

# UCF - Graduate Program Handbooks 2016-2017

*Last Updated 2011-06-21*

## Optics and Photonics MS

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

## Introduction

No more than 3 hours of directed research (OSE 6918), or Research report (OSE 6909) may be included in the program of study. The Optics and Photonics MS program requires a minimum of 30 credit hours beyond the bachelor's degree. The program offers a thesis and nonthesis option. Students are allowed considerable freedom in planning their study programs, although some foundation Optics courses are strongly recommended as core courses and two research methods/laboratory courses are required.

## Independent Learning

All students must take a minimum of two graduate methodology/laboratory courses in Optics or a closely related field that include experiments, research and laboratory reports. Non-thesis students may also engage in directed research or research report. Thesis students enroll in 6 hours of thesis credits during the completion of their research study.

## Advising and Mentoring

Before beginning their second year of full-time study, students pursuing the thesis option are required to select a thesis advisor. Students pursuing the non-thesis option are not required to select an advisor, although it is strongly encouraged if expecting to pursue the Optics and Photonics PhD later. The thesis advisor must be selected from the college list of approved graduate faculty and must be qualified to serve as chair of a thesis committee. The Associate Dean will serve as academic advisor for students pursuing the nonthesis option.

## Plan of Study

A Plan of Study (POS) is a listing of course work agreed to by the student and the degree program specifying course degree requirements. A specific Plan of Study, which will vary from student to student, must be formulated jointly by the student and their thesis advisor. Nonthesis students will form their Plan of Study with the Associate Dean. The completed Plan of Study must comply with the graduate catalog current at the time it is proposed. Once completed, the Plan of Study must be approved by the thesis advisor and/or the Associate Dean prior to the second term of full-time enrollment. For a graduate student carrying a reduced load, the establishment of a Plan of Study may be delayed up to the registration for the tenth graduate semester hour. The student may make changes in the Plan of Study at any time with approval of the thesis advisor and/or the Associate Dean.

Students requesting to transfer credits from a previous institution must note those classes on the Plan of Study. Additionally, students are required to provide the appropriate documentation for transferring credits at the time of submitting the Plan of Study (See Frequently Cited Policies section). Requests to transfer credits without the appropriate documentation will be denied.

As described in section 5 below, the MS degree requires 30 graduate credit hours according to the requirements below

### Thesis Option Plan of Study must be comprised of:

- at least 24 hours of graduate science and engineering course work, satisfying all of the following requirements:
  - at least 12 hours must be Optics courses
  - at least 6 hours are science/engineering graduate laboratory courses,
  - at least 3 of the laboratory hours must be in Optics
- 6 hours of thesis (OSE 6971)
- No Research hours or Directed Research may be applied to the Master's Thesis plan of study.

### Nonthesis Plan of Study must be comprised of:

No more than 3 hours of directed research (OSE 6918), or Research report (OSE 6909) may be included in the program of study.

- at least 30 hours of graduate science and engineering course work, satisfying all of the following requirements:
  - at least 18 hours must be Optics courses
  - at least 6 hours are science/engineering graduate laboratory courses,
  - at least 3 of the laboratory hours must be in Optics

No more than 3 hours of directed research (OSE 6918), or Research report (OSE 6909) may be included in the plan of study.

## Curriculum

The Optics and Photonics MS program requires a minimum of 30 credit hours beyond the bachelor's degree. The program offers a thesis and nonthesis option. Students are allowed considerable freedom in planning their study programs, although some foundation Optics courses are strongly recommended as core courses and two research methods/laboratory courses are required.

Additional notes on the curriculum:

- A minimum of 24 credit hours of formal graduate courses is required in the thesis option of which at least 12 credit hours must be formal Optics (prefix OSE) courses. A minimum of 27 credit hours of formal graduate courses is required in the nonthesis option of which at least 18 credit hours must be formal Optics (prefix OSE) courses. The remaining credit hours can be thesis or other elective and research courses as permitted in the option.
- At least 6 credit hours of approved optics or related science and engineering research methods/laboratory courses are required in both options. At least one must be in Optics or approved as an Optics substitute.
- Up to nine credit hours of appropriate graduate courses from accredited universities may be transferred with approval from the College of Optics and Photonics. Only courses with grades of "B" or better can be transferred.

## Required Courses—15 Credit Hours

### Core—9 Credit Hours

The following foundation courses are required.

- OSE 5115 Interference and Diffraction (3 credit hours)
- OSE 6111 Optical Wave Propagation (3 credit hours)
- OSE 6525 Laser Engineering (3 credit hours)

### Research Methods/Laboratory—6 Credit Hours

At least 6 credit hours of approved Optics and related science/engineering research methods/laboratory courses are required from the list below. At least one must be in Optics (OSE). One required laboratory may be waived if the student can demonstrate an equivalent hands-on proficiency in that laboratory specialization. These research methods/laboratory courses count toward the formal graduate course work requirement.

- OSE 6234C Applied Optics Laboratory (3 credit hours)
- OSE 6455C Photonics Laboratory (3 credit hours)
- OSE 6526C Laser Engineering Laboratory (3 credit hours)
- OSE 6615L Optoelectronic Device Fabrication Laboratory (3 credit hours)
- Other graduate-related science and engineering methodology labs may be taken with approval by the College of Optics and Photonics.

### Elective Courses—9 Credit Hours

All students are required to take a minimum of 9 credit hours of electives.

Any graduate course with an OSE prefix may be an elective with the approval of the adviser. In addition, the following courses are also accepted toward meeting the Optics (OSE) course work requirement.

- EMA 5610 Laser Materials Processing (3 credit hours)
- PHY 5455 Modern X-Ray Science (3 credit hours)
- PHZ 5505 Plasma Physics (3 credit hours)
- Other appropriate engineering and science courses may be taken with approval by the College of Optics and Photonics.

A listing and description of courses offered by the College of Optics and Photonics is found in the "Courses" section of the Graduate Catalog Menu at the top of the page.

### Thesis Option—6 Credit Hours

The thesis option requires at least 6 credit hours of thesis research.

- OSE 6971 Thesis (6 credit hours)

Independent study and directed research credit hours are not allowed toward the degree requirements. The student must prepare an approved program of study and form a thesis committee upon completion of nine credit hours. The MS thesis committee consists of three members, with at least two regular graduate faculty members from the College of Optics and Photonics. Students are required to write a thesis and pass an oral exam based primarily on the topics of the thesis and course work.

### Nonthesis Option—6 Credit Hours

The nonthesis option requires an additional 6 credit hours of electives.

- Electives (6 credit hours)

Up to 3 credit hours of directed research (OSE 6918) or research report (OSE 6909) may be included as electives with prior approval of the College of Optics and Photonics although they are not counted toward the required 27 credit hours of formal course work. Students must prepare an approved program of study upon completion of nine credit hours. Students are required to pass a final oral comprehensive examination based primarily on the subject matter of the courses taken. The purpose of the exam is for the student to demonstrate his or her basic knowledge of the fundamentals of optics and photonics.

The nonthesis master's requires a minimum of two methods/laboratory courses as described above. These laboratory courses involve a substantial amount of independent learning on the part of the student. For example, laboratory reports must include sections on the theoretical and historical background behind the phenomena explored in laboratory experiments, and students are expected to obtain this background information on their own by researching the scientific literature. One required Optics laboratory may be waived if the student can demonstrate an equivalent hands-on proficiency in that laboratory specialization. These methodology/laboratory courses count toward the formal course work requirement.

## **Track Curriculum: International**

The Optics and Photonics MS program requires a minimum of 30 credit hours beyond the bachelor's degree. The program offers a thesis and nonthesis option. Students are allowed considerable freedom in planning their study programs, although some foundation Optics courses are strongly recommended as core courses and two research methods/laboratory courses are required.

Additional notes on the curriculum:

- A minimum of 24 credit hours of formal graduate courses is required in the thesis option of which at least 12 credit hours must be formal Optics (prefix OSE) courses. A minimum of 27 credit hours of formal graduate courses is required in the nonthesis option of which at least 18 credit hours must be formal Optics (prefix OSE) courses. The remaining credit hours can be thesis or other elective and research courses as permitted in the option.
- In addition the following requirements must be satisfied:
  - For this track, 18 credit hours must be taken at UCF and 12 credit hours of course work must be taken at the partner university. These hours must be taken from an approved list maintained by the college and made available on the college web site. Courses other than those on the list must be approved by the College of Optics and Photonics Curriculum Committee. If the thesis option is selected, the thesis hours must be taken at UCF.
  - At least 6 credit hours of approved optics or related science and engineering research methods/laboratory courses are required in both options. At least one must be in Optics or an approved Optics substitute.
- Language requirements. Students must demonstrate competency in the primary language of the partner university or else must take at least 6 hours of appropriate undergraduate language courses prior to traveling to the partner university.

## **Required Courses—15 Credit Hours**

### **Core Courses—9 Credit Hours**

The following foundation courses are strongly recommended for all students unless they can demonstrate knowledge sufficient to waive the course in which case they will take an additional elective.

- OSE 5041 Introduction to Wave Optics\* (3 credit hours)

And two of the following three courses:

- OSE 5203 Geometrical Optics and Imaging Systems (3 credit hours)
- OSE 6432 Guided Waves and Optoelectronics (3 credit hours)
- OSE 6525 Laser Engineering (3 credit hours)

\* Note that OSE 5041 may be substituted by the student taking both OSE 6111 Optical Wave Propagation and OSE 6115 Interference and Diffraction.

### **Research Methods/Laboratory—6 Credit Hours**

At least 6 credit hours of approved Optics and related science/engineering research methods/laboratory courses are required from the list below. At least one must be in Optics (OSE). One required laboratory may be waived if the student can demonstrate an equivalent hands-on proficiency in that laboratory specialization. These research methods/laboratory courses count toward the formal graduate course work requirement.

- OSE 6234C Applied Optics Laboratory (3 credit hours)
- OSE 6455C Photonics Laboratory (3 credit hours)
- OSE 6526C Laser Engineering Laboratory (3 credit hours)
- OSE 6615L Optoelectronic Device Fabrication Laboratory (3 credit hours)
- Other graduate-related science and engineering methodology labs may be taken with approval by the College of Optics and Photonics.

### **Elective Courses—9 Credit Hours**

All students are required to take a minimum of 9 credit hours of electives. If students substitute OSE 6111 and OSE 6115 for OSE 5041, then the number of elective hours is reduced to 6 credit hours.

Any graduate course with an OSE prefix may be an elective with the approval of the adviser. In addition, the following courses are also accepted toward the Optics (OSE) course work requirement.

- EMA 5610 Laser Materials Processing (3 credit hours)
- PHY 5455 Modern X-Ray Science (3 credit hours)
- PHZ 5505 Plasma Physics (3 credit hours)
- Other appropriate engineering and science courses may be taken with approval by the College of Optics and Photonics.

A listing and description of courses offered by the College of Optics and Photonics is found in the "Courses" section of the Graduate Catalog Menu at the top of the page.

### **Thesis Option—6 Credit Hours**

The thesis option requires at least 6 credit hours of thesis research.

- OSE 6971 Thesis (6 credit hours)

Independent study and directed research credit hours are not allowed toward the degree requirements. The student must prepare an approved program of study and form a thesis committee upon completion of nine credit hours. The MS thesis committee consists of three members, with at least two regular graduate faculty members from the College of Optics and Photonics. Students are required to write a thesis and pass an oral exam based primarily on the topics of the thesis and course work.

### **Nonthesis Option—6 Credit Hours**

The nonthesis option requires an additional 6 credit hours of electives.

- Electives (6 credit hours)

Up to 3 credit hours of directed research (OSE 6918) or research report (OSE 6909) may be included with prior approval of the College of Optics and Photonics although they are not counted toward the formal course work requirement. Students must prepare an approved program of study upon completion of nine credit hours. Students are required to pass a final oral comprehensive examination based primarily on the subject matter of the courses taken. The purpose of the exam is for the student to demonstrate his or her basic knowledge of the fundamentals of optics and photonics.

The nonthesis master's requires a minimum of two methods/laboratory courses as described above. These laboratory courses involve a substantial amount of independent learning on the part of the student. For example, laboratory reports must include sections on the theoretical and historical background behind the phenomena explored in laboratory experiments, and students are expected to obtain this background information on their own by researching the scientific literature. One required Optics laboratory may be waived if the student can demonstrate an equivalent hands-on proficiency in that laboratory specialization. These methodology/laboratory courses count toward the formal course work requirement.

## **Track Curriculum: Optics**

The Optics Track in the Optics and Photonics MS program requires a minimum of 30 credit hours beyond the bachelor's degree. The program offers thesis and nonthesis options. Students are allowed some freedom in planning their study programs, although some foundation Optics courses are strongly recommended as core courses and one research methods/laboratory course is required.

Additional notes on the curriculum:

- A minimum of 24 credit hours of formal graduate courses is required in the thesis option, of which at least 12 credit hours must be formal Optics (prefix OSE) courses. A minimum of 27 credit hours of formal graduate courses is required in the nonthesis option, of which at least 18 credit hours must be formal Optics (prefix OSE) courses. The remaining credit hours can be thesis or other elective and research courses as permitted in the option.
- At least 3 credit hours of an approved optics methods/laboratory course is required in both options.
- An OSE 6909 Research Report of 3 credit hours is required in the nonthesis option.
- Up to 9 credit hours of appropriate graduate courses from accredited universities may be transferred with approval from the College of Optics and Photonics. Only courses with grades of "B" or better can be transferred.

## **Required Courses—18 Credit Hours**

### **Core—15 Credit Hours**

The following foundation courses are required.

- OSE 5203 Geometrical Optics (3 credit hours)
- OSE 6111 Optical Wave Propagation (3 credit hours)
- OSE 6525 Laser Engineering (3 credit hours)
- OSE 6211 Imaging and Optical Systems (3 credit hours)
- OSE 6265 Optical Systems Design (3 credit hours)

### **Research Methods/Laboratory—3 Credit Hours**

At least 3 credit hours of approved Optics and related science/engineering research methods/laboratory courses is required from the list below. These research methods/laboratory courses count toward the formal graduate course work requirement.

- OSE 6234C Applied Optics Laboratory (3 credit hours)
- OSE 6526C Laser Engineering Laboratory (3 credit hours)
- Other graduate-related science and engineering methodology labs may be taken with approval by the College of Optics and Photonics.

### **Elective Courses—6 Credit Hours**

All students are required to take a minimum of 3 credit hours of electives.

Any graduate course with an OSE prefix may be an elective with the approval of the adviser. In addition, the following courses are also accepted toward meeting the Optics (OSE) coursework requirement.

- EMA 5610 Laser Materials Processing (3 credit hours)
- PHY 5455 Modern X-Ray Science (3 credit hours)
- PHZ 5505 Plasma Physics (3 credit hours)
- Other appropriate engineering and science courses may be taken with approval by the College of Optics and Photonics.

A listing and description of courses offered by the College of Optics and Photonics is found in the "Courses" section of the Graduate Catalog Menu at the top of the page.

### **Thesis Option—6 Credit Hours**

The thesis option requires at least 6 credit hours of thesis research.

- OSE 6971 Thesis (6 credit hours)

Independent study and directed research credit hours are not allowed toward the degree requirements. The student must prepare an approved plan of study and form a thesis committee upon completion of 9 credit hours. The MS thesis committee consists of three members, with at least two regular graduate faculty members from the College of Optics and Photonics. Students are required to write a thesis and pass an oral exam based primarily on the topics of the thesis and course work.

### **Nonthesis Option—6 Credit Hours**

The nonthesis option requires an additional 6 credit hours of courses or electives.

- OSE 6909 Research Report (3 credit hours)
- Elective course (3 credit hours)

Up to 3 credit hours of Research Report (OSE 6909) will be included. Students must select an adviser from the College of Optics Faculty to serve on their Research Report. Students must prepare an approved plan of study upon completion of 9 credit hours. Students are required to pass a final oral comprehensive examination based primarily on the subject matter of the courses taken. The purpose of the exam is for the student to demonstrate his or her basic knowledge of the fundamentals of optics and photonics.

### **Track Curriculum: Photonics**

The Photonics Track in the Optics and Photonics MS program requires a minimum of 30 credit hours beyond the bachelor's degree. The program offers thesis and nonthesis options. Students are allowed some freedom in planning their study programs, although some foundation Optics courses are strongly recommended as core courses and one research methods/laboratory course is required.

Additional notes on the curriculum:

- A minimum of 24 credit hours of formal graduate courses is required in the thesis option, of which at least 12 credit hours must be formal Optics (prefix OSE) courses. A minimum of 27 credit hours of formal graduate courses is required in the nonthesis option, of which at least 18 credit hours must be formal Optics (prefix OSE) courses. The remaining credit hours can be thesis or other elective and research courses as permitted in the option.
- At least 3 credit hours of an approved optics methods/laboratory course is required in both options.
- An OSE 6909 Research Report of 3 credit hours is required in the nonthesis option.
- Up to 9 credit hours of appropriate graduate courses from accredited universities may be transferred with approval from the College of Optics and Photonics. Only courses with grades of "B" or better can be transferred.

## Required Courses—21 Credit Hours

### Core—18 Credit Hours

- OSE 5414 Fundamentals of Optoelectronic Devices (3 credit hours)
- OSE 5115 Interference and Diffraction (3 credit hours)
- OSE 6111 Optical Wave Propagation (3 credit hours)
- OSE 6525 Laser Engineering (3 credit hours)
- OSE 6421 Integrated Photonics (3 credit hours)
- OSE 6474 Optical Communications Systems (3 credit hours)

### Research Methods/Laboratory—3 Credit Hours

At least 3 credit hours of approved Optics and related science/engineering research methods/laboratory courses is required from the list below. These research methods/laboratory courses count toward the formal graduate course work requirement.

- OSE 6455C Photonics Laboratory (3 credit hours)
- OSE 6615L Optoelectronic Device Fabrication Laboratory (3 credit hours)
- Other graduate-related science and engineering methodology labs may be taken with approval by the College of Optics and Photonics.

### Elective Courses—6 Credit Hours

All students are required to take a minimum of 3 credit hours of electives.

Any graduate course with an OSE prefix may be an elective with the approval of the adviser. In addition, the following courses are also accepted toward meeting the Optics (OSE) coursework requirement.

- EMA 5610 Laser Materials Processing (3 credit hours)
- PHY 5455 Modern X-Ray Science (3 credit hours)
- PHZ 5505 Plasma Physics (3 credit hours)
- Other appropriate engineering and science courses may be taken with approval by the College of Optics and Photonics.

A listing and description of courses offered by the College of Optics and Photonics is found in the "Courses" section of the Graduate Catalog Menu at the top of the page.

### Thesis Option—6 Credit Hours

The thesis option requires at least 6 credit hours of thesis research.

- OSE 6971 Thesis (6 credit hours)

Independent study and directed research credit hours are not allowed toward the degree requirements. The student must prepare an approved plan of study and form a thesis committee upon completion of 9 credit hours. The MS thesis committee consists of three members, with at least two regular graduate faculty members from the College of Optics and Photonics. Students are required to write a thesis and pass an oral exam based primarily on the topics of the thesis and course work.

### Nonthesis Option—6 Credit Hours

The nonthesis option requires an additional 6 credit hours of courses or electives.

- OSE 6909 Research Report (3 credit hours)
- Elective course (3 credit hours)



Up to 3 credit hours of Research Report (OSE 6909) will be included. Students must select an adviser from the College of Optics and Photonics Faculty to serve on their Research Report. Students must prepare an approved plan of study upon completion of 9 credit hours. Students are required to pass a final oral comprehensive examination based primarily on the subject matter of the courses taken. The purpose of the exam is for the student to demonstrate his or her basic knowledge of the fundamentals of optics and photonics.

## Timeline for Completion

There is not a specific timeline for students enrolled into the MS in Optics and Photonics program. However, the MS program is designed to span three semesters or one full year. The total credit hour requirement for the program is thirty hours, which must be charted out and approved using the Plan of Study form (see Plan of Study section).

## Course Schedule

Please visit the [Courses webpage](#) on the [College of Optics and Photonics website](#) for a course timetable, schedule by course, schedule by instructor and schedule by semester.

## Examination Requirements

There are no specific examinations required for the MS, except the thesis defense, or for nonthesis students, the MS comprehensive oral exam. Passing the PhD Qualifying exam may substitute for the MS comprehensive oral exam. Students should form their Thesis Advisory Committee prior to scheduling their thesis defense.

### Thesis Oral Defense Examination

The thesis is a culmination of research conducted while enrolled in the Optics and Photonics MS program. Thesis topics are decided upon jointly by the student and thesis advisor. The format of a thesis consists of an introduction and literature review, details of the study, and results and conclusions. Since the work is original, it is very important that care is taken in properly citing ideas and quotations of others.

An oral defense of the thesis is required. The approved thesis must be written and prepared in accordance with the College of Optics and Photonics and university graduate policies. Students are required to announce the date of thesis defense at least two weeks prior to the scheduled date. Before submitting a thesis announcement, students are required to have all the necessary details set (room reservation and time). Thesis announcements absent of room reservations or time spans will be denied. Once the defense is over, students are required to submit the Thesis Approval form to notify the college of the outcome of the defense.

The UCF Thesis and Dissertation Manual describes formatting requirements for theses and outlines the steps that graduate students must follow in order to submit their theses electronically to UCF Graduate Studies. See the University Thesis Requirements section below for details.

### Exit Examination and Interview

Students completing the MS in Optics and Photonics degree are required to complete an exit examination and interview with the Associate Dean. The exit interview is the student's opportunity to inform the college about his/her experience in the graduate program. The exit interview also provides data about student placement after graduation. The Exit Examination and Interview is required for nonthesis MS graduates, however the PhD qualifying examination may serve as a substitute. Students electing the thesis option are required to complete only the Exit Interview.

## Thesis Requirements

## University Thesis Requirements

**A thesis is optional for this program; the following information is intended for those choosing to complete a thesis.**

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

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 thesis 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 thesis document by final submission deadline

Students must format their thesis according to the standards outlined at [Formatting the ETD](#). 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 Thesis 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 thesis 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](mailto:editor@ucf.edu).

## Thesis advisory committee membership

The Thesis Advisory Committee will consist of a minimum of three members. At least two or a majority of the committee, whichever is larger, must be graduate faculty in the Optics and Photonics Program who hold full or primary joint appointments in the college. At least one member, referred to as the "external member", must be either a faculty member in another college at UCF or be a recognized researcher from outside the university whose research specialty matches that of the dissertation. If the external member is a UCF faculty member, he or she must be a full or associate member of the graduate faculty in his or her own program. If the external member is from outside the university, they must be approved as a graduate faculty scholar to serve by the College of Optics and Photonics curriculum committee and the UCF College of Graduate Studies. The graduate college maintains a list of graduate faculty on their website, however, just because a person is listed as a Graduate Faculty Scholar does not automatically qualify him/her to serve on any committee. Such approvals are specific to each dissertation. Further questions on the composition of dissertation advisory committees can be answered by the Associate Dean.

Prior to enrolling in thesis hours, these members must be identified and approved by filling out the Thesis committee form and submit this to the college for subsequent university approval. Please allow at least two weeks for this process before attempting to enroll in thesis hours.

## Thesis Progress

Students are expected to successfully progress in their thesis research each year. Upon admittance into the masters program, students are held to a deadline of seven years to graduate before completed courses are considered outdated and removed off the GPS degree audit. In order to ensure students are continuously working on their thesis, it is required that once enrolling in thesis hours (6971) the student must continuously enroll (including summers) in thesis hours until actual defense. For more information on the before mentioned policies, please reference the current catalog.

## Graduate Research

For information on research in the discipline including a list of research areas, groups, laboratories and publications visit the [Research webpage](#) on the [College of Optics and Photonics website](#).

As a graduate college for optical science and engineering education and research, the research activities of COP faculty span the spectrum from basic science to prototype development. Additionally, the faculty vigorously pursue joint research projects with industry, academia, and government laboratories. The main facilities of the COP are housed in a state-of-the-art 96,000 ft<sup>2</sup> building dedicated to optics and photonics research and education.

The COP faculty collaborate closely with other UCF research units, including the Center for Nanoscience and Technology, the Burnett School of Biomedical Sciences, the Advanced Materials Processing and Analysis Center (AMPAC), the Institute for Simulation and Training (IST), and the Florida Solar Energy Center. Several COP faculty hold joint appointments in these and other UCF departments, which facilitates access to the outstanding facilities in these units and encourages interdisciplinary research.

### Research Policies and Student Responsibility

Research is an integral part of the college and its graduate programs. Masters students can be funded as research assistants at the discretion of their thesis advisors depending on the availability of funds. Provided that a research assistantship is awarded, a tuition waiver may also be granted.

Students are expected to take an active role in the laboratory and in the classroom, thereby taking full advantage of the college's outstanding facilities. However, before beginning their work as a research assistant, students have the responsibility to familiarize themselves with the university's policies governing research as detailed on the UCF Research and Commercialization and the Office of Graduate Studies websites.

As graduate students employed by or attending the university, each action, whether bearing positive or negative results, is a reflection of not only that student but of the university. Therefore, students who commit research ethics violations, Golden Rule violations, or do not meet their thesis advisor's expectations may lose financial support. In serious cases, students may face possible removal from their graduate program and potential referral to the Office of Student Conduct for university disqualification. If a student is removed from the graduate program or university, an appeal process can be initiated by the student (See Graduate Academic Grievance Procedure in the Frequently Cited Policies section).

### 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. For further information on UCF's Patent and Invention policies, students are encouraged to reference the current graduate catalog.

## Financial Support

For information on fellowships available for graduate students in Optics and Photonics visit the [Fellowships webpage](#) of the [College of Optics and Photonics website](#).

The College of Optics and Photonics works to provide students the opportunity to fully engage themselves in research education. However, master's students are typically not funded unless granted a research assistantship by a faculty member. Provided that an assistantship is awarded, tuition waiver dollars may also be made available to cover partial tuition expenses. Master's students in need of financial aid are strongly encouraged to seek out openings in faculty laboratories. In the event that a student can not obtain a research assistantship, students can request financial aid through forms managed by the

UCF Financial Aid Office. Students granted research assistantships should familiarize themselves with the following requirements governing employment legibility.

- Students must meet the expectations of the faculty (employer) in order to maintain funding. If, at any time, students do not meet the expectations of their employer, funding can be canceled.
- Students must maintain good academic standing with a graduate GPA of 3.0 or higher each term. If a student's term or program GPA falls below 3.0, funding will not be available until the student's status returns to good academic standing (GPA of at least 3.0).
- University financial resources are to be used to support full-time, degree-seeking graduate students who maintain good academic progress. Therefore, students not enrolled full-time and/or in a probationary status due to a low GPA are not eligible for funding.

## Graduate Student Associations

### Optics Student Organizations:

- [CREOL Association of Optics Students \(CAOS\)](#)
- [International Society for Optical Engineering](#)
- [Optical Society of America Student Chapter](#)
- [The Institute of Electrical and Electronic Engineers](#)

## Professional Development

As students progress in their academic career, the University of Central Florida also provides many opportunities for professional development. The following is a listing of several organizations offering outstanding development opportunities.

### Career Services and Experiential Learning Center

- **Career Expo**  
Held in the fall and spring, this event provides the opportunity for employers to discuss internship, career, and employment opportunities with University of Central Florida students and alumni.
- **Internship Job Fair**  
Provides the opportunity for employers to discuss internship, career, and employment opportunities with University of Central Florida students and alumni through the Internship Fair and Spring Career Expo.
- **Statewide Job Fair**  
Joint effort from all Florida universities to provide the opportunity to Florida students to meet with employers and discuss internship, career, and employment opportunities.
- **Employment Prep Fair**  
Held prior to each Career Expo, this event provides students with the opportunity to meet with employers to learn more about job search techniques, resumes, interviewing, and negotiating job offers. Employers are available to critique resumes and offer practice interviews. This event is designed to better prepare students for success at Career Expo.
- **Externship Information Sessions**  
Provide students with information on how to participate in winter and spring externships. The Externship Program offers students the opportunity to shadow an employer in their professional area of interest to learn more about the career field as well as the organizations culture, products, and services.
- **Career Panels**  
Provide students with opportunities to hear employers talk about potential careers and jobs relative to their majors. These employer panels are ideal for anyone considering a major or already declared in a major relevant to the panel's professional field.

### 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 [www.students.graduate.ucf.edu/pathways/](http://www.students.graduate.ucf.edu/pathways/).

### 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. The Research Forum is usually held in the spring semester. Students may contact the college or the College of Graduate Studies for more information.

### Graduate Student Association

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 [www.gsa.ucf.edu](http://www.gsa.ucf.edu).

## Job Search

### Career Services

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 [www.career.ucf.edu](http://www.career.ucf.edu).

## Forms

- [College of Graduate Studies Forms](#)  
A listing of general forms and files for graduate students including student services and records and graduation forms.
- [College of Optics and Photonics Graduate Student online information](#)  
Link includes forms required for progress toward the MS degree.

## Useful Links

- [College of Graduate Studies Useful Links](#)
- [College of Optics and Photonics](#)
- [College of Graduate Studies](#)
- [College of Graduate Studies Graduate Catalog](#)
- [Graduate Student Center](#)
- [Pathways to Success](#)

[Graduate Catalog](#) | [About Graduate Handbooks](#) | [Events Calendar](#) | [Apply Now!](#)



© 2016 University of Central Florida - May 2016, Volume 36

This Publication is copyrighted by the University of Central Florida and may not be reprinted or republished in whole or in part in any fashion or any media whatsoever without the prior written consent of a duly authorized University

of Central Florida official.

Developed and maintained by the UCF College of Graduate Studies. Questions? E-mail [webmaster](mailto:webmaster).