

# **Welcome to Graduate School!**

**Craig Martens**  
**Vice Chair for Graduate Affairs**  
**Department of Chemistry**

The UCI logo is centered at the bottom of the slide. It consists of the letters "UCI" in a bold, blue, sans-serif font. The logo is set against a white, circular background with a scalloped or flower-like edge. The background of the entire slide is a photograph of a modern, multi-story university building with a curved facade and large glass windows, partially obscured by trees and a clear blue sky.

**UCI**

# Departmental Leadership

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Doug Tobias  
Chair



Jim Smith  
VC Undergrad Affairs



Rachel Martin  
VC Facilities



Amanda Holton  
VC Diversity, Equity, and Inclusion



Greg Weiss  
VC Safety



Craig Martens  
VC Grad Affairs

# Key Department Staff

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Cynthia Dennis  
Chief Administrative  
Officer



Stacie Tibbetts  
Operations Manager



Janet Del Campo  
Personnel Analyst



Haleema Sood  
Assistant  
Personnel Analyst



Tatum Power  
Undergraduate Program  
Coordinator

# Facilities Directors

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Joe Ziller  
Single-Crystal  
X-ray Diffraction



Phil Dennison  
NMR



Nate Crawford  
Modeling



Dmitry Fishman  
Laser Spectroscopy



Felix Grun  
Mass Spectrometry

# UCI Chemistry Graduate Program

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Craig Martens  
Vice Chair

## Vice Chair for Graduate Affairs

- Graduate admissions and recruiting
- Graduate student advising

☞ **ADVOCATE ON YOUR BEHALF IN THE DEPARTMENT AND ON CAMPUS**



Morgan Sibley  
Student Affairs Manager

**Outside of your research advisor, Garrett and Morgan will be the most important and helpful people during your time at UCI.**

**They make the graduate program run!**



Garrett Yoshitomi  
Graduate Affairs Coordinator

# Graduate Area Advisors

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Jennifer Prescher  
*Chemical Biology*



Sergey Pronin  
*Organic*



Andy Borovik  
*Inorganic*



Shane Ardo  
*ChAMP & Materials*



Eric Potma  
*Atmospheric & Analytical*



Eric Potma  
*Physical & Theoretical*

# Graduate Advising

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## The area advisors

- Prior to joining a research group, the area advisors will be your best source of information on course selection, especially for fall quarter
- After joining a research group, be sure to consult with your research advisor on which courses you should take during winter and spring quarters
- The area advisors will play key roles in later years when it comes to exam scheduling, committee assignments, Individual Development Plans (IDP), and conflict resolution.

# Typical PhD Timeline

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## Year 1

**Fall 2021**

**Winter 2022**

**Spring 2022**

**Summer 2022**

2-3 Courses

2-3 Courses

1-3 Courses

Research

Teaching

Teaching

Teaching

Research

Rotations

Rotations

Research

Research

Join research group

# Typical PhD Timeline

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<b>Years 2-3    Pre-Candidacy</b>	
<b>Fall 2022-Winter 2023</b>	<b>Spring 2023-Fall 2023</b>
Research (possible courses)	Research
Possible teaching	Possible teaching
First-Year Exam	Advancement to Candidacy Exam

<b>Years 3 and beyond    Post-Candidacy</b>			
Research			
Possible teaching			
Publications	Conferences	Career plans	Find your next job
Write and defend thesis			

# Academics

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**Much of your first year at UCI will be spent taking graduate classes**

- Must complete 7 regular graduate level courses
- Maintain a 3.1 GPA to remain TA eligible
- Earn a B or better in all courses
- Enroll in Chem 399 when you're a TA
- Serve as a TA for (at least) four quarters

**Register for 2-3 courses during Fall '21.**

**Enroll and attend Chem 200. (Doesn't count as one of 7 regular courses.)**

**Make sure you register for 12-16 units every academic quarter so that the campus recognizes you as a full-time student**

# Full-Time Course Registration for Fall 2021

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**2-3 main courses to support your research interests (8-12 units)**

**Chem 200: Conduct of Research (#41390; 2 units)**

**Chem 290: Seminar (1 unit)**

Inorganic (#41792)

Organic (#41790)

Physical (#41791)

**Chem 399: University Teaching (#41970; 1-4 units)**

**Chem 292: Graduate Symposium (#41950; 2 units; *organic students only*)**

# Sample Coursework Plans for Fall 2021

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<b>Analytical</b>	
<b>Units</b>	<b>Course</b>
2	Chem 200: Conduct of Research
4	Chem 213: Chem Kinetics
4	Chem 231A: Quantum Mech
1	Chem 290: Seminar
3	Chem 399: Univ Teaching
<b>14</b>	<b>Total Units</b>

<b>Atmospheric</b>	
<b>Units</b>	<b>Course</b>
2	Chem 200: Conduct of Research
4	Chem 213: Chem Kinetics
4	Chem 231A: Quantum Mech
4	Chem 245A: Gas-Phase Atm Chem
1	Chem 290: Seminar
1	Chem 399: Univ Teaching
<b>16</b>	<b>Total Units</b>

# Sample Coursework Plans for Fall 2021

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<b>Organic</b>	
<b>Units</b>	<b>Course</b>
2	Chem 200: Conduct of Research
4	Chem 201: Org Rxn Mech I
4	Chem 203: Organic Spec
4	Chem 216: Organometallic
1	Chem 290: Seminar
2	Chem 292 Grad Symposium
1	Chem 399: Univ Teaching
<b>18</b>	<b>Total Units</b>

<b>Chemical Biology</b>	
<b>Units</b>	<b>Course</b>
2	Chem 200: Conduct of Research
4	Chem 201: Org Rxn Mech I (or Chem 125, 215, 231A)
4	Chem 223: Organic Spec
1	Chem 290: Seminar
2	Chem 292 Grad Symposium
1	Chem 399: Univ Teaching
<b>14</b>	<b>Total Units</b>

# Sample Coursework Plans for Fall 2021

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<b>Inorganic</b>	
<b>Units</b>	<b>Course</b>
2	Chem 200: Conduct of Research
4	Chem 201: Org Rxn Mech I (or Chem 125, 231A, 233, and 248)
4	Chem 215: Inorg Chem
4	Chem 216: Organometallics
1	Chem 290: Seminar
1	Chem 399: Univ Teaching
<b>16</b>	<b>Total Units</b>

<b>Physical</b>	
<b>Units</b>	<b>Course</b>
2	Chem 200: Conduct of Research
4	Chem 213: Chem Kinetics
4	Chem 231A: Quantum Mech
1	Chem 290: Seminar
3	Chem 399: Univ Teaching
<b>14</b>	<b>Total Units</b>

# Sample Coursework Plans for Fall 2021

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<b>Materials</b>	
<b>Units</b>	<b>Course</b>
2	Chem 200: Conduct of Research
4	Chem 201: Org Rxn Mech I (or Chem 213)
4	Chem 215: Inorg Chem [SEP] (or Chem 230)
4	Chem 216: Organometallics (or Chem 231A)
1	Chem 290: Seminar
1	Chem 399: Univ Teaching
<b>16</b>	<b>Total Units</b>

<b>ChAMP</b>	
<b>Units</b>	<b>Course</b>
2	Chem 200: Conduct of Research
4	Chem 229: Comp Methods (or Chem 250, 254)
4	Chem 231A: Quantum Mech
4	Chem 233: Nuc. Radiochem, (or Chem 213, 248)
1	Chem 290: Seminar
1	Chem 399: Univ Teaching
<b>16</b>	<b>Total Units</b>

# Notes on Course Selection and Registration

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- Schedule a meeting with your area advisor (9/1 or 9/2)
- Fill out the pdf form listing your proposed classes before the meeting. Obtain your area advisor's electronic signature and email to signed form to Garrett Yoshitomi ([gyoshito@uci.edu](mailto:gyoshito@uci.edu))
- Course registration must go through the campus Registrar. Access WebREG at <https://www.reg.uci.edu/registrar/soc/webreg.html>
- If, for some reason, you end up with more than 16 units in a quarter, contact Garrett Yoshitomi ([gyoshito@uci.edu](mailto:gyoshito@uci.edu)) to ask for an exception.
- You may substitute graduate courses in other departments for those listed on the Course Schedule Sheet. (Talk to your area advisor).
- One upper-division undergraduate course may count towards the required seven courses (for example Chem 125; Talk to your area advisor).

# Choosing a research group

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**Your choice of research group will change your career path...and your life!**

- UCI Chemistry offers many choices: 47 research-active faculty in Chemistry plus 19 more with joint appointments.
- The Department requires 4 rotations in research groups prior to making a decision. But this is a minimum—meet as many faculty and gather as much information as possible!
- Keep an open mind. You may think you know what you are interested in, but explore options. Everything can be interesting!
- The area of chemistry, the research focus of the group, and the thesis topic are important, but so are personal resonance and “chemistry” with advisor and coworkers.
- Choosing a group is an important decision, but not an irreversible one.

# Chemistry Department Rotations

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## Required of all first year graduate students

- Four three-week rotations during Fall 2021 and Winter 2022
  1. Monday, Oct. 4th – Friday, Oct. 22nd
  2. Monday, Oct. 25th – Friday, Nov. 12th
  3. Monday, Nov. 15th – Friday, Dec. 10th
  4. Monday, Jan. 3rd – Friday, Jan. 21th
- Prior to the start of rotations, attend all faculty research talks presented during orientation.
- At the end of orientation you'll receive an e-mail with a link to a web form to provide your preferred labs for rotation. These choices are due by Wednesday, Sept. 29th.
- At the end of the fourth rotation you'll receive another request to provide us with your top choices for advisor. Group joining will happen around week 5 of winter quarter.
- Rotations may be in person, hybrid, or virtual—ask the PI.

# Research Group Selection Algorithm

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## During rotations you should...

- Spend time working at your desk in the group space
- Talk with grad students in the group about their science
- Get a feel for the group dynamic and how it operates
- Attend group meetings and/or subgroup meetings
- Read recent papers from the research group
- Talk to the PI about research projects, expectations, mentoring style, etc.

## Things to do *in addition to* rotations...

- Attend group meetings for other research groups that you may be interested in joining
- Talk with students in other research groups in similar research areas
- Introduce yourself to other faculty in your area of interest

# Joining a Research Group

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**Once we have your advisor selection forms, you will be assigned to a group**

- Most students will get their first choice
- Occasionally a few students get their second or third choice
- The Department chair, Prof. Doug Tobias, will send you a letter confirming your new research advisor
- As soon as you are in a group, start being one of the group

# Progress Towards Degree

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**It is important that you make timely progress through the Chemistry PhD program. The technical term for this is “progress towards degree”.**

**This progress is gauged by several checkpoints**

- Timely joining of a research group
- Coursework
- First (Second) year exams
- Advancement to Candidacy exam
- Annual progress reports, IDP, and meetings
- Thesis/Defense

# Conflict Resolution

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**Not every interpersonal interaction goes smoothly. Sometimes we find ourselves in a situation in which we cannot realize our full potential. The Area Advisors, the VC for Graduate Affairs and VC for DEI, the Department Chair (and beyond) can and will help. Graduate Affairs officers (Morgan Sibley and Garrett Yoshitomi) are also there to help!**

- If you find yourself in a conflict with another student, postdoc, etc. in your research lab, your research advisor is your first point of contact to help seek resolution
- If you feel that your research advisor is not helping the situation, or if you cannot enlist the help of your research advisor for the situation, seek assistance from your area advisor
- In cases where there is still a conflict of interest (i.e., your issue is with your research advisor who is also the area advisor), you should contact the Vice Chair for Graduate Affairs
- For serious issues, the Ombudsman is a source of confidential guidance.

# Changing Research Groups

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**Sometimes, due to conflicts or to changes in interest, you may want or need to change research groups**

- In general it is the responsibility of both the student and research advisor to maintain open and healthy lines of communication
- If attempts to resolve issues directly with the research advisor have failed, the student should contact their area advisor
- If the student and area advisor determine that a change of research group is the best option, the student will be encouraged to inform their current advisor of their intent to find a new advisor
- Attempts to find a new research advisor confidentially, without communicating with the current one, create awkward situations for both faculty and student and are therefore discouraged

# Professionalism

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**The Chemistry Department expects professional behavior from all members of the community. You must be professional with people at all levels (undergraduates, other graduate students, staff, faculty, etc.) and you should expect the same in return.**

- Common sense, combined with kindness and respect, go a long way.
- Teaching is both a privilege and a responsibility. Excellence in your teaching duties should be a high priority.
- The Chemistry Department has no tolerance for threats, bullying, harassment, or misuse of power.
- Be professional at all times, when teaching, when in the lab, or when interacting with your peers on or off campus.

# Honesty

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**Honesty and integrity are the foundations of scientific research (and life)**

**A scientist is:**

**Someone who observes Nature carefully and with an open mind and describes clearly and honestly what they see.**

- *We should* always tell the truth, even when it might be painful
- This applies rigorously in your laboratory notebook, and also in your professional interactions inside and outside of the Department.
- The Department will hold you strictly to this expectation

# The Ethical Conduct of Research

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**Adapted from Chem 200**

## **Acknowledgments**

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# Plagiarism

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- Plagiarism is passing off someone else's work as your own.
- In recent times, competition and stress in all levels of academia have increased, and on an international scale. This is correlated with an increase in plagiarism. It is now common from an early age.
- This explanation is NOT AN EXCUSE for plagiarism. It is unethical, unacceptable, easily detectable, and has serious consequences.
- It can be avoided by the scholarly mechanism of attribution.

## From NIH

“The theft or misappropriation of intellectual property and the substantial unattributed textual copying of another's work.”

## From NSF

“The appropriation of another person's ideas, processes, results or words without giving appropriate credit.”

# Avoiding Plagiarism

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## Cite all of your sources

- Failure to reference your paper correctly, even if you do list all the sources, can be considered plagiarism
- You must cite everything you used; if you paraphrase a point then this must be acknowledged
- If you use an idea suggested in another document, but in a way that you don't think comprises a paraphrase, you still must cite it

## Do not cut-and-paste – EVER

- The cultural norm of borrowing ideas, photos, etc. and sharing them more broadly (think Facebook or Twitter) does not apply to academia
- Just because you find something on the internet, you do not have the right to reuse it and present it as your own

# More Information on Academic Integrity

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**The ethical conduct of research, plagiarism, and academic integrity will be covered thoroughly in Chem 200.**

**For more information see**

[http://www.chem.uci.edu/undergrad/2010 PS Handbook#cheat](http://www.chem.uci.edu/undergrad/2010_PS_Handbook#cheat)

# Excellence

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- Academic life is centered on the pursuit of excellence
- The faculty of this Department are reviewed regularly, with high standards of excellence in research, teaching, and service
- In turn, we expect that pursuit of excellence from our graduate students
- Excellence vs. “progress towards degree”
- When pursuing excellence, “good enough” is not good enough!
- Your advisor and committee will have opinions about this...
- ...but ultimately YOU must be the judge for yourself, and set your own standard

# Safety

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**Laboratory research can be dangerous! Constant attention must be paid to developing, practicing, and maintaining safe practices in the lab.**

- Be proactive when it comes to safe laboratory practices
- If you have a question about the safety of a reagent, a procedure, or a piece of equipment, ASK SOMEONE!
- Know and use your personal protective gear (PPE)
- Safe practices applies to both the research and teaching labs
- Get involved with the Graduate Safety Team
- COVID-19 procedures are still in place, and evolving.

# Involvement in Outreach

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## Laboratory Experiments and Activities in the Physical Sciences (LEAPS)

- Offers students from nearby middle schools a “Day at College” experience to increase their awareness and understanding of chemistry and physics
- Contact Dr. Helen Chen, SoPS Director Research Development (chenhc@uci.edu)

## Iota Sigma Pi

- IOTA SIGMA PI is a national honor society for women in chemistry
- For more info see <http://clubs.uci.edu/iotasigmapi/>

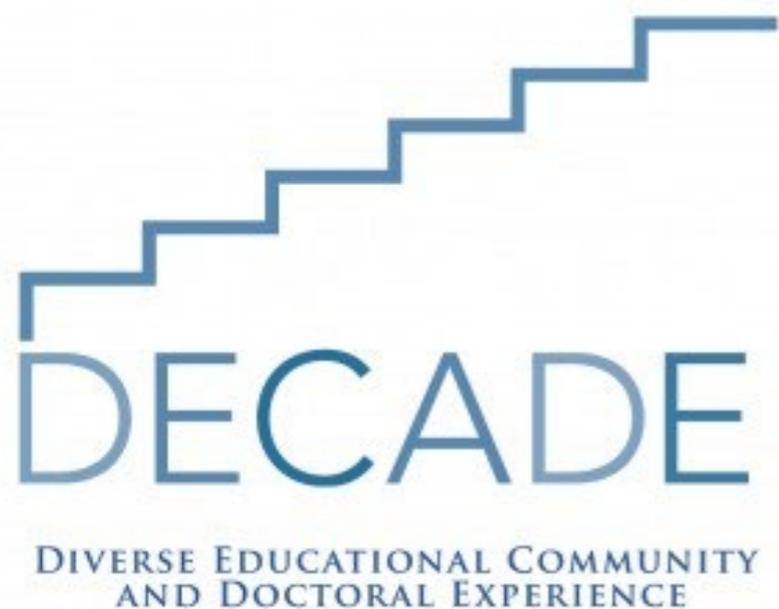
## ChemUnity

- Peer mentorship program that pairs incoming first-years with current students
- For more info see <https://sites.uci.edu/gradmentoring/>

## Chemistry Outreach Program

- In the UCI Chemistry Outreach Program, teams of graduate and undergraduate students visit local K-12 schools to perform demonstrations and talk about chemistry
- For more info see [http://www.chem.uci.edu/~jsnowick/outreach/UCI\\_Outreach/index.html](http://www.chem.uci.edu/~jsnowick/outreach/UCI_Outreach/index.html)

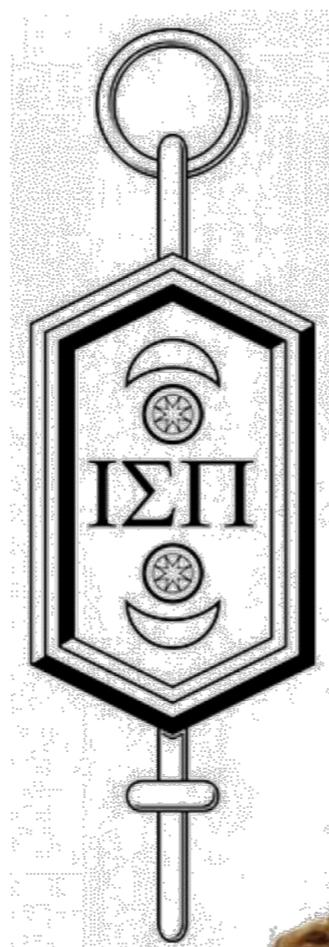
# An inclusive climate for graduate studies



*Social events, invited speakers, career development, outreach, journal clubs, etc.*



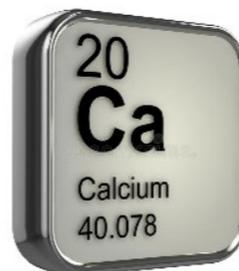
For more info, visit:  
[grad.uci.edu/about-us/diversity/decade/](http://grad.uci.edu/about-us/diversity/decade/)



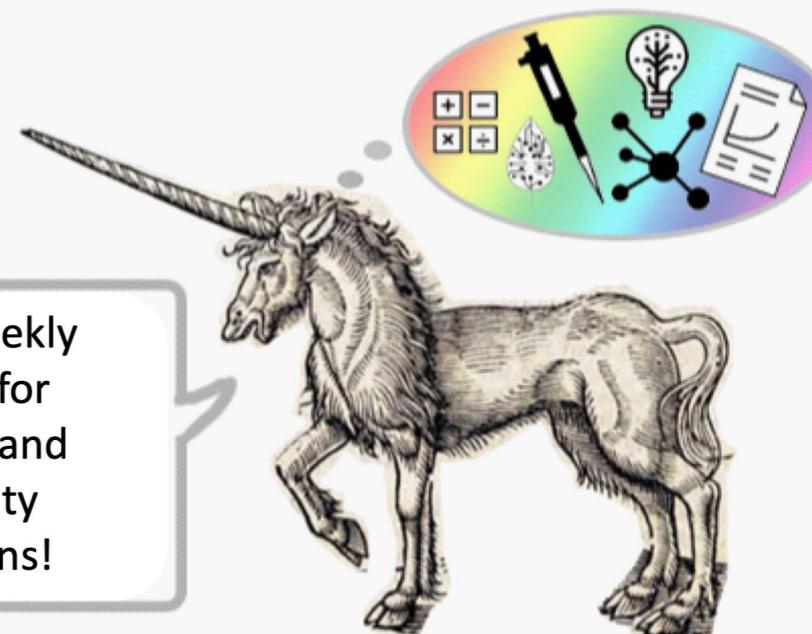
For more info, email:  
[iotasigmapi@uci.edu](mailto:iotasigmapi@uci.edu); or  
[clubs.uci.edu/iotasigmapi/](http://clubs.uci.edu/iotasigmapi/)

**Q T**  
Queer/Trans

**S T E M**  
science · tech · engineering · math



Join our weekly meetings for discussion and community connections!



For more info, email: [qt-stem@uci.edu](mailto:qt-stem@uci.edu); or  
FB: QT STEM @ UCI

