

# Science and Math Education

## Minor

The Science and Math Education minor is offered by the CalTeach program. CalTeach is a program for undergraduate STEM (Science, Technology, Engineering, and Mathematics) majors interested in exploring a career in education.

CalTeach at UC Berkeley is working to increase the number of qualified STEM educators in K–12 classrooms. Courses in the CalTeach program are open to any STEM major with a desire to promote math and science education and equity.

CalTeach is unique from other education programs in that it is focused on learning and applying those skills in local classrooms. All the courses in the Science and Math Education minor have field placements (<http://calteach.berkeley.edu/cal-teach-program/field-placements.php>) in local K-12 STEM classrooms. By the time students graduate with the minor, they will have spent over 100 hours honing their teaching in local classrooms.

The CalTeach program offers STEM students the opportunity to complete both a bachelor's degree and a California teaching credential as an undergraduate. See teaching credential and minor with CalTeach (<http://calteach.berkeley.edu/cal-teach-program/cal-teach-credential.php>) for more information.

The courses in the Science and Math Education minor cover topics including inquiry-based learning, creating and assessing student learning outcomes, equity in urban education, project-based instruction, methods of conducting and presenting research, and positive teacher-student interactions. The knowledge and skills gained in these courses are integral to success in any field that requires the communication of knowledge to others. This includes, but is not limited to, education, business, scientific/engineering industry, and public service.

Additional scholarships, internships, and research opportunities (<http://calteach.berkeley.edu/scholarships-and-opportunities/>) are provided to students in the CalTeach minor.

## Applying for the Minor

It is recommended to schedule a meeting with the CalTeach student services coordinator to discuss your planning and educational goals as early as possible. Learn more about advising resources here (<http://calteach.berkeley.edu/cal-teach-program/advising-and-resources.php>).

After completing the introductory course and all five upper division minor courses, speak with the student services coordinator about completing the appropriate paperwork to be awarded the minor.

The minor in Science and Math Education demonstrates a passion and excellence in K-12 STEM Education. Additionally earning the Science and Math minor allows you to apply to the Cal Teach science and math credential program and earn your California Teaching Credential as an undergraduate.

To learn more, schedule or plan, and to declare the minor please schedule an appointment with the Cal Teach Student Services

Coordinator. (<http://calteach.berkeley.edu/cal-teach-program/advising-and-resources.php>)

## General Guidelines

1. All minors must be declared before the first day of classes in your Expected Graduation Term (EGT). For summer graduates, minors must be declared prior to the first day of Summer Session A.
2. All upper-division courses must be taken for a letter grade.
3. A minimum of three of the upper-division courses taken to fulfill the minor requirements must be completed at UC Berkeley.
4. A minimum grade point average (GPA) of 2.0 is required in the upper-division courses to fulfill the minor requirements.
5. Courses used to fulfill the minor requirements may be applied toward the Seven-Course Breadth requirement, for Letters & Science students.
6. No more than one upper division course may be used to simultaneously fulfill requirements for a student's major and minor programs.
7. All minor requirements must be completed prior to the last day of finals during the semester in which the student plans to graduate. If students cannot finish all courses required for the minor by that time, they should see a College of Letters & Science adviser.
8. All minor requirements must be completed within the unit ceiling. (For further information regarding the unit ceiling, please see the College Requirements tab.)

## Requirements

1. Enroll in and complete EDSTEM 82.
2. Speak with the Cal Teach student services coordinator about fitting the courses for the minor into your schedule.
3. The minor in Science and Math Education requires five courses. Note that two of these courses also fulfill American Cultures and Historical Studies breadth requirements (EDUC 131AC, and HIST 138T/180T/182AT, respectively).

### Required Courses

Take these three courses in sequence after completing EDSTEM 82 and/or EDSTEM 82T:

EDUC 130	Knowing and Learning in Mathematics and Science	3
EDUC 131AC	Classroom Interactions in Science and Mathematics: A Focus on Equity and Urban Schools	3
EDSTEM 187	Project-Based Instruction	4
Complete the following two courses at any point after completing EDSTEM 82 and before the completion of your bachelor's degree:		
EDSTEM 189	Integrating Research Methods into K-12 Teaching in Mathematics and Science	3
HISTORY 100ST	Special Topics in the History of Science (CalTeach)	4
HISTORY 138T	History of Science in the US CalTeach <sup>1</sup>	4
	or HISTORY 180T History of the Life Sciences Since 1750 (Cal Teach)	
	or HISTORY 182AT Science, Technology, and Society (Cal Teach)	

<sup>1</sup> The course offered varies by semester. Check [classes.berkeley.edu](https://classes.berkeley.edu) (<https://classes.berkeley.edu/>) for which course is offered in the upcoming semester.