EDUC 422: TEACHING, LEARNING AND TECHNOLOGY
Section 40012
Fall 2019

Class Meetings:
Fridays, 9:30AM – 12:20PM
University Hall 273

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Office Location: University Hall 426
Office Hours: By Appointment

COURSE CATALOG DESCRIPTION

Required for all credential candidates. Focuses on developing knowledge and skills using technology for teaching and learning within the broader context of Science, Technology, Engineering, Arts, and Math (STEAM) education through fifteen (15) hours of field experience with children in K-12 educational settings. Certificate of clearance and TB risk assessment required prior to engaging field experience hours.

ADDITIONAL INFORMATION ON THE COURSE

This course is one of the three prerequisite courses for entering the teacher credential program at CSUSM. The other two prerequisite courses include EDUC350 Foundations of Teaching as a Profession and EDUC364 The Role of Cultural Diversity in Schooling. This is also a required course for the Minor in Education Studies.

COURSE PREREQUISITE

The prerequisite for this course is basic computer knowledge and skills such as turning a computer on and off; opening, saving, and deleting a file; creating and deleting a folder; using e-mail and web browsers (i.e. Internet Explorer, Safari, Firefox, Google Chrome).

COURSE OBJECTIVES

The course objectives are:
  (a) Contextualize STEAM teaching and learning in authentic contexts.
  (b) Develop and disseminate STEAM learning experiences.
  (c) Implement, assess and reflect on STEAM learning experiences.
  (d) Engage in instructional conversations and collaborations that enhance STEM teaching and learning across content areas.
  (e) Increase confidence and self-efficacy in STEM teaching and learning.
  (f) Increase understanding of design thinking.

COURSE LEARNING OUTCOMES

In the end of this course, students will meet the International Society for Technology in Education (ISTE) Educator Standards. These standards are:

1. Learner: Educators continually improve their practice by learning from and with others and exploring proven and promising practices that leverage technology to improve student learning.

2. Leader: Educators seek out opportunities for leadership to support student empowerment and success and to improve teaching and learning.

3. Citizen: Educators inspire students to positively contribute to and responsibly participate in the digital world.

4. Collaborator: Educators dedicate time to collaborate with both colleagues and students to improve practice, discover and share resources and ideas, and solve problems.

5. Designer: Educators design authentic, learner-driven activities and environments that recognize and accommodate learner variability.

6. Facilitator: Educators facilitate learning with technology to support student achievement of the 2016 ISTE Standards for Students (see https://www.iste.org/standards/standards/for-students).

7. Analyst: Educators understand and use data to drive their instruction and support students in achieving their learning goals.

COURSE MATERIALS & RESOURCES

1. **Google Drive:** This is an online file storage service provided by Google. It allows users to create, share, and collaboratively edit files stored in the cloud. Students should have access to Google Drive through their CSUSM e-mail. If you do not have access to Google Drive, you can create an account at drive.google.com. Directions on how to create an account are available at: https://support.google.com/drive/answer/2424384?hl=en

2. **Additional File Storage:** While you can create, upload, and store files using Google Drive, you may need to use an additional secondary cloud file storage service such as Dropbox (You can create an account at www.dropbox.com) and/or purchase a USB stick (8GB or larger) to store large files.

3. **Cougar Courses:** Course materials, assignment instructions, and grades will be available on Cougar Courses site. Available at: https://cc.csusm.edu/. Be sure to set your preferred email in your profile settings of Cougar Courses so that you receive important announcements and communications. It is your responsibility to check the course site regularly and bring any issues immediately to the instructor's attention.

4. **Campus Resources:** In addition to attending class meetings, students may need to use campus resources for some assignments. It is the student's responsibility to make arrangements to have the technology resources available in order to complete scheduled assignments and due dates. All students must plan times they can work in labs on campus. Students are required to check campus resources and availability of labs. Mac computers are available in ACD 202, ACD 211, UH 271, and SCI2 306 in addition to other locations such as the library 2nd floor.

5. **Backing Up Work:** Many technology platforms you will be using in this course are online and require a username and password. However, for some assignments you will need to take a screenshot or copy/paste your work into a word file, therefore it is important that you backup your work.

6. **Username & Password:** You will be using a variety of online platforms. Avoid creating a new username and password for each platform, instead, use the same username and password for all platforms for you to easily remember.

UNIVERSITY AND SCHOOL OF EDUCATION POLICIES

Attendance Policy: Due to the dynamic and interactive nature of courses in the School of Education, all candidates are expected to attend all classes and participate actively. At a minimum, teacher candidates must attend more than 80% of class time, or s/he may not receive a passing grade for the course at the discretion of the instructor. Individual instructors may adopt more stringent attendance requirements. Should the candidate have extenuating circumstances, s/he should contact the instructor as soon as possible.

Professional Dispositions: The California State University San Marcos School of Education fosters the development of the following professional dispositions among teacher candidates:
*   *Social Justice and Equity*: Candidates appreciate the languages, communities, and experiences learners bring to the classroom. Candidates advocate for and support marginalized communities and individuals.
*   *Collaboration*: Candidates learn and practice the skills of collaboration in their coursework and use them in their professional interactions with students, colleagues, parents, caregivers and those in the wider community.
*   *Critical Thinking*: Candidates analyze various professional contexts, resulting in more informed decision-making about professional practice.
*   *Professional Ethics*: Candidates learn to make and act on well-reasoned, principled judgments.
*   *Reflective Teaching and Learning*: Candidates critically review their professional practice and the impact it has on student success.
*   *Life-Long Learning*: Candidates are committed to actively seeking new knowledge, skills and experiences throughout their career.

Academic Honesty Policy: Students are expected to adhere to standards of academic honesty and integrity, as outlined in the Student Academic Honesty Policy. All written work and oral presentation assignments must be original work. All ideas/materials that are borrowed from other sources must have appropriate references to the original sources including resources found online. Any quoted material should give credit to the source and be punctuated with quotation marks.

Students are responsible for honest completion of their work including examinations. There will be no tolerance for infractions. If you believe there has been an infraction by someone in the class, please bring it to the instructor's attention. The instructor reserves the right to discipline any student for academic dishonesty in accordance with the general rules and regulations of the university. Disciplinary action may include the lowering of grades and/or the assignment of a failing grade for an exam, assignment, or the class as a whole.

Incidents of Academic Dishonesty will be reported to the Dean of Students. Sanctions at the University level may include suspension or expulsion from the University.

It is expected that each candidate will do his/her own work, and contribute equally to group projects and processes. Plagiarism or cheating is unacceptable under any circumstances. If you are in doubt about whether your work is paraphrased or plagiarized see the Plagiarism Prevention for Students website **http://library.csusm.edu/plagiarism/index.html**. If there are questions about academic honesty, please consult the University catalog.

Writing Requirement: The CSUSM writing requirement of 2500 words is met through the completion of course assignments. Therefore, all assignments will be looked at for content, organization, grammar, spelling, and format. If needed, it is suggested that you make an appointment with the Writing Center

(http://www.csusm.edu/writing_center/) to seek help with writing skills before submitting your written assignments.

Because it is important for teachers to be able to effectively communicate their ideas to students, parents, colleagues, and administrators, writing that is original, clear and error-free is a priority for the School of Education.

Students with Disabilities Requiring Reasonable Accommodations: Candidates with disabilities who require reasonable accommodations must be approved for services by providing appropriate and recent documentation to the Office of Disability Support Services (DSS). This office is located in Craven Hall 4300, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909. Candidates authorized by DSS to receive reasonable accommodations should meet with their instructor during office hours or, in order to ensure confidentiality, in a more private setting.

COURSE EXPECTATIONS

Professional Demeanor: It is expected that students will conduct themselves as professional adults who show respect to others, bring a positive attitude, and demonstrate productive engagement with people, process, and tasks to be completed. Professional demeanor includes, but not limited to, meeting the following expectations:

1. Arriving to all class meetings and school sites **on time**. Emailing the instructor when you are unable to attend class meetings or when you will be late. If you come late to class more than twice in the semester, you will be considered absent. Consistently being late to class will not be tolerated. You cannot be late to the school site.

1. Submitting required assignments **on time**. When you are unable to complete an assignment and need more time, e-mail the instructor and explain the reasons for requesting an extension, and provide a projected timeline for successful completion of the assignment.

2. Approaching problems with a disposition to find solutions rather than feeling helplessness or hopelessness when facing a challenge or difficulty. This applies to the learning and teaching of different technologies and other class and field work related issues.

3. Working respectfully and productively with peers, the instructor, children, and school site staff at all times.

4. Contributing to and being part of a supportive and collaborative teaching and learning environment. This includes helping classmates with technical and/or content issues, interacting with your peers, selecting one or two class "buddies" to ensure that you receive information and handouts if you miss a class, and help you keep track of the course assignments, upcoming tasks, and deadlines.

Electronic Communication: My goal is to respond to your e-mails as soon as possible. However, I have other job responsibilities and family obligations. While it is my intention to respond to all received e-mails in a timely manner, it might take up to 24 hours to respond to your e-mail.

Online Etiquette: Please keep in mind that electronic communication is a very specific form of communication, with its own nuances and etiquette. For instance, electronic messages sent with no title or greetings, in all upper case (or lower case) letters, major typos, or slang, often communicate more than the sender originally intended. With that said, please be mindful of all e-mail and online discussion messages you send to your colleagues, to faculty members in the School of Education, or to persons within the greater educational community. All electronic messages should be crafted with professionalism and care. Things to consider:
- Would I say in person what this electronic message specifically says?

- How could this message be misconstrued?
- Does this message represent my highest self?
- Am I sending this electronic message to avoid a face-to-face conversation?

In addition, if there is ever a concern with an electronic message sent to you, please talk with the author in person to correct any confusion. Be aware that messages sent within an online context may be open to misinterpretation. When concerned, meanings should be verified to clarify sender's intent.

COURSE ACTIVITIES

IN CLASS MEETINGS

The course meets on Fridays between 9:30AM-12:20PM. Students are expected to attend each weekly session prepared to actively participate in a hands-on, workshop style class session. Starting week 4, students will learn and practice STEM/STEAM activities and discuss key concepts related to design thinking and teaching STEM/STEAM during class meetings. The course is structured such that students will practice in class what they are expected to do with children at their field experience sites.

Noticings and Wonderings: Each week we complete a design challenge in class, you will record what you notice and wonder on the provided template. The noticings and wonderings will be used to support you in developing important problem-solving skills to be successful with open ended tasks such as the design challenges. Following each design challenge, you will share your noticings and wonderings with the class to begin a reflective conversation about your learning. This activity will support you learning the activities and your Social Media Shares Assignment (see details below).

FIELD EXPERIENCE

As part of the course, students will implement the STEM activities they learned in class with children (grades 4 through 8) at a school site. The field experience will take place between 3:00PM-5:30PM on Mondays, Tuesdays, Wednesdays, or Thursdays. Students will work in groups of four to five throughout the semester and will be assigned to one school site. Each after school session, EDUC422 students will take a different role within their groups. Students must be prepared to budget for travel expenses. Using a messaging and phone app (e.g. WhatsApp, GoogleTalk, etc.) is recommended for coordination and communication among group members. Carpooling is strongly encouraged when going to the school site. You will accumulate approximately 15 hours of field experience in this class.

COURSE ASSIGNMENTS

TB Risk Assessment (must be completed before field experience): You will make an appointment with a health care provider and have him/her fill out the "Certificate of Completion for Tuberculosis (TB) Risk Assessment Form.You will keep this form for your own records. You will complete the "Tuberculosis (TB) Risk Assessment Confirmation Form" as a confirmation that you have visited a health care provider and that s/he completed the certificate and submit the form as an assignment. You cannot start your field experience without the submission of this form.

Certificate of Clearance (must be completed before field experience): You will apply and obtain a certificate of clearance through the California Commission on Teacher Credentialing (CTC) website. The certificate will be posted in your online account. You will submit a digital copy of the certificate as an assignment. You cannot start your field experience without the submission of the certificate.

CITI Training (must be completed before field experience): As part of your field experience, you will take on the role of a teacher-researcher, collecting data (information) about children's STEM/STEAM learning through observations and document in the form of field notes. You will complete the CITI (Collective Institutional Training Initiative) and receive a certificate upon completing the appropriate modules and submit a digital copy of the certificate as an assignment. The modules will provide

information about procedures and guidelines that must be followed when doing research in educational settings with children. You cannot start your field experience without the submission of the certificate.

Field Notes: At the end of each afterschool session with children, students will submit field notes that document what happened during the session and their reflections about the session. Each field note entry will be at least 1000 words and will include photos from the site. **The photos must be unidentifiable, meaning you can only take photos of children at an angle where children's faces cannot be recognized (e.g. behind their head).** Further, in your field notes you must only use children's first name and the first letter of their last name.

Social Media Shares: Social media has become a powerful tool for educators and students to share ideas, collaborate on projects, build learning communities, and network. For this assignment, you will create a Twitter account and tweet one big "takeaway" from the face-to-face class session during the weeks when we are doing the design challenges in class.

Create Your Own Lesson: Students will work in groups to create a lesson (i.e. design challenge) that integrates and emphasizes technology. Students will identify the content standards that are met with the design challenge and the grade level(s) that are targeted. The lesson plan will include an **assessment plan** and tool to capture children's learning before, during, and after the lesson. Additionally, you will put together a short presentation of your lesson.

Instructional Video: Based on the lesson you created, you will put together an instructional video (at least 3 minutes long) and share it using social media so that other teachers can implement the lesson in their own classrooms. You will create storyboard, use digital camera, do screen casting, edit video files, and upload their video and publically share it on YouTube or Vimeo.

Teaching, Learning, and Technology Portfolio: You will put together a personal website as a means to document your work, showcase your learning, and things you have created as a future educator. Your portfolio (i.e. website) must include: (1) your lesson plan, assessment tool, and presentation (2) your photo and bio, (3) your instructional video, (4) a narrative about how you met at least two ISTE standards, and (5) a written plan for how you will integrate STEAM powered by Maker Education in your future classroom.

All assignments are due by 23:55 pm on the due date. Note that Field Notes are due within 48 hours of field experience by 23:55pm. More information on each assignment can be found on Cougar Course Site.

GRADING

It is expected that work will be turned in on time and course expectations will be met. Please discuss individual issues with the instructor promptly if extraordinary circumstances prohibit you from turning in assignments on time, going to the school sites, or participate in course activities. Points will be deducted if assignments are submitted late (10% penalty per day late) **except for the field notes assignment. If you submit your field notes past 48hours mark, you will receive no credit.**

94 – 100 A	90 – 93 A-
87 – 89 B+	84 – 86 B
80 – 83 B-	77 – 79 C+
74 – 76 C	70 – 73 C-
60 – 69 D	Below 60 F

You are responsible to track your grades and progress in the course by logging in Cougar Course.

Attendance Policy: Attendance will be taken each class. 10 points will be deducted from your overall grade if you miss the class more than 2 times during the semester. **However, note that during the seven week where we do design challenges in class, you cannot miss the class session because**

there will be no make-up. If you miss in-class session, you will not be allowed to go to the school site that week. Note that there is also no make-up for missing a session at the school site. You will fail the class if you do not meet the field experience hours.

Failure to complete this course with a grade of C+ or better will prohibit a teacher candidate from entering a teaching credential program.

Assignments	Points	Percentage
CITI Training	10	3.3%
TB Risk Assessment	10	3.3%
Certificate of Clearance	10	3.3%
Field Notes (10 points x 7)	70	23%
Social Media Shares (8 points x 7)	56	23%
Create Your Own Design Challenge: 1. Lesson Plan (20 points) 2. Assessment Plan and Tool (10 points) 3. Short Presentation (20 points	50	13.5%
Instructional Video: 1. Storyboarding (20 points) 2. Final Video (40 points)	60	20%
Teaching, Learning, and Technology Portfolio	30	10%
Total:	310	100%

COURSE SCHEDULE

Please note that modifications may occur at the discretion of the instructor and based on coordination with the school sites. Any changes to assignments and activity schedule will be announced in class OR students will be notified via e-mail through the course announcements in Cougar Courses. To successfully complete this course, *all assignments must be completed* at an acceptable level noted on assignment directions. **All assignments are due by 23:55 pm on the due date**. **Field Notes are due within 48 hours of field experience by 23:55pm**

Week	Date	Topics	Due Dates
1	Aug. 30	Introductions Course Overview Assigning Up for School Sites	
2	Sept. 6	Maker Education Design Thinking What is STEAM & STEM Education?	
3	Sept. 13	Classroom Management Facilitating Afterschool STEAM/STEM Activities Teachers as Researchers & Observer-Participants	**TB Risk Assessment, Certificate of Clearance, & CITI Training**

		Taking Effective Field Notes	**Assignment:** Due Friday, September 13
4	Sept. 20	Practice Design Challenge 1	**Tweet #1**
5	Sept. 23-26	**Field Experience:** Implement Design Challenge 1 at the school site	**Field Notes Assignment:** Field Note Entry #1 Due within 48 hours of site visit
	Sept. 27	Field Experience Debrief Practice Design Challenge 2	**Tweet #2**
6	Sept. 30 - Oct. 3	**Field Experience:** Implement Design Challenge 2 at the school site	**Field Notes Assignment:** Field Note Entry #2 Due within 48 hours of site visit
	Oct. 4	Field Experience Debrief Practice Design Challenge 3	**Tweet #3**
7	Oct. 7-10	**Field Experience:** Implement Design Challenge 3 at the school site	**Field Notes Assignment:** Field Note Entry #3 Due within 48 hours of site visit
	Oct. 11	Field Experience Debrief Practice Design Challenge 4	**Tweet #4**
8	Oct. 14-17	**Field Experience:** Implement Design Challenge 4 at the school site	**Field Notes Assignment:** Field Note Entry #4 Due within 48 hours of site visit
	Oct. 18	Field Experience Debrief Practice Design Challenge 5	**Tweet #5**
9	Oct. 21-24	**Field Experience:** Implement Design Challenge 5 at the school site	**Field Notes Assignment:** Field Note Entry #5 Due within 48 hours of site visit
	Oct. 25	Field Experience Debrief Practice Design Challenge 6	**Tweet #6**
10	Oct. 28-31	**Field Experience:** Implement Design Challenge 6 at the school site	**Field Notes Assignment:** Field Note Entry #6 Due within 48 hours of site visit
	Nov. 1	Field Experience Debrief Practice Design Challenge 7	**Tweet #7**
11	Nov. 4-7	**Field Experience:** Implement Design Challenge 7 at the school site	**Field Notes Assignment:** Field Note Entry #7 Due within 48 hours of site visit
	Nov. 8	A Holistic Reflection on the Field Experience Create Your Own Lesson	
12	Nov. 15	Storyboarding the Instructional Video	**Create Your Own Lesson Assignment:** Due Thursday, November 14
13	Nov. 22	Shooting the Instructional Video	**Instructional Video Assignment:** Storyboard Due Thursday, November 21
14	Nov. 29	**Thanksgiving. No class meeting.**	
15	Dec. 6	Editing & Publishing the Instructional Video	**Instructional Video Assignment:** The Actual Video Due Thursday, December 5

16	Dec. 13	**Finals Week. No class meeting.**	**Teaching, Learning, and Technology Portfolio:** <u>Due Saturday, December 14</u>