Program Co-Coordinators: Dr. Dirk Baron (Research Track) & Dr. Carl Kloock (Credential Track)  
Office: Science Building II, 333 or Science Building I, 147  
Telephone: (661) 654-3044 or (661) 654-3021  
email: dbaron@csub.edu or ckloock@csub.edu  
Website: http://www.csub.edu/scienceED; please be aware that this site was still under construction at the publication of this document.  
Graduate Faculty: D. Baron, A. Gebauer, J. Hughes, R. Hughes, C. Kloock

Program Description

Masters of Science in Science Education  
The Masters of Science in Science Education provides in-service teachers and career changers with undergraduate degrees in traditional science and math disciplines with advanced coursework on science content, pedagogy directly targeted to the teaching of science, and educational leadership. In addition, scientific and science education research methodologies will be incorporated both into coursework and into a thesis or project to be completed by the candidates.

Masters of Science in Science Education - Research Track  
The research track of the Masters of Science in Science Education offers a two-year program with two intensive summer institutes emphasizing hands-on activities including research participation experiences, coursework during the school year, and a culminating independent project. This option is intended for in-service math and science teachers wanting additional training in science content, methodology, pedagogy, and leadership skills.

Masters of Science in Science Education - Credential Track  
The Credential track of the Master of Science in Science Education offers a two-year, blended program that leads to a California Teaching Credential and the MS degree. This option is intended for individuals who already hold a Bachelors Degree in a science field and who have decided to enter the teaching profession. One of the hallmarks of the program is a focus on meeting the State of California Science breadth requirements for teachers. Due to this, it includes as either prerequisites or additional coursework, lower division courses amounting to one year in each of the four sciences (Biology, Chemistry, Earth Science, Physics) or passage of the CSET General Science Exams (118 and 119) demonstrating this breadth of knowledge.

Application Process for the Master of Science in Science Education  
To apply the Master of Science Degree in Science Education, please visit www.csumentor.com to initiate the application process. Be sure to complete both parts A and B of the application.

Admission Requirements for the Master of Science in Science Education Credential Track  
1. BS or BA in a science field with GPA 3.0 or higher.  
2. Report results from GRE General test.  
3. Report results from GRE subject test in discipline of interest being sought (Biology, Chemistry, or Physics). Please note that because there is no GRE subject test in Geology, students pursuing Geology as a concentration are exempt from this requirement (but still must submit results from general test).  
4. Science Breadth Preparation:  
   a. At least one year of introductory college major’s level coursework in 2 of the 4 science areas (Biology, Chemistry, Geology, Physics), AND a commitment to complete the equivalent of one year of introductory major’s level coursework in any remaining science areas. **Note that these units will not count toward the Master’s degree.**  
   OR  
   b. Passage of both CSET General Science Exams (exams 118 and 119).

Research Track (Please note that we are unable to accept Candidates for this track in Academic year 2012/13 – contact Dr. Dirk Baron for more information)  
1. BS or BA in Mathematics or a science field with GPA 3.0 or higher.  
2. Report results from GRE General test.  
3. Report results from GRE subject test in discipline of interest being sought (Biology, Chemistry, or Physics). Please note that because there is no GRE subject test in Geology, students pursuing Geology as a concentration are exempt from this requirement (but still must submit results from general test).  
4. Hold a valid Single-subject California Teaching Credential in Mathematics or Science.  
5. Have at least 2 years of teaching experience in a middle or high school mathematics or science classroom.
Graduate Student Classifications

Conditionally Classified Graduate Status (Either track)
To be enrolled as a conditionally classified Graduate Student, the basic admission requirements for the Masters of Science in Science Education (above) must be met. Most candidates for the Credential track are expected to be admitted as conditionally classified Graduate Students. Acceptance will only be granted if space is available for the student in the program.

Classified Graduate Student (Credential Track)
Acceptance as a Classified Graduate Student allows the student to begin Phase III credential coursework and begin work on Higher-level credential coursework. To become a Classified graduate Student Candidates must, in addition to meeting the admission requirements of the Master of Science in Science Education, meet State mandated Criteria for teaching in the California. The following evidence must be submitted to the department of Teacher Education:
2. Valid Fingerprint Clearance.
4. Passage of California Basic Education Skills Test (CBEST).
5. Passage of both of the California Subject Exams for Teachers (CSET) General Science Exams (exams 118 and 119.)

Classified Graduate Student (Research Track)
Acceptance as a classified graduate student allows students to participate in research activities. To attain classified status students must:
1. An acceptable baccalaureate degree from an accredited institution.
2. An undergraduate GPA of at least 3.0 in the last 90 quarter (60 semester) units of course work, or Graduate Records Examination scores of 1000 or greater (verbal and quantitative; see above information on the new GRE scoring system), or an approved petition to the Graduate Committee waiving this requirement by proposing other evidence of adequate prior academic preparation.
3. Acceptance into an academic advising relationship with a departmental faculty member.
4. Acceptance will only be granted if space is available for the student in the program.

Advancement to Candidate Status. Acceptance as a candidate indicates that the student has completed significant units within the approved Plan of Study and that there is a reasonable expectation that the student will complete all remaining requirements within one year. Students must advance to candidate status to participate in the culminating project in science education (SCI 680). Classified Graduate Students will be advanced to Candidate Status when they have met the following criteria:

Advancement to Candidate Status: Credential Track
1. Completion of all requirements for classified status.
2. Completion of at least 55 quarter units of courses applicable to the Master of Science Degree in Science Education: Credential track with a grade of "B-" or better and graduate GPA of at least 3.0.
3. Achieve Subject Matter competency in a Science discipline by passing a single disciplinary CSET Exam (120 or 121 or 122 or 123) in addition to previously passed exams 118 and 119 required for classified status.
4. Obtain approval of the project research topic by the student’s Graduate Committee.

Advancement to Candidate Status: Research Track
1. Completion of at least 30 quarter units of courses applicable to the Master of Science in Science Education: Research track with a grade of “B-” or better and graduate GPA of at least 3.0.
2. Obtain approval of the project research topic by the student’s Graduate Committee.
3. Obtain certification by the student’s advisor that there is a reasonable expectation that the student will satisfactorily complete the degree requirements within one year.

Admission to Candidate Status must be attained within two calendar years after acceptance as a Classified Graduate Student.

All requirements and graduation are to be completed within five calendar years after initial acceptance as either a Classified or a Conditionally Classified Graduate Student. The five-year time limit can be extended by petition to and approval from the Graduate Committee.

Completion of all requirements for the Master of Science in Science Education requires satisfactory completion of all courses in an approved Plan of Study with a minimum 3.0 GPA and satisfactory completion of a project in science education, as determined by the Candidates Graduate Committee. Additionally, students must have received at least a C in a course in order for the course to count toward their required graduate courses and students must have taken at least 50% of their course units at the 500- or 600- level.
Course Requirements for the Master of Science in Science Education

**Research Track (45 units):**
SCI 354A, 477, 550A, 550B, 680, EDCI 532, EDCI 537

**Credential Track (90 units):** Course Descriptors:
EDCI=Curriculum and Instruction; EDSE=Secondary Education; EDTE=Teacher Education; SCI=Science

**Science Depth Coursework (20 units):**
20 units of approved Upper Division or Graduate level Science coursework*

**Credential Coursework (51 units):**
EDSE 531, 532, 533, 534, 535, 593, EDSP 301, EDTE 300, 401, 402, 403, 404, 410, 415, 416

**Science Education Coursework Beyond the Credential (14 units):**
EDCI 532, 533, 535, 537

**Summer Institute (3 units):**
SCI 500

**Culminating Project (2 Units):**
SCI 680

*Selection of elective courses must be approved by the Student's committee, but must be major's level courses in the sciences (i.e. BIOL, CHEM, GEOL, PHYS). Limited substitutions of courses can be made with approval of the graduate committee.

Graduate students must also pass the Graduation Writing Assessment Requirement (GWAR)

There are several options for meeting this requirement. The most common are provided below. See [http://www.csub.edu/testing/gwar.shtml](http://www.csub.edu/testing/gwar.shtml) for a full list of means of satisfying GWAR.

You will be exempt from the GWAR if you meet any of the criteria below:
- You graduated from a CSU or UC since 1980.
- You have achieved any of following test scores, provided the test was taken since 1980:
  - CBEST 41 or higher on the writing portion of the CBEST
  - GMAT 4.5 or higher on the writing portion of the GMAT
  - GRE 4.5 or higher on the analytic writing portion of the GRE General Test
  - GWAR 8 or higher

**COURSE DESCRIPTIONS: Courses specific to the Master in Science Education degree**

**SCI 500 Applying Research Skills to Teaching (3)**
In-depth discussion between practicing teachers actively engaged in scientific research and beginning science teachers regarding the research process and strategies for engaging grade 6-12 students in authentic research processes in the context of classroom and laboratory settings. The focus will be on the practical application of research skills to instructional design, and will include designing lessons with a research-skill focus. 3 units discussion. Prerequisite: EDSE 535 or Teaching credential.

**SCI 550A Summer Institute 1 – Research Track (10)**
10-week Summer Institute in Year 1 consisting of 3.125 hours per day, four days per week (mornings) participation in authentic research projects either at CSUB or with appropriate community partners and 1.25 hours per day, four days per week (afternoons) of reflection and instruction in pedagogy, science content, and leadership skills. 5 units laboratory, 5 units lecture.

**SCI 550B Summer Institute 2 – Research Track (10)**
10-week Summer Institute in Year 2 consisting of 3.125 hours per day, four days per week (mornings) work on incorporating research experiences, inquiry-based learning, and instruction on the Nature of Science in K-12 classrooms. 1.25 hours per day, four days per week (afternoons) of reflection and instruction in pedagogy, science content, and leadership skills. 5 units laboratory, 5 units lecture.

**SCI 680 Project in Science Education (2-9 units)**
Project Students complete a project in the field of science education that requires an appropriateness of topic, theory and methods applicable to the nature of the degree, conducted under supervision of the graduate advisor and committee.