Why pursue a Master of Arts in Teaching Science?

In order to create a science curriculum that presents concepts and develops skills in a challenging and relevant manner, science teachers must have a solid understanding of science content and utilize the most advanced science learning techniques. The program for a Master of Arts in Teaching Science (MAT-S) provides students with a solid foundation of advanced studies in science that becomes a basis for their enhanced instruction. At Cal State Fullerton, the primary goal of the MAT-S program is to allow science educators to strengthen their knowledge of the science education field. Our faculty members and degree plan are dedicated to providing a challenging program that is tailored to meet the professional responsibilities of science educators. In addition, our program provides science teachers with research and seminar opportunities based on contemporary issues in the science education field.

According to one of our graduates, a science teacher at Sonora High School, “The program provided me with the confidence and ability to connect and integrate concepts within different science disciplines. It has been the catalyst that has allowed my students to become more scientifically literate due to my participation in many meaningful experiences that promote the enjoyment and understanding of science.”

What sets Cal State Fullerton’s program apart?

Flexible and Practical Curriculum - MAT-S courses are often offered in the late afternoon/evening in order to accommodate teaching schedules. In addition, our program allows students to design a course of study that meets their specific needs, with many possible combinations of course work. Students also have the opportunity to work with an adviser and a committee of scientists on a culminating project or thesis, which allows them to concentrate on an area that will improve their knowledge of science education. The project becomes an excellent way to work on an advanced degree and deal successfully with a real world scenario.
Quality Teaching and Learning Environment - Our science education faculty members have expertise in specific subject matter and levels of K-12 instruction. The MAT-S degree enables students to become more proficient in science disciplines that are appropriate to their teaching assignments. Our program provides an excellent blend of scientific content and real-world application. Additionally, both elementary and secondary tracks are available.

Our program also offers graduate-level coursework in the full spectrum of science education. Additional coursework is selected from the departments of Biological Science, Chemistry and Biochemistry, Computer Science, Geological Sciences and Physics. All courses are taught by experienced and qualified faculty members who are competent in biology, chemistry and biochemistry, physics and earth/space science. Science education faculty members are housed in their respective science departments.

What career opportunities are available with a MAT-S degree?

The MAT-S degree prepares graduates to take a major professional step forward in their ability to teach science effectively. Our graduates have been extremely successful, and many have taken strong leadership roles in their schools and school districts, as well as in local and state organizations. Some of our success stories include a graduate who was honored as a Presidential Science Scholar by the President of the United States. Another graduate was recipient of the 1998 Outstanding High School Science Teacher in Orange County.

In addition, some of our alumni become qualified to teach on a part-time basis within Cal State Fullerton’s Science Education Program. Many other opportunities are available through this partnership as the Science Education Program conducts ongoing education for area teachers.

What are the requirements for admission?

University requirements for admission to conditionally classified standing include a baccalaureate from an accredited institution and a grade point average of at least 2.5 in the last 60 semester units attempted. A student who meets the above requirements, as well as the following requirements may be granted classified standing upon the development of an approved study plan.

All candidates must:

- Work with a graduate committee that will include instructors from the academic departments of the student's teaching specialty or emphasis.

- Take (elementary track) or may have to take (secondary track) a diagnostic examination prior to classification in the declared area of teaching specialty. The purpose of this examination is to aid advisers in recommending appropriate and prerequisite science course work. Prerequisite course work will not count toward the 30-unit degree requirement.
- Have a minimum grade point average of 2.5 in science prerequisites.
- Have an adequate science preparation, as described below:

**Elementary candidates must:**
- Be credentialed elementary teachers or certified curriculum coordinators/supervisors in elementary education.

**Secondary candidates must:**
- Be science instructors or curriculum coordinators/supervisors as evidenced by the appropriate credential certifying that they may teach in one of the science disciplines below the collegiate level.
- Declare an area of teaching specialization.

**What are the requirements to complete the degree?**

The degree program consists of 30 units of course work within the College of Natural Sciences and Mathematics, of which at least half must be 500-level courses. Study plan course work must be completed with a grade point average of 3.0 or better.

**Core Courses (9 units):**
- Science Education 550 Theoretical Designs in Science Education (3)
- Science Education 552 Review of Research in Science Education (3)
  (meets the graduate level writing requirement)
- Science Education 554 Issues in Science Education (3)

**Thesis/Project (6 units):**
- Science Education 598 Thesis (6)
  OR Science Education 597 Project (3) and Science Education 599
  Independent Graduate Research (3)

**Basic Science Electives (15 units)**
Electives will be chosen from upper-division and graduate courses from the following departments:
- Biology
- Chemistry
- Computer Science
- Geological sciences
- Physics
- Science Education (elementary track)
What interesting opportunities are available for students?

Our faculty members work to obtain grants from external agencies to work with teachers. Funded projects create opportunities for students to earn graduate credit as they work within these grants. Students should always inquire about the possibility of participating in these projects.

Students also have the opportunity to work at the Tucker Wildlife Sanctuary in the Santa Ana Mountains. Course credit that can be received as part of the work experience at the Sanctuary is also applicable toward the MAT-S degree.

Where can I get more information?

For further information, contact Dr. Gaylen R. Carlson (714) 278-3912 (Science Education Office) or write to:

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