

Chemistry 695: Graduate Education in Chemistry and Biochemistry

Location: GMCS 217

Instructors:

Theresa Carlson

GMCS 213B

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Prof. Christal Sohl

Lab: CSL 326

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Course Catalog Description:

Skills and knowledge needed for success in chemistry graduate program to include techniques for successful teaching, key safety protocols, ethical issues in teaching and research, department research programs, effective means of finding and communicating chemical information.

Scope and Purpose:

This class is designed for new graduate students and will cover teaching strategies, lab safety, ethics in science, searching for chemical information, useful software, and tips for presenting and manuscript writing. It will also include presentations of SDSU Chemistry faculty on their research.

Office Hours: e-mail Theresa or Christal for an appointment

Course Information: Available on Blackboard

Grading:

Class and seminar attendance, participation	100 Points
Make a CV (Due 9/25)	100 Points
TA/Lab skills	100 Points
NSF proposal (Due 12/1)	200 Points
<i>Total</i>	<i>500 Points</i>

Grading Scale:

320-350 = A
300-320 = A-
280-300 = B+
260-280 = B
240-260 = B-
230-250 = C+
200-230 = C
100-200 = D
0-100 = F

Students with Disabilities:

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact Student Disability Services (SDS) at (619) 594-6473. To avoid any delay in the receipt of your accommodations, contact SDS as soon as possible. Please note that accommodations are not retroactive, and that accommodations cannot be provided until you have presented your instructor with an accommodation letter from SDS. Your cooperation is appreciated.

Lecture	Date/Time	Topic(s)	Location
1	8/22 2-4 pm	Panel discussion, TA exercises (Carlson)	GMCS 217
2	8/23 9 am -12 pm	TA exercises (Carlson)	GMCS 217
3	8/24 2-4 pm	TA exercises (Carlson)	GMCS 217
4	8/28 3 – 5 pm	Group Selection; Presentations	GMCS 217
5	8/30 3 – 5 pm	Lydia Wood (UAW rep); Lab Record Keeping; Writing papers	GMCS 217
6	9/4	<i>Labor Day, no classes!</i>	
7	9/6 3 – 5 pm	Writing grant proposals; Making a CV	GMCS 217
8	9/11 3 – 5 pm	Ethics	GMCS 217
9	9/13 3 – 5 pm	Research presentations by faculty	GMCS 217
10	9/18 3 – 5 pm	Research presentations by faculty	GMCS 217
11	9/20 3 – 5 pm	Research presentations by faculty	GMCS 217
12	9/25 3 – 5 pm	Research presentations by faculty	GMCS 217
CV due 9/25			
13	9/27 3 – 5 pm	Research presentations by faculty	GMCS 217
14	10/2 3 – 5 pm	Computer Resources (Pymol, Pubmed)	GMCS 217 Bring your laptop!
15	10/4 3 – 5 pm	Science Careers myIDP; Networking in San Diego	GMCS 217 Bring your laptop!

Lecture	Date/Time	Topic(s)	Location
16	10/9 3 – 5 pm	Student Presentations	GMCS 217
Faculty Interview Sheet due to Chem office 10/9			
17	10/11 3 – 5 pm	Student Presentations	GMCS 217
18	10/16 3 – 5 pm	Student Presentations	GMCS 217
19	10/18 3-5 pm	Student Presentations	GMCS 217
NSF proposals due 12/1			

Student Outcomes

Upon completion of this course students will be able to:

- 1) Teach undergraduates successfully in laboratories.
- 2) Perform safely in a laboratory both as a student and as a researcher.
- 3) Evaluate ethical situations associated with research and know the appropriate steps to take in order to maintain high ethical standards.
- 4) Be knowledgeable of the diversity of research within the department in order to make an appropriate choice of research for their graduate study.
- 5) Search efficiently for the chemical information they will need for their course and research work.
- 6) Use popular chemistry software.

Textbook (required):

On Being a Scientist: A guide to responsible conduct in research 3rd edition. Available free online at: http://www.nap.edu/catalog.php?record_id=12192

Other resources:

http://en.wikipedia.org/wiki/Scientific_misconduct
<http://en.wikipedia.org/wiki/MSDS> (and references therein)
<http://tlt.psu.edu/plagiarism/student-tutorial/>
<http://www.sciencegeek.net/Chemistry/chemware/chemware.shtml>
<http://bionumbers.hms.harvard.edu/>
<https://pymol.org/edu/?q=educational/>
<https://www.ncbi.nlm.nih.gov/pubmed/>