

Graduate Certificate in Teaching Secondary Education (9-12) Biology

NOTE: School systems strongly prefer the Comprehensive Science license.

Required courses

- MDSK 6162:** Planning for K-12 Teaching (3)
READ 5255: Integrating Reading and Writing in the Content Areas (3)
EDUC 5100: Diverse Learners (3)
SECD 5140: The Secondary School Experience (3)
MDSK 5251: Middle and Secondary Science Methods

Final course

- MDSK 6161:** Analysis of K-12 Teaching (3)

This final course is a full time internship requiring employment as a secondary biology teacher in an approved high school or a non-paid placement with a licensed biology teacher in a public high school. It requires application and approval during the semester prior to the internship.

Additional requirements for licensure

Other specific background courses in the sciences, if applicable – See two sets of options below

Technology portfolio

Applying for the teaching license

Application for NC Standard Professional I license to be filed in TEAL Office, with all appropriate forms regarding completion of coursework, technology portfolio, and internship

Looking ahead

You may wish to apply to the Master of Arts in Teaching (MAT) in Secondary Education at the completion of the Graduate Certificate program: <http://www.uncc.edu/gradmiss/index.asp> . All your coursework for the Graduate Certificate will be applied toward the requirements for that degree. Completion of the master's degree leads to the advanced "M" teaching license and a 10% pay raise.

Option 1: Secondary Biology (9-12) Background Requirements For Biology majors

Candidates must have at least a bachelor's degree with a major in biology. The GPA for background requirements must be at least a 2.75, and no courses may be presented for licensure with grades lower than a C.

Competency areas met by the major in biology:

- Cellular and general physiology
- Genetics
- Systematics and ecology
- Plant and animal growth and development, behavior, evolution
- Chemistry
- Organic chemistry
- Statistics

Competency area which may not have been met within the major in Biology:

Understands the nature of science: process, content, interrelationships among the sciences	<i>Additional requirement: One course in physics or geology, e.g.,</i> PHYS 1101+L: Introductory Physics I GEOL 1200+L: Introductory Geology
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Option 2: Secondary Biology requirements for students with less than a biology major

Candidates must have at least a bachelor's degree. In order to build the equivalent of a major in biology, a candidate must earn at least 24 hours in biology. In order to meet the background requirements for a biology license, a candidate must earn credits for courses aligned with all competencies below. The GPA for background requirements must be at least a 2.5, and no courses may be presented for licensure with grades lower than a C.

Competency Area	Coursework required and exemplar UNC Charlotte courses	Courses taken	Year taken	Grades	Plan for satisfying deficiencies*
	There must be at least one course in each cell unless otherwise noted				
Physiology (cellular and general)	<i>One course in cell biology, e.g.,</i> BIOL 2111+L: Cell Biology AND <i>One course in human/animal or plant physiology, e.g.,</i> BIOL 3272: Plant Physiology BIOL 3273: Animal Physiology				
Genetics	<i>One course in genetics, e.g.,</i> BIOL 3166: Genetics				
Systematics, Ecology	<i>One course in ecology, e.g.,</i> BIOL 3144: Ecology				
General and organic chemistry	<i>Sequence of courses in both general and organic chemistry, e.g.,</i> CHEM 1251+L: Inorganic Chem AND CHEM 1252+L: Inorganic Chem II AND CHEM 2131+L: Organic Chemistry				
Growth and development, morphology, behavior, evolution	<i>Two semester sequence of courses in animal and plant biology, e.g.,</i> BIOL 1222+L: Plant Biology and BIOL 1233+L: Animal Biology OR BIOL 1101+L: Biology I and BIOL 1115+L: Biology II				
Understands the nature of science: process, content, interrelationships among the sciences	<i>One course in physics or geology, e.g.,</i> PHYS 1101: Introductory Physics I GEOL 1200+L: Introductory Geology				
Use of mathematics in the sciences	<i>Any statistics course, e.g.,</i> STAT 1221: Statistics				

Note: Courses required to satisfy deficiencies may have prerequisites.