



Graduate School Demystified

Ken Hanson

FSU Department of Chemistry & Biochemistry

Graduate School Demystified: Outline

- 1) Application timeline
- 2) Deciding where to apply
- 3) The application/admission process
- 4) Graduate school timeline
- 5) Graduate school summary
- 6) After your Ph.D.

Applying for Graduate School in Chemistry

Dec 1-15: Application Deadlines

- Transcript
- CV/Resume
- 3 letters of rec
- Cover letter
- GRE (some schools)

Late Dec-Feb: Admissions

Feb and Mar: Visitation Weekends

April 15th: Decision Deadline

Early August: Start Date

Where to Apply?

- Location
- Salary
- Department
- Resources
- Research

Where to Apply?

- Location
 - Weather
 - Proximity to home
 - Hobbies
 - Life experience

(Note that grad school is temporary!)

Where to Apply?

- Salary

Base Pay: \$19,000-\$40,000

Average: \$26,500 (C&EN 2022)

FSU: \$30,073

Other factors:

Tuition, fees, health insurance, guaranteed support

Cost of living (<https://www.nerdwallet.com/cost-of-living-calculator>)

Current city®	New city	Pre-tax household income
Tallahassee, FL	San Francisco, CA	\$30,073

To maintain your standard of living in San Francisco, CA, you'll need a household income of:

\$55,107

The cost of living is 83% higher in San Francisco, CA

Where to Apply?

- Department Size

	All Schools	Small Programs (0-40 students)	Medium Programs (41-105 students)	Large Programs (106+ students)
Avg. # of faculty	23	15	20	33
Avg. # of students	96	25	70	183

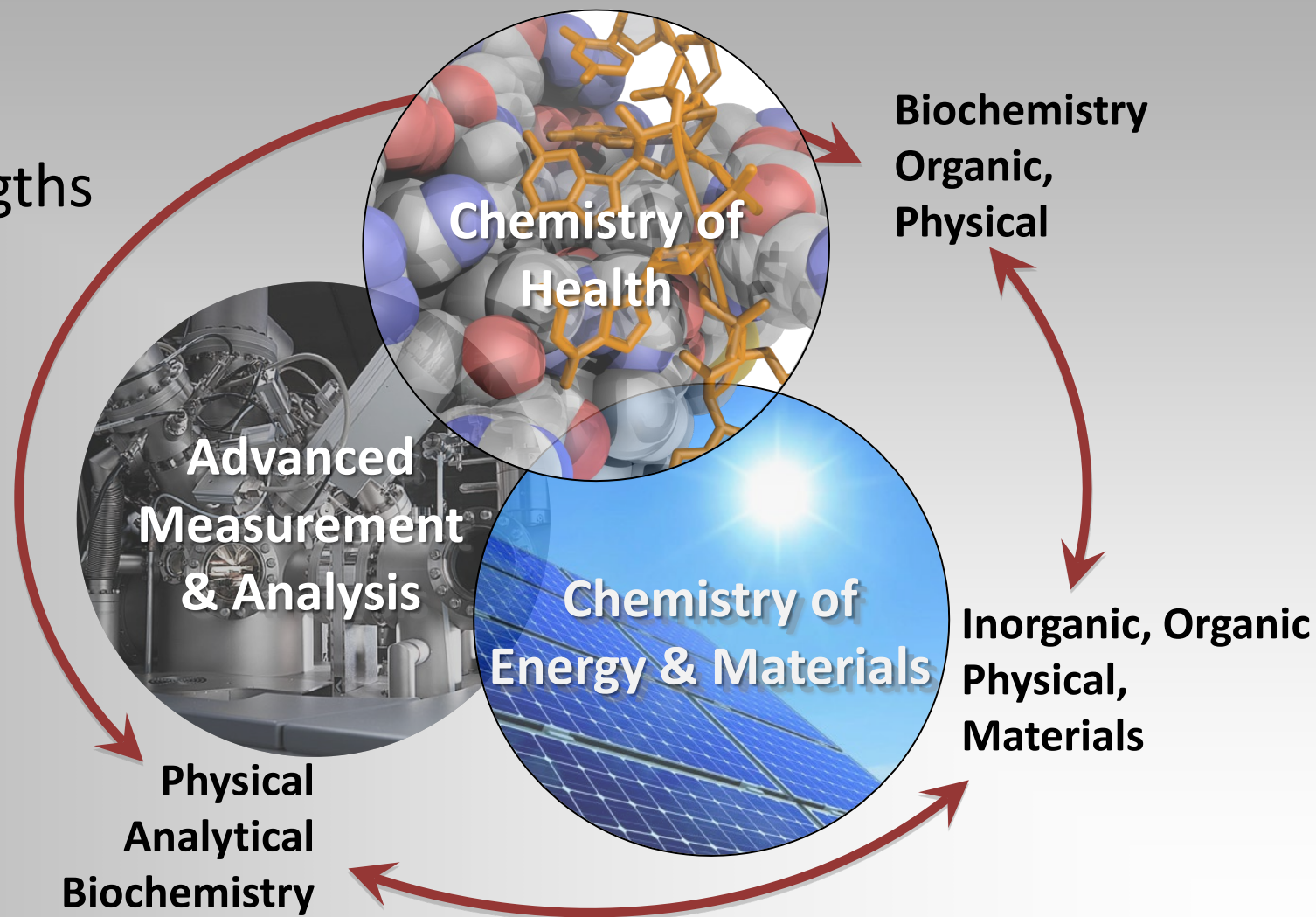
<https://www.acs.org/education/students/graduate/survey-of-phd-programs-in-chemistry.html>

FSU Chemistry:

- 33 research active faculty
- ~160 graduate students
- ~40 postdoctoral fellows

Where to Apply?

- Department Size
- Research Strengths

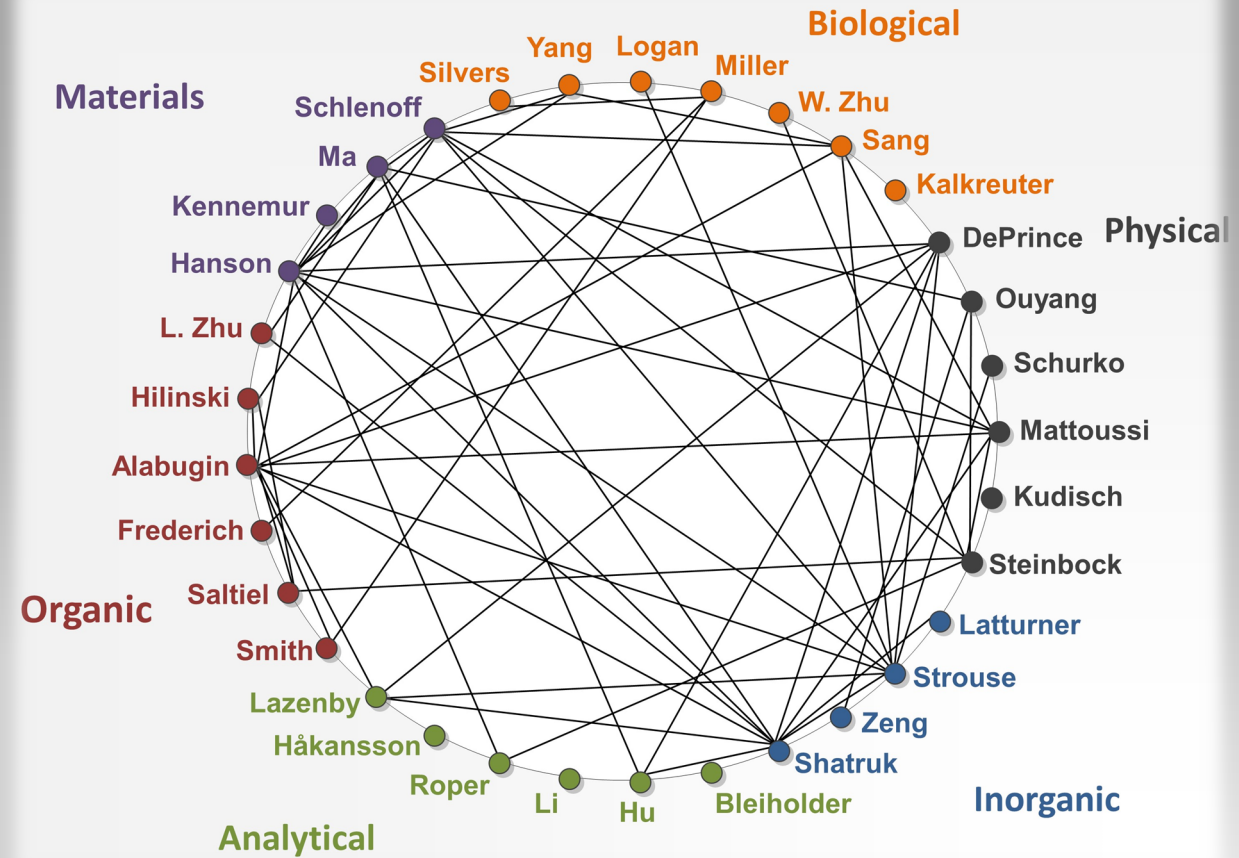


Where to Apply?

- Department
 - Size
 - Research Strengths
 - Collegiality
 - Social/Networking
 - Success rates
 - Graduate Student Union

Where to Apply?

- Department Size
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- Success rates
- Graduate Student Union
- Collaborative vs. Competitive



Where to Apply?

- Department
- Size
- Research Strengths
- Collegiality
- Social/Networking
- Success rates
- Graduate Student Union
- Collaborative vs. Competitive
- Ranking

NAME/RANK	PEER ASSESSMENT SCORE
California Institute of Technology Pasadena, CA	

HOME > CAREERS > NSF GRADUATE FELLOWSHIPS DISPROPORTIONATELY GO TO STUDENTS AT A FEW TOP SCHOOLS

CAREERS | FUNDING

NSF graduate fellowships disproportionately go to students at a few top schools

26 AUG 2019 • BY JANE C. HU

Harvard University Cambridge, MA #4 in Chemistry (tie)	4.8
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Save

Where to Apply?

- Resources
 - Equipment
 - Access
 - Support staff
 - Repairs



- NMR Lab: Solid-State and Solution NMR 700, 600, 2 x 500, 400 and 2 x 300 MHz
- MaC Lab: AFM, DSC, TGA, SQUID, BET
- Mass Spec Lab: TOF, MALDI, GC, ICP, LC
- X-Ray Lab: 3 x powder, 2 x Crystal, Fluorescence
- Spectroscopy Lab: SS and TR spectroscopy, quantum yield, Raman/IR
- Glass Blower, Machine, and Electrical Shop

Where to Apply?

- Research


Research Areas:

- All Areas
- Analytical Chemistry
- Biochemistry
- Inorganic Chemistry
- Materials Chemistry**
- Organic Chemistry
- Physical Chemistry

Research Specialties:


- All Specialties
- Bioanalytical
- Chemical Biology
- Computational Chemistry
- Environment and Energy
- Nanoscience
- Solid State Chemistry
- Spectroscopy and Photochemistry
- Structural Biology
- Synthesis and Catalysis

Materials Chemistry Faculty



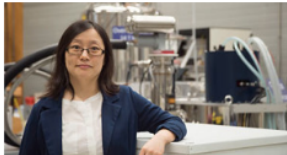
Dr. Igor Alabugin
Areas: Organic, Materials
Specialties: Synthesis and Catalysis, Computational Chemistry, Environment and Energy, Photochemistry and Spectroscopy

The Alabugin research group focuses on the discovery of new chemical reactions, synthesis of unusual molecules, and stereoelectronic connections between structure and reactivity.



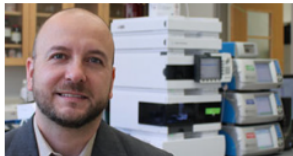
Dr. Kenneth Hanson
Areas: Inorganic, Materials, Physical, Organic
Specialties: Environment and Energy, Spectroscopy and Photochemistry, Synthesis and Catalysis

The Hanson research group focuses on the design, synthesis and characterization of light absorbing and emitting molecules for various applications.




Dr. Yan-Yan Hu
Areas: Materials, Analytical, Physical
Specialties: Environment and Energy, Photochemistry and Spectroscopy, and Solid State Chemistry

The Hu research group focuses on the design, synthesis, and characterization of functional energy materials and advancement of solid-state NMR/MRI techniques.



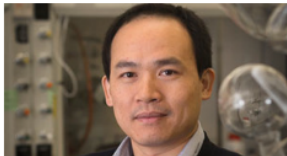
Dr. Justin G. Kennemur
Areas: Materials, Organic
Specialties: Environment and Energy, Nanoscience, Synthesis and Catalysis

The Kennemur research team focuses on the synthesis, characterization, and properties of functional polymers towards precise, biomimetic, stimuli-responsive, nanostructured, and/or sustainable materials.



Dr. Susan Latturner
Areas: Materials, Inorganic
Specialties: Environment and Energy, Solid State Chemistry

The Latturner group explores metal flux synthesis of inorganic semiconductors and intermetallics of interest for their magnetic and electronic properties.



Dr. Biwu Ma
Areas: Materials, Inorganic, Physical
Specialties: Environment and Energy, Nanoscience, Spectroscopy and Photochemistry, Solid State Chemistry

Our research focuses the development of new functional materials for applications in a wide range of technological areas from energy to environmental and information technologies.

Find at least two faculty that you would be excited to work with!

Where to Apply?

- Location
- Salary
- Department
- Resources
- Research

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- **Transcript**
 - Lower-level vs. upper-level GPA
 - Check for minimum GPA
- **CV/Resume**
 - Highlight research experience
 - Publications
- **3 letters of rec**
 - Ideally people that know you well
 - From research advisor
- **Cover letter**
 - Faculty/research interests
 - Address any shortcoming in your app
- **GRE (some schools)**
 - Less and less common

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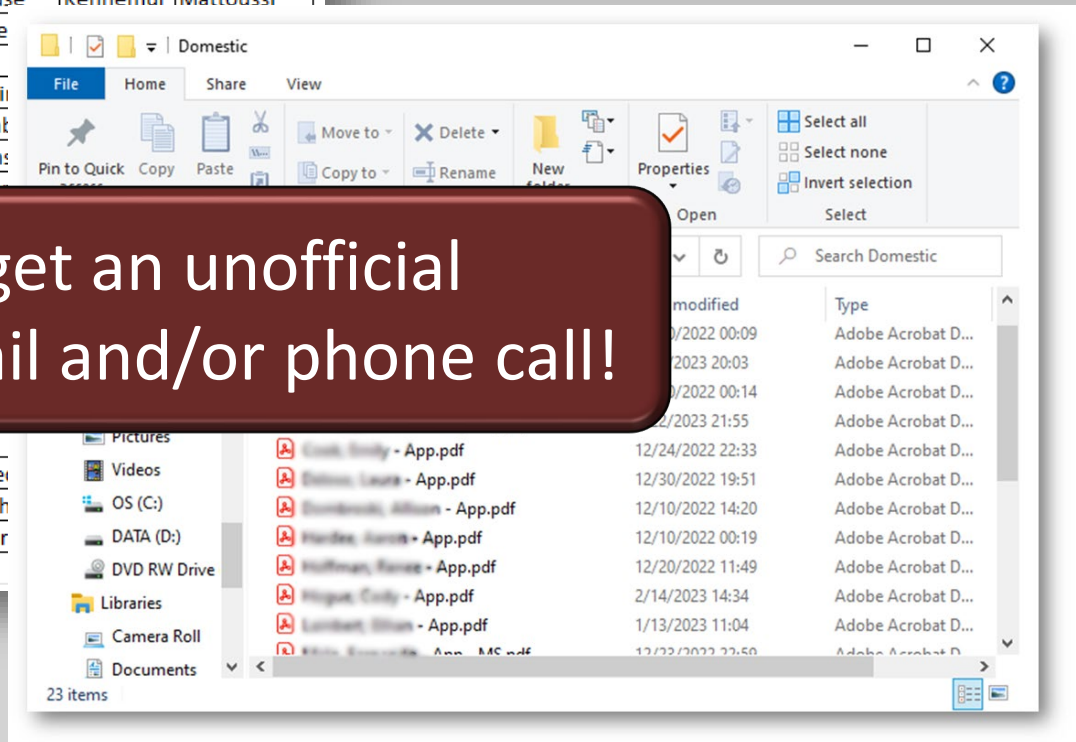
Applying for Graduate School in Chemistry

Late Dec-Feb: Admissions

- Graduate Admissions Committee (6 members)

Area	Last Name	First Name	B Major	B Univ.	UD GPA	M Major	M Univ.	M GPA	1st	2nd	3rd
M	JOHNSON	Mary	Chemistry	Northwest Missouri State	3.14	/	/	/	Strouse	Kennemur	Mattoussi
O	WILLIAMS	Patricia	Chemistry	Bloomsburg University of Penn	3.58	/	/	/	Frede		
A	BROWN	James	Chemistry	Troy Univeristy	3.6	/	/	/	Hu		
P	JONES	Robert	Chemistry	FGCU	3.76	/	/	/	DePrii		
P	GARCIA	John	Chemistry	Wagner College	3.62	/	/	/	Steink		
O	MILLER	Michael	Chemistry	University of North Dakota Gra	3.12	/	/	/	Hillins		
A	DAVIS	Linda	Chemistry	St. Louis Univeristy	3.87	/	/	/	Boyer		
M	RODRIGUEZ	Elizabeth	Chemical	Louisiana State	3.87	/	/	/	Boyer		
B	MARTINEZ	Barbara	Chemistry	Shepherd University	3.87	/	/	/	Boyer		
P	HERNANDEZ	Susan	Chemistry	Mercyhurst University	3.87	/	/	/	Boyer		
M	LOPEZ	Joseph	Chemistry	Valdosta State	3.87	/	/	/	Boyer		
O	GONZALEZ	Thomas	Chemical	FSU	3.87	/	/	/	Boyer		
A	WILSON	Christoph	Chemical	University of North Carolina	3.87	/	/	/	Boyer		
M	ANDERSON	Charles	Earth and Atmospheric	Jilin Univeristy	3.87	/	/	/	Boyer		
P	THOMAS	Jessica	Chemistry	Miami University (Ohio)	3.2	/	/	/	Dalal		
I	TAYLOR	Sarah	Chemistry	Georgia Regents University	3.35	/	/	/	Albrecht		
A	MOORE	Karen	Chemistry	FSU	3.7	/	/	/	Marsh		
M	JACKSON	Lisa	Chemistry	California State Univeristy Long Beach	3.14	Chemis	Califo	4.0	Lattur		
B	MARTIN	Barbara	Chemistry	Mount. St. Mary's University	3.31	/	/	/	Li		

Then you get an unofficial admissions email and/or phone call!



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Feb and Mar: Visitation Weekend

Florida State University Department of Chemistry & Biochemistry	Thursday, February 9		
	3:00PM – 6:00PM	Hotel Check-in: Aloft Tallahassee Downtown Roommate: N/A	200 North Monroe Street
	6:30PM	Pick up from the Hotel Lobby (Current Graduate Student: Jason Kuzynski)	
	7:00PM	Dinner with Current Graduate Students (Railroad Square Crafthouse)	
	Friday, February 10		
	7:40AM	Transport from Aloft to the Chemistry Department (meet in the Hotel Lobby)	
	8:00AM – 8:40AM	Breakfast and Chemistry Department Welcome (CSL 1005) Dr. Kenneth Hanson and Dr. Wei Yang	
	8:45AM – 9:55AM	Meetings with Faculty – Graduate Student Escort: Rachel Clark 8:45 – 9:15 Dr. Geoffrey Strouse (CSL 2002) 9:25 – 9:55 Dr. Biwu Ma (DLC 214)	
	10:00AM – 10:15AM	Coffee / Snack Break (CSL 1005)	
	10:15AM – 11:00AM	Facilities/Lab Tour: Staff 10:15AM - 10:35AM 10:40AM - 11:00AM	
	11:10AM – 11:40AM	Meeting with Faculty – Graduate Student Escort: Rachel Clark 11:10 - 11:40 Dr. Lea Nienhaus (CSL 4001)	
	11:45PM – 1:00PM	Informative Lunch (student life, curriculum, and money matters -- CSL 1005)	
	1:10PM – 1:30PM	Drive to MagLab (Current Graduate Student: Fabby Gonzalez)	
	1:30PM – 2:30PM	Tour of National High Magnetic Field Laboratory with Dr. Marshall	
	2:30PM – 2:50PM	Drive back to Department (Current Graduate Student: Fabby Gonzalez)	
	3:00PM – 4:10PM	Meeting with Faculty: Graduate Student Escort: Rachel Clark 3:00-3:30 Dr. Kenneth Hanson (CSL 5006) 3:40-4:10 Dr. Yan-Yan Hu (CSL 3004)	
	4:15PM – 4:35PM	Q & A with Dr. Kenneth Hanson (CSL 1005)	
	4:40PM – 5:00PM	Campus Tour	
	5:00PM – 6:15PM	Poster Session at Miller Hall	
	6:30PM – 8:00PM	Dinner with Faculty at Miller Hall	
	8:15PM	Arrive Aloft	
	9:00PM	Optional Night out with Current Grad Students	
	Saturday, February 11		
	10:00AM	Transport from Aloft to The Rez (meet in the Hotel Lobby)	
10:30AM – 12:30PM	Brunch at The Rez		
12:30PM	Shuttle to Airport		



Contact Information

Aloft Tallahassee Downtown
200 N Monroe Street
Tallahassee, FL 32301
850.513.0313

Departmental Contact: Lori Hayes 513.290.5085
Dinner Contact: Jason Kuzynski 832.215.8941
Airport Pickup: Lori Henley 513.290.5085
Escort: Rachel Clark 646.584.6504
Driver: Fabby Gonzalez 864.363.8707

General Goals:

Experience the town/university.

Get a feel for the department culture.

Get your questions answered.

Research goal is to find:

1) someone you want to work for.

2) a group you want to work with.

3) project/goal alignment.

4) something you would like to do on a daily basis.

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Resolution Regarding Graduate Scholars, Fellows, Trainees, and Assistants

Acceptance of an offer of financial support* (such as a graduate scholarship, fellowship, traineeship, or assistantship) for the next academic year by a prospective or enrolled graduate student completes an agreement that both student and graduate school expect to honor. In that context, the conditions affecting such offers and their acceptance must be defined carefully and understood by all parties.

Students are under no obligation to respond to offers of financial support prior to April 15; earlier deadlines for acceptance of such offers violate the intent of this Resolution. In those instances in which a student accepts an offer before April 15, and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of the appointment at any time through April 15. However, an acceptance given or left in force after April 15 commits the student to first inform the program that they are withdrawing or resigning from the offer of financial support that they previously had accepted. Starting in Fall 2020, applicants are no longer required to obtain a formal release from the program whose offer they accepted, either before or after the April 15 deadline. It is further agreed by the institutions and organizations subscribing to the above Resolution that a copy of this Resolution or a link to the URL should accompany every scholarship, fellowship, traineeship, and assistantship offer.

The following list includes CGS member institutions that indicated their support of the Resolution.

This Resolution was renewed October 2019. Institution list last updated March 12, 2023.

Alcorn State University	College of Charleston	Hofstra University	Missouri State University
Andrews University	College of New Jersey	Hood College	Montana State University - Bozeman
Appalachian State University	College of William and Mary	Howard University	Montclair State University
Arizona State University	Colorado School of Mines	Idaho State University	National University
Arkansas State University	Columbia University	Illinois Institute of Technology	New Jersey Institute of Technology
Arkansas Tech University	Concordia University Chicago	Illinois State University	New Mexico State University
Augusta University	Coppin State College	Indiana State University	New York Medical College
Austin Peay State University	Cornell University	Indiana University	New York University
Ball State University	Creighton University	Indiana University of Pennsylvania	North Carolina Agricultural & Technical State University
Baylor College of Medicine	Dakota State University	Iowa State University	North Carolina State University at Raleigh
Baylor University	Dartmouth College	Jackson State University	North Dakota State University
Boise State University	Drexel University	James Madison University	Northern Arizona University
Boston College	Duke University	John Carroll University	Northern Illinois University
Boston University	East Carolina University	Johns Hopkins University	Northern Michigan University
Bowling Green State University	Eastern Illinois University	Kansas State University	Northwestern State University of Louisiana
Bradley University	Eastern Kentucky University	Kent State University	Northwestern University
Brandeis University	Eastern Michigan University	Kutztown University of Pennsylvania	Oakland University
Brigham Young University	Eastern Washington University	Lamar University	Ohio University
Brown University	Emory University	Langston University	Ohio State University
Bryn Mawr College	Emporia State University	Lehigh University	Oklahoma State University
Caldwell University	Fairmont State University	Lipscomb University	
California Institute of Technology	Fayetteville State University	Loma Linda University	
California State University, Fresno	Ferris State University	Louisiana State University and	

“Students are under no obligation to respond to offers of financial support prior to April 15”

“[If a person accepts on offer but wants to change] the applicant must first inform the program that they are withdrawing or resigning from...Once they have informed the program that they are withdrawing, they then can accept any other offers.”

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Ph.D at FSU: Timeline

- 1st weeks** Orientation
- 1st Year** 5 Classes
- 1st Sem.** Lab Exploration and Choosing an Advisor
- 1st Year** Teaching Assistant
- 2nd Year** Research Presentation
- 3rd Year** Ph.D. candidacy exam
- 4th Year** Data Defense
- 4th-6th Year** Thesis and Defense (average 5.2 years)

Ph.D at FSU: Timeline

1st weeks Orientation

Fall 2022 Chemistry Graduate Orientation

Monday, August 8th

TIME	EVENT	LOCATION
8:30 AM - 9:30 AM	Welcome and General Orientation Dr. Geoffrey Strouse: Department Chair, Dr. Wei Yang: Associate Chair of Graduate Studies, Dr. Stephanie Dillon: Director of Graduate Teaching Assistants, and TBA: Graduate Affairs Coordinator	CSL 1005
9:30 AM - 12:30 PM	<ul style="list-style-type: none"> • New Employee Session - Rotating Groups <ul style="list-style-type: none"> ◦ HR Appt - 19 ◦ Document Scanning ◦ FSU ◦ Loyalty Oath: Appr 	DL C 344
12:30 PM - 1:30 PM	Lunch on	
1:30 PM - 5:00 PM	International Students to Social S Domestic non-Florida residents Leon County Circuit Court Finis Speak Exam for Inte	

Tuesday August 9th

TIME	EVENT	LOCATION
8:00 AM - 8:45 AM	Academic H Joshua I	
9:00 AM - 9:30 AM	Research Ex Dr. Wei	
9:30 AM - 10:00 AM	Faculty Research Dr. Oliver I	
10:15 AM - 10:50 AM	Cheminole Fabian	
11:00 AM - 12:00 PM	Entrance Exam / TA Assessment E Dr. Wei	
12:15 PM - 1:45 PM	Student Lu	

Wednesday August 17th

TIME	EVENT	LOCATION
8:30 AM - 11:30 AM	CPR and Adult First Aid Renee Murray, Ben Arline, Mary Parker	HCB 212, 214, 217
11:30 AM - 12:00 PM	Faculty Research Presentation Dr. Edwin Hilinski	CSL1003
12:00 PM - 1:00 PM	Lunch Provided	CSL1005
1:00 PM - 3:00 PM	Hazardous Waste/Introduction to Laboratory Safety Renee Murray, Ben Arline, Mary Parker	HCB 212, 214, 217
3:30 PM - 4:00 PM	Faculty Research Presentation Dr. Oliver Steinbock	CSL1003

Thursday August 18th

TIME	EVENT	LOCATION
8:00 AM - 8:30 AM	Faculty Research Presentation Moved to Friday 8/19	CSL1003
8:30AM - 9:00 AM	Faculty Presentations Dr. Bin Ouyang	CSL1003
9:00 AM - 12:00 PM	TA Training by Assignment	Variable
12:00 PM - 1:30 PM	Lunch on Your Own	Lunch Break
1:30 PM - 4:00 PM	TA Training by Assignment	Variable
4:15 PM - 4:45 PM	Faculty Research Presentation Dr. Robert Schurko	Variable

- Intake paperwork
- Safety Training
- TA Training
- Teaching Tips
- Faculty Research Presentations
- and more...

Ph.D at FSU: Timeline

1st Year

5 Classes (2 or 3 per semester)

Analytical Chemistry

Area Core Knowledge Courses	
CHM 5140	Introduction to Chemical Instrumentation
CHM 5138	Mass Spectrometry
CHM 5151	Optical Methods of Chemical Analysis
CHM 5153	Electrochemistry
CHM 5154	Chemical Separations

Special Topic Courses	
CHM 5180	Special Topic in Analytical Chemistry
CHM 5454	Polymer Characterization (co-listed in Materials)
CHM 5716	Characterization of Materials: NMR
CHM 5086	Environmental Chemistry

Biochemistry

Area Core Knowledge Courses	
BCH 5405	Molecular Biology
BCH 5505	Structure and Function of Enzymes
BCH 5745	Chemical and Physical Characterization of Biopolymers

Special Topic Courses	
BCH 5884	Programming for Chemists and Biochemists
BCH 5886	Special Topic: Biomolecular Nuclear Magnetic Resonance
BCH 5887	Special Topic: Drug Target and Assay Development

Inorganic Chemistry

Area Core Knowledge Courses	
CHM 5620	Principles of Inorganic Chemistry
CHM 5541	Group Theory
CHM 5629	Solid State Chemistry

Special Topic Courses	
CHM 5681	Physical Methods in Inorganic Chemistry
CHM 5442	Advanced Inorganic Chemistry for Emerging Applications

Materials Chemistry

Area Core Knowledge Courses	
CHM 5715	Chemistry of Materials; cross-listed as CHM4714
CHM 5450	Polymer Chemistry; cross-listed as CHM 4455
CHM 5454	Polymer Characterization
CHM 5629	Solid State Chemistry

Special Topic Courses	
CHM 5716	Characterization of Materials: NMR
CHM 5718	Topics in Materials Chemistry II: Magnetism and Magnetic Materials
CHM 5713	Nanomaterials
CHM 5580	Nuclear Magnetic Resonance Spectroscopy

Organic Chemistry

Area Core Knowledge Courses	
CHM 5226	Advanced Organic Chemistry: Reactions and Mechanisms
CHM 5245	Physical Organic Chemistry
CHM 5250	Advanced Organic Synthesis
CHM 5225	Advanced Organic Chemistry: Characterizations

Special Topic Courses	
CHM 5380	Special Topic: Heterocycles
CHM 5380	Photochemistry and Photophysics

Physical Chemistry

Area Core Knowledge Courses	
CHM 5480	Quantum Mechanics
CHM 5481	Advanced Quantum Mechanics
CHM 5506	Physical Chemistry of Macromolecules
CHM 5580	Nuclear Magnetic Resonance Spectroscopy

After completing 5 classes, research focused!

Ph.D at FSU: Timeline

1st Sem. Lab Exploration and Choosing an Advisor

Introduction to Research: Lab Exploration Form

Student's Name: _____ EMPL ID: _____
FSU Email Address: _____ Contact Phone #: _____

Major Professor Selection Process
Part I. Identify at least three (fourth optional) faculty members whose research programs are of interest to you. Make an appointment to speak with them about their research. At the conclusion of the appointment/interview, please have the faculty member sign next to their name in this section.
By **September 28**, bring this completed section to Monday Seminar to obtain your CBSA initials and move on to Part II. _____ CBSA Initials/Date

_____	_____	_____	_____
Print Faculty Name	Faculty Signature	Print Faculty Name	Faculty Signature
_____	_____	_____	_____
Print Faculty Name	Faculty Signature	Print Faculty Name	Faculty Signature

Part II. You are expected to carry out lab explorations in at least two research groups (third rotation is optional). At the conclusion of the explorations, please rank order the professors with whom you would like to join their group and obtain their signatures.
By **October 26**, bring this completed section to Monday Seminar to obtain your CBSA initials and move on to Part III. _____ CBSA Initials/Date

_____	_____	_____
Print Faculty Name	Faculty Signature	Date

Part III. By **October 30**, you will need to choose your major professor. Your choice should be indicated below and must be accompanied by the signature of the faculty member, confirming the agreement that you can join his/her research group.

I plan to join the research group of: _____
_____ **Print Major Professor's name** **Faculty Signature** **Date**

_____	_____
Student's Signature	Date Submitted

You must return the final version of this form with all the signatures to Chemistry & Biochemistry Student Affairs Office by 5:00PM on October 30.

Phase 1) Meet with at least 3 faculty members. (by end of Sept.)

Phase 2) Do 2 or 3 lab explorations. (by end of Oct.)

Phase 3) Group selection. (by start of Nov.)

Ph.D at FSU: Timeline

1st Year Teaching Assistant

Laboratory TA



Monitor 2-3 labs per week.
Office hours + lab grading.

Recitation TA



3 x 1 hour classroom periods.
Office hours + exam grading.

Ph.D at FSU: Timeline

2nd Year

Research Presentation



Area seminar (open to all)

20-minute presentation
5-10 minutes for questions

Introduction to your research.
Some preliminary results.

Ph.D at FSU: Timeline

3rd Year (Fall) Ph.D. candidacy exam

Candidacy Exam (only committee members):

1) Written Component (i.e., Research Proposal)

- <12 pages
- style of an NSF or NIH R01 proposal
- aims, rationale, literature, preliminary data, and future plans

After you pass, you are
officially a Ph.D. candidate!
(and receive your M.S. if you want it)

2) Oral Component (30 min. presentation, then questions)

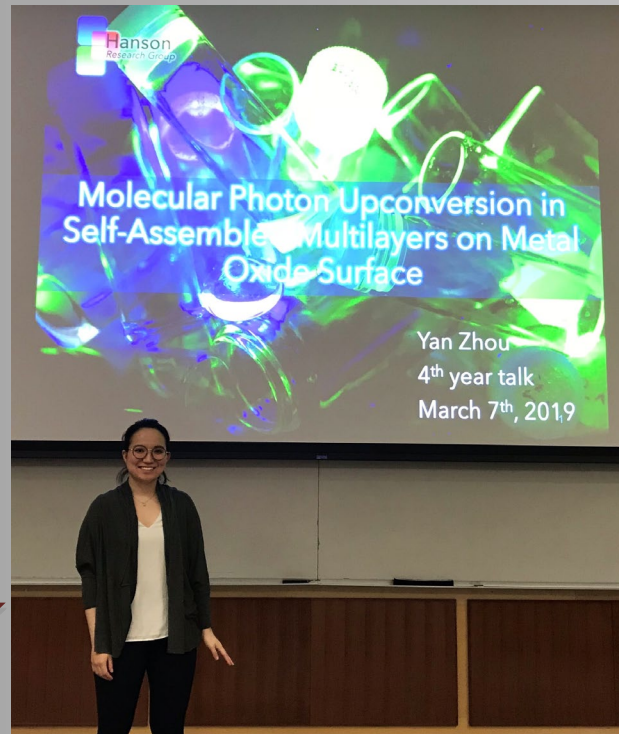
(a) Defense of research proposal (30-40 min.)

(b) Defense of fundamental knowledge in chemistry

Ph.D at FSU: Timeline

4th Year Data Defense

“The Data Defense will demonstrate to the Ph.D. committee that the Ph.D. candidate has collected sufficient data of adequate quality to assemble the dissertation.”



Area seminar (open to all)

40-50 minute presentation

10-20 minutes for questions

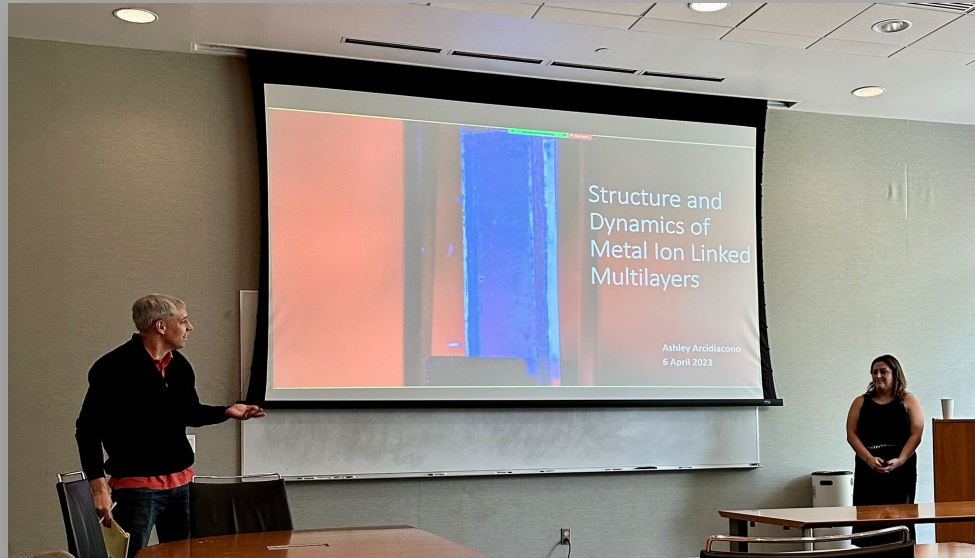


Ph.D at FSU: Timeline

4th-6th Year Thesis and Defense (average 5.2 years)

Thesis/Dissertation:

A compilation of your graduate research
Highlights a unique contribution to science
Typically, 100-300 pages



Defense:

Open, 50 min presentation
10 min. for ? from audience
30-60 min. ? from the committee

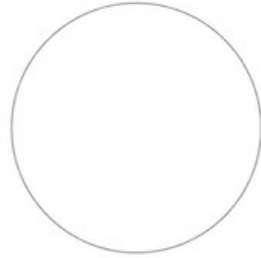


Ph.D at FSU: Timeline

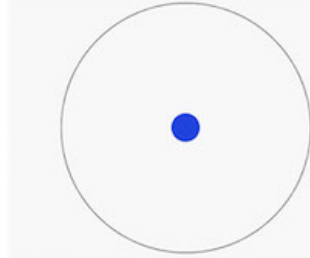
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- 1st Year** 5 Classes
- 1st Sem.** Lab Exploration and Choosing an Advisor
- 1st Year** Teaching Assistant
- 2nd Year** Research Presentation
- 3rd Year** Ph.D. candidacy exam
- 4th Year** Data Defense
- 4th-6th Year** Thesis and Defense (average 5.2 years)

The Illustrated Guide to a Ph.D.

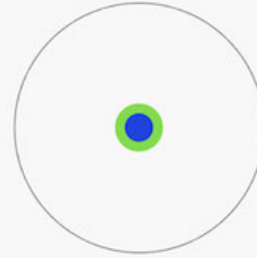
Imagine a circle that contains all of human knowledge:



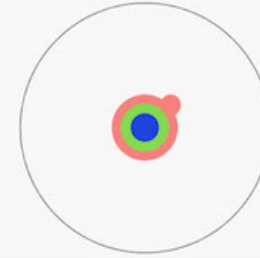
By the time you finish elementary school, you know a little:



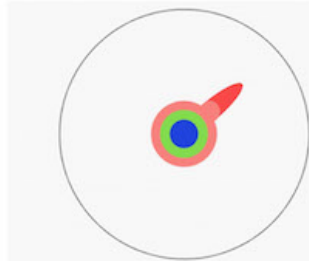
By the time you finish high school, you know a bit more:



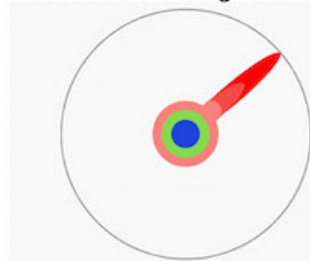
With a bachelor's degree, you gain a specialty:



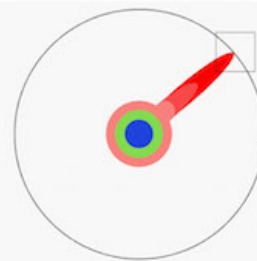
A master's degree deepens that specialty:



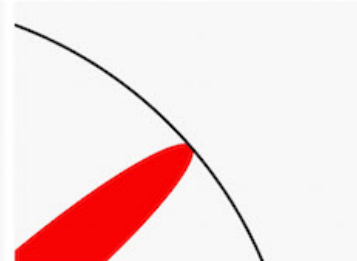
Reading research papers takes you to the edge of human knowledge:



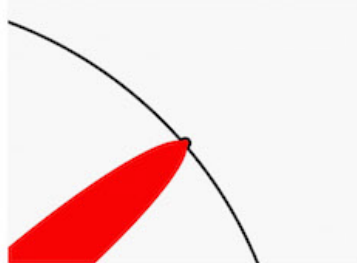
Once you're at the boundary, you focus:



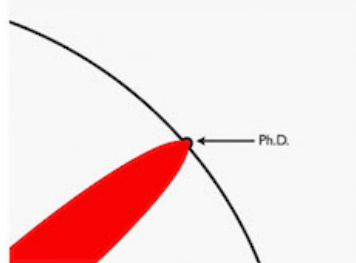
You push at the boundary for a few years:



Until one day, the boundary gives way:



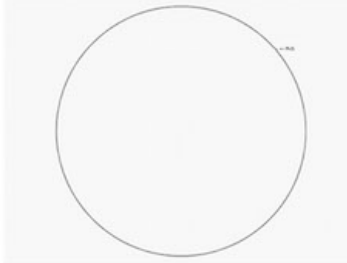
And, that dent you've made is called a Ph.D.:



Of course, the world looks different to you now:



So, don't forget the bigger picture:



Keep pushing.

Ph.D at FSU: Afterwards

Industry

AstraZeneca, Hercules, Vertex Pharmaceuticals, Amgen, Applied Biosystems, ThermoFinnigan, Nanostream, Ashland Chemical, PE Biosystems, Hoffman La Roche, General Dynamics, Bruker, DuPont CR&D, Merck, Pfizer, Johnson & Johnson, Waters, Rhône-Poulenc, Abbott Labs, Eli Lilly, Varian NMR Inc....

Government

Scripps Fla., Batelle Pacific Northwest Nat'l Labs, NHMFL, Wright-Patterson AFB...

Academia:

MIT, U. of Michigan, U. of Minnesota, UC Irvine, U. of Maine, École Polytechnique, Albert Einstein College of Medicine, Cornell University, Georgia State, Univ. at Alabama at Huntsville, Univ. of Maryland...

Postdoctoral positions:

MIT, Cambridge, Caltech, Northwestern, NIH, ...

Graduate School Demystified: Outline

- 1) Application timeline ✓
- 2) Deciding where to apply ✓
- 3) The application process ✓
- 4) Graduate school ✓
- 5) Pushing the boundaries of knowledge ✓
- 6) After your Ph.D. ✓

Questions?