

CHEM 695: Graduate Education in Chemistry (26256)

FALL 2022 COURSE INFORMATION

Course Sessions:

Fridays: 12 pm – 2 pm in GMCS 329

Materials on Canvas: <https://sdsu.instructure.com/courses/99769>

Instructors:

Dr. Regis Komperda (She/Hers/Her) Office Hours: by appointment (send email)

GMCS 203A

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Theresa Carlson (She/Hers/Her) Office Hours: by appointment (send email)

GMCS 213B

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Welcome to Chem 695! This course is designed to introduce new graduate students to the department and the variety of roles and responsibilities included therein. In this course we will develop academic skills as scientists, students, and mentors. This will include presentation skills, management and lab safety, research and mentorship ethics, providing feedback, scientific reading and writing, use of online resources, networking, and career planning. This course is designed to support YOU as a new graduate student, therefore we will work together to make this class useful for everyone. Our mission is to set you up for success and provide the community structure to support you long-term.

Students are provided with an SDSU Gmail account, and this [SDSU email address](#) will be used for all communications. Per University Senate policy, students are responsible for checking their official university email once per day during the academic term. For more information, please see [Student Official Email Address Use Policy here](#).

All communication regarding this course should occur through official SDSU email accounts. The course instructors will be available via email to answer questions or to schedule office hour appointments. Please allow 24-48 hours for a response, longer over weekends and holidays.

COURSE CATALOG DESCRIPTION

Skills and knowledge needed for success in chemistry graduate programs which 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.

STUDENT LEARNING OUTCOMES

Upon completion of this course students will be able to:

- LO1) Teach undergraduates successfully in laboratories.
- LO2) Perform safely in a laboratory both as a student and as a researcher.
- LO3) Evaluate ethical situations associated with research and know the appropriate steps to take in order to maintain high ethical standards.
- LO4) Be knowledgeable of the diversity of research within the department in order to make an appropriate choice of research for their graduate study.
- LO5) Search efficiently for the chemical information they will need for their course and research work.
- LO6) Use popular chemistry software.

COURSE MATERIALS

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

All other required readings will be made available through Canvas (<https://sdsu.instructure.com/>).

Class Resources/Links:

http://en.wikipedia.org/wiki/Scientific_misconduct
https://en.wikipedia.org/wiki/Safety_data_sheet (and references therein)
<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/>

LAND ACKNOWLEDGMENT

For millennia, the Kumeyaay people have been a part of this land. This land has nourished, healed, protected and embraced them for many generations in a relationship of balance and harmony. As members of the San Diego State University community, we acknowledge this legacy. We promote this balance and harmony. We find inspiration from this land, the land of the Kumeyaay.

ESSENTIAL STUDENT INFORMATION

For essential information about student academic success, please see the [SDSU Student Academic Success Handbook](#).

- SDSU provides disability-related accommodations via the Student Ability Success Center (sascinfo@sdsu.edu | sdsu.edu/sasc). Please allow 10-14 business days for this process.
- Class rosters are provided to the instructor with the student's legal name. Please let me know if you would prefer an alternate name and/or gender pronoun.

RESOURCES FOR STUDENTS (SEE FULL LIST ON CANVAS)

A complete list of all academic support services--including the [Writing Center](#) and [Math Learning Center](#)--is available on the Student Affairs' [Academic Success](#) website. [Counseling and Psychological Services](#) (619-594-5220) offers confidential counseling services by licensed therapists; you can Live Chat with a counselor at http://go.sdsu.edu/student_affairs/cps/therapist-consultation.aspx between 4:00pm and 10:00pm, or call San Diego Access and Crisis 24-hour Hotline at (888) 724-7240.

COURSE DESIGN

Equity, Inclusion, and Diversity:

In this course, we are committed to creating a safe space for people of all views and backgrounds. We may cover difficult topics in this course regarding social issues that you may encounter while teaching or at some other point in your teaching career. It is our intent to present materials and activities that are respectful of diversity: gender identity, sexual orientation, disability, age, socioeconomic status, ethnicity, race, culture, perspective, and other background characteristics. Suggestions about how to improve the value of diversity and inclusion in this course are encouraged and appreciated.

Community Building:

This is a course designed to build community among the graduate student cohort and beyond. The course instructors are committed to your success and we intend to support the formation of a community among your peers to expand that support. Formation of a graduate student community can be an integral part of your success and this course will lay the framework for such a community.

Assignments:

Class attendance and participation (14 classes x 15 pts)	210 points
Faculty interviews (5 x 30 pts) due by September 9	150 points
Student presentations + peer feedback	100 points
Reflections (submitted to Canvas)	90 points
Assignments (submitted to Canvas)	200 points
	Total 750 points

GRADING POLICIES

Grading Scale:

	A = $\geq 92.5\%$	A- = 89.5-92.4%
B+ = 87.5-89.4%	B = 82.5-87.4%	B- = 79.5-82.4%
C+ = 77.5-79.4%	C = 72.5-77.4%	C- = 69.5-72.4%
D+ = 67.5-69.4%	D = 62.5-67.4%	D- = 59.5-62.4%
	F < 59.4%	

SCHEDULE

Tentative Schedule (check [Canvas](#) for any updates): *Unless otherwise told by the instructor, all assignments are due in Canvas at 9am on the day of class.*

Class #	Date/Time	Topic(s)	Assignment(s) Due BEFORE Class	Learning Outcome
1	8/26 12 - 2 pm	<ul style="list-style-type: none"> Discuss first week of class Finding a research group 	<ul style="list-style-type: none"> Canvas introduction 	LO2, LO4
	8/27 9 am – 4pm	Department Research-palooza in GMCS 333		LO4
2	9/2 12 - 2 pm	<ul style="list-style-type: none"> Responsible Conduct of Research (RCR) Discuss ethics case studies 	<ul style="list-style-type: none"> Read case studies Reflection 	LO2, LO3, LO4
3	9/9 12 - 2 pm	<ul style="list-style-type: none"> Overview of campus resources 	<ul style="list-style-type: none"> Faculty interviews Research rotation ranking 	LO4
4	9/16 12 - 2 pm	<ul style="list-style-type: none"> Finding funding opportunities 	<ul style="list-style-type: none"> RCR Complete 	LO4
5	9/23 12 - 2 pm	<ul style="list-style-type: none"> Structuring resumes/CVs Writing personal statements 	<ul style="list-style-type: none"> Funding plan 	LO4
6	9/30 12 - 2 pm	<ul style="list-style-type: none"> Peer review of resumes/CVs and personal statements Giving presentations 	<ul style="list-style-type: none"> Resume/CV or personal statement 	LO4
7	10/7 12 - 2 pm	<ul style="list-style-type: none"> Deliver prepared presentation Provide feedback to peers 	<ul style="list-style-type: none"> Presentation outline 	LO1
8	10/14 12 - 2 pm	<ul style="list-style-type: none"> Deliver prepared presentation Provide feedback to peers 	<ul style="list-style-type: none"> Presentation revision 	LO1
9	10/21 12 - 2 pm	<ul style="list-style-type: none"> Check in with grad advisors Planning for rest of term 	<ul style="list-style-type: none"> Presentation revision Mid-semester reflection 	LO1
10	10/28 12 - 2 pm	<ul style="list-style-type: none"> Software, online and library resources 	<ul style="list-style-type: none"> Research group ranking 	LO5, LO6
11	11/4 12 - 2 pm	<ul style="list-style-type: none"> Issues related to equity, diversity, and inclusion 	<ul style="list-style-type: none"> Implicit bias test reflection 	LO1, LO3

Class #	Date/Time	Topic(s)	Assignment(s) Due BEFORE Class	Learning Outcome
	11/11	VETERAN'S DAY – NO CLASS		
12	11/18 12 - 2 pm	<ul style="list-style-type: none"> • Mentoring • Individual Development Plans • Networking and career planning 	<ul style="list-style-type: none"> • Reflection 	LO4
	11/25	THANKSGIVING BREAK – NO CLASS		
13	12/2 12 - 2 pm	<ul style="list-style-type: none"> • Academic literature • Professional writing 	<ul style="list-style-type: none"> • IDP/Mentor Map 	LO4
14	12/9 12 - 2 pm	<ul style="list-style-type: none"> • Peer review of writing • End of semester discussion 	<ul style="list-style-type: none"> • Writing assignment 	LO4

ROTATION & RESEARCH GROUP SELECTION TIMELINE

- **Aug 27:** Learn about faculty research in the department at Research-palooza
- **Aug 28 – Sept 9:** Interview five faculty about their research
- **Sept 9:** Submit research rotation ranking
- **Sept 16:** Rotation schedules sent to graduate students
- **Sept 19 – Sept 30:** Research Rotation 1
- **Oct 3 – Oct 14:** Research Rotation 2
- **Oct 16 – Oct 28:** Research Rotation 3
- **Oct 28:** Submit research group ranking
- **Week of Oct 31:** Graduate students notified of research group placement