California State University SAN MARCOS

SCHOOL OF EDUCATION

Engaging diverse communities through leading and learning for social justice.

333 South Twin Oaks Valley Road, University Hall 468
San Marcos, California 92096-0001
760.750.4300
www.csusm.edu/education

Course & Section Nos.	**EDUC 422 Section 3902**
Course Title	**Technology Tools for Teaching and Learning**
Class Roster No.	**4001333102**
Days	**FriMonday & Wednesday**
Time	**96:300 AM PM to 128:2015 PM**
Course Location	**University Hall 2731**
Semester / Year	**FallSummer 2018**

Instructor	Rong-Ji Chen, Ph.D.
Phone	760.750.8509
E-Mail	rchen@csusm.edu
Office	UH 418
Hours	By Appointment or before and after class

SCHOOL OF EDUCATION MISSION & VISION STATEMENT
(Adopted by SOE Governance Community, January 2013)

Vision
To serve the educational needs of local, regional, and global communities, the School of Education advances innovative practice and leadership by generating, embracing, and promoting equitable and creative solutions.

Mission
The mission of the School of Education community is to collaboratively transform education.   We:
- Create community through partnerships
- Promote and foster social justice and educational equity
- Advance innovative, student-centered practices
- Inspire reflective teaching and learning
- Conduct purposeful research
- Serve the School, College, University, and Community

BASIC TENETS OF OUR CONCEPTUAL FRAMEWORK
- Student centered education
- Research and theory specific to the program field inform practice
- Connections and links between coursework and application
- Strong engagement between faculty and candidates
- Co-teaching clinical practice
- Culturally responsive pedagogy and socially just outcomes

COURSE DESCRIPTION

This course is designed to help students (teacher candidates) who are seeking to enter the credential program at CSUSM to develop the skills, knowledge, and attitudes necessary to effectively integrate Science, Technology, Engineering, and Math (STEM) into classroom teaching and learning.

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). Students may demonstrate their basic knowledge and skills by completing the campus-wide computer competency requirement (CCR) or a computer course within the last 12 months with a grade B or above.

COURSE OBJECTIVES

The course objectives are:
   a) Contextualize STEM teaching and learning in authentic contexts;
   b) Develop STEM learning experiences;
   c) Engage in instructional conversations and collaborations that enhance STEM teaching and learning across content areas;
   d) Increase confidence and self-efficacy in STEM teaching and learning;
   e) 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 at the novice teacher's level. 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

There is not a required textbook. We will use online 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.   **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.

3. **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.

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: Students with disabilities who require reasonable accommodations must seek approval for services by providing appropriate and recent documentation to the Office of Disability Support Services (DSS). This office is in Craven Hall 4200, contact by phone at (760) 750-4905, or TTY (760) 750-4909. Website: http://www.csusm.edu/dss/. Students 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. The CSUSM's accessibility policy can be found at https://www.csusm.edu/accessibility/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 4200, 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.

Tuberculin Risk Assessment and Certificate of Clearance

Due to school site regulations and state and federal laws associated with protecting the safety of children, CSUSM students may NOT engage in field experience hours until a **Certificate of Clearance/Live Scan** and a **Tuberculin (TB) Risk Assessment** (form provided on Cougar Courses) are cleared. You will need to provide your instructor with verification of Live Scan clearance. To protect your health information privacy, students enrolled in prerequisite courses, do not need to submit the TB Risk Assessment to the instructor; however, the school at which you complete the early field experience may ask for it, along with the letter of introduction from your instructor, and the Certificate of Clearance. **Be prepared to show evidence of these documents to the school site.** You will be required to sign and submit to your instructor a **Confirmation of TB Risk Assessment Contract** (contract provided on Cougar Courses).

Tuberculin (TB) Risk Assessment
The TB Risk Assessment is achieved through submitting to a TB Risk Assessment visit with your medical provider. Additional information regarding tuberculosis risk assessment can be found here. TB risk assessment is valid according to the findings of your risk assessment and must remain valid throughout all early Field Experiences and Clinical Practice (student teaching). The clearance may be obtained at a private health care provider's office, the County Health Department or the CSU San Marcos Student Health and Counseling Center. Current CSUSM students can obtain an appointment at the Student Health Center by calling 760-750-4915. Please note the tuberculin clearance is separate from the immunization clearance required for University admission.

Certificate of Clearance
A Certificate of Clearance is issued by the Commission on Teacher Credentialing (CTC) to credential program candidates. Title 5 regulations require that an application for Certificate of Clearance be filed to determine whether or not a candidate meets the state standards for character and fitness to teach in California's public schools. A Certificate of Clearance is valid for five years. Additional information about the Certificate may be obtained here. You are required to submit documentation of the Certificate of Clearance to your instructor.

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 **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 must arrive 15 minutes before to the practicum site. You cannot be late to the practicum site.

2. 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.

3. 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.

4. Working respectfully and productively with peers and the instructor.

5. Open and clear communication with peers and the instructor at all times.

6. Contributing to and being part of a supportive and collaborative teaching and learning environment. This includes helping classmates with technical, content, managerial, and pedagogical issues, interacting with your peers, connecting and working collaboratively with your teammates.

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 uppercase (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 ASSIGNMENTS

CITI Training: As part of your field experience, you will take on the role of a teacher-researcher, collecting data (information) about children's STEM learning through photos, field notes, and interviews. You will complete the CITI (Collective Institutional Training Initiative (CITI) and receive a certificate upon

completing the appropriate modules and submit the certificate to the instructor. The modules will provide information about procedures and guidelines that must be followed when doing research in educational settings with children.

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.

Creating a Design Challenge: Students will work in groups to create a design challenge that integrates one of the technology tools they learned in class, and implement the design challenge with children in the afterschool program. ~~**Weekly Journal Entries:** Students will complete a total of seven (7) journal entries (1 following each week there is a design challenge), using Google Docs. Students will document (a) at least one thing they learned, (b) one thing that surprised them, and (c) one thing they are still wondering about. Each journal entry will be at least 500 words.~~

~~**Learning and Assessment:** This assignment will have three parts. Part 1: Students will generate an assessment using Google Forms that could be used to assess what your future students learned from the process of completing a design challenge. Students will focus the assessment according to students' learning in STEM, problem solving, design thinking, etc. Part 2: Students will respond to their peers' assessments. Part 3: Students will use Excel or Google Sheets to analyze the responses to their assessment and then develop a report that summarizes the results.~~

~~**Discussion Forums:** Students will participate in online discussion forums and exchange ideas and provide constructive feedback.~~

~~**Creating a Design Challenge:** Students will work in groups to create a design challenge that integrates one of the technology tools they learned in class, and share the design challenge, using a Google Slide Presentation. The audience will provide the groups with constructive feedback, so the presenters can improve their design challenges.~~

Instructional Video: Students will work in groups to create an instructional video of their design challenge (at least 4 ~~to 5~~ minutes long). Students will create storyboard, use digital camera, edit video files, and upload their video and publicly share it on the web (e.g., Google Drive, YouTube or Vimeo).

~~**Social Media Share:** Students will share the instructional video of their design challenge via LinkedIn, Twitter, Professional Learning Network, or creating a blog post.~~

STEM Teaching and Learning Reflection: You will write a reflection paper based on a topic related to STEM teaching and learning drawing on your field notes and research articles (1 to 3) you find on the topic. The goal of the reflection paper is for you to reflect on your own learning, your observations of how children learn at your practicum site, and connecting these experiences to what we know from research conducted by others in the field of education. The paper should be 6 to 7 double space pages and 12-point font and normal 1 inch margins ~~**Digital Portfolio:** Student will create a digital portfolio of work completed in the course, using the new Google Sites. Students will reflect on the ISTE Standards for Educators 1-7. The written narratives must include a narrative that describes and provides evidence for how the artifacts meet each standard with a hyperlink within the narrative to the evidence/artifact. Throughout the course, students will work on writing their narratives, and will submit the completed at the end of the courses. Each reflection will be at least 200 words~~.

All assignments are due by 23:55 pm on the due date. More information on each assignment can be found on Cougar Course Site.

<div align="center">

GRADING

</div>

It is expected that you will complete your practicum, submit your assignments on time, and meet course expectations. Please discuss individual issues with the instructor promptly if extraordinary circumstances (e.g. being sick) prohibit you from turning in assignments on time, going to the practicum sites, or participate in course activities. You must provide a doctor's note if you are sick. Points will be deducted if assignments are submitted late (10% penalty per day late). No credit will be awarded if the assignment is 1 week late. Field notes must be turned in within 48 hours of the completion of an afterschool session. No credit will be awarded if field notes are submitted after the 48 hours limit. Students who wish to revise an assignment (except the CITI and the field notes assignments) must negotiate the requirements of the revision with the instructor.

Final grades are calculated on the standard of:
~~It is expected that you will submit your assignments on time, and meet course expectations. Please discuss individual issues with the instructor promptly if extraordinary circumstances (e.g. being sick) prohibit you from turning in assignments on time, or participate in course activities. You must provide a doctor's note if you are sick. Points will be deducted if assignments are submitted late (10% penalty per day late). No credit will be awarded if the assignment is 1 week late. Weekly journals must be turned in within 48 hours of the completion of the in-class design challenge. Students who wish to revise an assignment must negotiate the requirements of the revision with the instructor.~~

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

Failure to complete this course with a grade of C+ or better will prohibit a teacher candidate from entering a teaching credential program. You are responsible to track your grades and progress in the course by logging in Cougar Course. Attendance will be taken in each class. 10 points will be deducted for each class you miss. Points will be deducted for significantly arriving late or leaving a class early. You cannot miss any field experience sessions at the practicum site~~any design challenge sessions as it will significantly impact your final course grade~~. Fulfilling at least 10.5 hours of field experience is a requirement to pass this course.

Assignments	Points
CITI Training	**10**
Field Notes (10 points x 7)	**70**
Creating a Design Challenge	**30**
Instructional Video	**30**
STEM Teaching and Learning Reflection	**30**
Total:	**175**

~~Assignments~~	~~Points~~
~~Weekly Journal (10 points x 7)~~	~~70~~
~~Learning and Assessment~~	~~30~~
~~Discussion Forums~~ ~~1. Introduction (post and comment)~~	~~30~~

2. ~~Design Challenge Feedback (Feedback only)~~	
~~Creating a Design Challenge~~	~~30~~
~~Storyboard~~	~~20~~
~~Instructional Video~~	~~50~~
~~Social Media Share~~	~~20~~
~~Digital Portfolio~~	~~30~~
~~Total:~~	**~~280~~**

TENTATIVE COURSE SCHEDULE

The dynamic nature of teaching and learning makes it hard to establish a set schedule. Please note that modifications will likely to occur at the discretion of the instructor.

Week	Date	Topics	Due Dates
1	Aug. 31	Introductions Course Overview	
2	Sept. 7	Introduction to Design Thinking Training for Taking Field Notes Asking Purposeful Questions & Interviewing	
3	Sept. 14	Becoming Digital Citizens Classroom management Review of G Suite Writing Reflection Paper	
4	Sept. 21	Practice Design Challenge 1	
5	Sept. 24-27	**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. 28	Practice Design Challenge 2	
6	Oct. 1-4	**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. 5	Practice Design Challenge 3	
7	Oct. 8-11	**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. 12	Practice Design Challenge 4	**STEM T&L Reflection Assignment:** Identify a Topic Due Thursday, Oct. 12
8	Oct. 15-18	**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. 19	Practice Design Challenge 5	

Week	Date	Topics	Due Dates
9	Oct. 22-25	**Field Experience:** Implement Design Challenge 5 at the school site	**Field Notes Assignment:** Field Note Entry #5 <u>Due within 48 hours of site visit</u>
	Oct. 26	Practice Design Challenge 6	
10	Oct. 29-Nov.1	**Field Experience:** Implement Design Challenge 6 at the school site	**Field Notes Assignment:** Field Note Entry #6 <u>Due within 48 hours of site visit</u>
	Nov. 2	**Practice Design Challenge 7**	**STEM T&L Reflection Assignment:** Find an Article <u>Due Thursday, Nov. 2</u>
11	Nov. 5-8	**Field Experience:** Implement Design Challenge 7 at the school site	**Field Notes Assignment:** Field Note Entry #7 <u>Due within 48 hours of site visit</u>
	Nov. 9	Review of Field Notes Create a Design Challenge Storyboarding the Instructional Video	
12	Nov. 16	Continue Design Challenge Presentations of Design Challenge	**Design Challenge Assignment:** Design Challenge & Storyboarding <u>Due Thursday, November 30</u>
13	Nov. 23	**Thanksgiving. No class meeting.**	
14	Nov.30	Shooting the Instructional Video	**STEM T&L Reflection Assignment:** Draft Submission <u>Due Thursday, November 30</u>
15	Dec. 7	Editing & Publishing the Instructional Video	**Design Challenge Assignment:** Instructional Video <u>Due Thursday, December 14</u>
16	Dec. 14	**Finals Week. No class meeting.**	**STEM T&L Reflection Assignment:** Final Submission <u>Due Saturday, December 16</u>

<u>*</u> Be aware that before you begin your observation hours, you MUST complete a TB Risk Assessment (TBRA) and Certificate of Clearance (Live Scan) fingerprinting. See the policy on p. 4 above. You will be asked to provide your instructor with Certificate of Clearance completion – and sign a contract stating that you have secured both the TBRA and the Certificate of Clearance. Bring TBRA and Certificate of Clearance documents to each school site as you may be asked to show them.