MONTANA STATE UNIVERSITY BILLINGS

Bachelor of Science Degree: Mathematics Teaching Licensure Option Single Subject Endorsement General Bulletin 2026-2027

Name: _____

Student ID: _____

General Education Requirements – see attached page for specific courses

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.

Category I: Global Academic Skills (10 credits)

Gen Ed Category	Course	Credits	Grade	Semester	Equivalent
Mathematics (3 credits)					
English (3 credits)	WRIT 101				
Communication & Information Literacy (3 credits)	COMX 111 or 115				
Skills for College Success (1 credit)	COLS 108				

NOTE: Skills for College Success Course: in addition to the MUS Transfer Policies (see MUS Core Curriculum), transfer and re-admit students who transfer in 30 or more credits are not required to meet this category.

Category II: Natural Sciences (6 credits)

Gen Ed Category	Course	Credits	Grade	Semester	Equivalent
Life Sciences (3 credits)					
Physical Sciences (3 credits)					

NOTE: Some majors are required to take specific science labs as part of their requirements. Please speak with an advisor for more information

Category III: Social Sciences and History (6 credits)

Gen Ed Category	Course	Credits	Grade	Semester	Equivalent
Social Science (3 credits)	EDU 105				
History (3 credits)	HSTA 101 or 102				

Category IV: Cultural Diversity (3 credits)

Gen Ed Category	Course	Credits	Grade	Semester	Equivalent
Cultural Diversity (3 credits)	NASX 105 or 205				

Category V: Arts & Humanities (6 credits)

Gen Ed Category	Course	Credits	Grade	Semester	Equivalent
Fine Arts (3 credits)					
Humanities (3 credits)					

General Education Requirements

Category I: Global Academic Skills (10 credits)

Subcategory A – Mathematics (3 credits)

Subject	Number	Course Title	Credits
M	105	Contemporary Math	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 Health Care	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)

Subject	Number	Course Title	Credits
WRIT	101	College Writing I	3
WRIT	121	Introduction to Technical Writing	3
WRIT	122	Introduction to Business Writing	3

Subcategory C – Communication and Information Literacy (3 credits)

Subject	Number	Course Title	Credits
BMIS	150	Cyber Security & Electronic Communication	3
COMX	111	Introduction to Public Speaking	3
COMX	115	Intro to Interpersonal Communication	3
COMX	210	Communication in Small Groups	3
LSCI	125	Research in the Information Age	3

Subcategory D – Skills for College Success (1 credit)

Subject	Number	Course Title	Credits
COLS	108	Skills for College Success	1

Category II: Natural Sciences (6 credits)

Subcategory A – Life Science (3 credits)

Subject	Number	Course Title	Credits
BIOB	101	Discover Biology	3
BIOB	102	Discover Biology Laboratory	1
BIOB	120	Fundamentals of Biology Plants and People	3
BIOB	121	Fundamentals of Biology for Allied Health	3
BIOB	123	Fundamentals of Biology Nature of Nutrition	3
BIOB	160	Principles of Living Systems	3
BIOB	161	Principles of Living Systems Laboratory	1
SCIN	101	Integrated Sciences I	4

Subcategory B – Physical Science (3 credits)

Subject	Number	Course Title	Credits
ASTR	110	Introduction to Astronomy	3
ASTR	111	Introduction to Astronomy Laboratory	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 II Laboratory	1
GEO	101	Introduction to Physical Geology	3
GEO	102	Introduction to Physical Geology Laboratory	1
GEO	112	Montana Geology	3
GPHY	262	Spatial Sciences Technology & Applications	3
GPHY	263	Spatial Sciences Tech & Applications Lab	3
PHSX	103	Our Physical World	3
PHSX	104	Our Physical World Laboratory	1
PHSX	205	College Physics I	3
PHSX	206	College Physics I Laboratory	1
SCIN	103	Integrated Sciences II	4

BIOB 101, BIOB 102, BIOB 120, BIOB 161, ASTR 111, CHMY 122, CHMY 142, GEO 102, GPHY 263, PHSX 103, PHSX 104, PHSX 206, SCIN 101, and SCIN 103 include a lab experience. Elementary Education majors can satisfy Natural Sciences by taking SCIN 101 and SCIN 103.

Category III: Social Sciences and History (6 credits)

Subcategory A – Social Sciences (3 credits)

Subject	Number	Course Title	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

Subject	Number	Course Title	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)

Subject	Number	Course Title	Credits
ANTY	220	Cultural 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	Intro to Native American Studies	3
NASX	205	Native Americans in Contemporary Society	3
REHA	201	Intro 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 and Humanities (6 credits)

Subcategory A – Fine Arts (3 credits)

Subject	Number	Course Title	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 to Creative Writing Workshop	3
FILM	160	Intro to World Cinema	3
LIT	270	Film and 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 Theater	3

Subcategory B – Humanities (3 credits)

Subject	Number	Course Title	Credits
ARTH	150	Introduction to Art History	3
HONR	111	Perspectives & 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

Major Requirements

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

Professional Education Core

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
EDU	105	Education and Democracy	3			
EDU	220	Human Growth and Development	3			
EDU	220L	Human Growth and Development Lab (45-hour practicum required	0			
EDU	221	Educational Psychology and Measurement	3			
EDSP	204	Introduction to Teaching Exceptional Learners (15-hour practicum required)	3			
EDSP	410	Supporting Diverse Learners through Collaboration	3			
HTH	412	Drugs and Alcohol	1			
EDU	333	Reading and Writing Across the Curriculum	3			
EDU	343	Strategies for Managing Diverse Learners	2			
EDU	354	Secondary Junior Field	2			
EDU	366	Math Practicum	3			
EDU	381	Curriculum Theory and Design	3			
EDU	383	Assessment in Education	3			
EDU	406	Philosophical, Legal, & Ethical Issues in Education	3			
EDU	497B	Methods: 9-12 Mathematics	3			

Student's choice of either course

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
EDU	495A	Student Teaching: K-12	9			
EDU	495C	Student Teaching: 5-12	9			

Mathematics Required Courses

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
M	171	Calculus I	4			
M	172	Calculus II	4			
M	242	Methods of Proof	3			

M	273	Multivariable Calculus	4			
M	305	Discrete Structures I	4			
M	329	Modern Geometry	3			
M	333	Linear Algebra	4			
M	431	Abstract Algebra I	3			
M	471	Mathematical Analysis	3			
STAT	216	Introduction to Statistics	4			
STAT	341	Introduction to Probability and Statistics	4			

Concentration Electives

Select 6-8 credits from below. Other courses may be chosen in consultation with an advisor.

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
CSCI	116	Introduction to Python Programming	3			
CSCI	150	Introduction to Computer Science	3			
M	130	Math for Elementary Teachers I	3			
M	131	Math for Elementary Teachers II	3			
PHSX	220	Physics I	3			
PHSX	221	Physics I Laboratory	1			
PHSX	232	Physics II & Thermo	3			
PHSX	233	Physics II & Thermo Laboratory	1			

Electives

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent

Bachelor of Science Degree Mathematics Teaching Licensure Option Single Subject Endorsement

Categories	Credits	Earned	Remaining
General Education	31		
Profession Education Core	47		
Required Math Courses	40		
Concentration Electives	6-8		
Electives	V		
Total	120		

The following general education categories are required for admission to the Educator Preparation Program: Mathematics, English, Communication, Life Science, History, and Cultural Diversity.

EDU 105, EDU 220, EDU 220L, EDU 221, EDSP 204, and HTH 412 are required for admission to the Educator Preparation Program.

EDU 220, EDU 220L, EDSP 204, EDU 354, EDU 495A, and EDU 495C require a completed Federal Criminal Background Check in order to complete the required practicum hours within the class. Packets may be picked up either at the Advising Center in McMullen Hall or printed off from MSUB's College of Education website.

Professional Education Core courses for the Secondary Art Teaching licensure are: ARTZ 402 and ARTZ 403. Must be completed in sequence.

M 171, STAT 216 and EDU 105 may satisfy General Education requirements

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

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).

Montana State University Billings

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