



**ADVISING WORKSHEET**  
**BACHELOR OF SCIENCE DEGREE**  
**MAJOR IN CHEMISTRY**  
**General Bulletin 2019-2020**

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 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

## CATEGORY I: GLOBAL ACADEMIC SKILLS 9 credits

*Students are required to take one course from each subcategory*

### Subcategory A - Mathematics 3 credits

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
STAT	216	Introduction to Statistics	4

### Subcategory B - English 3 credits

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

### Subcategory C- Communication & Information Literacy 3 credits

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

## 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*

### Subcategory A – Life Sciences 3-4 credits

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
BIOB	160	Principles of Living Systems	3
BIOB	161	Principles of Living Systems Lab	1

### Subcategory 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 Lab	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 Laboratory	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

### Integrated Sciences

SCIN	101, 102, 103, 104	Integrated Sciences	3, 1, 3, 1
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## CATEGORY III: SOCIAL SCIENCES AND HISTORY 6 CREDITS

*Students are required to take one course from each subcategory*

### Subcategory A – Social Sciences 3 credits

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
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 Government	3
PSYX	100	Introduction to Psychology	3
SOCI	101	Introduction to Sociology	3
SOCI	201	Social Problems	3

### Subcategory B - History 3 credits

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

## CATEGORY IV: CULTURAL DIVERSITY 3 credits

A&SC/WGSS	274	Women, Culture, and Society	3
ANTY	220	Culture and Society	3
ARTH	160	Global Visual Culture	3
COMX	212	Introduction to Intercultural Communication	3
GPHY	121	Human Geography	3
HTH	270	Global Health Issues	3
LIT	230	World Literature	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

## CATEGORY V: ARTS & HUMANITIES 6 credits

*Students are required to take one course from each subcategory*

### Subcategory A – Fine Arts 3 credits

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

### Subcategory 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
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	141	College Chemistry I	3		
*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		
CHMY	312	Analytical Chemistry Laboratory – Quantitative 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		
CHMY	361	Elements of Physical Chemistry Laboratory	3		
CHMY	362	Elements of Physical Chemistry Laboratory	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 Instrumental Analysis Laboratory	2		
CHMY	490	Undergraduate Research	2		
CHMY	494	Seminar / Workshop	1		
CHMY	498	Internship / Cooperative Education	2		
BCH	380	Biochemistry	3		
BCH	381	Biochemistry Lab	1		
BCH	480	Advanced Biochemistry I	3		
BCH	481	Advanced Biochemistry I Lab	1		
<b>Chemistry Total</b>			<b>50</b>		
<b>Mathematics Requirement</b>					
*STAT	216	Introduction to Statistics <b>and</b>	4		
<b>Choose one set:</b>					
*M	171	Calculus I <b>and</b>	4		
M	172	Calculus II	4		
<b>OR</b>					
M	161	Survey of Calculus <b>and</b>	3		
M		Math Electives	5		
<b>Mathematics Total</b>			<b>12</b>		
<b>Physics Requirements</b>					
PHSX	220	Physics I	3		
PHSX	221	Physics I Lab	1		
PHSX	232	Physics II and Thermo	3		
PHSX	233	Physics II and Thermo Laboratory	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 (23 credits selected with advisor approval)**


**Electives**


**BACHELOR OF SCIENCE DEGREE IN CHEMISTRY**

Categories	Credits	Earned	Remaining
General Education	31	_____	_____
Chemistry Requirements	**47	_____	_____
Mathematics Requirements	**9	_____	_____
Physics Requirements	8	_____	_____
Science and Math Electives	23	_____	_____
Electives (variable)	V	_____	_____
Total	120	_____	_____

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

*The total number of elective credits required for the degree will be determined by the number of courses a student elects to take which fulfill both General Education requirements and major requirements. Electives should be chosen in consultation with an academic advisor.*

**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: