Bachelor of Science Degree: Biology Medical Laboratory Science Option 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) STAT 216 – *Major Requirement*					
English (3 credits)					
Communication & Information Literacy (3 credits)					
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) BIOB 160/161 – *Major Requirement*					
Physical Sciences (3 credits) CHMY 141/142 – *Major Requirement*					

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)					
History (3 credits)					

Category IV: Cultural Diversity (3 credits)

Gen Ed Category	Course	Credits	Grade	Semester	Equivalent
Cultural Diversity (3 credits)					

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

Biology Requirements

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
BIOB	160	Principles of Living Systems	3			
BIOB	161	Principles of Living Systems Lab	1			
BIOM	250	Microbiology for Health Sciences	3			
BIOM	251	Microbiology for Health Sciences Laboratory	1			
BIOB	260	Cellular and Molecular Biology	3			
BIOB	261	Cellular and Molecular Biology Lab	1			
BIOH	301	Human Anatomy and Physiology I	3			
BIOH	302	Human Anatomy and Physiology I Laboratory	1			
BIOH	311	Human Anatomy and Physiology II	3			
BIOH	312	Human Anatomy and Physiology II Laboratory	1			
BIOB	375	General Genetics	3			
BIOB	376	General Genetics Laboratory	1			
BIOM	400	Medical Microbiology	3			
BIOM	401	Medical Microbiology Laboratory	1			
BIOH	405	Hematology	3			
BIOH	406	Hematology Laboratory	1			
BIOB	410	Immunology	3			
BIOB	499	Senior Thesis/Capstone	1			

Chemistry Requirements

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
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			
CHMY	211	Elements of Organic Chemistry	3			
CHMY	212	Elements of Organic Chemistry Laboratory	1			

BCH	380	Biochemistry	3			
BCH	381	Biochemistry Lab	1			

Highly recommended, but not required:

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
CHMY	311	Analytical Chem-Quant Analysis	3			
CHMY	312	Analytical Chem-Quant Analysis Laboratory	1			

Mathematics/Statistics Requirements

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
STAT	216	Introduction to Statistics	4			

Physics Requirement

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
PHSX	205	College Physics I	3			
PHSX	206	College Physics I Laboratory	1			

Professional Medical Lab Training Core

Course Subject	Course Number	Course Title	Credits	Grade	Semester	Equivalent
BIOH	470	Summer Clinical Laboratory	V			
BIOH	471	Professional Training I Fall Semester	V			
BIOH	472	Professional Training II Spring Semester	V			

Courses in the professional training core (BIOH 470, BIOH 471 Fall Semester, and BIOH 472 Spring Semester) will be taught at an affiliated institution, which include Montana State University Bozeman; University of North Dakota, Grand Forks; Sacred Heart School of Medical Technology, Spokane, Washington; or the Colorado Center for Medical Laboratory Science, Aurora. The training and credits from all four programs will allow students to fulfill the requirements needed to take the national examinations to become certified clinical laboratory scientists or medical technologists. All students enrolled at each training program site will remain MUS students at their respective institutions.

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Categories	Credits	Earned	Remaining
General Education	31		
Biology Requirements	36		
Chemistry Requirements	18		
Math/Statistics Requirements	4		
Physics Requirements	4		
Professional Med Lab Training Core	37		
Total	120		

Students with a 2.5 GPA or higher can apply for a final year of professional training to earn a degree in Biology Medical Laboratory Science Option from MSU Billings. Total credits for graduation are 120 credits. Students in this program will take an additional three semesters of courses through one of our affiliate institutions. With proper planning and advising, it is possible for students to begin their professional training after their junior year. These additional semesters are necessary because professional training programs approved by the National Accrediting Agency for Clinical Laboratory Science are 12 months in duration. All students desiring to become a certified Clinical Laboratory Scientist must take a national certification examination upon completion of the year of professional training.

BIOB 160, CHMY 141, and STAT 216 may satisfy General Education requirements.

Students wishing to obtain a minor in Chemistry will need to take CHMY 311, CHMY 312, CHMY 321, CHMY 322, CHMY 323, and CHMY 324, instead of CHMY 211 and CHMY 212.

BIOH 470, BIOH 471, and BIOH 472 require an extra fee.

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).

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