

**UNIVERSITY OF CALIFORNIA, MERCED**  
**EDUC X390 – Curriculum and Professional Development for P-12 Teachers (1 credit)**

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**Course Description:** EDUC X390 provides an opportunity for educators to develop new teaching strategies and curriculum during the summer to implement during the school year. This is a **professional development course** for P-12 educators in STEM (science, technology, engineering, and math) to facilitate their transition to the Next Generation Science Standards (NGSS) and their integration with the California Common Core State Standards (CCSS) for both Mathematics and English Language Arts and Literacy in History/Social Science, Science, and technical Subjects. The readings and research are tailored for each school site, grade level, and teacher; the structure and timeline are flexible to meet the individual needs of the participants.

**I. Course Goals and Outcomes:**

a. **Course Goals:**

The overall goal of this course is to provide course participants (both in-service and pre-service teachers) the opportunity to develop a deeper understanding and mastery of the concepts embedded in the California Common Core State Standards (CCSS) and how to integrate these with the Next Generation Science Standards (NGSS).

This course facilitates collaboration among course participants (teachers) to foster creativity and critical thinking.

This course enables course participants (teachers) to develop both curriculum and associated instructional strategies that promote deeper conceptual understanding and foster a culture of discovery and inquiry learning within their classrooms.

b. **Learning Outcomes:**

By successfully completing this course, course participants (teachers) will be able to:

- 1) Prepare effective lesson plans, activities, and corresponding assessments aligned with the California Common Core State Standards (CCSS) and the Next Generation Science Standards (NGSS).
- 2) Articulate a variety of instructional strategies to facilitate the following for their students: communication, collaboration, critical thinking, and creativity.

This course is part of University Extension's Education Programs, which focuses on professional development for in-service and pre-service teachers. This professional development course specifically addresses PLO #4, but touches on all four of the Program Learning Outcomes (see below).

## *Continuing Education Courses Program Learning Outcomes*

The overarching goal of any Continuing Education course is to engage students in scholarship and creativity while fostering a culture of inquiry and discovery learning, thus promoting a value for lifelong learning.

Students who complete a Continuing Education course will be able to:

1. **Communicate** their thoughts, questions, ideas and solutions to colleagues and their students, especially in the context of the course content.
2. **Collaborate** with colleagues and their students to reach an articulated goal, involving the talent and expertise of all, especially in the context of the course content.
3. **Think critically** by looking at problems in a new way, linking their own learning and that of their students across content areas.
4. Foster **creativity** in themselves and their students by trying new approaches to attain their goals and promoting innovation and invention, especially in the context of the course content.

**II. Format and Procedures:** This course will have online, in-class and classroom application components. The online portion will include readings, simulations, and research. The in-class portion will include lecture, discussion, and in-class exercises. The classroom application portion will include field-testing newly developed curriculum and instructional strategies, which are then analyzed and revised.

**III. Course Requirements (per 1 credit):**

- a. *Class attendance and participation policy:* The course participants (teachers) are expected to be present at ALL sessions for a total of 15 hours.
- b. *Course readings:* Course participants (teachers) are expected to complete ALL on-line readings, simulations, and research for a total of 15 hours.
- c. *Course assignments and projects:* Course participants (teachers) are expected to complete and pilot a one-week unit (or equivalent) for each credit, which satisfies the remaining 15 hours.

**IV. Grading Procedures:**

Both letter grading and pass-fail options will be available. For grading on a pass-fail basis, 70% is considered a passing grade. The course grade will be calculated as follows:

Class attendance and participation	40%
On-line readings, simulations, and research	20%
One-week unit which follows the 5E Model of Instruction (or equivalent): Engage, Explore, Explain, Extend/Elaborate, Evaluate and includes detailed descriptions for each component and necessary materials/resources.	40%
<b>Total</b>	<b>100%</b>

Letter grades will be assigned as follows:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

**V. Academic Integrity:**

Each student in this course is expected to abide by the University of California, Merced's Academic Honesty Policy. Any work submitted by a student in this course for academic credit will be the student's own work. Students are encouraged to study together and to discuss information and concepts covered in in the course with other students. Students can give "consulting" help to or receive "consulting" help from each other. However, this permissible cooperation should never involve one student taking credit for work done by someone else. Penalty for violation of this Policy can also be extended to include failure of the course and University disciplinary action.

**VI. Accommodations for Students with Disabilities:** The University of California, Merced is committed to ensuring equal academic opportunities and inclusion for students with disabilities based on the principles of independent living, accessible universal design and diversity. The instructor is available to discuss appropriate academic accommodations that may be required for a student with disabilities. Requests for academic accommodations are to be made during the first three weeks of the semester (or equivalent), except for unusual circumstances. Students are encouraged to register with Disability Services Center to verify their eligibility for appropriate accommodations.

**VII. Tentative Course Schedule:** This workshop-style course will vary in time of day, hours per day, and frequency of meetings. Per university policy, 45 hours are equivalent to one credit.