



**ADVISING WORKSHEET**  
**BACHELOR OF SCIENCE DEGREE**  
**MAJOR IN CHEMISTRY**  
**GENERAL BULLETIN 2023-2024**

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>M 171 and STAT 216 major requirement</i> B. English (3 credits) C. Communication & Information Literacy (3 credits)					
<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>CHMY 141 is a major requirement</i>	BIOB 160				
	BIOB 161				
<b>Category III: Social Sciences and History</b> (6 credits) A. Social Science (3 credits) B. History (3 credits)					
<b>Category IV: Cultural Diversity</b> (3 credits)					
<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.

*Note: Certain degrees may require a minimum grade of "C" in General Education courses.*

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
<b>M</b>	<b>171</b>	<b>Calculus I</b>	<b>4</b>
STAT	141	Introduction to Statistical Concepts	3
<b>STAT</b>	<b>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

<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
COMX	201	Communication in Small Groups	3
HONR	205	Honors Inquiry and Research	3
LSCI	125	Research in the Information Age	3

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

<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	123	Fund of Biology: The Nature of Nutrition	3
<b>BIOB</b>	<b>160</b>	<b>Principles of Living Systems</b>	<b>3</b>
<b>BIOB</b>	<b>161</b>	<b>Principles of Living Systems Lab</b>	<b>1</b>
SCIN	101	Integrated Science I	3
SCIN	102	Integrated Science I Lab	1

<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</b>	<b>141</b>	<b>College Chemistry I</b>	<b>4</b>
<b>CHMY</b>	<b>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
SCIN	103	Integrated Science II	3
SCIN	104	Integrated Science II Lab	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>
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	159	World History to 1500 CE	3
HSTR	160	Modern World History	3
PSCI	230	Introduction to International Relations	3

<b>CATEGORY IV: CULTURAL DIVERSITY</b>			<b>3 credits</b>
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
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>
<i>Students are required to take one course from each subcategory</i>			
<b>Subcategory A – Fine Arts</b>			<b>3 credits</b>
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
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

<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
<i>A minimum grade of C- or better is required in all major coursework</i>					
<b>Chemistry Requirements</b>					
*CHMY And *CHMY	141 142	College Chemistry I College Chemistry Laboratory I	4 1		
CHMY And CHMY	143 144	College Chemistry II College Chemistry Laboratory II	4 1		
CHMY And CHMY	311 312	Analytical Chemistry – Quantitative Analysis Analytical Chemistry Laboratory – Quantitative Analysis	3 1		
CHMY And CHMY	321 322	Organic Chemistry I Organic Chemistry Laboratory I	3 1		
CHMY And CHMY	323 324	Organic Chemistry II Organic Chemistry Laboratory II	3 1		
CHMY And CHMY	371 372	Physical Chemistry – Quantum Chemistry and Spectroscopy Physical Chemistry Laboratory I	3 1		
CHMY And CHMY	373 374	Physical Chem - Kinetics & Thermodynamics Physical Chemistry Laboratory II	3 1		
CHMY And CHMY	401 402	Advanced Inorganic Chemistry Advanced Inorganic Chemistry Laboratory	3 1		
CHMY And CHMY	411 412	Advanced Organic Chemistry Advanced Organic Chemistry Laboratory	3 1		
CHMY And CHMY	421 422	Advanced Instrument Analysis Advanced Instrument Analysis Laboratory	3 2		
CHMY	490	Undergraduate Research	2		
CHMY	498	Internship / Cooperative Education	2		
CHMY	499	Senior Thesis/Capstone	1		
BCH And BCH	380 381	Biochemistry Biochemistry Laboratory	3 1		
BCH And BCH	480 481	Advanced Biochemistry I Advanced Biochemistry I Laboratory	3 1		
<b>Chemistry Total</b>			<b>56</b>		
<b>Mathematics Requirements</b>					
*STAT	216	Introduction to Statistics <b>and</b>	4		
*M	171	Calculus I	4		
M	172	Calculus II	4		
<b>Mathematics Total</b>			<b>12</b>		
<b>Physics Requirements</b>					
PHSX And PHSX	220 221	Physics I Physics I Lab	3 1		
PHSX And PHSX	232 233	Physics II and Thermodynamics Physics II and Thermodynamics Laboratory	3 1		
<b>Physics Total</b>			<b>8</b>		

\* May satisfy General Education requirements.

Course	Credits	Grade	Semester	Equivalent
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**Science and Math Electives (16 credits selected with advisor approval)**


**Electives**


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**BACHELOR OF SCIENCE DEGREE IN CHEMISTRY**

Categories	Credits	Earned	Remaining
General Education	31	_____	_____
Chemistry Requirements	56	_____	_____
Mathematics Requirements	12	_____	_____
Physics Requirements	8	_____	_____
Science and Math Electives	16	_____	_____
Electives (variable)	V	_____	_____
Total	120	_____	_____

\*May satisfy General Education requirements.

The following General Education courses also satisfy requirements in the major: CHMY 141/142, M 171 and STAT 216.

Certain courses in this program have prerequisites; students should check the 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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