



UNIVERSITY OF CENTRAL FLORIDA

Modeling and Simulation PhD Graduate Program Handbook

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Modeling and Simulation PhD

Together, the [Graduate Student Handbook](#) and your graduate program handbook should serve as your main guide throughout your graduate career. The Graduate Student Handbook includes university information, policies, requirements and guidance for all graduate students. Your program handbook describes the details about graduate study and requirements in your specific program. While both of these handbooks are wonderful resources, know that you are always welcome to talk with faculty and staff in your program and in the Graduate College.

The central activities and missions of a university rest upon the fundamental assumption that all members of the university community conduct themselves in accordance with a strict adherence to academic and scholarly integrity. As a graduate student and member of the university community, you are expected to display the highest standards of academic and personal integrity.

Here are some resources to help you better understand your responsibilities:

- [Academic Honesty](#)
- [Academic Integrity Training](#) - Open to all graduate students at no cost
- [Plagiarism](#)

Introduction

The PhD degree consists of at least 72 semester hours of course work, including a minimum of 15 dissertation hours. The core will consist of four required courses and three restricted courses. These core courses and a research seminar will provide an interdisciplinary framework for all students. In addition, students are required to take two of the seven focus area cornerstone courses.

Curriculum

Please visit the [Graduate Catalog](#) to see the current curriculum for our program.

Timeline for Completion

- Core Coursework and Electives (two years to complete)
- Qualifying Exams
- Candidacy Exam (to formally propose dissertation topic)
- Research (about two years)
- Dissertation Writing (about a year)
- Dissertation Defense

Examination Requirements

Qualifying Examination

A written test is required covering content of the core courses. Students in the Modeling and Simulation program should also demonstrate consistent, strong performance in their required core courses, restricted core courses, and focus area corner stone courses apart from the performance in the written test. Specifically, students must receive a grade of B (3.0 out of 4.0) or better in each required core, restricted core, and focus area corner stone course that appear on their approved plan of study. Additionally, students must earn a combined GPA of 3.5 (out of 4.0) in these required cores, restricted core and focus area cornerstone courses. The qualifying exam is

scheduled by the program director or coordinator periodically based on the number of students intending to take the exam during a particular semester.

Candidacy Examination

The Candidacy Examination evaluates the student's preparation to undertake the research in the student's dissertation topic. A student may sit for the Candidacy Examination upon: (1) Passing the Qualifying Examination; (2) Completing all conditions placed as a result thereof; and (3) Completing all but six (6) credits or less of the courses prescribed in the plan of study.

The Candidacy Examination is based on the following:

- The Candidacy Proposal developed by the student to identify the chosen area of research.
- Literature Review on the topic of the dissertation.
- An Oral Defense of the candidacy proposal to the dissertation committee.

The candidacy exam is taken after the student completes all the course work or during the last semester of the course work. It usually takes the form of the draft of the first three chapters of the dissertation. If the student does not pass the exam on the first attempt he is allowed to take the exam for a second time.

Admission to Candidacy

The following are required to be admitted to candidacy and enroll in dissertation hours:

- Completion of all course work, except for dissertation hours.
- Successful completion of the candidacy examination.
- Successful defense of the written dissertation proposal.
- The dissertation advisory committee is formed, consisting of approved graduate faculty and graduate faculty scholars.
- Submittal of an approved plan of study.

Post-Candidacy Enrollment

Prior to enrollment into IDS 7980 Dissertation Research, the student must have passed candidacy and the dissertation committee must be reviewed and approved by the Dean of the appropriate college. Additionally, the College of Graduate Studies must receive candidacy documents prior to the first day of classes for the term in order to enroll in dissertation hours for that term.

Doctoral students engaging in dissertation research must be continuously enrolled in at least three hours of IDS 7980 every semester, including summers, until they successfully defend and submit their dissertation to the University Thesis Editor. The three hours of dissertation enrollment each semester reflects the expenditure of university resources, particularly if more than the minimum number of hours is required for completion of the dissertation.

Dissertation Requirements

The following is from the UCF [Graduate Catalog Dissertation Requirements](#) section:

The dissertation consists of an original and substantial research study designed, conducted, and reported by the student with the guidance of the Dissertation Committee. The written dissertation must include a common theme with an introduction and literature review, details of the study, and results and conclusions prepared in accordance with program and university requirements. The dissertation is expected to represent a significant

contribution to the discipline. Since this work must be original, it is very important that care is taken in properly citing ideas and quotations of others. Failure to do so is academic dishonesty and subject to termination from the program without receiving the degree. An oral defense of the dissertation is required.

University Dissertation Requirements

The College of Graduate Studies [Thesis and Dissertation page](#) contains information on the university's requirements for dissertation formatting, format review, defenses, final submission, and more. A step-by-step completion guide is also available on [Thesis and Dissertation Services](#) Site.

All university deadlines are listed in the [Academic Calendar](#). Your program or college may have other earlier deadlines; please check with your program and college staff for additional deadlines.

The following requirements must be met by dissertation students in their final term:

- Submit a properly formatted file for initial format review by the format review deadline
- Submit the Thesis and Dissertation Release Option form well before the defense
- Defend by the defense deadline
- Receive format approval (if not granted upon initial review)
- Submit signed approval form by final submission deadline
- Submit final dissertation document by final submission deadline

Students must format their dissertation according to the standards outlined in [Thesis and Dissertation Webcourse](#). Formatting questions or issues can be submitted to the Format Help page in the [Thesis and Dissertation Services](#) site. Format reviews and final submission must be completed in the [Thesis and Dissertation Services](#) site. The Dissertation Approval Form is also available in the Thesis and Dissertation Services site.

The College of Graduate Studies offers several thesis and dissertation [Workshops](#) each term. Students are highly encouraged to attend these workshops early in the dissertation process to fully understand the above policies and procedures.

The College of Graduate Studies thesis and dissertation office is best reached by email at editor@ucf.edu.

Dissertation Committee

A doctoral student's dissertation committee must consist of at least four members. Of the four members, three of these must be qualified regular faculty members of the M&S program, one of whom must serve as the chair of the committee. The fourth member must be from either outside the program or outside the university. A fifth member on the committee is allowed and can come from outside the modeling and simulation program. The committee must include at least one member each from the College of Engineering and College of Arts and Humanities.

Only one adjunct or visiting faculty member may serve as a member of a dissertation committee. An adjunct or visiting faculty may not serve as the chair, but may serve as a co-chair. One of the co-chairs must satisfy faculty qualifications for serving as a chair of a dissertation advisory committee. The other co-chair must satisfy the minimum requirements for serving as a member of a dissertation advisory committee. Qualifications of additional members must be equivalent to that expected of UCF faculty members. UCF faculty members must form the majority of any given committee. More information on the formation of a Dissertation committee can be found at: ucf.catalog.acalog.com/content.php?catoid=4&navoid=255.

Graduate Research

Research is required in most courses such as the capstone course. Research leading to publication is strongly encouraged for master's students and clearly required for the doctoral students. Modeling and simulation is a

multi-disciplinary program that draws its resources for laboratory space from throughout the university. Information on conducting research is covered in the core courses, the research practicum class and the various elective courses. There are numerous associations and societies that focus on research in modeling and simulation. Some of them include Society for computer simulation, Society for applied learning technology, Society for medical simulation, Human factors and ergonomic society and Military operations and research society. In cases of research dishonesty such as plagiarism, each case is referred to the academic advisory committee for appropriate action. Advising on professional development is an intricate part of the advising process. The program encourages participation in internship programs. Most of the courses bring in outside speakers from the industry.

Human Subjects

If the student chooses to conduct research that involves human subjects (i.e. surveys, interviews, etc.), he or she must gain Institutional Review Board (IRB) approval prior to beginning the study. For access to the IRB submission form and sample consent forms, please visit the Office of Research website: research.ucf.edu/ > Compliance > UCF IRB Webpage > UCF-IRB Principal Investigator's Manual.

Animal Subjects

If the student chooses to conduct research that involves animal subjects, he or she must gain Institutional Animal Care and Use Committee (IACUC) approval prior to beginning the study. For access to the IACUC submission forms, please visit the Office of Research website: research.ucf.edu/ > Compliance > UCF IACUC Webpage > Animal Use Approval Form

If you have questions regarding human or animal subjects, please contact Ms. Barbara Ward, IRB Coordinator, at 407-823-2901.

Ethics in Research

Researchers in every discipline have a responsibility for ethical awareness as the status of the profession rests with each individual researcher. It is important to be honest and ethical in conducting research as well as in taking classes. The ethical collection and use of information includes, but is by no means limited to, the following: confidentiality, accuracy, relevance, self-responsibility, honesty, and awareness of conflict of interest. The University of Arizona's Code of Research Ethics provides our students with guidelines for responsible practice in research. This code of ethics can be found [here](#).

Patent and Invention Policy

UCF has three fundamental responsibilities with regard to graduate student research. They are to (1) support an academic environment that stimulates the spirit of inquiry, (2) develop the intellectual property stemming from research, and to (3) disseminate the intellectual property to the general public. UCF owns the intellectual property developed using university resources. The graduate student as inventor will according to this policy share in the proceeds of the invention.

The full [Patent and Invention](#) policy is available online from the Graduate Catalog.

Facilities

There is a lot of laboratory space available at the University, Colleges and the Institute for Simulation and Training for conducting research in various areas. Research facilities are available at the following key centers:

- Institute for Simulation and Training
- Center for Advanced Transportation Systems Simulation
- Center for Distributed Learning
- Team Performance Laboratory
- Center for Research and Education in Optics and Lasers
- National Center for Forensic Science
- Florida Solar Energy Center
- Advanced Materials Processing and Analysis Center

Financial Support

Generally full-time doctoral students receive a support package that includes assistantship and tuition remission based on the availability of funding. A substantial portion of the master's students get financial assistance based on the research projects available. The funding for the support comes from fellowship opportunities, internship opportunities, research contracts and grants. Research opportunities come from both within and outside the university. Fellowship opportunities are available from within and outside the university. The outside fellowship opportunities include Link fellowships, AT&T fellowships and ITSEC fellowships. Generally, financial support opportunities are more available for students entering the fall semester. In order to process tuition remission for applicable students they must register for the classes well before the start of the semester to enable tuition remission processing.

International Students

Several types of employment are available to international students, including on-campus employment. For more information about the types of employment available to international students, and the requirements and restrictions based in visa-type, please see the International Services Center's [website](#).

Assistantships

For complete information about university assistantship, tuition remission, and health insurance, please see the [Funding for Graduate School](#) section in the Graduate Students website.

To be appointed and to maintain a graduate assistantship, the student must be:

- In good academic standing
- Enrolled full time

To be awarded and continue receipt of tuition remission, the student must be:

- In good academic standing
- Enrolled full time
- Employed on a graduate status (GRA, GTA) or receive a University fellowship

Doctoral students can be offered tuition support for a maximum of twelve semesters (for doctoral student beyond the master's degree) or twenty-one semesters (for doctoral students without a master's degree).

GTA Training Requirements

If the student is hired in the position of Graduate Teaching Associate, Assistant or Grader, there are training requirements that must be met in order for the assistantship agreement to be processed. For more information, see [Graduate Teaching](#) on the College of Graduate Studies Students website.

International students who will be hired in GTA positions must be proficient at speaking English. This is determined by successfully passing the SPEAK test.

Support for Conference Presentations

The College of Graduate Studies offers a Graduate Presentation Fellowship that provides funding for master's, specialist, and doctoral students to deliver a research paper or comparable creative activity at a professional meeting. Students must be the primary author and presenter. More information can be found at graduate.ucf.edu/presentation-fellowship/.

The Student Government Association offers graduate students travel funding to pay transportation expenses for graduate students who are delivering a research paper or comparable creative activity at a professional meeting. Contact the Student Government Association at 407-823-5648 for more information.

Graduate Student Associations

The Graduate Student Association (GSA) is UCF's graduate organization committed to enrich graduate students' personal, educational and professional experience. To learn more or get involved, please visit facebook.com/groups/UCFgsa/. For individual department or graduate program organizations, please see program advisor.

Professional Development

Advising on professional development is an intricate part of the advising process. The program encourages participation in internship programs. Most of the courses bring in outside speakers from the industry. There are numerous associations and societies that focus on research in modeling and simulation. Some of them include Society for Computer Simulation, Society for Applied Learning Technology, Society for Medical Simulation, Human Factors and Ergonomic Society and Military Operations and Research Society. Master's students are strongly encouraged to publish their research work and the doctoral students are expected to have successful publications of their research works in first tier journals.

Instructor Training and Development

The Faculty Center for Teaching and Learning (FCTL) promotes excellence in all levels of teaching at the University of Central Florida. To that end, they offer several programs for the professional development of Graduate Teaching Assistants at UCF.

GTA Training

This training provides information and resources for students who will be instructors in a two-day workshop. The seminars cover a variety of topics, including course development, learning theories, lecturing, and academic freedom. Those interested in additional training can also attend an optional training session that normally follows the mandatory training.

Preparing Tomorrow's Faculty Program

This program (12-weeks for domestic students, 16-weeks for international students) consists of group and individualized instruction by Faculty Center staff and experienced UCF professors. Textbooks and materials are provided, and a stipend is offered to current UCF students who complete the certificate. International students are provided the same training as well as information regarding language immersion and tricks and cultural awareness as a way of knowing what to expect from American students.

For more information: fctl.ucf.edu/ > Events > Preparing Tomorrow's Faculty Program or call 407-823-3544.

Pathways to Success Workshops

Coordinated by the College of Graduate Studies, the Pathways to Success program offers free development opportunities for graduate students including workshops in Academic Integrity, Graduate Grantsmanship, Graduate Teaching, Personal Development, Professional Development, and Research. For more information and how to register, please visit graduate.ucf.edu/pathways-to-success/.

Graduate Research Forum

Sponsored by the College of Graduate Studies, the [Graduate Research Forum](#) is an opportunity for students to showcase their research and creative projects and to receive valuable feedback from faculty judges. Awards for best poster and best oral presentation in each category will be given and all participants will receive recognition.

Graduate Excellence Awards

Each year, the College of Graduate Studies offers graduate students who strive for academic and professional excellence the opportunity to be recognized for their work. The award categories include the following:

Award for Excellence by a Graduate Teaching Assistant – This award is for students who provide teaching support and assistance under the direction of a lead teacher. This award focuses on the extent and quality of the assistance provided by the student to the lead instructor and the students in the class. (Not intended for students who are instructor of record)

Award for Excellence in Graduate Student Teaching – This award is for students who serve as instructors of record and have independent classroom responsibilities. The focus of this award is on the quality of the student's teaching and the academic contributions of those activities.

Award for the Outstanding Dissertation – It recognizes doctoral students for excellence in the dissertation. The focus of this award is on the quality and contribution of the student's dissertation. Excellence of the dissertation may be demonstrated by evidence such as, but not limited to: publications in refereed journals, awards and recognitions from professional organizations, and praise from faculty members and other colleagues in the field.

For the nomination process and eligibility criteria, see graduate.ucf.edu/awards-and-recognition/.

Other

For information about the Council of Southern Graduate Schools (CSGS) thesis and dissertation awards, see their website: csgs.org/ > Awards.

For grant-proposal writing resources: uwc.cah.ucf.edu/ > Writing for Graduate School.

The Institute for Simulation and Training (IST) offers the M&S Colloquium Series, Medin Seminar Series and Lunch 'n' Learn Series. For information and a listing of coming events visit the [IST website](#).

Job Search

UCF's Career Services department offers a wide range of programs and services designed to assist graduate students. These services include evaluation and exploration of career goals, preparation for the job search and job search resources. To learn more, visit their website at career.ucf.edu/.

For specific services or resources provided by the academic program, please contact the graduate program director or academic advisor.

Please contact the [IST personnel office](#) or see [UCF Human Resources](#) for more information regarding employment opportunities at IST and the university.

Forms

- [College of Graduate Studies Forms and References](#)
A complete listing of general forms and references for graduate students, with direct links, may be found here.
- [Graduate Petition Form](#)
When unusual situations arise, petitions for exceptions to policy may be requested by the student. Depending on the type of appeal, the student should contact his/her program adviser to begin the petition process.
- [Traveling Scholar Form](#)
If a student would like to take advantage of special resources available on another campus but not available on the home campus; for example, special course offerings, research opportunities, unique laboratories and library collections, this form must be completed and approved.

Useful Links

- [Modeling and Simulation PhD](#)
- [College of Graduate Studies](#)
- [College of Graduate Studies](#)
- [Academic Calendar](#)
- [Bookstore](#)
- [Campus Map](#)
- [Counseling Center](#)
- [Financial Assistance](#)
- [Golden Rule Student Handbook](#)
- [Graduate Catalog](#)
- [Graduate Student Association](#)
- [Graduate Student Center](#)
- [Housing and Residence Life](#)
- [Housing, off campus](#)
- [Knights Email](#)
- [Library](#)
- [NID Help](#)
- [Pathways to Success](#)
- [Recreation and Wellness Center](#)
- [Shuttles Parking Services](#)
- [Student Health Services](#)
- [Thesis and Dissertation \(ETD\)](#)
- [UCF Global](#)
- [University Writing Center](#)

Grad Faculty

Asterisk = has previous committee experience, which qualifies the person to serve as vice chair

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