergraduate Research	V			
PHSX	498	Internship/Cooperative Education	V			

Upper Division Electives – 7 credits, selected from the following rubrics: BCH, BIOB, BIOE, BIOM, BIOO, CHMY, ERTH, GEO, GPHY, PHSX.

Upper Division Electives 7

Mathematics –Select two courses from the following:

*M	171	Calculus I	4			
M	172	Calculus II	4			
*STAT	216	Introduction to Statistics	4			
STAT	217	Intermediate Statistical Concepts	4			
PSYX & PSYX	225 226	Research Design and Analysis Research Design and Analysis Lab	3 1			

Mathematics Total 8

Unrestricted Electives

BACHELOR OF SCIENCE DEGREE MAJOR IN BROADFIELD SCIENCE

Categories	Credits	Earned	Remaining
General Education	31	_____	_____
Biology	12	_____	_____
Chemistry	14	_____	_____
Earth Science	12	_____	_____
Physics or Geography/Geographic Info	12-14	_____	_____
Concentration	18	_____	_____
Upper Division Electives	7	_____	_____
Mathematics	8	_____	_____
Unrestricted Electives	V	_____	_____
Total	120	_____	_____

*May satisfy General Education requirements.

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

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).