



# SCHOOL OF EDUCATION ADVISING GUIDE

## Biology Major with a Concentration in Secondary Education for Secondary Science Licensure

(For students under the 2011-2012 catalog or earlier)

Name: \_\_\_\_\_ 900#: \_\_\_\_\_



**Use this document** to learn about specific requirements for your major and accompanying teacher licensure courses, and to work with your academic advisors to plan your course of study and track your progress. Please keep an updated copy of this form and leave the original on file in the School of Education Student Services Office.

For general requirements pertaining to Secondary Education licensure, see the Program Overview in the School of Education Student Services Office, WC 162, or online at [www.msudenver.edu/education](http://www.msudenver.edu/education), and **be sure to talk with your advisors.**

**Visit your advisors.** If you major in Biology and seek licensure in Secondary Education, you will have two advisors:

- One in the Department of Biology
- One in Secondary Education

**Before you can register for most education courses:**

- Apply to the School of Education.
- Obtain provisional and/or formal admission to the program. Some courses require provisional admission, while most advanced courses require formal admission.

**There are four parts to this program (described in detail below):**

### 1. GENERAL STUDIES COURSES

The following courses meet Colorado content standards for teachers and are the first courses to focus on completing. You need a total of **22 credit hours** from the following list. **All courses required for licensure (notated with a “§” symbol) must be passed with a grade of C or better.**

Course	Substitute Course # / Title / College	Credit Hours	When?	Grade	Advisor Initials
§ ENG 1010-3	Composing Arguments				
§ ENG 1020-3	Freshman Composition II: Analysis, Research & Documentation				
§ SPE 1010-3	Public Speaking				
§ MTH 1210-4*	Introduction to Statistics*				
HIS XXXX-3	General Studies History				
Arts & Letters-6	General Studies Arts and Letters				
Social Science-6**	Met by EDS 3130 and EDS 3150**				
Natural Science-6	Met by Licensure Requirements				
<b>GENERAL STUDIES TOTAL</b>		<b>22</b>			

\* While MTH 1610 is acceptable for this requirement, MTH 1210 is preferred for prospective science teachers.

\*\* Undergraduate Science Licensure students do not declare a minor in Secondary Education. If you declare this minor, you will have to take additional courses to fulfill your Social Science General Studies requirements.

**2. BIOLOGY MAJOR COURSES**

The following are the course requirements for your major. Please track progress on your major and other graduation requirements on your CAPP report and see your **Biology advisor regularly**. Your major should be declared with the Secondary Education Concentration (BIO1). You **do not** need to declare a minor in Secondary Education. **Courses required for licensure (notated with a “§” symbol) must be passed with a grade of C or better.** These content area courses also factor in to your Content Area GPA for student teaching. See [www.msudenver.edu/education](http://www.msudenver.edu/education) for more info.

**BIOLOGY CORE**

You need all courses, a total of **36 hours**, from the following list.

Course	Substitute Course	Credits	When?	Grade
§ BIO 1080 -3	General Biology I			
§ BIO 1090-1	General Biology Laboratory I			
§ BIO 1081-3	General Biology II			
§ BIO 1091-1	General Biology Laboratory II			
§ BIO 2400-5	General Microbiology			
§ BIO 3050-4	Cell and Molecular Biology			
§ BIO 3230-5	Principles of Anatomy and Physiology			
BIO 45XX-4	Approved Ecology Course**			
§ BIO 3600-4	General Genetics			
§ BIO 4850-3	Evolution			
§ SCI 3950-3	Teaching Science in Secondary Schools * (Beginning Fall 2016, this course will be offered spring and fall semesters. Offered fall only until then.)			
<b>BIOLOGY CORE COURSES TOTAL</b>		<b>36</b>		

\*Must be taken concurrently with SCI 3960; see Teacher Education Courses, below

\*\*See your Biology advisor to select an approved Ecology course.

**3. ADDITIONAL COURSES REQUIRED FOR SCIENCE LICENSURE**

All courses in the following list (**31-36 credit hours total**) are required for Science licensure. **Courses required for licensure (notated with a “§” symbol) must be passed with a grade of C or better.** These content area courses also factor in to your Content Area GPA for student teaching. See [www.msudenver.edu/education](http://www.msudenver.edu/education) for more info.

Course	Substitute Course # / Title / College	Credit Hours	When?	Grade	Advisor Initials
<b>Physics (10 hours required)</b>					
§ PHY 2010-4	College Physics I				
§ PHY 2020-4	College Physics II				
§ PHY 2030-1	College Physics I Laboratory				
§ PHY 2040-1	College Physics II Laboratory				
<b>Chemistry (10 hours required)</b>					
§ CHE 1100-4	Principles of Chemistry				
§ CHE 1150-1	Principles of Chemistry Laboratory				
§ CHE 2100-5	Introduction to Organic and Biological Chemistry				
<b>Earth Space Science (7-12 hours required)</b>					
§ GEL 1030-4***	Historical Geology***				
§ GEG 1100-3 <b>or</b>	Introduction to Physical Geography <b>or</b>				
§ GEL 1010-4 <b>and</b>	General Geology <b>and</b>				
§ MTR 2400-4	Introduction to Atmospheric Science (If you select GEL 1010 and MTR 2400 instead of GEG 1100, the total hours in this category increase by 5.)				
<b>Mathematics (4 hours required)</b> Please note: Students may substitute College Algebra and College Trigonometry for Pre-Calculus.					
§ MTH 1400-4	Pre-Calculus				
<b>ADDITIONAL COURSES TOTAL</b>		<b>31-36</b>			

\*\*\* See your School of Education advisor to discuss appropriate substitution courses for GEL 1030.

#### 4. TEACHER EDUCATION COURSES

All the courses in the following list (34-35 credit hours total) are required for Science licensure. Courses listed with heavy outlines must be taken together; please see an advisor in the School of Education for more detail on recommended sequence. All letter-graded courses required for licensure (notated with a “§” symbol) must be passed with a grade of C or better. You should complete your General Studies and at least half of your major and additional content area course (Part 3) before beginning Education courses.

Course	Substitute Course # / Title / College	Credit Hours	When?	Grade	Advisor Initials
§ EDS 3130-4*	Foundation of Educational Psychology and Philosophy				
EDS 3140-1*	First Field Experience in Secondary Education (60-hour field experience)				
§ EDS 3150-3	Issues in Multicultural Education in Secondary Schools (Meets multicultural requirement for graduation. Must be taken concurrently with or after completion of EDS 3130 and EDS 3140)				
§ EDT 3610-2 Or § EDT 3010-3	Applications of Educational Technology Or Integrating Educational Technology into Teaching				
§ SED 3600-3	The Exceptional Learner in the Classroom				
§ EDS 3210-3**	Classroom Management, Planning, and Assessment in Secondary Schools				
EDS 3240-1**	Field Experience: Classroom Management, Planning, and Assessment in Secondary Schools (60-hour field experience)				
§ RDG 3280-4**	Teaching Content Literacy Skills (you must complete at least one field experience before taking this class)				
§ SCI 3950-3	Teaching Science in Secondary Schools (credits counted toward major) (Beginning Fall 2016, this course will be offered spring and fall semesters. Offered fall only until then.)				
SCI 3960-1**	Field Experience in Teaching Science in Secondary Schools (60 hours; must be taken concurrently with SCI 3950, see Biology Core) (Beginning Fall 2016, this course will be offered spring and fall semesters. Offered fall only until then.)				
EDS 4290-12**	Student Teaching and Seminar: Secondary 7-12				
<b>TEACHER EDUCATION COURSES TOTAL</b>		<b>34-35</b>			

\* Requires at least provisional admission to the teacher licensure program.

\*\* Requires formal admission to the teacher licensure program.

#### GRAND TOTAL FOR PROGRAM

**123 - 129 CREDIT HOURS**

Before you begin student teaching, you will need your education advisor's initials for all courses (except the courses in your major area) and signature below.

Based on my review, this student is eligible to apply for student teaching.

SIGNATURE OF EDUCATION ADVISOR: \_\_\_\_\_ Date \_\_\_\_\_

Please see the School of Education website for updated licensure exam requirements for Secondary Science Education.