

Biology

&

Unified Science

High School (9-12)

Teacher Certification Program

for College Graduates

Advising Guide



Advising Process

New students should contact the following in this order:

Kelli Best-Oliver, College of Education
359A Marillac Hall, 314.516.5917

Students may then be referred to:

Teacher Certification & Advising Office, College of Education
155 Marillac Hall, 314.516.5937

Content Advisor: Dr. Charles Granger at 314.516.6226
or grangerc@umsl.edu
<http://www.umsl.edu/~sep/>

Graduate Advising Office: Nancy Ashford
121 SCC, 314.516.5483

For general information visit <http://coe.umsl.edu/web/index.html>

Biology and Unified Science: Post Degree Certification Program Plan

Name _____ Student # _____

Address _____

City _____ State/zip _____

Telephone _____ E-mail _____

Education Advisor _____

BA or BS from which undergraduate college? _____

Major _____ Year _____ GPA _____

Certification Sought: Biology Only _____ Unified Science _____

General Courses

	<u>Course</u>	<u>Credit Hours</u>	<u>Grade</u>
Public Speaking (3)	COMM 1040	_____	_____
General Psychology (3)	PSY 1003	_____	_____
College Algebra (3)	MATH 1030	_____	_____
Or Contemporary Mathematics (3)	MATH 1020	_____	_____
Advanced Public Speaking (3)	COMM 1140	_____	_____
Or Fundamentals of Acting (3)	THE 1210	_____	_____

Recommended for Proficiency

Audiovisual Equipment Operation for Classroom Teachers (3)	ED TEC 2245	_____	_____
Selection and Utilization of Educational Multimedia (3)	TCH ED 5340	_____	_____

Science Courses

<u>Course Titles</u>	<u>Course No.</u>	<u>Credit Hrs</u>	<u>Grade</u>
<u>Biology</u>			
Introductory Biology I (4-5)	BIO 1811	_____	_____
Introductory Biology II (4-5)	BIO 1821	_____	_____
Vertebrate Physiology (3)	BIO 3802	_____	_____
Vertebrate Physiology Lab (2)	BIO 3803	_____	_____
OR other Zoology Course (4-5)	_____	_____	_____
General Ecology (3)	BIO 2102	_____	_____
Or Environmental Biology (3)	BIO 1202	_____	_____
Or Conservation Biology (2)	BIO 3202	_____	_____
Or General Ecology Lab (2)	BIO 2103	_____	_____
Cell Structure and Function (3)	BIO 3622	_____	_____
Or Biochemistry (3)	BIO 4712	_____	_____
Genetics (3)	BIO 2012	_____	_____
Genetics Laboratory (2)	BIO 2013	_____	_____
Biology of Plants and Lab (5)	BIO 2501	_____	_____
Microbiology (3)	BIO 2482	_____	_____
Microbiology Laboratory (2)	BIO 2483	_____	_____
Introduction to Evolution (3)	BIO 3302	_____	_____
<u>Recommended</u>			
Animal Behavior (3)	BIO 3102	_____	_____
Animal Behavior Lab (2)	BIO 3103	_____	_____
Minimum total credits required for this section is 34 hours.			
A minimum of 5 laboratory courses in Life Science is required.			
<u>Chemistry</u>			
Introductory Chemistry I (4-5)	CHEM 1111	_____	_____
Introductory Chemistry II (4-5)	CHEM 1121	_____	_____
Structural Organic Chemistry (3)	CHEM2612	_____	_____
<u>Physics</u>			
Basic Physics I (4)	PHYS 1011	_____	_____
Basic Physics II (4)	PHYS 1012	_____	_____
<u>Related Sciences</u>			
<u>Course Titles</u>	<u>Course No.</u>	<u>Credit Hrs</u>	<u>Grade</u>
Basic Probability & Statistics (3)	MATH 1105	_____	_____
Or Psychological Statistics (4)	PSY 2201	_____	_____
Or Educational Statistics (3)	ED REM 5730	_____	_____
Or Biometry (3)	BIO 4122	_____	_____

Writing in the Sciences (3)	ENG 3160		
Or Technical Writing	ENG 3130		
Or Writing for Teachers	SEC ED 4880	_____	_____
Philosophy of Science (3)	PHIL 3380	_____	_____

Additional Courses Required for Unified Science Certification

Course Titles	Course No.	Credit Hrs	Grade
General Geology (4)	GEO 1001		
Or Historical Geology	GEO 1002	_____	_____
Elementary Meteorology (4)	ATMSC 1001	_____	_____

Minimum total credit required this section: 8 hrs. _____

Advisor Signature: _____ Date: _____

Graduate Certification Sequence: Education Courses (Biology)

NOTE: This program is recommended for students with a related area Bachelor's degree.

Apply to Graduate School (2.75 minimum GPA) and to Teacher Education Program (online).

<u>Level I</u>		<u>Credit Hrs</u>	<u>Grade</u>
Foundations of Education (4) <i>[Replaces TCH ED 2210 & 2211]</i>	TCH ED 5311	_____	_____
Learning . . . in Sec. School (4) <i>[Replaces TCH ED 2212 & 3312]</i>	ED PSY 6109	_____	_____
<i>Prereq: General Psychology (3)</i>			
	PSY 1003		

FORMAL ADMISSION: *Complete Level I, meet GPA requirements, and apply to the Teacher Education Program online before enrolling in Level II courses.*

Apply for Internship and Student Teaching (online). *Contact TC&A for deadlines. You need a "near-major," 2.5 GPA in your subject area, and diverse field experiences.*

<u>Level II</u>		<u>Credit Hrs</u>	<u>Grade</u>
Designing Instruction (3) <i>[Replaces TCH ED 3310]</i>	TCH ED 5310	_____	_____

NOTE: Plan to complete TCH ED 5310 two semesters before student teaching.

Post-degree candidates may defer the last Level II course to the Internship:

Differentiated Instruction (4) <i>[Replaces TCH ED 4391 & 3313]</i>	TCH ED 5312	_____	_____
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Level III:

Internship Semester: *Biology Methods and Internship must be taken concurrently the semester before student teaching. These courses are offered only during the Fall semester.*

Curriculum & Methods of Teaching Life Sciences (4)	SEC ED 4985	Faculty Advisor	
Professional Internship (2)	SEC ED 4989	Approval	_____
		100 clock hours	_____

Student Teaching Semester: *Student Teaching and Seminar MUST be taken concurrently in the Spring.*

Biology Teaching Seminar (3)	SEC ED 4999/5999	_____	_____
Secondary Student Teaching (12)	SEC ED 4990	_____	_____

Student teaching is a full-day, full semester role. PLEASE AVOID holding a job and minimize other obligations at this time.

Undergraduate Certification Sequence: Education Courses (Biology)

NOTE: If you prefer not to seek graduate credit, you may follow the following sequence of courses in Education. You should see your content advisor for content courses required for certification in Biology.

<u>Level I</u> (prerequisite to all higher courses)	<u>Credit Hrs</u>	<u>Grade</u>
Intro. to Teaching (3) TCH ED 2210	_____	_____
Intro. to Schools (3) TCH ED 2211	_____	_____
Intro to Learners & Learning* (3) TCH ED 2212	_____	_____

**Prereq: General Psychology (3) PSY 1003*

FORMAL ADMISSION: Complete Level I, meet GPA requirements, and apply to the Teacher Education Program online before enrolling in Level II courses.

Apply for Internship and Student Teaching (online). You need a “near-major,” 2.5 GPA in your subject area, and diverse field experiences.

<u>Level II:</u>	<u>Credit Hrs</u>	<u>Grade</u>
Intro. to Instructional Methods (3) TCH ED 3310	_____	_____
Psych. of Teaching & Learning (3) TCH ED 3312	_____	_____
Intro. Learners w/ Disabilities (3) TCH ED 3313	_____	_____
Teaching Reading in Sec. Sch. (3) TCH ED 4391	_____	_____

NOTE: Plan to complete TCH ED 3310/ Level II two semesters before student teaching.

Level III:

Internship Semester: *Biology Methods and Internship must be taken concurrently the semester before student teaching. These courses are offered only during the Fall semester.*

Curriculum & Methods of Teaching Life Sciences (4)	SEC ED 4985	Faculty Advisor Approval	_____
Professional Internship (2)	SEC ED 4989	100 clock hours	_____

Student Teaching Semester: *Student Teaching and Seminar MUST be taken concurrently in the Spring.*

Biology Teaching Seminar (3)	SEC ED 4999		_____
Secondary Student Teaching (12)	SEC ED 4990		_____

Student teaching is a full-day, full semester role. PLEASE AVOID holding a job and minimize other obligations at this time.

*Science Education announcements are posted in the
Biology Department in R223 Research Building.*