

**Master of Arts in Teaching:  
Secondary Education  
Earth Science**

**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 earth science teacher in an approved high school or a non-paid placement with a licensed earth science 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 options below.**

Technology portfolio

*Praxis II Specialty Area exams passed – for lateral entry teachers \_\_\_\_\_ (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 earth science teacher

- RSCH 6101:** Educational Research Methods (3)  
**XXXX xxxx:** Graduate courses in earth science and/or geology (9) **Note:** See advisor for approved choices.  
**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 Earth Science (9-12) Background Requirements For Earth Science or Geology majors

Candidates must have at least a bachelor's degree with a major or equivalent in Earth Science or Geology. Whenever possible, candidates with a degree in Earth Science or Geology may satisfy background deficiencies with graduate Earth Science or Geology courses applied to the M.A.T. Age of courses and relevant work experience in earth science/geology may affect the plan for satisfying deficiencies and selecting graduate courses. 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.

### Competencies already met through the major in earth science or geology

- Geology and meteorology
- Oceanography
- Upper division coursework in one of the following areas: geology, meteorology, astronomy or oceanography
- Calculus

### Competency areas that may not have been met through the major in earth science or geology:

Competency Area	Coursework required and UNC Charlotte examples	Candidate's courses	Grade	Plan for satisfying deficiencies
<b>Astronomy</b>	<i>A course in astronomy, e.g.,</i> PHYS 1130+L: Astronomy			
<b>Understands the nature of science: process, content, inter-relationships among the sciences</b>	<i>One additional science course outside earth science or geology, e.g.,</i> CHEM 1251+L: Principles of Chemistry BIOL 1101 +L: Biology I			

## Option 2: Secondary Earth Science (9-12) Background Requirements For students creating the equivalent of an Earth Science/Geology major

Candidates must have at least a bachelor's degree. Candidates must take a minimum of 24 hours in Earth Science and Geology to meet the equivalent of a major in this field. Age of courses and relevant work experience in earth science/geology may affect the plan for satisfying deficiencies and selecting graduate courses. They must also satisfy the requirements for the competency area requirements. 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	Candidate's courses	Grade	Plan for satisfying deficiencies
<b>Geology and Meteorology</b>	<i>A basic earth science - geography course, e.g.,</i> ESCI 1101+L: Earth Science – Geography <b>AND</b> <i>A two course sequence in geology that includes treatment of meteorology, e.g.,</i> GEOL 1200+L: Physical Geology GEOL 1210+L: Earth History			
<b>Astronomy</b>	<i>A course in astronomy, e.g.,</i> PHYS 1130+L: Astronomy			
<b>Oceanography</b>	<i>A course in oceanography, e.g.,</i> ESCI 2105: Oceanography			
<b>Advanced work in one of the four areas above</b>	<i>At least 3 courses at the 3000 level or above in one of the following specialty areas :</i> <ul style="list-style-type: none"> <li>• geology</li> <li>• meteorology</li> <li>• astronomy</li> <li>• oceanography</li> </ul>			
<b>Mathematical competency</b>	<i>A course in calculus, e.g.,</i> MATH 1241: Calculus I			
<b>Understands the nature of science: process, content, inter-relationships among the sciences</b>	<i>One additional science course outside earth science/geology, e.g.,</i> CHEM 1251+L: Principles of Chemistry BIOL 1101 +L: Biology I			

**Note: Courses required to satisfy deficiencies may have prerequisites.**