

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

# **ADVISING WORKSHEET BACHELOR OF SCIENCE DEGREE** MAJOR IN MATHEMATICS

**TRANSFER INSTITUTION(S):** 

General Bulletin 2019-2020

Name	 	 
Student ID #_	 	 

#### **GENERAL EDUCATION REQUIREMENTS – SEE ATTACHED PAGE FOR SPECIFIC COURSES**

<b>General Education Category</b>	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)					
<b>Category III: Social Sciences and History</b> (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.

**Reviewed:** 

## **GENERAL EDUCATION REQUIREMENTS**

CATEGO	ORY I: (	GLOBAL ACADEMIC SKILLS	9 credits
Students	are req	uired to take one course from each subc	category
Subcate	gory A	- Mathematics	3 credits
М	105	Contemporary Mathematics	3
М	114	Extended Technical Mathematics	3
М	121	College Algebra	3
М	122	College Trigonometry	3
М	130	Mathematics for Elementary Teachers	s I 3
Μ	140	College Math for Healthcare	3
М	143	Finite Mathematics	4
М	161	Survey of Calculus	3
Μ	171	Calculus I	4
STAT	141	Introduction to Statistical Concepts	3
STAT	216	Introduction to Statistics	4
Subcate	gory B -	- English	3 credits
MUD IT	101	Cilling Weiting I	2

WRIT	101	College Writing I	3
WRIT	121	Introduction to Technical Writing	3
WRIT	122	Introduction to Business Writing	3
WRIT	201	College Writing II	3
WRIT	220	Business & Professional Writing	3
WRIT	221	Intermediate Technical 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
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 <u>or</u> Integrated Sciences

Subcate	gory A -	- Life Sciences 3-4 crea	lits
BIOB	101	Discover Biology	3
BIOB	102	Discover Biology Lab	1
BIOB	121	Fundamentals of Biology for Allied Health	3
BIOB	122	Fund of Biology: Evolution, Ecology, and	
		Biodiversity	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

gory B	– Physical Sciences	3-4 credits
110	Introduction to Astronomy	3
111	Introduction to Astronomy Lab	1
121	Introduction to General Chemistry	3
122	Introduction to General Chemistry	Lab 1
141	College Chemistry I	3
142	College Chemistry Laboratory I	1
101	Introduction to Physical Geology	3
102	Introduction to Physical Geology L	aboratory 1
111	Introduction to Physical Geography	/ 3
112	Introduction to Physical Geography	/Lab 1
103	Our Physical World	3
104	Our Physical World Lab	1
205	College Physics I	3
206	College Physics I Lab	1
		3, 1, 3, 1
	110 111 121 122 141 142 101 102 111 112 103 104 205 206 ed Scie	111Introduction to Astronomy Lab121Introduction to General Chemistry122Introduction to General Chemistry123Introduction to General Chemistry141College Chemistry I142College Chemistry Laboratory I101Introduction to Physical Geology102Introduction to Physical Geology L111Introduction to Physical Geography112Introduction to Physical Geography113Our Physical World104Our Physical World Lab205College Physics I

Course

#### CATEGORY III: SOCIAL SCIENCES AND HISTORY 6 CREDITS Students are required to take one course from each subcategory Subcategory A – Social Sciences 3 credits ANTY 217 Physical Anthropology & Archeology 3 BGEN 105 Introduction to Business 3 COMX 106 Communicating in a Dynamic Workplace 3 PSYX 231 Human Relations 3 201 ECNS Principles of Microeconomics 3 ECNS 202 Principles of Macroeconomics 3 EDU 105 Education and Democracy 3 GPHY 141 Geography of World Regions 3 HTH 110 Personal Health and Wellness 3 PSCI Introduction to Comparative Government 3 220 PSCI 210 Introduction to American Government 3 3 PSYX 100 Introduction to Psychology SOCI 101 Introduction to Sociology 3 Social Problems 3 SOCI 201 Subcategory B - History 3 credits American History I HSTA 101 3 HSTA 102 American History II 3 HSTR 101 Western Civilization I 3 HSTR 102 Western Civilization II 3 HSTR 103 Honors Western Civilization I 3 HSTR 104 Honors Western Civilization II 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 Introduction to Intercultural Communication 3 Human Geography GPHY 121 3 HTH 270 Global Health Issues 3 World Literature LIT 230 3 207 World Music MUSI 3 NASX 105 Introduction to Native American Studies 3 205 NASX Native Americans in Contemporary Society 3 PHL 271 Indian Philosophies and Religions 3 PHL 272 Chinese Philosophies and Religions 3 201 3 REHA Introduction to Diversity in Counseling RLST 170 The Religious Quest 3 A&SC//WGSS274 Women, Culture, and Society 3 SPNS 150 The Hispanic Tradition 3 **CATEGORY V: ARTS & HUMANITIES** 6 credits Students are required to take one course from each subcategory Subcategory A – Fine Arts 3 credits ARTZ 101 Art Fundamentals 3 ARTZ 105 Visual Language-Drawing 3 ARTZ 106 Visual Language-2-D Foundations 3 108 ARTZ Visual Language-3-D Foundations 3 ARTZ Ceramics for Non-majors 3 131 CRWR Intro Creative Writing Workshop 3 240 FILM 160 Introduction to World Cinema 3 270 Film & Literature 3 LIT **Computer Presentation and Animation** MART 260 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 THTR 120 Introduction to Acting I 3

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Subcate	gory B	- Humanities	3 credits
ARTH	150	Introduction to Art History	3
HONR	111	Perspectives and Understanding	3
LIT	110	Introduction to Literature	3
LIT	240	The Bible as Literature	3
PHL	110	Introduction to Ethics	3
PHL	111	Philosophies of Life	3
PHL	254	People and Politics	3
С	redits	Grade Semester	Equivalent

CSCI	111A	Programming with Java I	4	
*M	171	Calculus I	4	
М	110	Mathematical Computing	1	
М	172	Calculus II	4	
М	242	Methods of Proof	3	
М	273	Multivariable Calculus	4	
М	274	Introduction to Differential Equations	4	
М	305	Discrete Structures I	4	
М	329	Modern Geometry	3	
М	333	Linear Algebra	4	
М	371	Numerical Computing	4	
М	431	Abstract Algebra I	3	
М	471	Mathematical Analysis	3	
М	472	Introduction to Complex Analysis	3	
М	499	Capstone	3	
STAT	341	Introduction to Probability and Statistics	4	

## A minimum grade of C- or better is required in all major coursework

# \*May satisfy General Education requirements.

## Language Requirement (2 semesters/1 year of the same language)

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# Electives

Lieuves		

## **BACHELOR OF SCIENCE DEGREE IN MATHEMATICS**

Categories	Credits	Earned	Remaining	
General Education	31			
Mathematics Major	55			
Language Requirement	8			
Minor (Optional)	V			
Electives	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).

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

NOTES: