EDU/GEL 183

Winter Quarter 2022 Syllabus

Lecturer

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Office Hours: T and Th 1:00 - 2:00

or by appointment, Zoom appointments available upon request Email: spinter@ucdavis.edu

Topical Outline

The CalTeach/MAST III (Teaching High School Math and Science, EDU/GEL 183) seminar is designed for 3rd and 4th year students and focuses on teaching practices in high school science and math classrooms. Through selected readings, seminar discussion, in person internships and pre-recorded teaching videos provided by ATLAS, students will gain understanding what it means to teach science or math in a high school setting and explore the CA State Standards for math (Common Core) and the New Generation Science Standards (NGSS) for science.

Internships:

It is necessary to collect 30 internship hours to pass EDU/GEL 183. These internship hours count as hours towards entering a credential program. As of now all school districts we are working with are offering in person internships. However, this might change if COVID-19 caseloads are going up significantly.

Due to the on-going COVID-19 global pandemic, school districts require to be vaccinated against the SARS-CoV-2 virus that causes COVID-19. ABSOLUTELY NO EXCEPTIONS!

Missing internship hours can be made up watching pre-recorded teaching videos by National Board-Certified Teachers on the ATLAS website. You will receive an invitation to participate in ATLAS once your email information is uploaded into the ATLAS account. Please be aware that ATLAS videos are only 15 to 20 minutes long and you need to watch more than one video to count as 1 internship hour.

Internship hours must be logged on the CalTeach website: https://calteach.ucop.edu. Since ATLAS videos count towards internship hours, they need to be logged on the CalTeach website as well, use Susann Pinter ad instructor in this case. Log your **hours** only, don't do anything else on the CalTeach website.

Reflections:

Reflections are a **weekly** assignment and are always due Sundays 11:59 on Canvas starting **week 1**. Some weeks you are asked to reflect on your internship experience with your mentor teacher while other weeks you are asked to reflect on an ATLAS video. All reflection prompts/assignments can be found in the syllabus.

If you, for some reason, cannot attend your internship, you MUST choose an ALTAS video to reflect on instead. You have many ATLAS videos to choose from and you may need to investigate several videos before you find one that you are satisfied with or mashes well with the assignment prompt.

If your assignment is to reflect on a video **ALWAYS** write the video case number (e.g., # 1900) **AND** the title of the video you chose as the title of your assignment! The videos you choose MUST either be from science or mathematics and from grades 9-12 unless directed otherwise.

Community Norms (RESPECT)

All voices are welcomed, encouraged and respected in this space.

Reflect Think before you speak.
Empower Empower yourself and others.
Share Share your voice and space.

Push Participate until something happens.

Elmo Enough, let's move on.

Confidentiality Share the knowledge, not the story.

Tech Check Be mindful; be present.

Outline by week Subject to Change

In additions to mandatory readings, I uploaded articles of interest regarding teaching practices to CANVAS. Reading these articles are voluntary. Voluntary reading have a * besides them.

Week 1

• Introduction & Information on course requirements and logistics, internships

(If time permits first look at the CA State Teaching Standards: New Generation Science Standards and Common Core State Standards. Links are available on the class homepage on Canvas).

Due 1/9: Assignment. Enter the assignment into the assignment section on Canvas. 250 words minimum.

Read "What is an effective teacher?" excerpt from "The first days of school" by Wong, H. and Wong, R. The text can be found in the first module (Week 1) on Canvas.

Reflect on this text. Did you have an "effective" teacher at some point in your school career? If you did, what made this teacher effective?

Week 2

- NGSS Susann Pinter
- Common Core TBD

Due 1/16: Reading Assignment

<u>Teach like a Champion 2nd edition:</u> Read chapter 4. You need to **read** this information to be able to create a meaningful lesson plan week 3 in class! Start thinking about a topic you want to create a lesson plan for. Become familiar with the NGSS or the Common Core. Links to both can be found on our Canvas home page.

The first days of school by Wong, H. and Wong, R. Read Chapter 10 and 14. The text is uploaded as a pdf in week 1 module to this week's module to Canvas.

Due 1/16, Reflection 1: 250 words minimum:

Select an ATLAS Video (Write the video title and video case # as the title of your reflection paper.)

Write a brief **description** of the lesson you watched first (include school, grade, lesson content). In a separate paragraph answer the prompt:

Write down your thoughts about the lesson you watched: was learning going on, was teaching going on, was the teacher in control of the classroom, did anything noteworthy happen?

Record your reflection on Canvas by Sunday 11:59 pm

Record your hours on the CalTeach website: https://calteach.ucop.edu

Week 3

- Differentiation: Does the one-size-fit-all classroom actually work?
 - Helping ALL students learn
 - How to tailor individual instruction to students
 - Create a differentiated assignment in class (upload to Canvas)
- **Discussion Board:** Lesson Plan Partnering: Find a partner to work with on your lesson plan assignment. Make an initial post with the numbered information below by Thursday 1/20 at 8pm, then reply to folks you're interested in working with no later than Sunday 1/23 at 11:59pm.
 - 1. What's your major?
 - 2. Which subject do you wish to teach: Math or Science? (Choose one)
 - 3. List at least 3 high school topics or concepts within the subject you chose. (You can be specific or general; the purpose is to help you all find a partner with overlapping teaching interests)

Due 1/23: Assignment. Enter the assignment into the assignment section on Canvas. **250 words minimum**. Teach like a Champion 2nd edition: Read chapter 2. Download "Understanding differentiated instruction" from Canvas. Writing prompt: **What is meant by "culture of error"? Do you think this is a useful concept? How can differentiated instruction help?** Be sure to answer the complete prompt.

Due 1/23 Reflection 2: 250 words minimum:

Internship: Reflect on how your mentor teacher potentially uses differentiated instruction in the classroom. Write a brief **description** of the lesson you chose to reflect on (include school, grade, lesson content). In a separate paragraph answer the prompt:

Did you observe and/or identify differentiated instruction? If you did not identify any differentiated instruction, how would you differentiate in order to help students in need?

If you are not going to your internship yet, choose an ATLAS video instead.

Record your reflection on Canvas by Sunday 11:59 pm.

Record your hours on the CalTeach website: https://calteach.ucop.edu

Week 4

- Developing a positive classroom environment (Classroom Management)
 - o Behavioral expectations and accountability
- Lesson planning starts in class today (first draft due Week 6 (lesson plan peer reviews). Print 2 copies and bring to class on 2/9. Final draft due Week 9, 3/2 in class)
 - Together with your partner, develop a lesson plan on a science or math topic of your choice. Choose the grade level you want to develop a lesson plan for, any grade level 9 -12 is appropriate. Use the New Science Generation Standards or the Common Core State Standards as your guide. (Links to the standards are on the homepage on Canvas).
 - O Download the appropriate lesson plan template from Canvas: science students download the **NGSS** template and math student download the **Common Core** template. Use these templates to complete your lesson plan.
 - O As part of your lesson plan, create and write a "lesson hook" to engage students at the beginning of a lesson you would like to teach. A lesson hook is a 2 to 3 minutes introduction to a topic that engages students at the beginning of a lesson and sets up your lesson for success. In other words, it is an introduction or opening into a lesson that grabs the students' attention. A lesson hook is an opportunity to inject energy into a new learning journey and to create an eagerness to find out more.

Due 1/30, Reflection 3: Create a classroom management plan and answer the following questions: How would you handle your worst classroom nightmare?

Read Chapter 15 and 17 of from "The first days of school" by Wong, H. and Wong, R. The text is uploaded as a pdf in the week 3 module on Canvas.

You are allowed to use your mentor teacher's classroom management strategies to create this plan, if you want to. A guide on how to create the plan is uploaded to Canvas. Upload your document to Canvas.

Record your reflection on Canvas by Sunday 11:59 pm

Record your hours on the CalTeach website: https://calteach.ucop.edu

Week 5

- Teaching Strategies and Methodologies
- Pros and cons of various teaching styles

Due 2/6: Reflection 4: 250 words minimum:

Internship: Describe your mentor teacher's style of teaching. Write a brief **description** of the lesson you chose to reflect on (include school, grade, lesson content). In a **separate** paragraph answer the prompt:

Is the instruction student centered, teacher centered or a hybrid? Does the selected teaching style and topic work for the teacher's instructional style? Is learning going on in the classroom?

Record your reflection on Canvas by Sunday 11:59 pm.

Record your hours on the CalTeach website: https://calteach.ucop.edu

Week 6

- Engaging the learner:
- Questioning techniques (discussion: cold call versus wait time and other techniques)
- Teaching ELL Students
- Lesson plan peer reviews. Peer reviews are done in class. Bring 2 copies of your lesson plan!!!! Everyone must review 2 (TWO) lesson plans.

Due 2/13: Assignment. Enter the assignment into the assignment section on Canvas. **250 words minimum**. Teach like a Champion 2nd edition: Read chapter 7

Writing prompt: Compare and contrast the technique of "cold call" and "wait time". Do you prefer one or the other? What are the benefits and draw backs of both these techniques?

Due 2/13: Reflection 5: 250 words minimum:

Select ATLAS Video Case #190 (ALWAYS write the video title and video case # into the title! Even now!)

Video **Case #190 is about** ELL (English Language Learners) students. Write a brief **description** of the lesson you watched first (include school, grade, lesson content). In a separate paragraph answer the prompts:

- a. How does the teacher in the video support ELL students?
- b. Does your mentor teacher have ELL students in the classroom, and if so, what accommodations are made to help these students learn?

Record your reflection on Canvas by Sunday 11:55 pm.

Record your hours on the CalTeach website: https://calteach.ucop.edu

Week 7

- Technology
- PhET interactive simulations (https://phet.colorado.edu)
 - o **Discussion** board on Canvas: Which PhET did you like best and why? Enter your choice on the discussion board by Thursday 1/17 and reply to at least one peer by Sunday 2/20.

Due 2/20, Reflection 6: 250 words minimum:

Internship: Read the article "Technology in the Classroom" (uploaded on this week's Canvas module). Write a brief **description** of the lesson you chose to reflect on (include school, grade, lesson content). In a separate paragraph answer the prompt:

Did you see any technology used in your mentor teacher's classroom that is used in the article? Is other technology used and if so, is it used in a meaningful way?

Record your reflection on Canvas by Sunday 11:59 pm

Record your hours on the CalTeach website: https://calteach.ucop.edu

Week 8

• So, you want to teach: Credentialing Program Information

Due 2/27, Reflection 7: 250 words minimum:

Internship: Write a brief **description** of the lesson you chose to reflect on (include school, grade, lesson content). In a separate paragraph answer the prompt:

Pay close attention to what students are doing during this lesson. Analyze the lesson. Are students engaged? Do some seem to "tune out? Would you improve the lesson and if so, how would you improve the lesson?

Record your reflection on Canvas by Sunday 11:59 pm.

Record your hours on the CalTeach website: https://calteach.ucop.edu

Week 9

- Number Talk and other Mathematics Learning Strategies
- Create a poster in class to present in session 10

Due 3/2: LESSON PLANS in class!, 8:00 am.

Due 3/6, Reflection 8: 250 words minimum:

Select an ATLAS Video (ALWAYS write the video title and video case # into the title of your reflection paper.)

Write a brief **description** of the lesson you watched (include school, grade, lesson content). In a separate paragraph answer the prompt:

Write down what you thought of the lesson you watched. Did you like the way the teacher taught? Why did you like it? If you didn't like it, explain why? Was the lesson perfect or can you suggest improvements?

Record your reflection on Canvas by Sunday 11:59 pm.

Record your hours on the CalTeach website: https://calteach.ucop.edu

Week 10.

- Poster presentation
- Wrap-up

Due 3/13, Reflection 9: 250 words minimum:

By now you have watched many several ATLAS videos, and watched your mentor teacher teach. Answer the following prompt:

What characteristics of the teachers at work would you emulate? What would you not emulate and why?

Record your reflections on Canvas by Sunday 11:59 pm.

Record your hours on the CalTeach website: https://calteach.ucop.edu

Final Paper

The Final Paper prompt will be posted Wednesday 3/9/22 on Canvas. Due Wednesday 3/16/22 on Canvas, 8:00 AM

1. READINGS

Readings are selected from the following books:

- Common Core State Standards, CA Department of Education; access through Canvas
- New Generation Science Standards; access though Canvas
- · Selected chapters from "The first days of school" by Wong, H. and Wong, R. Available as PDFs on Canvas
- Teach like a Champion, Doug Lemov, 2nd edition.
 - o Chapters are posted on Canvas
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 - o Teach like a Champion is also available in digital format and will be provided as e-book.
 - To access the e-book available for your courses, click on the BOOKSHELF option in the Canvas navigation menu.
 - Equal Access: you have Auto-Access for any required textbook but can opt out in the Bookshelf window if you make other arrangements for the text.
 - The access charge will be billed for any items showing a status of "Opted In" after the 14th day of instruction.
 - For questions regarding content access, billing, please contact the student support desk at inclusiveaccess@ucdavis.edu.
- For questions regarding functionality of the Bookshelf e-reader, please contact the Vital Source support desk at support@vitalsource.com.

GRADING

40 % Nine reflection papers, minimum 250 words unless stated otherwise (always due each Sunday at 11:59 pm on Canvas, starting week 1):

Grading Rubric:

- 10 pts. on time + exceptionally well done + exceptional professional writing + description of the lesson and reflection are submitted as required (if applicable) + writing prompt is observed.
- 9 pts. Writing prompt mainly met but not outstanding
- 8 pts. Writing prompt mostly met, satisfactory
- 7 pts. 1-2 days late and/or description and reflection not in separate paragraphs, and/or writing prompt not observed
- 6 pts. badly done or under the required 250-word.
- 5 pts. over 4 days late
- **0 pts.** Not turned in

20 % Assignments include:

- What is an effective teacher?
- Assignments associated with "Teach Like a Champion"
- Differentiated assignment
- Lesson plan
- Virtual poster and presentation, week 10

30 % Intern participation includes:

• 30 internship hours verified by your mentor teacher on the Internship hour verification sheet and uploaded to Canvas as a PDF file 3/18/22, 8:00 am

- ATLAS video hours if you need to make up missing internship hours. Atlas videos count towards 30 hours of internship, if necessary, ATLAS video verification sheet uploaded to Canvas as PDF file 3/18/22, 8:00 am.
- Mentor teacher evaluation, uploaded to Canvas as PDF file 3/18/22, 8:00 am.

10% Final paper, due Wednesday 3/16/22, 8:00 am.

Attendance Policy

Attendance is required, one absence is excused, no questions asked. More than one absence will result in a final grade reduction of 5 % for every additional absence. If there are extenuating circumstances why you must be absent more than once (e.g., quarantining or testing positive for COVID-19, caring for sick family member), let me know IMMEDIATELY so you can make appropriate arrangements.

Late work:

A 10% grade reduction is given for each day that an assignment is late.

Writing Assignment Grading Criteria (reflections, final exam):

- Relevance. Did you address the specific requirements of this assignment? For example, did you address the topic? Sometimes an assignment will offer a choice of topics, and it is up to you to choose, and to be clear about the chosen topic(s).
- Clarity. Is your writing clear? In order to be clear, it needs to be correct. Your readers should not have to stumble through typos and other errors, or puzzle over your wording.
- **Examples**. Did you illustrate your points with examples? Examples may be from your own experience, or from research, reading, etc.
- Linking topics and examples. Is it clear how your examples illustrate your topics?
- **Engagement**. Did you write in such a way as to engage your readers? For example, after reading your introduction, would I want to read on?
- Introduction: your first paragraph is particularly important. To refer back to some of the above criteria, a good introduction makes your topic clear to your readers and engages them sufficiently that they are happy to read on
- Citations and references (if applicable). If part of the assignment, you should provide citations and references for sources other than assigned course material and your own experience. If, for example, you use a current issue as an example, you should cite your sources, and provide a reference for each source. I don't mind which of the many available formats you use for citations and references, as long as you are consistent.
- Length. Please observe the guidelines for length, it is usually a word count.
- **Format**. Do not double-space and do not resort to extreme point sizes, margins, etc. The default format for Word documents is fine unless specified otherwise.

1. JUSTIFICATION FOR UNIT(S) OF CREDIT

3.

This course will meet for 2 hours of lecture/discussion each week via Zoom. During lecture/discussion sessions, basic concepts of teaching a math and science class will be introduced, and the CA State Standards for math and the NGSS for science will be examined. In addition, you will be spending about 3 hours per week examining recorded classroom videos by **National Board-Certified Teachers** and reflecting on their lessons.

ADDITIONAL INFORMATION FOR STUDENTS:

- 2. The U.S. Department of Education determined that UC Davis needed to institute measures for validating that students participate in their registered classes. To comply with this mandate, in September 2019 the campus will require students to verify that they have begun each course for which they are registered via the Academic Participation program. This program also encourages students to acknowledge their responsibilities regarding academic integrity and the Code of Academic Conduct, reinforcing our campus culture of honesty. participate.ucdavis.edu
- My lectures and course materials, including PowerPoint presentations, tests, outlines, and similar materials, are protected by U.S. copyright law and by University policy. I am the exclusive owner of the copyright in those materials I create. You may take notes and make copies of course materials for your own use. You may also share those materials with another student

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