Teaching Integrated Science (M.A.T.)

at Central Michigan University

Welcome

Central Michigan University offers the highly touted Master of Teaching degree program in Integrated Science (M.A.T. degree). This is an innovative yet very practice program specifically designed for teachers who wish to enhance their ability to teach a variety of science classes within the K-12 environment.

Master of Arts Program

The Master of Arts in Teaching Integrated Science is designed for K-12 teachers with a major in Integrated Science (DI endorsement) or Science (DX endorsement) who want to balance and strengthen their science content knowledge and skills in the broad arena of science.

Secondary teachers with an endorsement in a particular science area (biology, chemistry, earth science, physics) may find this degree useful for the eventual addition of a new endorsement. However, these teachers should also consider a masters program (MS, MA, or MAT) in their area of specialty (e.g., Biology, Chemistry, etc.). Completion of the MAT in the Integrated Science program by itself does not involve any new endorsement.

Graduate students in this program will learn to apply new content knowledge to your classrooms through the design of instructional materials and experiments that emphasize student learning through inquiry. Students will also gain pedagogical skills required to teach inquiry-based science.

Enrolled students may choose to pursue either a thesis option (Plan A) and complete a 30 semester hour degree or a non-thesis option (Plan B) and complete a 36 semester hour degree. Fifteen credits must be earned at the 600-level or above.

The thesis or research project is completed under the direction of the major advisor and your advisory committee. If you are interested in the thesis option, you should identify a faculty member who has appropriate scientific and academic qualifications and is willing to commit appropriate time to thesis supervision, and define a project of mutual interest. A thesis proposal must be prepared in collaboration with the faculty advisor and the committee before the research project is to begin. Approval from other committees and oversight bodies (e.g., IRB, Safety Officer) may be required before the thesis research can begin.

Total: 30-36 semester hours

Admission Requirements

To be eligible for Regular Admission to the Master of Arts in Teaching Integrated Science, you should have:

- Completed an undergraduate degree with a major in integrated science, science, biology, chemistry, earth science, physical science or physics (or the equivalent) with a 2.7 or better GPA in your major and a 3.0 GPA overall.
- Taken at least 30 semester hours of undergraduate science.
- Current teacher certification with a science endorsement.
- Completed at least one year of teaching at the level of your certification in a permanent (not substitute) teaching position.

You are also required to submit a statement of interests, transcripts, evidence of teacher certification, and three letters of recommendation.
Admission Requirements (continued)

An applicant who does not meet the foregoing requirements may be granted Conditional Admission with the understanding that additional coursework may be required.

If you are from a non-English speaking country, you are required to demonstrate proficiency in English via the TOEFL exam.

Graduate Assistantships: Applicants for graduate teaching assistantships (Biology department only) are required to submit GRE General scores (contact the Department of Biology for application materials and deadline dates).

Completion Requirements: All degree requirements must be completed in 7 years or less. Since most courses will need to be taken in the summer, full-time teachers may take up to 5 years to complete the degree.

Examination: You must pass a comprehensive oral and/or written examination over the coursework and administered by the advisory committee.

Transfer Credit: A maximum of 10 semester credits are accepted for transfer, with the approval of the advisory committee.

Program Requirements

Enrolled students may choose to pursue either a thesis option (Plan A) and complete a 30 semester hour degree or a non-thesis option (Plan B) and complete a 36 semester hour degree.

Select one of the following plans:

Plan A (30 hours)

Thirty semester hours of graduate work including 6 credit hours of thesis and at least one credit hour in seminar. Since the thesis is an extensive research project, if you are planning further graduate study in science education you may choose this option as a prelude to doctoral work.

Required Science Education Courses (9 hours)

- EDU 615: Survey of Science Education 3(3-0)
- EDU 618: The Nature of Science in Science Teaching 3(3-0)
- EDU 645: Advanced Science Teaching Methods 3(3-0)

Elective Science Education Courses (23-25 hours)

The electives must be 500- or 600-level science courses in astronomy, biology, chemistry, earth science, engineering, environmental education, geology, physical science or physics, chosen with the approval of your advisor. These courses should strengthen your teaching expertise or apply toward a new area of endorsement. Students with elementary certification may choose to take courses that are specifically designed to provide content and hands-on science appropriate for K-8 classrooms. If you are certified at the secondary level, you are encouraged to focus on graduate-level courses in one of the sciences. All students must identify and take at least one course at a field station or participate in a significant field experience, laboratory research experience or internship-like experience approved by the advisor.

Required Capstone Course (2-4 hours)

- SCI 790: Research in Science Education 2-4(Spec)

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Required Capstone Course I (6 hours)

- EDU 698: Thesis 1-6(Spec)
- SCI 798: Thesis 1-6(Spec)

Required Capstone Course II (1-3 hours)

- EDU 780/MLE 780: Master of Arts Capstone Seminar 3(3-0)
- SCI 730: Seminar 1(1-0)

Plan B (36 hours)

Thirty-six hours of graduate-level coursework approved by the advisory committee. In addition, you must submit an approved Plan B paper demonstrating either research or independent study in an area of science or science education.

The Plan B paper might focus on improving the teaching of science in your school including improvements in curriculum, instruction, or leadership in science teaching. Or it might focus on answering a particular question in any one of the science disciplines, for example, someone might look at the various ferns found at Neithercut Woodland and then develop a guide to be used by those visiting the property.

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Apply Online

http://apply.cmich.edu

For More Information

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