



ADVISING WORKSHEET
BACHELOR OF SCIENCE DEGREE MAJOR IN BIOLOGY
TEACHING LICENSURE OPTION
General Bulletin 2018-2019

TRANSFER INSTITUTION(S):

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) <i>STAT 141 or 216 and M 171 – Major Requirements</i> | | | | | |
| 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) | | | | | |
| <i>BIOB 160/161 & CHMY 141 – Major Requirements</i> | | | | | |
| Category III: Social Sciences and History (6 credits) | EDU 105 | | | | |
| A. Social Science (3 credits) | | | | | |
| 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

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

| | | | |
|-----------|-----|---|---|
| COMX | 111 | Introduction to Public Speaking | 3 |
| OR | | | |
| COMX | 115 | Introduction to Interpersonal Communication | 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 |
| PHSX | 105 | Fundamentals of Physical Science | 3 |
| PHSX | 106 | Fundamentals of Physical Science Lab | 1 |

Integrated Sciences

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

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 |
| PSYX | 231 | Human Relations | 3 |
| SOCI | 101 | Introduction to Sociology | 3 |
| SOCI | 201 | Social Problems | 3 |

Subcategory B - History 3 credits

| | | | |
|-------------|------------|----------------------------|----------|
| HSTA | 101 | American History I | 3 |
| OR | | | |
| HSTA | 102 | American History II | 3 |

CATEGORY IV: CULTURAL DIVERSITY 3 credits

| | | | |
|-----------|-----|--|---|
| NASX | 105 | Introduction to Native American Studies | 3 |
| OR | | | |
| NASX | 205 | Native Americans in Contemporary Society | 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 | 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> | | | | | | |
| 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 | | | |
| #HTH | 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 | | | |

#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 | | | |
| BIOE | 370 | General Ecology | 3 | | | |
| BIOE | 371 | General Ecology Lab | 1 | | | |
| BIOB | 375 | General Genetics | 3 | | | |
| BIOB | 376 | General Genetics Lab | 1 | | | |
| BIOB | 498 | Internship/Cooperative Education | 2 | | | |
| BIOB | 499 | Capstone | 1 | | | |
| Biology electives selected in consultation with an advisor. | | | 22 | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

Biology Total

45

Chemistry Requirements

| | | | | | | |
|-------|-----|---------------------------------|---|--|--|--|
| *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 | | | |

Chemistry Requirements (continued)

| | | | | | | |
|------|-----|---|---|--|--|--|
| CHMY | 211 | Elements of Organic Chemistry | 3 | | | |
| CHMY | 212 | Elements of Organic Chemistry Laboratory | 1 | | | |
| CHMY | 311 | Analytical Chemistry – Quantitative Analysis | 3 | | | |
| CHMY | 312 | Analytical Chemistry Laboratory – Quantitative Analysis | 1 | | | |
| BCH | 380 | Biochemistry | 3 | | | |
| BCH | 381 | Biochemistry Lab | 1 | | | |

Chemistry Total 20

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

Mathematics and Statistics Requirement

| | | | | | | |
|-----------|-----|--------------------------------------|---|--|--|--|
| *M | 171 | Calculus I | 4 | | | |
| *STAT | 141 | Introduction to Statistical Concepts | 3 | | | |
| OR | | | | | | |
| *STAT | 216 | Introduction to Statistics | 4 | | | |

Mathematics/Statistics Total 7-8

Physics Requirement (Choose one Physics course with lab)

| | | | | | | |
|-----------|-----|------------------------------|---|--|--|--|
| * PHSX | 205 | College Physics I | 3 | | | |
| * PHSX | 206 | College Physics I Laboratory | 1 | | | |
| OR | | | | | | |
| PHSX | 220 | Physics I | 3 | | | |
| PHSX | 221 | Physics I Laboratory | 1 | | | |

Physics Total 4

BACHELOR OF SCIENCE DEGREE IN BIOLOGY – TEACHING LICENSURE OPTION

| Categories | Credits | Earned | Remaining |
|------------------------------|---------|--------|-----------|
| General Education | 31 | _____ | _____ |
| Professional Education Core | **31 | _____ | _____ |
| Biology Requirements | ***41 | _____ | _____ |
| Chemistry Requirements | **17 | _____ | _____ |
| Math/Statistics Requirements | **4-5 | _____ | _____ |
| Physics Requirements | 4 | _____ | _____ |
| Total | 128-129 | _____ | _____ |

****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.