

ADVISING WORKSHEET BACHELOR OF SCIENCE DEGREE MAJOR IN CHEMISTRY TEACHING LICENSURE OPTION General Bulletin 2015-2017

TRANSFER INSTITUTION(S):	TRANSFER	INSTITUTION(S):
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Montana State University Billings Advising & Career Services 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)\$TAT 216 or M 171 – Major Requirements					
B. English (3 credits) #	WRIT 101				
C. Communication & Information Literacy (3 credits) #	COMX 111 or 115				
Category II: Natural Sciences (7 credits) # 2 lectures (6 credits) & 1 lab (1 credit) (1 life science & 1 physical science & 1 lab)	BIOB 160				
	BIOB 161				
CHMY 141 – Major Requirements					
Category III: Social Sciences and History (6 credits) A. Social Science (3 credits)	EDU 105				
B. History (3 credits) #	HSTA 101 or 102				
Category IV: Cultural Diversity (3 credits) #	NASX 105 or 205				
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.

#= Required for Admission to the Educator Preparation Program

Reviewed:

GENERAL EDUCATION REQUIREMENTS

CATEGO	DRY I: (GLOBAL ACADEMIC SKILLS	9 credits
Students	are req	uired to take one course from each subco	ategory
Subcate	gory A	- Mathematics	3 credits
М	105	Contemporary Mathematics	3
М	114	Extended Technical Mathematics	3
М	121	College Algebra	3 3 3 II 3
М	122	College Trigonometry	3
М	131	Mathematics for Elementary Teachers	II 3
М	143	Finite Mathematics	4
М	161	Survey of Calculus	3
М	171	Calculus I	4
STAT	141	Introduction to Statistical Concepts	3
STAT	216	Introduction to Statistics	4
Subcate	gory B	- English	3 credits
WRIT	101	College Writing I	3
WRIT	121	Introduction to Technical Writing	3
WRIT	122	Introduction to Business Writing	
WRIT	201	College Writing II	3 3 3 3
WRIT	220	Business & Professional Writing	3
WRIT	221	Intermediate Technical Writing	3
Subcate	gory C-	- Communication & Information Literacy	y 3 credits
COMX	<i>ิ เ</i> บ	Introduction to Public Speaking	́ <u>3</u>
OR		1 0	
COMX	115	Introduction to Interpersonal Commu	nication3

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

		esponding lab <u>or</u> integrated Sciences	
Subcateg	gory A -	- Life Sciences	3-4 credits
BIOB	101	Discover Biology	3
BIOB	102	Discover Biology Lab	1
BIOB	160	Principles of Living Systems	3
BIOB	161	Principles of Living Systems Lab	1
Subcateg	gory 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 I	ab 1
CHMY	141	College Chemistry I	3
CHMY	142	College Chemistry Laboratory I	1
GEO	101	Introduction to Physical Geology	3
GEO	102	Introduction to Physical Geology La	boratory 1
GPHY	111	Introduction to Physical Geography	3
GPHY	112	Introduction to Physical Geography	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
PHSX	105	Fundamentals of Physical Science	3
PHSX	106	Fundamentals of Physical Science L	ab 1
Integrat	ed Scier	ices	
SCIN 101	, 102, 103	3, 104 Integrated Sciences	3, 1, 3, 1

CATEGO	RY III:	SOCIAL SCIENCES AND HISTORY	6 credits
Students	are req	uired to take one course from each subca	tegory
Subcate	gory A	– Social Sciences 3	3 credits
ANTY	217	Physical Anthropology & Archeology	3
BGEN	105	Introduction to Business	3
COMX	106	Communicating in a Dynamic Workpla	ace 3
ECNS	201	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	210	Introduction to American Government	3
PSCI	220	Introduction to Comparative Governme	ent 3
PSYX	100	Introduction to Psychology	3
PSYX	231	Human Relations	3
SOCI	101	Introduction to Sociology	3
SOCI	201	Social Problems	3

Subcate	gory B	- History	3 credits
HSTA	101	American History I	3
OR			
HSTA	102	American History II	3
CATEGO	ORY IV:	CULTURAL DIVERSITY	3 credits
NASX	105	Introduction to Native American Stud	ties 3
OR NASX	205	Nativo Amonio ana in Contonno anama	aniate 2
NASA	203	Native Americans in Contemporary S	ociety 5
CATEGO	ORY V:	ARTS & HUMANITIES	6 credits
Students	are req	uired to take one course from each subc	ategory
Subcate	gory A	– Fine Arts	3 credits
ARTZ	101	Art Fundamentals	3
ARTZ	105	Visual Language-Drawing	3
ARTZ	131	j	3
CRWR	240	Intro Creative Writing Workshop	3
FILM	160	Introduction to World Cinema	3
LIT	270	Film & Literature	
MART	260	Computer Presentation and Animation	
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
РНОТ	154	Exploring Digital Photography	3
THTR	101	Introduction to Theatre	3
THTR	120	Introduction to Acting I	3

THIR	101	Introduction to Theatre	3
THTR	120	Introduction to Acting I	3
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

			Credits	Grade	Semester	Equivalent
Profession	al Educatio	A minimum grade of C or better is requir	ed in all	major co	ursework	
*#EDU	al Education 105	Education and Democracy	3			
^#EDU	220/	Human Growth and Development/	3			
	220L	Lab (45 hour practicum required)				
#EDU	221	Educational Psychology and Measurement	3			
^#EDSP	204	Introduction to Teaching Exceptional Learners (15 hour practicum required)	3			
#HTH	412	Alcohol, Tobacco and Other Drug Awareness (ATOD)	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			
Chamistur	Doguinom	Professional Core Total	34	#Require	l for Admission to	the Educator Preparation Prog
*CHMY	Requirem 141	College Chemistry I	3	1		
*CHMY	142	College Chemistry Laboratory I	1			
CHMY	143	College Chemistry II	3			
CHMY	144	College Chemistry Laboratory II	1			
CHMY	311	Analytical Chemistry – Quantitative Analysis	3			
CHMT	312	Analytical Chemistry Laboratory – Quantitative	1			
	512	Analysis	1			
CHMY	321	Organic Chemistry I	3			
CHMY	322	Organic Chemistry Laboratory I	1			
CHMY	323	Organic Chemistry II	3			
CHMY	324	Organic Chemistry Laboratory II	1			
СНМҮ	371	Physical Chemistry – Quantum Chemistry and Spectroscopy	3			
CHMY	372	Physical Chemistry Laboratory I	1			
СНМҮ	373	Physical Chemistry – Kinetics and Thermodynamics	3			
CHMY	374	Physical Chemistry Laboratory II	1			
BCH	380	Biochemistry	3			
BCH	381	Biochemistry Lab	1			
CHMY	498	Internship/Cooperative Education	2			
Chemistry	v Electives (Chemistry Total Choose 9 credits from the following:	34			1
CHMY	401	Advanced Inorganic Chemistry	3			
CHMY	402	Advanced Inorganic Chemistry Laboratory	1			
CHMY	411	Advanced Organic Chemistry	3			
CHMY	412	Advanced Organic Chemistry laboratory	1			
CHMY	421	Advanced Instrument Analysis	3			
CHMY	422	Advanced Instrument Analysis Laboratory	2			
CHMY	490	Undergraduate Research	1-5			
СНМҮ	491	Special Topics	3			
BCH	480	Advanced Biochemistry I	3			
BCH		Advanced Biochemstry I Laboratory	1			
всп	481	Advanced Biocnemstry I Laboratory	0			

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Mathematics Requirements

Mathema	illes Regui	i ements		-	
*М	171	Calculus I	4		
М	172	Calculus II	4		
*STAT	216	Introduction to Statistics	4		

12

Mathematics Total

		filutionaties four	1.		
Physics R	equirements				
*ASTR	110	Introduction to Astronomy	3		
*ASTR	111	Introduction to Astronomy Lab	1		
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		
		Physics Total	12	·	

Physics Total

Science Electives (4 credits selected with advisor approval)

*May meet General Education requirements. Students should consult with an academic advisor before registering for courses in order to minimize the number of credits required for graduation.

BACHELOR OF SCIENCE DEGREE IN CHEMISTRY – TEACHING LICENSURE OPTION

Categories General Education	Credits 31	Earned	Remaining
Professional Education Core	**31		
Chemistry Requirements	**31		
Chemistry Electives	9		
Mathematics Requirements	**9		
Physics Requirements	12		
Science Electives	4		
Total	127		

**3 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.