UF Herbert Wertheim College of Engineering
UNIVERSITY of FLORIDA

GRADUATE PROGRAMS INFORMATIONAL LUNCHEON SERIES

Chemical Engineering (CHE)
Mechanical & Aerospace Engineering (MAE)

October 23, 2025
2340 Reitz Union

Speakers:

Dr. Sumant Patankar, CHE
Dr. Travis Anderson, CHE
Brittney Guerrier, MAE

Department of
CHEMICAL
ENGINEERING

Masters Program
Fall 2025

ABOUT ME!

Office: MAE bldg. A 328
Email: spatankar@ufl.edu

Instructional Asst. Professor:
Univ. of Florida, Jan 2021-present

Masters program coordinator:
July 2021 –present

Classes taught:
Adv. Chem Bio Lab (Fall + Spring),
Chem Process Data Sci (Fall),
Design and Analysis of Experiments (Spring)

Prior-

Process Engineer: Intel corp., Jan 2017-Dec 2020
PhD: The Ohio State University, 2016
Bachelor's: Institute of Chemical Technology (ICT), Mumbai, 2011

Shirley Kelly

Graduate Academic Advisor

(Started at UF in SP 1967 !)

Gabrielle Donalson

Graduate Academic Advisor and Administrator

Questions?
Email:
grad@che.ufl.edu

The Department of Chemical Engineering at the University of Florida is excited to introduce you all to what we hope is a life changing experience, full of learning, amazing intellectual pursuits, new colleagues, and fun!

Program Requirements

	MSNT	MS(thesis)	ME
Total Credit Hours	30	30	30***
Core requirements	15	18*	15
Class Requirements	21	21	21
Research (EGN 6913 / 6905) / Internship/ Co-op (EGN 5949)	7	7	7
Seminar	2	2	2
ECH6971 (thesis defense)*	NA	3	NA
Supervisory Committee	NA	2	NA
Final Exam	Report**	Oral and Written	Report**
Time for completing degree	2 years	2 years	2 years

**MS/ME non-thesis students write a report on a project / internship or a general chemical engineering topic as a requirement for graduation. The Master coordinator (me) grades the report.

***ME students are required to take a subset of UG courses in addition to the 30 credits.

15 CREDITS of required graduate courses

Remaining 15 credits

- ChE Electives (ECH 6937 various)
- Technical Electives (**non-ChE**)
- Non-Technical electives. (up to 6)
- Research / Seminar / Internship (up to 9)

(All Classes should be 5000 level or above)

- **RESEARCH PROJECT MATCHING**
  ~1-2 semester
- **WRITTEN THESIS/REPORT**
  ~end of degree

ECH 6937 : Adv. Chem Bio Lab

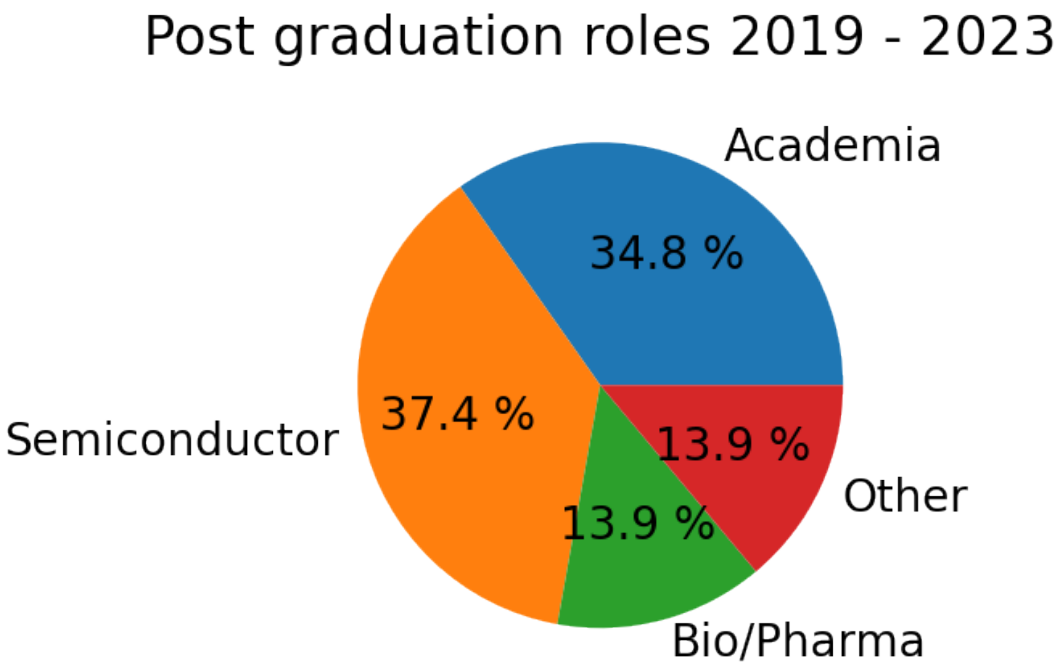
The Advanced Chem Bio Lab is a 6 credit / 2 semester long lab class.

Objective: Provide Masters students hands on exposure to advanced chemical manufacturing systems.

Fall Semester	Spring Semester
Semiconductor processing : Lithography, Etching, Oxide Film growth and Deposition	**Sustainability :** Hydrogen Fuel Cell. **Biochemistry :** Self-assembly, Michaelis-Menten kinetics (enzymes) **DNA :** Polymerase chain reaction, Gel electrophoresis, CRISPR Cas-9 gene editing.

Master's students are required to take the Adv. Chem Bio Lab **once in the Fall and once in the Spring.**

MS Graduates 2019-2023 (116 students)



Masters Research Projects

- Why Research ???
  - Ability to think critically about problems.
  - Systematic approach to problem solving.
  - Practical Skills.
  - Working in a team environment.
  - Technical presentation skills – both oral and written.
  - High performing students - recommendations from faculty.

- Think about the "extra" skillset you bring to the table compared to BS student.

Funding

- The Masters program is largely self-funded.

- **Non-FL residents** are awarded the **academic achievement award** which provides up to a total of **$4500 in tuition support for the first 3 semesters** (subject to satisfactory academic progress → > 3.0 GPA).

- CHE dept. awards a **$500 partial fellowship** in the first semester to **all** students.

- International students can work as graders or take up other on campus jobs. More info on UFIC website.

- Students can also look for research/teaching assistantships from other departments if there are any available.

- Internships – up to 7 cr. can count towards Masters degree.

Funding – Bright Futures

https://www.sfa.ufl.edu/types-of-aid/florida-bright-futures/florida-bright-futures-program-details/

Graduate Funding

Bright Futures Scholarship recipients who graduate with a baccalaureate degree may be funded for one semester of graduate study, not to exceed 15 semester hours paid at the undergraduate rate if they meet the following requirements:

- Earn their baccalaureate degree in seven semesters or fewer

OR

- Earn their baccalaureate degree in 105 semester hours or fewer

AND

- Have time remaining on their program

4 + 1 Option

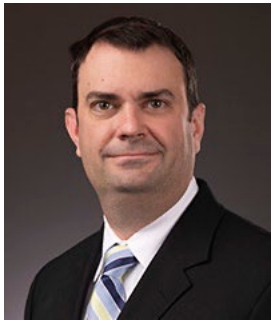
- Currently only available for CHE BS students.
- 12 cr. of Grad courses can be double counted for BS and MS degrees.

Requirements for Admission

- Completion of 6 ECH-prefixed BSChE core courses at the University of Florida (typically junior year)
- Upper division grade point average of at least 3.3
- A minimum GPA of 3.2 in chemical engineering courses
- Satisfaction of Graduate School and Chemical Engineering Department graduate studies admission requirements
- Three letters of recommendation from professors within the Chemical Engineering Department

Recruitment for Fall 2026 PhD Programs

Department of CHEMICAL ENGINEERING



Travis J. Anderson, PhD
Professor
PhD Recruitment Coordinator

Gabrielle Donalson, MS
Graduate Advisor

Fee Waivers and more information

Questions?
Email:
grad@che.ufl.edu

27 Primary Faculty Members

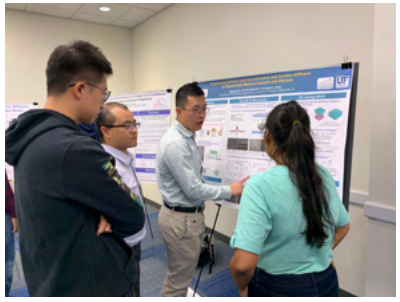
450 Undergraduate Students

65+ PhD Students

50+ MS and ME Students

Welcoming and Inclusive Environment

- Committed to educating you via a rigorous chemical engineering curriculum and supporting your growth toward research excellence
- Outstanding research infrastructure & access to state-of-the-art centers
- Interdisciplinary research programs for interactions and collaborations across campus
- Diverse, socially & intellectually active student body that supports each other through the PhD program



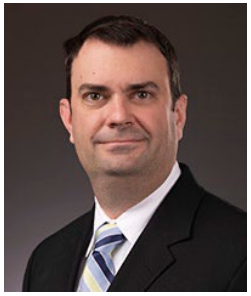
Engaged Student Organizations

- **Peer Mentoring**
- **Social and Cultural Events**
- **Community Outreach**
- **Student-led Research Symposia**
- **Student Chapters of Professional Societies**

UF Chemical Engineering Graduate Program Leadership

Richard Dickinson
Interim Department Chair

Mark Orazem
Associate Chair for Graduate Studies and William P. and Tracy Cirioli Term Distinguished Professor

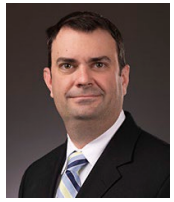


Travis J. Anderson
Professor, Graduate Program Recruitment Coordinator

Sumant Patankar
Instructional Assistant Professor and Master's Program Coordinator

Fee Waivers and more information

UF Chemical Engineering Primary Faculty


Travis Anderson


Jason Butler


Won Tae Choi


Carl Denard


Rich Dickinson


LiLu Funkenbusch


Helena Hagelin-Wea


Piyush Jain

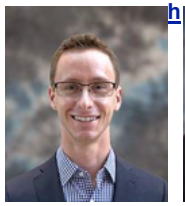

Yeongseon Jang


Peng Jiang


Dmitry Kopelevich


Tony Ladd


Fernando Mérida


Josh Moon


Ranga Narayanan


Mark Orazem


Sumant Patankar


Fan Ren


Juan M. Restrepo-Flórez


Carlos Rinaldi-Ramos


Janani Sampath


Whitney Stoppel


Spyros Svoronos

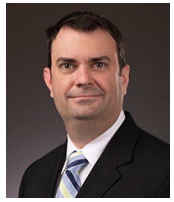

VJ Tocco


Sergey Vasenkov


Jason Weaver


Kirk Ziegler

UF Chemical Engineering Primary Faculty – 20 with Growing Research Programs!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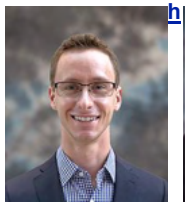
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Janani Sampath


Whitney Stoppel

Spyros Svoronos

VJ Tocco


Sergey Vasenkov


Jason Weaver

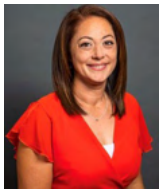

Kirk Ziegler

We have excellent staff support to assist in our smooth and efficient function!


Sharla


Shaniece Benis


Nicole Bristow


Amanda Bolcar


Gabrielle Donalson


Christina Formisano


Janice Harris


Shirley Kelly


David Sante


Shaura Thomas


Preston Towns

Gabrielle Donalson and Shirley Kelly serve in the Graduate Student Advising Office, helping with everything from recruiting, to registration, to paperwork (e.g., i-20s), to petitions, to helping you in times of stress.

They also help monitor and respond to the grad@che.ufl.edu inbox

Fee Waivers and more information

Renovated Chemical Engineering Building (~2027)

Renovated Chemical Engineering Building

- Modern lab infrastructure, hood capacity, and safety measures
- New Unit Ops laboratory
- New teaching labs for biomolecular engineering and advanced manufacturing
- Pre-Good Manufacturing Practices lab for synthesis and production of biomaterials
- Semiconductor research and fabrication spaces
- Faculty, Staff, and Student offices, lounge, and collaborative space

Student village

Unit Ops Lab

Modern Labs

PhD Program Details

Fee Waivers and more information

Application Requirements

Fall 2026 PhD Application includes:

- Application forms via the UF Graduate School https://admissions.ufl.edu/apply/graduate/
- Official transcripts (must be physically mailed to the UF admissions department- unofficial transcripts are ok for the initial submission)
- Personal statement (1-2 pages)
- ~2-page CV/resume
- 3+ recommendation letters from professors

ChE PhD FAQs Page
https://www.che.ufl.edu/academics/doctorate-program/ph-d-application-and-admission-faq/

PhD Program Info: Supporting you along your PhD Journey

Highly Competitive Admissions Rate

- 15–25% Ph.D. admission rates

5 years of guaranteed funding for Ph.D. students making satisfactory progress

- Competitive Graduate Assistant Stipend: **$35,000** per year salary
- Full Tuition, Health Insurance provided
- Very Low Cost of Living

Awards and Bonuses opportunities:

- Departmental awards for receiving external fellowships
- Travel awards for conference attendance
- Departmental awards for research achievements
- Departmental awards for service, leadership, and outreach
- Workshops to support NSF GRFP applications

ChE Women's Mentoring Group Holiday Cookie and Gift Exchange

Assignment of PhD Advisor and Project Selection Process

Advisor selection is not a part of our PhD acceptance process - PhD project matching and advisor selection occurs in the first semester (fall) of the graduate program

Timeline during your 1st Fall Semester in the Department:

Late August: Overview of Research Projects and Opportunities

August, September, and October: Meetings, Discussions, and Tours of Research and Office Space

- New PhD students meet with at least 3-5 faculty members to discuss details of available projects
- Students learn about mentoring styles, attend group meetings, and read relevant papers
- Students meet with current PhD students to learn about the environment and group culture
- Students participate in the annual Fall GRACE Symposium to learn about on-going research efforts

November: Advisor Matching

- Students submit their ranking of projects to the Graduate Program Associate Chair
- Faculty convene to match students to available projects and advisors

Typical Program Schedule

	Year	Fall Semester	Spring Semester	Summer Semester
Core courses done	1	• Transport Phenomena (ECH 6285) • Molecular Thermodynamics (ECH 6272) • Adv. Mathematics (ECH 6847) + **Select Research Adviser** + **Attend Seminar**	• Graduate Seminar (ECH 6926) • Kinetics/Reactor Design (ECH 6506 or 6526) • Elective • Advanced Research (ECH 7979) + **Select Supervisory Committee**	• Advanced Research (ECH 7979)
Proposal & qual. *Last elective in year 2 or 3*	2	• Graduate Seminar (ECH 6926) • 1-2 Electives • Advanced Research (ECH 7979)	• Graduate Seminar (ECH 6926) • Elective • Advanced Research (ECH 7979) + **Submit Research Proposal** + **Complete Oral Qualifying Exam**	• Advanced Research (ECH 7979) + Submit Supervised Teaching preferences
Supervised Teaching	3	• Graduate Seminar (ECH 6926) • Supervised Teaching (ECH 6940) or Elective • Research for Doctoral Dissertation (ECH 7980)	• Graduate Seminar (ECH 6926) • Supervised Teaching (ECH 6940) or Elective • Research for Doctoral Dissertation (ECH 7980) + **Submit Progress Report**	• Research for Doctoral Dissertation (ECH 7980)
Research, Research, Research...	4	• Graduate Seminar (ECH 6926) • Research for Doctoral Dissertation (ECH 7980)	• Graduate Seminar (ECH 6926) • Research for Doctoral Dissertation (ECH 7980) + **Submit Progress Report**	• Research for Doctoral Dissertation (ECH 7980)
Thesis & Defense	5	• Graduate Seminar (ECH 6926) • Research for Doctoral Dissertation (ECH 7980) + **Present at GRACE Symposium**	• Graduate Seminar (ECH 6926) • Research for Doctoral Dissertation (ECH 7980) + **Submit Doctoral Dissertation** + **Complete Final Oral Defense Examination**	

UF ChE Research Areas

Advanced Materials, Devices, and Nanotechnology

Anderson, Choi, Hagelin-Weaver, Jain, Jang, Jiang, Orazem, Ren, Rinaldi-Ramos, Sampath, Stoppel, Ziegler

Biomolecular Engineering, Cellular Engineering, and Synthetic Biology

Denard, Dickinson, Jain, Jang, Orazem, Ren, Rinaldi-Ramos, Sampath, Stoppel

Complex and Multiphase Flow Dynamics

Butler, Ladd, Narayanan

Energy, Environment, and Sustainability

Choi, Hagelin-Weaver, Jiang, Moon, Restrepo-Florez, Sampath, Vasenkov, Weaver, Ziegler

Heterogeneous Catalysis and Surface Science

Hagelin-Weaver, Weaver, Ziegler

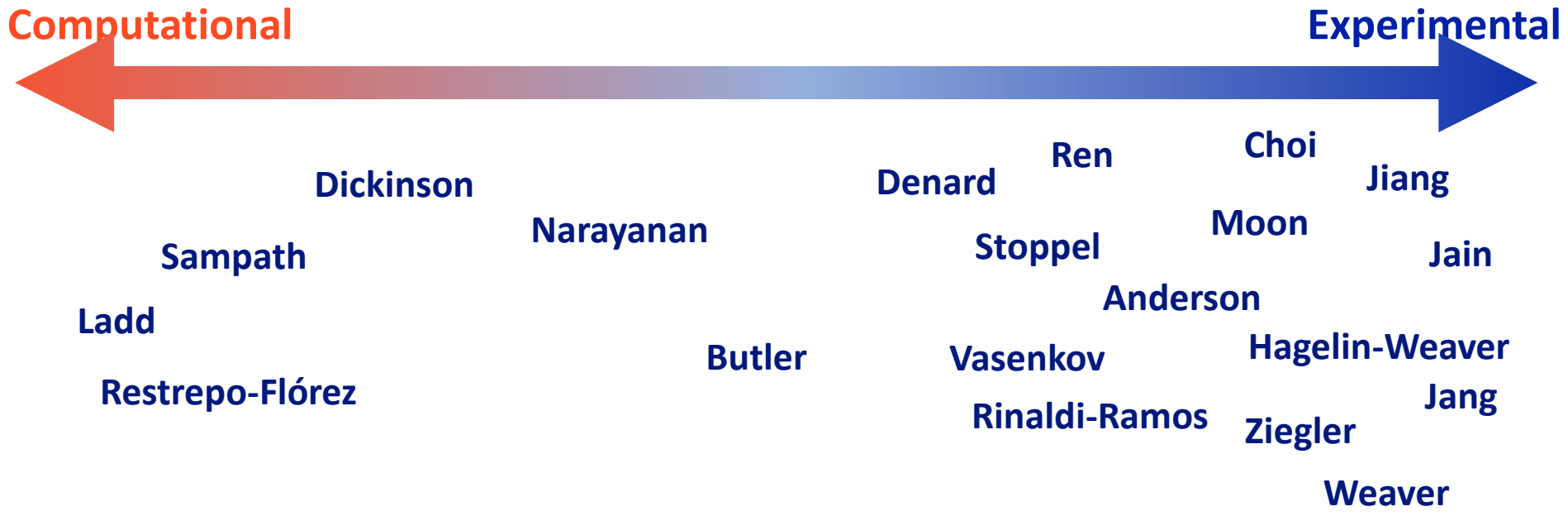
Modeling, Theory, and Simulation

Ladd, Narayanan, Restrepo-Florez, Sampath

Transport, Molecular Thermodynamics, and Electrochemical Engineering

Butler, Choi, Ladd, Narayanan, Rinaldi, Sampath, Vasenkov

Research Groups in the department span the spectrum of skills from simulation and modeling to hands-on benchwork

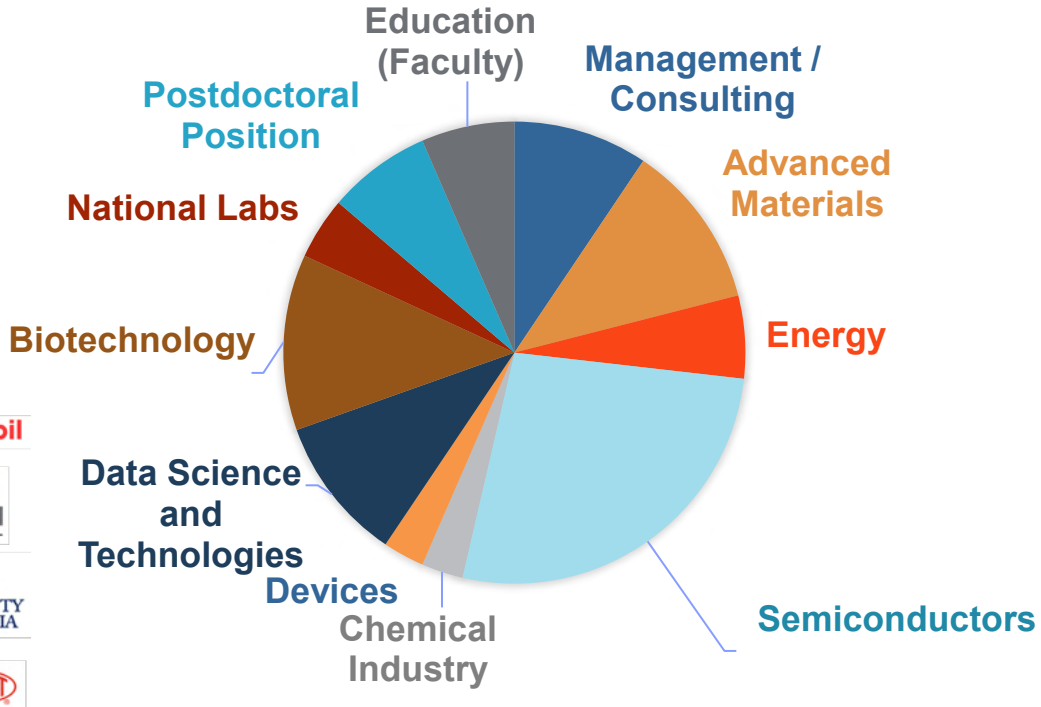


In some groups, students perform both benchwork and computational work. In other groups, students really focus on one skill over another. For more information, contact the professor or students in their group to get a better idea of the group organization

UF ChE PhD Graduates are Employed Across the Globe

APPLIED MATERIALS, Medtronic, VANDERBILT, AMGEN, MOTOROLA, NASA, ExxonMobil, tsmc, intel, Oregon State University, ASM INTERNATIONAL, Shire, NREL, AMD, UNIVERSITY of VIRGINIA, Shell, SAMSUNG, NOVARTIS, BOEING, TEXAS INSTRUMENTS, USF UNIVERSITY OF SOUTH FLORIDA, DU PONT, DOW

UF CHE PHD GRADUATES (2014-2024)- CURRENT JOB SECTORS



Question Time!

Fee Waivers and more information

UF Herbert Wertheim College of Engineering
UNIVERSITY of FLORIDA

Department of Mechanical and Aerospace Engineering

Graduate Information Session

October 23, 2025

Brittney Guerrier, Graduate Admissions Advisor & Recruitment Specialist

Mechanical & Aerospace Engineering Department at UF

@ufmae

@uflmae

POWERING THE NEW ENGINEER TO TRANSFORM THE FUTURE

Agenda

- Why should I consider a graduate degree?
- Which kind of graduate degree should I pursue?
- How do I pay for graduate school?
- What are my next steps?
- Where should I apply?
- How can I get in touch?


Finishing Undergrad

Combined BS/MS Program (MAE Students)

Key Features

- Up to 9 credits may apply to both BS and MS degrees
- Replace elective credits with MS classes (requires grade B or better and MAE Undergraduate Advisor approval)
- Complete MS degree quicker
- Submit Combined BS/MS Degree Request during final semester of undergrad (6 weeks prior to graduation)
- MS degree awarded upon successful completion of remaining MS requirements (21 credit hours = 7 courses)
- Contact Ellen Truchon (advising@mae.ufl.edu) for more information!

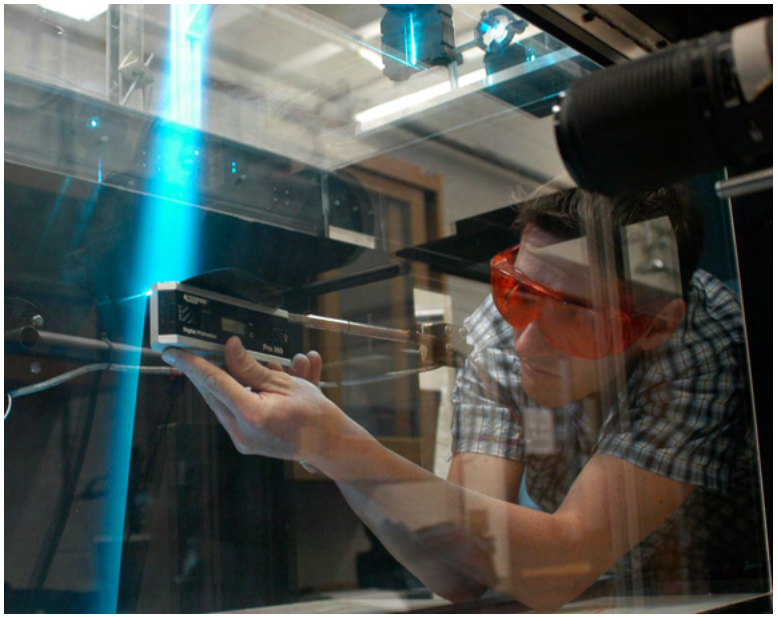
https://mae.ufl.edu/students/undergraduate/advising-curriculum/combined-bs-ms-degree-program/

Degree Options

Master of Science

Key Features

- Degree planning autonomy
- Specialize or diversify skillset
- Increase earning potential
- Future-proof
- Complete in as little as 4 semesters
  - Requires 30 credits
- For-credit internship option
- Flexible
- Full-time or part-time
- On-campus or online program
- Generally unfunded



Master of Science

Thesis Option

- Develop research experience
- Up to 6 research credits
- Written thesis & defense
- Infrequently funded
- Strengthen PhD Application
- Broaden skillset for industry
- Future-proof

Non-Thesis Option

- 30 credit hours of coursework
- No written final project
- Cumulative exam
- Not funded
- Research possible
  - Atypical
  - Not part of your academic program

Doctor of Philosophy

What do I do with a PhD?

- Private industry research
- Startup company
- Government agency
- Academia
  - Conduct research
  - Publish findings
  - Teach

Doctor of Philosophy

Key Features

- Fully-funded
  - Stipend + Healthcare + Tuition
  - Graduate Research Assistantship
  - Or Fellowship
- PhD Requirements Include:
  - 39 "graded" credits, 51 research credits
  - 90 total credits minimum
- Significant research component
- Dissertation
- Publications
- Earn MS along the way!


Paying for Graduate School

Cost - Master of Science

Tuition + Fees*

- Florida Resident, On-campus
  - Per credit hour: $545
  - Per FT Semester: $4,905
  - Total cost: $16,350
- Florida Resident, EDGE (Online)
  - Per credit hour: $501
  - Per FT Semester: $4,509
  - Total cost: $15,030
- Non-Florida Resident, On-campus
  - Per credit hour: $1,270
  - Per FT Semester: $11,430
  - Total cost: $38,100
- Non-Florida Resident, EDGE (Online)
  - Per credit hour: $726
  - Per FT Semester: $6,534
  - Total cost: $21,780

Average Total MS Cost

*4 Peer Institutions***

In-State Resident: $25,316

Non-Resident: $53,018

*based on 2025-2026 rates. See current year rates here.

**2022-2023 Figures collected online from University of Michigan, Georgia Tech, University of Texas at Austin, and Virginia Tech.

Cost - Doctor of Philosophy

Tuition*

- Fully covered by Graduate Research Assistantship or Fellowship

Fees*

- Florida Resident
  - Per credit hour: $81.96
  - Annual cost: $1,967
- Non-Florida Resident
  - Per credit hour: $117.32
  - Annual cost: $2,816

*based on 2024-2025 rates. See current year rates here.

Paying for Graduate School

Master of Science

- Infrequently funded
- Financial aid is available for those who qualify
- Employer tuition assistance
- External fellowships (typically research-based)

Doctor of Philosophy

- All UF MAE PhD Students are fully funded
- Stipend + tuition waiver + healthcare
- Funding sources include:
  - Faculty research funds
  - Internal fellowships
  - External fellowships and scholarships

Fellowships & Other Funding Sources

Internal Sources

- UF Only
- HWCOE Dean's Research Award (HDRA)
- Faculty research funds

External Sources

- NSF GRFP
- NSTGRO (NASA)
- NDSEG
- D.O.D. SMART

Benefits of Fellowships

- Guaranteed funding
- More advisor options
- More university options
  - External only

Admissions Requirements

Admissions Requirements

Doctor of Philosophy

- Upper-Division GPA above 3.0
- Statement of Purpose (1,000 words)
  - Mention Faculty
  - Discuss research background and interests
  - Link experience to goals
- Minimum three letters of recommendation
  - Instructional/Research Faculty/Faculty Advisor
  - Internship/Work Supervisor

Master of Science

- Upper-Division GPA above 3.0
- Statement of Purpose (500 words)
  - Academic/Career goals
  - Discuss undergrad experience
  - Why UF?
- Minimum two letters of recommendation
  - Instructional/Research Faculty
  - Internship/Work Supervisor

When should I apply?

Fall Semester

- Deadline: June 1
- Priority Consideration Dates:
  - PhD = December 5
  - Masters = January 5

Spring Semester

- Deadline: November 1

Application Palooza

Thursday, November 13

11:45 am – 1:45 pm

Marston Science Library, Room L308

Join us to fill out your graduate school application. MAE Experts will be on-site to answer questions, provide feedback, and more!

APPLICATION FEE WAIVER!!

UF Resources

Quick Links

Link	Details
Graduate Admissions	Find information on deadlines, requirements, Research Areas, etc.
Faculty Research Matrix	Review faculty with whom your research interests align.
Combined Degree	Review requirements and application process for the Combined BS/MS Degree Program
Apply!	Use this link if/when you are ready to apply!

Contact Us

Email
- GradAdmissions@mae.ufl.edu

Phone
- 352-392-0808

Virtual Appointments
- www.mae.ufl.edu/appointments

In-Person
- MAE-A 215

Office Hours
- 9 am – 4 pm

Join us on Discord!

Connect with MAE graduate admissions advisors and current MAE graduate students.

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UNIVERSITY *of* FLORIDA

LEADING THE CHARGE, CHARGING AHEAD