EARTH SCIENCE EDUCATION (7-12), M.S.ED.

Master of Science in Education Program
Program Code: MSED-NS
Major Code: EAS
HEGIS 1917.01

Earth Sciences and Science Education Department
National Council for Accreditation of Teacher Education (NCATE) Accredited
SAMC 160 (716) 878-6731
earthsciences.buffalostate.edu/

Enrollment in all teacher education programs follows the guidelines for "Admission to Teacher Education Programs (http://ecatalog.buffalostate.edu/graduate/admission-graduate-program/admission-all-education-programs)" found in this catalog. Applicants who do not yet meet all admissions criteria should consult with the department.

This program is designed for in-service teachers or those seeking science teaching certification. The earth science education program permits graduate work in any of the sciences or mathematics, in addition to required science education coursework. The program presumes an undergraduate background in geology/earth sciences; however, individuals with deficiencies may be granted conditional admittance. See the Earth Sciences and Science Education Department chair and the department web site for details.

Students must demonstrate competencies in the following areas:

- Earth sciences — historical geology, paleontology, geomorphology, astronomy, oceanography, mineralogy and petrology, meteorology.
- Other sciences — completion of no fewer than two semesters of lab-based coursework in each of the following: biology, chemistry, and physics.

The usual method of demonstrating competencies in the sciences is through successful completion of graduate or undergraduate courses in the areas listed.

Graduate credit is available only for courses listed as graduate. No competency may be fulfilled by examination after admission to the major.

Science education — evaluation, secondary curricula, current issues.

In addition to academic requirements, students who are enrolled in teacher education programs leading to Initial Certification or Initial/Professional certification are required to complete all seminars specifically required by New York State for program completion and graduation, including School Violence Prevention and Intervention (SAVE); Identification and Reporting of Child Abuse and Maltreatment; Alcohol and Other Drug Avoidance; Fire and Arson Safety; HIV and the Classroom; and Harassment, Bullying, Cyberbullying, and Discrimination in Schools: Prevention and Intervention (DASA Training). These seminar requirements are subject to change.

Admission Requirements
1. A bachelor's degree from an accredited college or university with a minimum cumulative GPA of 2.65 (4.0 scale).
2. A New York State Certificate of Qualification (CQ), provisional certificate, or initial certificate.
3. Three letters of recommendation that address teaching ability and academic standing.
4. Completion of two courses in earth sciences, including and introductory lab-based physical geology course, with a minimum grade of C.
5. An admission interview (at the discretion of the Admissions Committee).

In addition, all applicants should review the Admission to a Graduate Program (http://ecatalog.buffalostate.edu/graduate/admission-graduate-program) section in this catalog.

Program Requirements

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>SCI 628</td>
<td>SEMINAR IN SECONDARY SCIENCE EDUCATION</td>
<td>3</td>
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<tr>
<td>SCI 632</td>
<td>CURRICULAR TRENDS IN SCIENCE TEACHING IN THE SECONDARY SCHOOL</td>
<td>3</td>
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<tr>
<td>SCI 685</td>
<td>EVALUATION IN SCIENCE EDUCATION</td>
<td>3</td>
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<tr>
<td>SC/GES 690</td>
<td>MASTER’S PROJECT</td>
<td>3-6</td>
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Required Courses (15-18 credit hours)
Science and Mathematics Courses
Science Education Courses (9 credit hours)
Master’s Project or Master’s Thesis (3-6 credit hours)
Select one from the following:
<table>
<thead>
<tr>
<th>SCI/GES</th>
<th>MASTER'S THESIS</th>
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<td>795</td>
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Total Credit Hours 30