SCHOOL OF EDUCATION

Life Sciences Education

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Certification in Life Sciences Education is for grades 7-12. In addition to completing the General and Liberal Education Core requirements, students in this program complete a major in either Biology or Environmental Science designed for certification candidates, and complete the required education courses listed below. Students in this certification program may have requirements that non-certification students do not have. Program completion could require overloads, summer school, or a fifth year because of the total number of credits.

In addition to the required education courses listed below, students must meet with both the education advisor and their science major advisor to select courses. This dual advising system is critical to ensuring that they are meeting all of the relevant content certification standards within the content major.

Required Education Courses for Life Science Education
ED105 Educational Psychology
ED112 Teaching and Learning in a Democratic Society
ED224 Design and Management of the Learning Environment 30 hours
ED308 Introduction to Assessment
ED312 Understanding and Teaching Exceptional Learners 15 hours
ED314 Scientific Inquiry and Teaching Methods 15 hours
ED350 Teaching Literacy across the Curriculum 15 hours
ED360 Best Practices in a Secondary Context 30 hours

Total field hours prior to student teaching 105 hours
ED487 Secondary Student Teaching Seminar
ED492 Student Teaching 16 weeks

Specific Testing for Certification
• Basic Academic Skills Assessment (BASA) and Subject Area Testing in Life Science

Biology Education Track
BI101-102 Biology I and II (laboratory) (counts toward GLE core) 8 credits
BI211 Genetics (laboratory) 4 credits
BI319 Cellular Biology (laboratory) 4 credits or
BI325 Microbiology (laboratory) 4 credits
BI215 Biology and Health Sciences Seminar 3 credits
BI218 Ecology or 4 credits
BI241 Evolutionary Biology (laboratory) 4 credits
CH101 General Chemistry I (laboratory) 4 credits
CH102 General Chemistry II (laboratory) 4 credits
Two semesters of Math at the MT151 level or above 6-8 credits
(First semester counts as core requirement, second semester counts towards major)
BI460 Internship in Biology or
BI480 Senior Seminar in Biology/Health Sciences or
BI481 Invited Senior Research 3 credits

Note: Students wishing to complete the Secondary Teacher Certification may substitute ED487 Secondary Student Teaching Seminar (1 credit), and ED492 Secondary Student Teaching (14 credits), for Biology Seminar and Biology Thesis.

Environmental Science Education Track
BI218 Ecology (laboratory)
CIT222 Introduction to Geographic Information Systems: ArcView
ES103 Introduction to Ecosystem and Wildlife Conservation
ES104 Introduction to Natural Resource Conservation

ES108 Nature and Culture
ES210 Evolution of Environmental Thought
ES480 Junior Seminar in Environmental Science
ES490 Environmental Issues: Senior Capstone Project
GL205 Environmental Geology (laboratory)
Math MT151 or higher

Environmental Science Education Track Electives Requirements
In addition to the Environmental Core Requirements, choose at least 3 from the Human Society Electives list, and at least 1 from the Natural Science Electives list. (Minimum of 12 credits). Note: No course can count for two requirements in the major.

Recommended Curriculum Guide – Life Sciences

First Year					
Fall Semester		***Credits***	***Spring Semester***		***Credits***
ED112 **or** ED105	Teaching and Learning in a Democratic Society/ Educational Psychology	3	ED112 **or** ED105	Teaching and Learning in a Democratic Society/ Educational Psychology	3
_____	Primary Major	3	_____	Primary Major	3
_____	Primary Major	3	MT151 **or** MT260	GLE Mathematics Elective	3
GLE101	First-Year Inquiry Seminar	3	_____	GLE Social Science	3
GLE110	First-Year Composition	3	_____	GLE Humanities	3
	Total	15		Total	15
Second Year					
Fall Semester		***Credits***	***Spring Semester***		***Credits***
ED224	Design and Management of the Learning Environment	3	ED350	Teaching Literacy Across the curriculum	3
_____	Primary Major	3	_____	Primary Major	3
_____	Primary Major	3	_____	Primary Major	3
_____	GLE Natural Science	4	_____	GLE Natural Science	4
_____	GLE Social Science	3	GLE230	Second-Year Composition	3
	Total	16		Total	16
Third Year					
Fall Semester		***Credits***	***Spring Semester***		***Credits***

ED308	Introduction to Assessment	3	ED312	Understanding and Teaching Exceptional Learners	3
_____	Primary Major	3	ED314	Scientific Inquiry and Teaching Methods	3
_____	Primary Major	3	_____	Primary Major	3
_____	GLE Art and Design	3	_____	Primary Major	3
_____	GLE Humanities	3	_____	GLE Art and Design	3
	Total	15		Total	15

Fourth Year

Fall Semester		***Credits***	***Spring Semester***		***Credits***
ED360	Best Practices in a Secondary Context	3	ED492	Secondary Student Teaching	14
_____	Primary Major	3	ED487	Secondary Student Teaching Seminar	1
_____	Primary Major	3			
_____	GLE Humanities	3		Total	15
	Total	12		**Total Credits:**	**120**