Master of Science in Science Education

451 Reid Hall, Bozeman, MT 59717
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Home Page: www.montana.edu/msse

Program Director
Dr. Gregory Francis

Admission
Entrance requirements include: a bachelor's degree in an area of science, science education, or related area; at least two years of science teaching in educational settings; and an undergraduate GPA of 3.0 or higher. Students with a GPA of less than 3.0 have the opportunity to begin the program as a non-degree student to earn admissions.

Applications are accepted throughout the fall, spring, and summer sessions. Application documents include all official transcripts, three letters of recommendation, essay, and resume. For more information about the application process, visit the MSSE website (http://www.montana.edu/msse).

Program Features
- Designed for science educators by experienced science, science education, and mathematics faculty with the collaboration of outstanding classroom teachers
- Over 80% of the courses may be taken on-line by asynchronous, computer-mediated communication
- Accredited 30-credit graduate program
- Graduate in 2 to 3 years
- Courses are structured to support both formal classroom teachers and informal science educators
- The opportunity to work at home without frequent trips to campus
- The chance to participate in classes when it is most convenient for you
- Popular campus based summer field and lab experiences that vary in length from one day to two weeks
- Emphasizes Next Generation Science Standards
- Personalized science education capstone project for each student
- Interdisciplinary program with the opportunity to expand knowledge in all science disciplines
- Affordable online only graduate tuition fees

Online graduate courses are offered during the fall, spring, and summer sessions. Montana-based field and lab graduate courses are offered during the summer session.

In addition to completing a group of core courses (14 credits total) which includes the 3-credit capstone project, students develop interdisciplinary combinations of science courses (12 credits minimum) from offerings in biology, chemistry, earth science, microbiology, physics, plant sciences, and other related areas. The final four credits in the thirty-credit program are electives selected from education and/or science courses.

Interdisciplinary efforts and incorporation of both science content and pedagogy have been encouraged during the development of courses. Each student seeking the degree is advised by a three-person faculty committee, and programs are designed taking into account the student's background, interests, and career goals.

Instructors
The MSSE degree program was developed by Montana State University faculty members who are active in science, science education, and mathematics. The program is a unique, cooperative effort of several colleges and departments. Faculty members of the departments of Biology, Chemistry and Biochemistry, Earth Science, Education, Health and Human Development, Land Resources and Environmental Science, Mathematics, Microbiology, Plant Science and Environmental Science, Physics, and other related areas such as Engineering will teach most courses. Faculty members of other departments and units will play a major role in some courses. When appropriate, courses may be taught by faculty members of other institutions.

The program of study may begin with online courses in any semester, or summer field/lab courses based from the MSU-Bozeman campus. Study continues with online courses that students take from their homes or workplaces, and ends with a campus visit for presentation of the results of a personalized science education capstone project. Over 80% of the courses and credits may be taken off-campus by asynchronous, computer-mediated communication. Thirty-semester credits are required for the degree. Students typically will complete the degree in two or three years.

All students seeking the MSSE degree complete core courses (14 credits) in education which includes a three-credit capstone project. For the remaining credits (16), students select interdisciplinary combinations of science content courses (12 credits minimum) from offerings in biology, chemistry, computer science, earth science, engineering, health and human development, land resources and environmental science, microbiology, physics, and plant science. Interdisciplinary efforts and incorporation of both science content and pedagogy have been encouraged during the development of courses. The final four credits in the thirty-credit program are electives selected from education and/or science courses.

For a full list of courses visit the Master of Science in Science Education Webpage (http://www.montana.edu/msse).

Required Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>MSSE 501</td>
<td>Inquiry Sci Eng Prac</td>
<td>2</td>
</tr>
<tr>
<td>MSSE 504</td>
<td>Formative Assessment in Science Education</td>
<td>3</td>
</tr>
<tr>
<td>MSSE 505</td>
<td>Foundations of Action Research in Science Education</td>
<td>3</td>
</tr>
<tr>
<td>MSSE 509</td>
<td>Implementing Action Research in Science Education</td>
<td>3</td>
</tr>
<tr>
<td>MSSE 575</td>
<td>Capstone Paper and Symposium in Science Education</td>
<td>3</td>
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Font Notice
This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.