CRSN 15A
STEM Essentials – Summer 2022

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Objectives

The goal of this course is to introduce tips and techniques that will supplement and expand your existing repertoire of science/math academic skills. The material covered here will complement your other science and math classes, helping to maximize your performance in those courses and, more importantly, aid in your development as a confident learner and future expert in your subject.

You will learn the science behind how the brain learns and how you can design your study habits to take advantage of that. You will also develop and practice effective strategies for solving science and math problems. All of this will be embedded within a focus on metacognition, a fancy word that essentially describes how you actively monitor the progress of learning. It involves steps like planning your study approach, monitoring the effectiveness during the process, reflecting on and evaluating the success of the strategies that were used.

Becoming an expert in your chosen subject area takes experience and practice, which won't end at the conclusion of this course or even when you graduate. This course will boost your learning skills, helping you get the most out of your college education and laying the groundwork for success as a life-long learner.

Expectations

We aim to keep the workload as light as possible, while still providing sufficient depth to maximize your skill development. Each week there are short video lectures, some weeks include online discussions, individual homework assignments, group activities and short quizzes. All we ask is that you be engaged in the material and put in a sincere effort during your participation in class and thoughtfully and carefully complete all homework assignments. The time spent on all class activities should average ~ 12-hours per week but may be more or less in some weeks depending on the topic. This is based on the required time investment to get an A in a 2-unit class – for a 10-week normal quarter course this would be 6 hours, but a 5-week summer session is double the pace – so 12 hours of work will sometimes be needed (including lectures and all assignments).

Grading

Grades will be primarily based on group activities and homework assignments. Discussion participation will account for 10% of grade, homework assignment completion 40%, group activity completion 40% and participation in group activities (anonymously evaluated by peers) 10%. There will **not** be a final exam or any midterm exams. Late assignments will be deducted 10% per day late unless you have permission from instructor.

Learning Outcomes

By successfully completing this course students will be able to:

1) Understand the concept of distributed practice and exhibit how to schedule their study time to maximize distributed learning in their studying

2) Know what learning resources are available for use in their STEM classes. These may include learning support services such as group and individual tutoring, writing resources, academic advisors and career centers

3) Demonstrate an understanding of study techniques that research has demonstrated to be most effective, and those that are time consuming and less effective

4) Effectively and regularly evaluate their learning strategies and make revisions as needed

Course materials:

Microsoft Office – can be downloaded free on the UCSC website https://its.ucsc.edu/software/office365.html
No textbook required.

Dropping Courses in Summer Session
- YOU must officially drop your course by the <u>deadline</u> to avoid receiving an F or NP (No Pass) and being responsible for tuition and fees.
- There are no automatic drops over summer
  - Even if you never attend class - you need to drop yourself
  - Even if you don't pay - you need to drop yourself
  - If you are eligible for UC Financial Aid but decline it, you must still DROP your classes to avoid paying for them.
- Instructors do not drop students in summer. There is no "Administrative Drop by Instructor" in summer; the deadline is firm.
- The Summer Session Staff cannot drop you from your classes either.
- You must drop them using your Student Portal (my.ucsc.edu).

Failure to drop your course will result in billing you full tuition and fees.
- If you drop a course, a <u>refund</u> can be given based on the date on which the course is dropped, if you meet the deadlines.
- There is no "Add by Petition" in summer. You must enroll by the deadline below.
- There is no "Administrative Drop" in the summer. You must drop yourself by the deadline below.

Session 1
June 20 - July 22, 2022
Add - Thursday, June 23
Drop - Monday, June 27 (tuition reversed)
No classes are held in observance of Juneteenth June 20 & Independence Day July 4
Financial Aid Disbursement - Monday, June 13 (if enrolled by <u>June 1 priority deadline</u>)
Request "W" Grade - Sunday, July 10 (no tuition reversal)

Session 2
July 25 - August 26, 2022
Add - Thursday, July 28
Drop - Monday, August 1 (tuition reversed)
Financial Aid Disbursement - Monday, July 18 (if enrolled by <u>June 1 priority deadline</u>)
Request "W" Grade - Friday, August 14 (no tuition reversal)

Schedule and Activities

Week	Topic and activities
Week 1	***Topic***: Thriving in STEM In this class you will learn about metacognition as a foundation for all of the concepts that will be discussed in this class. ***Group activity:*** no group activity this week **Readings**: 1) *Multitasking*; 2) *Optimizing Learning in College*; 3) *Study Times Research* – all available on Canvas ***Topic***: time management and utilizing available learning resources In this class you will learn about effective time management skills, resources available on your campus and create a plan.
Week 2	***Topic:*** evidence-based study techniques and mindset In this class you will learn effective ways of learning and retaining material for your STEM classes. **Readings**: 1) Carol Dweck *Mindset the new psychology of success* chapters 1 & 2; and 2) *Fear of Failure: Friend or Foe,* both available on Canvas ***Group activity***: no group activity this week
Week 3	***Topic:*** test taking and academic integrity In this class you will learn skills to become a confident, methodical and strategic test taker. You will also learn how to avoid accidentally committing plagiarism in scientific writing. ***Group activity***: As a group evaluate three examples of plagiarism and report on how you determined what happened and how it could have been avoided. **Readings*:* 1) *Mastering test taking* – on Canvas
Week 4	***Topic:*** source evaluation In this class you will learn useful skills to navigate the primary scientific literature and evaluate news media sources for credibility. ***Group activity***: work with your group to analyze and determine the credibility of 3 news articles. **Reading**: no reading this week
Week 5	Pre-viewing: Discipline and keeping to goals (https://www.youtube.com/watch?v=PPQhj6ktYSo) ***Topic:*** long term goal setting and sustainable strategies for achievement In this class we will review the concepts learned in this class and establish realistic but challenging short-term and long-term goals. ***Group activity***: discuss the top 5 approaches that you might take to stick to your long-term goals. As a group, create a long-term goals action plan that applies to STEM students. **Reading**: no reading this week

DRC Accommodations:

The Disability Resources Center reduces barriers to inclusion and full participation for students with disabilities by providing support to individually determine reasonable academic accommodations. If you have questions or concerns about exam accommodations or any other disability-related matter, please contact the DRC office, located in Hahn 125 or at 831-459-2089 or drc@ucsc.edu. Non UCSC students are encouraged to contact their home campus disability resource center for more information.

CARE
UCSC offers the CARE program to provide support, advocacy, resources and violence prevention education to the UC Santa Cruz community. We respond to the needs of students, staff, faculty and non-affiliates impacted by stalking, dating/domestic violence and sexual assault by providing free and confidential services. For more information: https://care.ucsc.edu/who-we-are/about-care.html Non UCSC students are encouraged to contact their home campus resource center to find out more about services on their campus.

Academic Dishonesty

Academic integrity is the cornerstone of a university education. Academic dishonesty diminishes the university as an institution and all members of the university community. It tarnishes the value of a UCSC degree.
All members of the UCSC community have an explicit responsibility to foster an environment of trust, honesty, fairness, respect, and responsibility. All members of the university community are expected to present as their original work only

that which is truly their own. All members of the community are expected to report observed instances of cheating, plagiarism, and other forms of academic dishonesty in order to ensure that the integrity of scholarship is valued and preserved at UCSC.

In the event a student is found in violation of the UCSC Academic Integrity policy, he or she may face both academic sanctions imposed by the instructor of record and disciplinary sanctions imposed either by the provost of his or her college or the Academic Tribunal convened to hear the case. Violations of the Academic Integrity policy can result in dismissal from the university and a permanent notation on a student's transcript.

For the full policy and disciplinary procedures on academic dishonesty, students and instructors should refer to the Academic Integrity page at the Division of Undergraduate Education.

For information on correct citations please follow APA guidelines in this class. More information can be found at: http://guides.libraries.psu.edu/apaquickguide/articles

Title IX

The university cherishes the free and open exchange of ideas and enlargement of knowledge. To maintain this freedom and openness requires objectivity, mutual trust, and confidence; it requires the absence of coercion, intimidation, or exploitation. The principal responsibility for maintaining these conditions must rest upon those members of the university community who exercise most authority and leadership: faculty, managers, and supervisors.

The university has therefore instituted a number of measures designed to protect its community from sex discrimination, sexual harassment, sexual violence, and other related prohibited conduct. Information about the Title IX Office, the online reporting link, applicable campus resources, reporting responsibilities, the UC Policy on Sexual Violence and Sexual Harassment and the UC Santa Cruz Procedures for Reporting and Responding to Reports of Sexual Violence and Sexual Harassment can be found at titleix.ucsc.edu.

The Title IX/Sexual Harassment Office is located at 105 Kerr Hall. In addition to the online reporting option, you can contact the Title IX Office by calling 831-459-2462.

Principles of Community

The University of California, Santa Cruz expressly prohibits students from engaging in conduct constituting unlawful discrimination, harassment or bias (see more here). I am committed to providing an atmosphere for learning that respects diversity and supports inclusivity. We need to work together to build this community of learning. I ask all members of this class to:

- be open to and interested in the views of others
- consider the possibility that your views may change over the course of the term
- be aware that this course asks you to reconsider some "common sense" notions you may hold
- honor the unique life experiences of your colleagues
- appreciate the opportunity that we have to learn from each other
- listen to each other's opinions and communicate in a respectful manner
- keep confidential discussions that the community has of a personal (or professional) nature
- ground your comments in the texts we are studying. Refer frequently to the texts and make them the focus of your questions, comments, and arguments. This is the single most effective way to ensure respectful discussion and to create a space where we are all learning together.

UCSC Land Acknowledgement

The land on which we gather is the unceded territory of the Awaswas-speaking Uypi Tribe. The Amah Mutsun Tribal Band, comprised of the descendants of indigenous people taken to missions Santa Cruz and San Juan Bautista during Spanish colonization of the Central Coast, is today working hard to restore traditional stewardship practices on these lands and heal from historical trauma.