

**Master of Arts in Teaching
Secondary Education
Chemistry**

NOTE: School systems strongly prefer the comprehensive science license.

Phase One (18 hours)

- 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 in this phase:

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

This final course is a full time internship requiring employment as a secondary chemistry teacher in an approved high school or a non-paid placement with a licensed chemistry 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 science, if applicable – See two options below.

Praxis II Specialty Area exams passed – if applicable _____ (date)

Technology competencies completion form _____ (date)

Fast track completion form signed by advisor and filed with TEAL office _____ (date)

Application for Standard Professional I license filed in TEAL Office _____ (date)

Phase Two (minimum 21 hours)

Requirements to begin this phase: Completion of Phase One and full-time employment as a secondary chemistry teacher

- RSCH 6101:** Educational Research Methods (3)
XXXX xxxx: Graduate Courses in Chemistry (9)
Note: See advisor for approved choices in your field.
MDSK 6351: Advanced Methods in Middle and Secondary Science

Final courses in Phase Two:

- MDSK 6260:** Principles of Teacher Leadership (3)
MDSK 6691: Seminar in Professional Development (3)

Completion of 39 graduate hours to be applied to the degree _____

Application for candidacy filed with the Graduate School _____ (date)

Application for graduation filed with the Graduate School _____ (date)

Report of project/portfolio sent to the Graduate School _____ (date)

Application for “M” license filed in TEAL Office _____ (date)

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

Candidates must have at least a bachelor's degree with a major in Chemistry. Whenever possible, candidates with a degree in chemistry may satisfy background deficiencies with graduate chemistry courses applied to the M.A.T. Age of courses and relevant work experience in chemistry may affect the plan for satisfying deficiencies and selecting graduate courses in chemistry. 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 areas met by the major in chemistry:

- General chemistry
- Inorganic chemistry
- Organic chemistry
- Analytic chemistry
- Physical chemistry
- Calculus

Competency area which may not have been met by the major in chemistry:

Understands the nature of science: process, content, interrelationships among the sciences	Requirements: science courses in three other areas as follows: <i>Introductory physics (or higher), e.g.,</i> PHYS 1101+L: Introductory Physics I and <i>Introductory biology (or higher), e.g.,</i> BIOL 1110+L: Principles of Biology I <i>Introductory geology (or higher), e.g.,</i> ESCI 1200+L: Introductory Geology
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Option 2: Secondary Chemistry (9-12) Background Requirements

For students creating the equivalent of a major in chemistry

Candidates must have at least a bachelor's degree. For licensure in chemistry, students must earn a minimum of 24 hours in chemistry and take courses in all competency areas below. Age of previous courses and relevant work experience in chemistry may affect the plan for satisfying deficiencies and selecting graduate courses in chemistry. 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 UNC Charlotte examples <i>Must have the equivalent of one course in each cell unless otherwise noted</i>	Candidate's courses	Grades	Plan for satisfying deficiencies
General chemistry	<i>Two introductory chemistry courses, e.g.,</i> CHEM 1251+L: Principles of Chemistry I CHEM 1252+L: Principles of Chem. II			
Inorganic chemistry	<i>Inorganic chemistry course, e.g.,</i> CHEM 2125: Inorganic Chemistry			
Organic chemistry	<i>Two organic chemistry courses sufficient for upper division pre-requisites, e.g.,</i> CHEM 2131+L: Organic Chemistry I CHEM 2132+L: Organic Chemistry II			
Analytical chemistry	<i>Coursework in analytical chemistry, e.g.,</i> CHEM 3111: Quantitative Analysis			
Physical chemistry	<i>Coursework in physical chemistry, e.g.,</i> CHEM 2141: Survey of Physical Chem.			
Calculus	<i>Coursework in calculus sufficient for upper division prerequisites, e.g.,</i> MATH 1241: Calculus I and MATH 1242: Calculus II			
Understands the nature of science: process, content, interrelationships among the sciences	<i>CHEM and MATH courses listed above, plus science courses in three other areas, e.g.,</i> PHYS 1101+L: Introductory Physics I BIOL 1110+L: Principles of Biology I ESCI 1200+L: Introductory Geology			

Note: Courses required to satisfy deficiencies may have prerequisites.