

EDS Minor: Option 4 - Math Education Minor/Foundation Coursework [YEAR 1]

UC San Diego's Mathematics Education Program is part of California Teach (Cal Teach), a UC-wide initiative designed to address the critical shortage of K-12 mathematics teachers. By increasing the number of highly prepared teachers in California classrooms, the program will cultivate skilled workers for California's growing high-tech and bio-tech industries, as well as citizens capable of making sound decisions about the many math-based issues they will face in their daily lives.

Unlike traditional programs in which courses about teaching and learning are "tacked on" to a major in mathematics or engineering, UC San Diego's unique program is integrated from the beginning. Mathematicians with an authentic interest in K-12 education partnered with faculty to develop the innovative program. The result is an intellectually stimulating course of study that bridges disciplines to investigate how people learn mathematics.

The Mathematics Education Minor provides the coursework and hands-on experience in local schools to prepare you to become a student teacher or intern when you enroll in the M.Ed. Single Subject Credential program after you complete your bachelor's degree. *By completing the minor, you can receive your undergraduate degree, preliminary teaching credential, and master's degree in five years.*

Math and engineering majors may sign up for this minor if they have the appropriate prerequisites (Calculus 10 or 20 sequence) for the upper division courses. (Note: Mathematics Secondary Education Majors cannot declare the Mathematics Education Minor).

The Minor is 34 units and will fulfill the Foundations coursework requirement for the M.Ed. Credential Program.

All coursework, with the exception of EDS 139 and EDS 190, must be taken for a letter grade to fulfill the Foundations coursework requirement.

Math Education Minor (MO66)		
Course Number	Course Topic (units)	Notes
MATH 87	Teaching Math – The Challenge (1 unit)	Optional
MATH 95/EDS 30	Introduction to Teaching Math – (2 units)	
EDS 39	Practicum in Math & Science Teaching/Learning (2 units)	Best if taken concurrently with MATH 95
MATH 121A	Foundations of Teaching & Learning Math I (4 units)	
MATH 121B	Foundations of Teaching & Learning Math II (4 units)	
EDS 117	Language, Culture, and Education (4 units)	
EDS 129A/B/C	Introduction to Teaching & Learning (4 units each)	
EDS 139	Practicum in Teaching and Learning (2 units <i>each</i> , 6 units <i>total</i>)	Required co-requisite for EDS 129A/B/C
EDS 190	Research Practicum (2 units)	Optional co-requisite for EDS 129C

The **Mathematics Education Minor** is intended for students interested in understanding how people learn mathematics.

Courses will explore people's learning difficulties in mathematics, and develop the components of the knowledge base necessary for teaching mathematics (knowledge of the mathematics content, knowledge of how students learn the mathematics content and knowledge of how to develop curricula and assessments that promote learning).

Examples from the history of mathematics will be related to the developmental progression of students' understanding of mathematical concepts. There will also be a focus on working with teachers and students in urban schools and exploring the needs of diverse learners, including English language learners. Theories of teaching and learning will provide the framework that links together the coursework and experiences in the schools.

Sample Schedule (Course Schedule tentative and subject to change)

Math Education Minor Sample Schedule

	Fall	Winter	Spring
First-Year	MATH 87 (Optional)		
Sophomore		MATH 95/EDS 30 + EDS 39	
Junior	EDS 117	MATH 121A	MATH 121B
Senior	EDS 129A + EDS 139	EDS 129B + EDS 139	EDS 129C + EDS 139 + EDS 190 (Optional)

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