



## ADVISING WORKSHEET

**BACHELOR OF SCIENCE DEGREE MAJOR IN BROADFIELD SCIENCE  
TEACHING LICENSURE OPTION  
General Bulletin 2020-2021**

TRANSFER INSTITUTION(S):  
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Name \_\_\_\_\_

Student ID # \_\_\_\_\_

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

General Education Category	Course #	Credits	Grade	Semester	Equivalent
<b>Category I: Global Academic Skills</b> (9 credits) # A. Mathematics (3 credits) <i>STAT 216 or M 171 – Major Requirements</i> B. English (3 credits) # C. Communication & Information Literacy (3 credits) #					
	WRIT 101				
	COMX 111 or 115				
<b>Category II: Natural Sciences</b> (7 credits) # 2 lectures (6 credits) & 1 lab (1 credit) (1 life science & 1 physical science & 1 lab)  <i>BIOB 160/161 &amp; CHMY 141 – Major Requirements</i>					
<b>Category III: Social Sciences and History</b> (6 credits) A. Social Science (3 credits) B. History (3 credits) #	EDU 105				
	HSTA 101 or 102				
<b>Category IV: Cultural Diversity</b> (3 credits) #	NASX 105 or 205				
<b>Category V: Arts &amp; Humanities</b> (6 credits) A. Fine Arts (3 credits) B. Humanities (3 credits)					

A minimum grade of “C” required in all General Education courses.  
# = Required for Admission to the Teacher Education Program

Reviewed:  
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# GENERAL EDUCATION REQUIREMENTS

<b>CATEGORY I: GLOBAL ACADEMIC SKILLS</b>		<b>9 credits</b>
<i>Students are required to take one course from each subcategory</i>		
<b>Subcategory A - Mathematics</b>		<b>3 credits</b>
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
<b>STAT 216</b>	<b>Introduction to Statistics</b>	<b>4</b>
<b>Subcategory B - English</b>		<b>3 credits</b>
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
<b>Subcategory C- Communication &amp; Information Literacy</b>		<b>3 credits</b>
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

<b>CATEGORY II: NATURAL SCIENCES</b>		<b>6 cr. lecture &amp; 1 cr. lab</b>
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Students are required to take one course from each subcategory and at least one corresponding lab or Integrated Sciences

<b>Subcategory A – Life Sciences</b>		<b>3-4 credits</b>
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
<b>BIOB 160</b>	<b>Principles of Living Systems</b>	<b>3</b>
<b>BIOB 161</b>	<b>Principles of Living Systems Lab</b>	<b>1</b>

<b>Subcategory B – Physical Sciences</b>		<b>3-4 credits</b>
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
<b>CHMY 141</b>	<b>College Chemistry I</b>	<b>3</b>
<b>CHMY 142</b>	<b>College Chemistry Laboratory I</b>	<b>1</b>
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

Integrated Sciences  
 SCIN 101, 102, 103, 104 Integrated Sciences 3, 1, 3, 1

<b>CATEGORY III: SOCIAL SCIENCES AND HISTORY</b>		<b>6 CREDITS</b>
<i>Students are required to take one course from each subcategory</i>		
<b>Subcategory A – Social Sciences</b>		<b>3 credits</b>
ANTY 217	Physical Anthropology & Archeology	3
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

<b>Subcategory B - History</b>		<b>3 credits</b>
HSTA 101	American History I	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

<b>CATEGORY IV: CULTURAL DIVERSITY</b>		<b>3 credits</b>
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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
PHL 271	Indian Philosophies and Religions	3
PHL 272	Chinese Philosophies and Religions	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

<b>CATEGORY V: ARTS &amp; HUMANITIES</b>		<b>6 credits</b>
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Students are required to take one course from each subcategory

<b>Subcategory A – Fine Arts</b>		<b>3 credits</b>
ARTZ 101	Art Fundamentals	3
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
MART 260	Computer Presentation and Animation	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

<b>Subcategory B - Humanities</b>		<b>3 credits</b>
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
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*A minimum grade of C or better is required in all major coursework*

**Professional Education Core**

*#EDU	105	Education and Democracy	3			
^#EDU	220/ 220L	Human Growth and Development/ Lab (45 hour practicum required)	3			
#EDU	221	Educational Psychology and Measurement	3			
^#EDSP	204	Introduction to Teaching Exceptional Learners (15 hour practicum required)	3			
#HHP	412	Drugs and Alcohol	1			
EDU	333	Reading and Writing Across the Curriculum	3			
EDU	380	Introduction to Curriculum Planning/Practice	2			
EDU	354	Secondary Junior Field	2			
EDU	397G	Methods: 5-12 Science	2			
EDU	406	Philosophical, Legal & Ethical Issues in Education	3			
EDU	495C	Student Teaching: 5-12	9			

**Professional Core Total 34**

**#Required for Admission to the Educator Preparation Program**

**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	3			
*CHMY	142	College Chemistry I Lab	1			
CHMY	143	College Chemistry II	3			
CHMY	144	College Chemistry II Lab	1			
CHMY	211/ 212	Elements of Organic Chemistry with Lab	3/ 1			
<b>OR</b>						
CHMY	321/ 322	Organic Chemistry I with Lab				

**Chemistry Total 12**

**Earth Science Requirements**

*GEO	101	Introduction to Physical Geology	3			
*GEO	102	Introduction to Physical Geology Lab	1			
GEO	205	Mineralogy	4			
GEO	211	Earth History and Evolution	3			
GEO	212	Earth History and Evolution Lab	1			

**Earth Science Total 12**

**Physics Requirements** (Choose either the 205, 207 series or the 220, 232 series)

PHSX	205	College Physics I	3			
PHSX	206	College Physics I Lab	1			
PHSX	207	College Physics II	3			
PHSX	208	College Physics II Lab	1			
<b>OR</b>						
PHSX	220	Physics I	3			
PHSX	221	Physics I Lab	1			
PHSX	232	Physics II and Thermodynamics	3			
PHSX	233	Physics II and Thermodynamics Lab	1			
*ASTR	110	Introduction to Astronomy	3			

**Physics Total 11**

**Mathematics and Statistics Requirements** (choose two, one from each rubric)

*M	171	Calculus I	4			
M	172	Calculus II	4			
*STAT	141	Introduction to Statistical Concepts	3			
*STAT	216	Introduction to Statistics	4			
STAT	217	Intermediate Statistical Concepts	4			

**Math/Statistics Total 7-8**

**Concentration-Choose I or II below:****I. Concentration in Biology** Choose 4 courses (minimum of 2 with labs)

BIOB	315	Animal Development	3			
BIOM	360	General Microbiology	3			
BIOM	361	General Microbiology Lab	1			
BIOE	370	General Ecology	3			
BIOE	371	General Ecology Lab	1			
BIOB	375	General Genetics	3			
BIOB	376	General Genetics Lab	1			
BCH	380	Biochemistry	3			
BCH	381	Biochemistry Lab	1			
BIOO	412	Animal Physiology	3			
BIOB	425	Advanced Cell and Molecular Biology	3			
BIOB	426	Advanced Cell and Molecular Biology Lab	1			
BIOO	433	Plant Physiology	3			
BIOO	434	Plant Physiology Lab	1			
BIOO	435	Plant Systematics	2			
BIOO	436	Plant Systematics Lab	2			
BIOO	437	Plant Development	3			
BIOO	438	Plant Development Lab	1			
BIOO	450	Vertebrate Zoology	3			
BIOO	451	Vertebrate Zoology Lab	1			
BIOB	498	Internship/Cooperative Education <i>Recommended: Lab Teaching Assistant</i>	2			

**Minimum electives for Biology concentration 16**

**II. Concentration in Chemistry** Choose 4 courses (minimum of 2 with labs)

BCH	380	Biochemistry	3			
BCH	381	Biochemistry Lab	1			
BCH	480	Advanced Biochemistry I	3			
BCH	481	Advanced Biochemistry I Lab	1			
CHMY	311	Analytical Chemistry – Quantitative Analysis	3			
CHMY	312	Analytical Chemistry – Quantitative Analysis Lab	1			
CHMY	323	Organic Chemistry II	3			
CHMY	324	Organic Chemistry II Lab	1			
CHMY	371	Physical Chemistry-Quantum Chemistry & Spectroscopy	3			
CHMY	372	Physical Chemistry I Lab	1			
CHMY	401	Advanced Inorganic Chemistry	3			
CHMY	402	Advanced Inorganic Chemistry Lab	1			
CHMY	421	Advanced Instrument Analysis	3			
CHMY	422	Advanced Instrument Analysis Lab	1			
CHMY	498	Internship/Cooperative Education <i>Recommended: Lab Teaching Assistant</i>	2			

**Minimum electives for Chemistry concentration      16**

**Restricted Electives – Selected with advisor approval – 6 credits**


\*May satisfy General Education requirements.

**BACHELOR OF SCIENCE DEGREE MAJOR IN BROADFIELD SCIENCE – TEACHING LICENSURE OPTION**

Categories	Credits	Earned	Remaining
Academic Foundations/General Education	31	_____	_____
Professional Education Core	**31	_____	_____
Biology	***8	_____	_____
Chemistry	**9	_____	_____
Earth Science	12	_____	_____
Physics	11	_____	_____
Mathematics/Statistics	**4-5	_____	_____
Concentration (Biology or Chemistry)	16	_____	_____
Restricted Electives selected with advisor	6	_____	_____
Total	128	_____	_____

**\*\*3 credits that also satisfy General Education requirements are not included in the total number of credits.**

**\*\*\*4 credits that also satisfy General Education requirements are not included in the total number of credits.**

**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:**

^ Course requires a completed Federal Criminal Background Check in order to complete the required practicum hours within the class. Packets may be picked up at either the Advising Center in McMullen Hall or in the College of Education, or can be printed off the website at <http://www.msubillings.edu/coe/etp/FieldExper/FingerprintInfo.htm>. The background check is only valid for 24 months.