Graduate Council Curriculum Committee
October 18, 2017
2:30 p.m., Millican Hall 395E

Agenda

1. Welcome and call to order
2. Review of minutes from October 4, 2017
3. General business
4. Revision of COS Mathematical Science MS program effective Fall 2018
5. Revision of COS Mathematics PhD program effective Fall 2018
6. Addition of COHPA Social Work DSW program effective Fall 2018
7. Revision of Optics and Photonics PhD program
8. Courses
9. Adjournment

Members of the Graduate Council Curriculum Committee

Charles Kelliher, Chair, CBA	Devon Jensen, CGS Liaison
Jim Moharam, Steering Liaison, COP	Mostafa Bassiouni, CECS
Kerry Purmensky, CAH	Joellen Edwards, CON
Elsie Olan, CEHP	Foard Jones, CBA
Jennifer Sandoval, COS	David Hagan, COP
Cheyenne Ro, RCHM	Lynn Hepner, CAH
Art Weeks, CECS	Jana Jasinski, COS
Diane Andrews, CON	Jesse Mendez, CEHP
Steven Ebert, COM	Saleh Naser, COM
Mercedeh Khajavikhan, COP	Youcheng Wang, RCHM
Terrie Sypolt, LIB	Ross Wolf, COHPA
Joshua Troche, COHPA	Andrea Pulido, GSA

University of Central Florida

Graduate Program Recommendation Form - REVISIONS ONLY

This form is to be used to **REVISE** degree programs, tracks, or certificate programs. If there are changes to a program and the changes will also affect the program tracks, one form may be used for both the program and the track(s).

Please refer to the Graduate Council Curriculum Meeting Schedule for submission deadlines.

Checklist of items to be attached with completed form:

☑ Complete and current Graduate Catalog copy (www.graduatecatalog.ucf.edu), including description, curriculum, contact information, application requirements, and application deadlines. **Use Track Changes in Word to show revisions.**

☐ A list of faculty who will participate in the program, track or certificate and their credentials.

☐ All course action requests that will be needed to implement the curriculum changes.

☐ If applicable, a written agreement from all involved units that they are in support of the revisions.

College/Unit(s) Submitting Proposal: College of Science

Proposed Effective Term/Year: Fall 2018

Unit(s) Housing Program: Mathematics

Name of program, track and/or certificate: Mathematical Master Program

Please check all that apply: This action affects a: ☑ Program ☐ Track ☐ Certificate

If the revision applies to multiple tracks, please list them here:

Brief description of **program and rationale** of the revision: **Do not add complete catalog copy here.**

In the revision, we adjust the restrictives by adding two courses on Probabilty and Statistics.

The rationals on elective courses is that more students are interested in applied and industrial mathematics, such as financial mathematics and statistics. One course added in restricted electives is MAA7239 (Asymptotic Methods in Mathematical Statistics), which is the only course offered by the department that can be used to form a two semester sequence with MAP6111(Mathematical Statistics).

Briefly list curriculum changes in bullet format. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. **Remember to attach the catalog copy showing changes, using Track Changes in Word.**

1. Add two more options on the restricted electives: MAA 6245 Measure and Probability II (3 Credit Hours) and MAA7239 Asymptotic Methods in Mathematical Statistics.

Name Change

Are you changing the name of an existing program, track, or certificate? ☐ Yes ☑ No

If yes, provide the new name of the program, track, or certificate: _____

A proposed name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

If you are ONLY making a name change, skip the "Impact on Current Students" section.

Impact on Current Students

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate? ☐ Yes ☐ No

If yes, state the name of the program or track where students are currently enrolled and attach a list of students if possible:

_____

Will students have the option to stay in their existing program, track, or certificate? ☐ Yes ☑ No

If yes, how will current students be impacted by this change?

If there are substantial revisions, please complete the following table on financial support: (Specify all forms of support -- assistantships, fellowships, and tuition remission.)

	Number of assistantship students	Source of funds	Number of fellowship students (specify fellowship)	Number of tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Signature Page

Recommend Approval (all approval levels must be signed)

Graduate Faculty (Print) Qiyu Sun (Signature) _____ Date 10/2/2017
Program Coordinator

Department Chair (Print) Xin Li (Signature) Xin Li Date 10/3/2017
/Director

College Academic (Print) Jana L. Jasinski (Signature) _____ Date 10/3/17
Standards

College Dean (Print) Michael D. Johnson (Signature) _____ Date 2017-10-5

Digitally signed by Michael D. Johnson
DN: cn=Michael D. Johnson, o=University of Central Florida, ou=College of Sciences, email=Michael.Johnson@ucf.edu, c=US
Date: 2017.10.05 16:23:19 -04'00'

Graduate Council (Print) _____ (Signature) _____ Date _____

Vice President for Research and Dean of the College of Graduate Studies

(Print) _____ (Signature) _____ Date _____

Approval

Provost and Executive Vice President _____ Date _____

Distribution: After approval is received from the Provost, distribution will be to:

Department(s); College; Registrar; Associate Registrar; Institutional Knowledge Management; Academic Services; College of Graduate Studies

College : Sciences Degree :MS
Department : Mathematics Option : Thesis, Nonthesis
Program Websites : https://math.cos.ucf.edu/graduate/

PROGRAM DESCRIPTION

The Master of Science in Mathematical Science provides a broad base in applied and industrial mathematics.

~~Research interests of the faculty include: Algebra and Number Theory, Applied Analysis, Applied and Computational Harmonic Analysis, Classical Analysis and Approximation Theory, Combinatorics and Graph Theory, Dynamic Systems, Functional Analysis, Geometry and Topology, Inverse Problems, Mathematical Biology, Mathematical Finance, Mathematical Physics, Numerical Analysis, Orthogonal Polynomials and Special Functions, Partial Differential Equations, and Probability and Statistics.~~ Students in the program can specialize in one of many aspects of mathematics, including Approximation Theory, Applied and Computational Harmonic Analysis, Big Data and Mathematical Statistics, Combinatorics and Graph Theory, Commutative Algebra and Algebraic Geometry, Control and Optimization, Differential and Symplectic Geometry, Fluid and Plasma Dynamics, Functional Analysis, Inverse and Ill-posed Problems, Mathematical Biology, Mathematical Finance, Nonlinear Waves and Nonlinear Dynamics, Numerical Analysis, Orthogonal Polynomials, Partial Differential Equations, Probability and Stochastic Analysis, Tomography and Medical Imaging, and Wave Propagation.

Hide Program Description

CURRICULUM

The Mathematical Science MS program requires 30 credit hours minimum beyond the bachelor's degree. There are two options for the master's degree: thesis and non-thesis.

Total Credit Hours Required:

30 Credit Hours Minimum beyond the Bachelor's Degree

Thesis and non-thesis options are offered within the program. In both options, after completing the core courses, a student must establish an academic adviser for non-thesis MS option or a thesis adviser for thesis MS option. A program of study must be established by the end of the second semester and presented to the graduate program director for departmental approval. The program of study must include the completion of the core courses and one 2-semester sequence. At least one-half of the program courses in both options must be taken at the 6000 level.

Required Courses—15 Credit Hours

For thesis or non-thesis option, the master's program requires all students to complete the following five courses.

- MAS 5145 Advanced Linear Algebra and Matrix Theory (3 credit hours)
- MAA 5228 Analysis I (3 credit hours)
- MAA 6229 Analysis II (3 credit hours)
- MAT 5712 Scientific Computing (3 credit hours)
- MAP 6385 Applied Numerical Mathematics (3 credit hours)

Elective Courses—9 Credit Hours

Restricted Electives—3–6 Credit Hours

After the completion of the core courses, the program requires all students to complete one of the following two-semester sequences. The following shows examples of acceptable sequences using current courses. We expect that other sequences will be developed as our program grows. Note that some sequences consist of a core course plus one elective, while others consist of two electives. Thus, the credit hours in this requirement are variable (3 to 6 credit hours).

- ~~MAP 6407 Integral Equations and Calculus of Variations (3 credit hours) / MAP 6408 Perturbations and Asymptotic Methods (3 credit hours)~~
- MAA 6405 Complex Variables (3 credit hours) / MAA 6404 Complex Analysis (3 credit hours)
- MAD 5205 Graph Theory I (3 credit hours) / MAD 6309 Graph Theory II (3 credit hours)
- MAP 5336 Ordinary Differential Equations and Applications (3 credit hours) / MAP 6356 Partial Differential Equations (3 credit hours)
- MAA 6238 Measure and Probability I (3 credit hours) ~~/ MAP 6111 Mathematical Statistics (3 credit hours) or~~ /MAA 6245 Measure and Probability II (3 credit hours)
- MAA 6306 Real Analysis (3 credit hours) / MAA 6506 Functional Analysis (3 credit hours)
- MAP 6111 Mathematical Statistics (3 credit hours)/ MAA 7239: Asymptotic Methods in Mathematical Statistics (3 Credit hours)

Unrestricted Electives—3-6 Credit Hours

Unrestricted electives should be chosen in consultation with the graduate program director or the student's thesis adviser and may be chosen from the suggested options: Approximation Theory, Applied and Computational Harmonic Analysis, Big Data and Mathematical Statistics, Combinatorics and Graph Theory, Commutative Algebra and Algebraic Geometry, Control and Optimization, Differential and Symplectic Geometry, Fluid and Plasma Dynamics, Functional Analysis, Inverse and Ill-posed Problems, Mathematical Biology, Mathematical Finance, Nonlinear Waves and Nonlinear Dynamics, Numerical Analysis, Orthogonal Polynomials, Partial Differential Equations, Probability and Stochastic Analysis, Tomography and Medical Imaging, and Wave Propagation. A list of courses for these elective options can be obtained from

the graduate program director. Approved graduate courses outside the department may also be used.

Thesis Option—6 Credit Hours

In this option, the MS degree requires a total of at least 30 credit hours comprised of at least 24 credit hours of course work and 6 credit hours of thesis. This includes the 15 credit hours of the core courses and 3-6 credit hours of a two-course sequence. No more than 6 credit hours of independent study or directed research may be credited toward the degree. It is strongly recommended that the student select a thesis adviser and establish a program of study by the completion of the core courses. With the help of a thesis adviser, the student will form a thesis committee of three members, of which at least two must be from the Department of Mathematics.

It is recommended that the thesis topic have potential for industrial applications. An oral defense of the thesis will be required.

- MAP 6971 Thesis (6 credit hours)

Non-thesis Option—6 Credit Hours

Non-thesis students will take an additional 6 credit hours of electives. The electives should be chosen in consultation with the graduate program director or the student's adviser.

Non-thesis students will receive independent learning experiences by taking one of the two-semester sequences, where they apply mathematical principles to independent projects. Other courses that also have substantial research projects include MAP 5117 Mathematical Modeling, MAT 5712 Scientific Computing. MAP 6111 Mathematical Statistics, MAP 6424 Transform Methods, MAP 6465 Wavelets and Their Applications, and may be taken as electives.

No more than 3 credit hours of independent study may be credited toward the degree. It is strongly recommended that the student select an academic adviser and establish a program of study by the completion of the core courses. In addition, the non-thesis student must pass a comprehensive written examination (by passing the qualifying/comprehensive examination at or above the master level) based on the core courses. Two attempts at the examination are permitted.

Independent Learning

In the Mathematical Science MS program, the thesis option provides an independent learning experience through directed research, reading published research papers, and writing and defending the thesis. The non-thesis option requires students to take one of the two-semester sequences, where they apply mathematical principles to independent projects.

Application Requirements

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the Admissions section of the Graduate Catalog. Applicants must apply online. All requested materials must be submitted by the established deadline.

In addition to the general UCF graduate application requirements, applicants to this program must provide:

- One official transcript (in a sealed envelope) from each college/university attended.
- Official, competitive GRE score taken within the last five years.
- A working knowledge of undergraduate calculus, differential equations, linear algebra (or matrix theory), ~~boundary value problems,~~ ~~statistics,~~ ~~computer programming,~~ and maturity in the language of advanced calculus (at the level of MAA 4226).

Students who find they are not adequately prepared in one or more of the required mathematical subject areas can select appropriate courses from the undergraduate curriculum to make up such deficiencies. Such courses, unless specially approved, will not count toward the graduate degree. Applicants not qualified for regular status may be admitted initially to the university in a nondegree-seeking status. Transfer of credits from other programs will be considered on a course-by-course basis.

Meeting minimum UCF admission criteria does not guarantee program admission. Final admission is based on evaluation of the applicant's abilities, past performance, recommendations, match of this program and faculty expertise to the applicant's career/academic goals, and the applicant's potential for completing the degree.

Application Deadlines

All application materials must be submitted by the appropriate deadline listed below.

Mathematical Science MS	*Fall Priority	Fall	Spring	Summer
Domestic Applicants	Jan 15	Jul 15	Dec 1	Apr 15
International Applicants	Jan 15	Jan 15	Jul 1	Nov 1
International Transfer Applicants	Jan 15	Mar 1	Sep 1	Dec 15

*Applicants who plan to enroll full time in a degree program and who wish to be considered for university fellowships or assistantships should apply by the Fall Priority date.

FINANCIALS

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see the College of Graduate Studies Funding website, which describes the types of financial assistance available at UCF and provides general guidance in planning your graduate finances. The Financial Information section of the Graduate Catalog is another key resource.

Fellowships

Fellowships are awarded based on academic merit to highly qualified students. They are paid to students through the Office of Student Financial Assistance, based on instructions provided by the College of Graduate Studies. Fellowships are given to support a student's graduate study and do not have a work obligation. For more information, see UCF Graduate Fellowships, which includes descriptions of university fellowships and what you should do to be considered for a fellowship.

University of Central Florida

Graduate Program Recommendation Form - REVISIONS ONLY

This form is to be used to **REVISE** degree programs, tracks, or certificate programs. If there are changes to a program and the changes will also affect the program tracks, one form may be used for both the program and the track(s).

Please refer to the Graduate Council Curriculum Meeting Schedule for submission deadlines.

Checklist of items to be attached with completed form:

☑ Complete and current Graduate Catalog copy (www.graduatecatalog.ucf.edu), including description, curriculum, contact information, application requirements, and application deadlines. **Use Track Changes in Word to show revisions.**

☐ A list of faculty who will participate in the program, track or certificate and their credentials.

☐ All course action requests that will be needed to implement the curriculum changes.

☐ If applicable, a written agreement from all involved units that they are in support of the revisions.

College/Unit(s) Submitting Proposal: College of Science

Proposed Effective Term/Year: Fall 2018

Unit(s) Housing Program: Mathematical PhD program

Name of program, track and/or certificate: _____

Please check all that apply: This action affects a: ☐ Program ☐ Track ☐ Certificate

If the revision applies to multiple tracks, please list them here:

_____

Brief description of **program and rationale** of the revision: **Do not add complete catalog copy here.**

In the revision, we add two more options in the one required courses, and adjust the restricted electives by adding two courses on Probability and Statistics.

The rationale for the revision on required courses is that PhD students in the program is more diverified, and more students are interested in applied, industrial and financial mathematics.

Briefly list curriculum changes in bullet format. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. **Remember to attach the catalog copy showing changes, using Track Changes in Word.**

1. Students are required to take six required courses with five unchanged and one selected from the following four options: MAP 5336 (Ordinary Differential Equation), MAA6405 (Complex Variables), MAA6306 (Real Analysis) and mAP6111 (Mathematical Statistics). All has 3 credit hours. The last two course options are added.

2. Add four more options on the restricted electives: MAA6245 Measure and Probability II (3 Credit hours) and MAA7239 Pertubations and Asymptotic Methods (3 Credit Hours)

Name Change

Are you changing the name of an existing program, track, or certificate? ☐ Yes ☑ No

If yes, provide the new name of the program, track, or certificate: _____

A proposed name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

If you are ONLY making a name change, skip the "Impact on Current Students" section.

Impact on Current Students

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate? ☐ Yes ☐ No

If yes, state the name of the program or track where students are currently enrolled and attach a list of students if possible:

_____

Will students have the option to stay in their existing program, track, or certificate? ☐ Yes ☐ No

If yes, how will current students be impacted by this change?

If there are substantial revisions, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	Number of assistantship students	Source of funds	Number of fellowship students (specify fellowship)	Number of tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Signature Page

Recommend Approval (all approval levels must be signed)

Graduate Faculty Program Coordinator	(Print) Qiyu Sun	(Signature)		Date	09/2/2017
Department Chair /Director	(Print) Xin Li	(Signature)	Xin Li	Date	10/3/2017
College Academic Standards	(Print) Jana L. Jasinski	(Signature)		Date	10/3/17
College Dean	(Print) Michael D. Johnson	(Signature)	Digitally signed by Michael D. Johnson DN: cn=Michael D. Johnson, o=University of Central Florida, ou=College of Sciences, email=Michael.Johnson@ucf.edu, c=US Date: 2017.10.05 16:21:20 -04'00'	Date	2017-10-5
Graduate Council	(Print)	(Signature)		Date	

Vice President for Research and Dean of the College of Graduate Studies

(Print) _____ (Signature) _____ Date _____

Approval

Provost and Executive Vice President _____ Date _____

Distribution: After approval is received from the Provost, distribution will be to:

Department(s); College; Registrar; Associate Registrar; Institutional Knowledge Management; Academic Services; College of Graduate Studies

College : Sciences | Degree :PHD
Department : Mathematics | Option : Dissertation
Program Websites : https://math.cos.ucf.edu/graduate/

PROGRAM DESCRIPTION

The Mathematics PhD program prepares students with a broad base in pure, applied and industrial mathematics.

The Doctor of Philosophy degree in Mathematics is intended to provide a broad base in applied and industrial mathematics. The goal of the program is to produce students who will attain distinction in their fields of research. In order to achieve this, the program has required core courses as well as a set of electives providing cross-disciplinary subjects. All students are required to take electives outside the department.

Students in the program can specialize in one of many aspects of mathematics, including Approximation Theory, Applied and Computational Harmonic Analysis, Big Data and Mathematical Statistics, Combinatorics and Graph Theory, Commutative Algebra and Algebraic Geometry, Control and Optimization, Differential and Symplectic Geometry, Fluid and Plasma Dynamics, Functional Analysis, Inverse and Ill-posed Problems, Mathematical Biology, Mathematical Finance, Nonlinear Waves and Nonlinear Dynamics, Numerical Analysis, Orthogonal Polynomials, Partial Differential Equations, Probability and Stochastic Analysis, Tomography and Medical Imaging, and Wave Propagation. Responding to this wide variety of interests, the program offers flexibility in the composition of the core courses as well as the ~~qualifying~~ candidacy examination. The program is comprehensive with opportunities for students to pursue research in a variety of disciplines.

Faculty research interests include: Algebra and Number Theory, Applied Analysis, Applied and Computational Harmonic Analysis, Classical Analysis and Approximation Theory, Combinatorics and Graph Theory, Dynamic Systems, Functional Analysis, Geometry and Topology, Inverse Problems, Mathematical Biology, Mathematical Finance, Mathematical Physics, Numerical Analysis, Orthogonal Polynomials and Special Functions, Partial Differential Equations, and Probability and Statistics.

Hide Program Description

CURRICULUM

The Mathematics PhD program consists of at least 75 credit hours of course work beyond the bachelor's degree, of which a minimum of 39 hours of formal course work, exclusive of independent study, and 15 credit hours of dissertation research (7980) are required. The program requires 18 credit hours of core courses, and 6 to 12 credit hours in two 2-semester sequences.

Total Credit Hours Required:

75 Credit Hours Minimum beyond the Bachelor's Degree

Required Courses—18 Credit Hours

The remaining 30 to 36 credit hours consist of additional dissertation research (7980 or 7919), at least 15 credit hours of regular classroom elective courses, and at most 12 credit hours of independent study or independent directed research. Electives require the approval of the adviser and the graduate program director; up to 12 credit hours may be taken outside the department. At least one-half of the program courses must be taken at the 6000 level. Students who pass the qualifying examination may substitute some of the core courses at the approval of the adviser and the graduate program director.

All students are required to complete the following courses with grade of "B" or better.

- MAA 5228 Analysis I (3 credit hours)
- MAA 6229 Analysis II (3 credit hours)
- MAT 5712 Scientific Computing (3 credit hours)
- MAP 6385 Applied Numerical Mathematics (3 credit hours)
- MAS 5145 Advanced Linear Algebra and Matrix Theory (3 credit hours)
- MAP 5336 Ordinary Differential Equations and Applications (3 credit hours), or MAA 6405 Complex Variables (3 credit hours), or MAA 6306 Real Analysis (3 credit hours), or MAP 6111 Mathematical Statistics (3 credit hours)

Elective Courses—42 Credit Hours

At least 21 hours of course work here must be formal course work, exclusive of independent study.

Restricted Electives—6-12 Credit Hours

All students are required to complete two 2-semester sequences. Sequences are pairs of related courses that give advanced knowledge in an area of mathematics.

Each sequence must be approved by the dissertation adviser, dissertation committee, and the graduate program director. The following shows examples of acceptable sequences using current courses. We expect that other sequences will be developed as our program grows. Note that some sequences consist of a core course plus one elective, while others consist of two electives. Thus, the credit hours in this requirement are variable (6 to 12 credit hours). A written examination on two such sequences will be required as part of the candidacy examination (see more details in Candidacy Examination section).

- ~~MAP 6407 Integral Equations and the Calculus of Variations (3 credit hours) / MAP 6408 Perturbations and Asymptotic Methods (3 credit hours)~~
- MAA 6405 Complex Variables (3 credit hours) / MAA 6404 Complex Analysis (3 credit hours)

- MAD 5205 Graph Theory I (3 credit hours) / MAD 6309 Graph Theory II (3 credit hours)
- MAP 5336 Ordinary Differential Equations with Applications (3 credit hours) / MAP 6356 Partial Differential Equations (3 credit hours)
- MAA 6238 Measure and Probability I (3 credit hours) / MAA 6245 Measure and Probability II (3 credit hours)
- MAA 6306 Real Analysis (3 credit hours) / MAA 6506 Functional Analysis (3 credit hours)
- MAT 5712 Scientific Computing (3 credit hours)/MAP 6385 Applied Numerical Mathematics (3 credit hours)
- MAP 6111 Mathematical Statistics (3 credit hours)/ MAA 7239 Asymptotic Methods in Mathematical Statistics

Unrestricted Electives—30-36 Credit Hours

Electives are chosen in consultation with the student's advisory committee and may be chosen from the suggested options: Discrete Mathematics, General Applied Mathematics, Mathematical Computer Tomography, Image Processing and Computer Graphics, Mathematical Finance, ~~Mathematical Optics,~~ Mathematical Physics, Pure Mathematics, ~~Rational Mechanics,~~ ~~Signal Analysis,~~ and Mathematical Statistics. A list of elective course options can be obtained from the graduate program director.

Courses taken outside the Mathematics department must be approved by the adviser and graduate program director. These courses are selected in consultation with the student's advisory committee.

Dissertation—15 Credit Hours Minimum

- XXXX 7980 Dissertation Research (15 credit hours minimum)

Qualifying Examination

The qualifying/comprehensive examination is based on the core course work (MAA 5228 Analysis I/MAA 6229 Analysis II/ MAS 5145 Advanced Linear Algebra and Matrix Theory). To continue in the PhD program, students must pass the examination at the PhD level. Two attempts are permitted. The examination will be administered twice a year: one in the Fall semester and the other in the Spring semester. To take the examination, students must have earned a "B" or better in each core course, must have a minimum grade point average of 3.0 (out of 4.0) in the program, or must obtain permission from the graduate program director. Students will normally take the examination after the first year and are expected to have passed it by the end of the second year of study unless a written request for a postponement has been approved by the Graduate Committee at least two months before the examination date. The student must pass the Qualifying Examination in at most two attempts.

It is strongly recommended that the student select a dissertation adviser by the completion of 18 credit hours of course work, and it is strongly recommended that the student works with the

dissertation adviser to form a dissertation committee within two semesters of passing the Qualifying Examination.

Candidacy Examination

The Candidacy Examination consists of a written examination based on the materials from two of the selected two-semester sequence courses taken by the students beyond the core courses on Analysis and Advanced Linear Algebra (MAA 5228, MAA 6229, MAS 5145). A committee formed or selected by the Graduate Committee or the graduate program director is responsible for preparing and grading the written examinations.

After passing the candidacy examination and meeting other requirements, the student can register for Doctoral Dissertation (MAP 7980 or MAA 7980). A minimum of 15 Doctoral Dissertation credit hours are required. The Candidacy Examination can be attempted after passing the qualifying examination. The Candidacy Examination must be completed within three years after passing the qualifying examination. A student must successfully pass the Candidacy Examination within at most two attempts.

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.
- The dissertation advisory committee is formed, consisting of approved graduate faculty and graduate faculty scholars.
- Submittal of an approved program of study.

Dissertation Proposal Examination

After passing the candidacy examination, the student will prepare a dissertation proposal and orally present it to the dissertation advisory committee for approval. The proposal will include a description of the research performed to date and an agenda for the research planned to be completed for the dissertation. In addition to standards of correctness, indicating a suitable level of mastery of the material of the area of the dissertation, and suitability of the proposed dissertation topic, the presentation must meet current standards for professional presentations within the discipline of mathematics. For the successful completion of the Dissertation Proposal Examination the presentation must be judged as passing the requirements for the examination by the majority of the dissertation committee. This exam must be passed within 18 months of passing the candidacy examination and not later than the end of the sixth year of graduate study. A candidate must pass this examination within at most two attempts.

Dissertation Defense

Upon completion of a student’s research, the student’s committee schedules an oral defense of the dissertation. Most students complete the program within five years after obtaining their

bachelor's degree. Students are expected to complete the dissertation in no more than seven years from the date of admission to the program.

Independent Learning

The required 15 credit hours of dissertation will provide ample opportunities for students to gain the independent learning experience through studying published research papers and deriving, on their own, new and meaningful research results.

Application Requirements

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the Admissions section of the Graduate Catalog. Applicants must apply online. All requested materials must be submitted by the established deadline.

In addition to the general UCF graduate application requirements, applicants to this program must provide:

- One official transcript (in a sealed envelope) from each college/university attended.
- Bachelor's degree in related field.
- Official, competitive GRE score, taken in the last five years.
- Three letters of recommendation.
- Goal statement.
- Résumé.

Meeting minimum UCF admission criteria does not guarantee program admission. Final admission is based on evaluation of the applicant's abilities, past performance, recommendations, match of the program and faculty expertise to the applicant's career/academic goals, and the applicant's potential for completing the degree.

Transfer of credits from other programs will be considered on a course-by-course basis. Additionally, students entering the graduate program with regular status are assumed to have a working knowledge of undergraduate calculus, differential equations, linear algebra (or matrix theory), ~~boundary value problems,~~ ~~statistics, computer programming,~~ and maturity in the language of advanced calculus (at the level of MAA 4226). Students who are not adequately prepared in one or more of these areas can select appropriate courses from the undergraduate curriculum to make up such deficiencies. Such courses, unless specially approved, do not count toward the graduate degree.

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The department offers ~~over~~ ~~20~~ around 15 new Graduate Teaching Assistantships every year on a competitive basis. A few Graduate Research Assistantships are also available for qualified students.

UCF College of Graduate Studies

Graduate Program Recommendation Form - ADDITIONS ONLY

This form is to be used to ADD degree programs, tracks, or certificate programs. If there are tracks being added to the program, one form may be used for both the program and the track(s).

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☐ A list of faculty who will participate in the program, track or certificate and their credentials.

☐ If applicable, a written agreement from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate.

☐ Course Action Request forms, as needed.

☐ Library assessment of resources.

College/Unit(s) Submitting Proposal: College of Health and Public Affairs

Proposed Effective Term/Year: Summer 2018 (Fall 2018 admission)

Unit(s) Housing Program: School of Social Work

Name of program, track and/or certificate: Doctorate of Social Work

Please check all that apply. This action affects a: ☒ Program ☐ Track ☐ Certificate

DELIVERY: Program will be delivered: ☐ Face to Face ☒ UCF Online ☐ Mixed Delivery

Will the program be a **market tuition rate** program? ☐ Yes ☒ No

Will the program be a **cost recovery** program? ☐ Yes ☒ No

Brief description of program and rationale for the addition: **Do not add complete catalog copy here.**

The UCF School of Social Work (SSW) proposes a professional practice Doctorate in Social Work (DSW) aimed for working social work professionals to increase their skills in the field of Behavioral Healthcare Leadership and evidence-based practice, leading to career enhancement in healthcare and behavioral health settings or expanded opportunities for academic positions in Social Work degree programs. UCF's DSW curriculum will require completion of 42 credit hours. It will be an online (with two required residential weekend sessions), part-time three-year cohort program. UCF's DSW curriculum is distinguished from existing DSW programs in the U.S. by its grounding in the specific recommendations of the Institute of Medicine for population-based focus on behavioral health and training of practitioners in building evidence for behavioral health interventions with a focus on fidelity, standardization, accountability, and performance measurement. The curriculum will include differential theoretical approaches to social and behavioral problems and practice approaches; advanced knowledge and skills in cutting edge and emerging intervention strategies and their application in practice, agency and community settings; enhanced evaluation of behavioral health practice competency; and emphasis on pedagogy and scholarly dissemination of advanced practice skills and competencies. All curriculum content will be developed within an overarching theme of reducing disparities in health and mental health and access to behavioral health services.

Impact on Current Students

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate? ☐ Yes ☒ No

If yes, state the name of the program or track where students are currently enrolled and attach a list of students if possible:

Not applicable

Will students have the option to stay in their existing program, track, or certificate? ☐ Yes ☒ No

If yes, how will current students be impacted by the addition of a program, track or certificate?

Not applicable

Future Students

Provide a statement of who is likely to enroll and why. Please state if there is licensure or certification that depends upon this education, etc. Also, complete the following table.

	Year 1	Year 2	Year 3
Headcount	15	30	45
SCHs			

Indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

Please complete the following table on financial support:
(Specify all forms of support – assistantships, fellowships, and tuition remission.)

	Number of assistantship students	Source of funds	Number of fellowship students (specify fellowship)	Number of tuition remissions	Source of funds
Year 1	0	N/A	0	0	N/A
Year 2	0	N/A	0	0	N/A
Year 3	0	N/A	0	0	N/A

Signatures

Recommend Approval *(all approval levels must be signed)*

Graduate Faculty Program Coordinator:

Print: _____ **Signature:** _____ **Date:** _____

Department Chair / Director

Print: _____ **Signature:** _____ **Date:** _____

College Academic Standards

Print: _____ **Signature:** _____ **Date:** _____

College Dean

Print: _____ **Signature:** _____ **Date:** _____

Graduate Council

Print: _____ **Signature:** _____ **Date:** _____

Vice President for Research and Dean of the College of Graduate Studies:

Print: _____ **Signature:** _____ **Date:** _____

Approval

Provost and Executive Vice President:

Print: _____ **Signature:** _____ **Date:** _____

Distribution: After approval is received from the Provost, distribution will be to:

Department(s); College; Registrar; Associate Registrar; Institutional Knowledge Management; Academic Services; College of Graduate Studies

PROGRAM DESCRIPTION

The Doctor of Social Work (DSW) program is designed to educate working social work professionals to increase their skills in the field of Behavioral Healthcare Leadership and evidence-based practice, leading to career enhancement in healthcare and behavioral health settings or expanded opportunities for academic positions in Social Work degree programs.

The field of behavioral health is rapidly expanding and social work practitioners are the most populous of health professions represented in the behavioral health workforce. As organizations strive to meet these increasing demands, they will need an increasing number of social workers with the skills to not only provide direct social work services, but also join management teams. In response to the emerging demands for social work leadership in the healthcare sector, this degree will prepare professionals to develop, manage, evaluate, and strengthen programs that serve patients in hospitals, hospices, nursing care facilities, and mental health and substance abuse treatment facilities.

Students who successfully complete the Doctor of Social Work (DSW) degree will be prepared to assume leadership positions in the field of behavioral health and to work as expert instructors and disseminators of evidence-based knowledge in the field of social work and behavioral health. Students will graduate with theoretical approaches to social and behavioral problems and practice approaches; advanced knowledge and skills in cutting edge and emerging intervention strategies and their application in practice, agency and community settings; enhanced evaluation of behavioral health practice competency; and emphasis on pedagogy and scholarly dissemination of advanced practice skills and competencies.

CURRICULUM

The Doctor of Social Work (DSW) program is an online, part-time professional doctoral program requiring completion of 42 credits beyond the Master of Social Work degree. The coursework is taken online in a prescribed sequence over seven semesters plus two residential weekends, one at the beginning of the program and one in the final semester of the program.

Total Credit Hours Required:
42 Credit Hours Minimum beyond the MSW degree

Prerequisites

Completion of the Master of Social Work degree plus two years of post-MSW practice experience is required prior to starting the DSW program.

Required Courses

Fall 1 Term (6 Credit Hours)

- Advances in Behavioral Health Policy in the US and Abroad
- Theory Development in Social Work and Applied Social Science Research

Spring Term 1 (6 Credit Hours)

- Conducting Evidence-Based Research in Social Work
- Community Partnership and Leadership in Complex Behavioral Health Organization

Summer Term 2 (3 Credit Hours)

- Data Management for Decision Making in Behavioral Health Social Work

Fall Term 2 (6 Credit Hours)

- Teaching Skills for Social Work Programs
- Program Evaluation in Behavioral Health Organizations

Spring Term 2 (6 Credit Hours)

- Innovations in Behavioral Health: Current Topics
- Unrestricted Elective

Summer Term 3 (3 Credit Hours)

- Grant Writing for Behavioral Health

Fall Term 3 (6 Credit Hours)

- DSW Capstone 1
- Unrestricted Elective

Spring Term 3 (6 Credit Hours)

- DSW Capstone 2
- Workshop in Dissemination of Behavioral Health Research and Scholarship

Examinations

Each student will work with their Capstone Committee to develop a focus for two Capstone projects, the first being a thorough review of the evidence informing practice in a particular area of behavioral health practice. Students will present their Capstone 1 projects in a public forum at the completion of their project. The second Capstone project is the production of a publishable article based on the review of the literature in Capstone 1. Students will be required to submit the product of Capstone 2 to a peer-reviewed journal and successfully defend the article in a public defense presentation.

Independent Learning

All students in the Doctor of Social Work (DSW) program are required to engage in independent learning, a process in which individuals take the initiative, with or without help of others to attain knowledge, skills, and professional behaviors. Tangible assignments, research projects, scholarly reviews, and completion of the Capstone projects provide important independent learning experiences giving students ample opportunities to develop and demonstrate independent learning skills as a result of self-inquiry and group dialogue.

Application Requirements

The Doctor of Social Work program at UCF is competitive with all applicants required to complete the following:

- A master's degree in Social Work from a CSWE-accredited program with a minimum GPA of 3.5.
- Two years post-MSW practice experience

In addition to the general UCF graduate application requirements, applicants to this program must provide:

- One official transcript from each college/university attended.
- A narrative statement of 1000 words or less describing the applicant's educational expectations, career aspirations, level of computer skills, and any special qualifications or experiences that may enhance the overall learning environment of the DSW program.
- Résumé.
- A writing sample, i.e., academic paper, report, etc.
- Three letters of recommendation from faculty or professionals who can assess the applicant's ability to succeed in a doctoral program.
- Applicants who have attended a college/university outside the United States must also provide a course-by-course credential evaluation with GPA calculation through WES.

Incomplete applications will NOT be reviewed. Applicants not meeting these minimum requirements will not be considered for admission.

Admission to the program is competitive based on the above criteria, the applicant's abilities, past academic performance, work experience and match of the applicant with the program's mission and goals. Meeting minimum requirements does not guarantee an applicant admission to the program. Admissions decisions will be made only once per academic year. Incoming students must begin the program in the Fall term.

Application Deadlines

Applications are only accepted for Summer admission. The application for this program can be found at www.ptcas.org.

Social Work DSW	Fall	Spring	Summer
Domestic Applicants	February 1-		
International Applicants	- Nov 1		
International Transfer Applicants	- Nov 1		

FINANCIALS

Graduate students in the DSW program are part-time, online students and will not normally be qualified to receive financial assistance through fellowships, assistantships, or tuition support. For more information, see the College of Graduate Studies Funding website, which describes the types of financial assistance available at UCF and provides general guidance in planning your graduate finances. The Financial Information section of the Graduate Catalog is another key resource.

Doctorate of Social Work Faculty List

Kim M. Anderson, Ph.D.
Professor

Mary Ann Burg, PhD, MSW, LCSW
Professor

Reshawna L. Chapple, PhD, LCSW
Assistant Professor

Sophia F. Dziegielewski, Ph.D., LCSW
Professor

Denise Gammonley, Ph.D.
Associate Professor

Kim Gryglewicz, PhD, MSW
Assistant Professor

Shawn A. Lawrence, PhD, LCSW
Associate Professor

Ana M. Leon, PhD, LCSW
Professor

Olga Molina, DSW, LCSW
Associate Professor

Julie Allison Steen, Ph.D.
Associate Professor

J. Chris Stewart, Ph.D.
Associate Professor

Tracy Charisse Wharton, Ph.D.
Assistant Professor

James Whitworth, PhD, LCSW, BCD, Lt Col USAF (Ret)
Associate Professor

Bonnie L. Yegidis, PhD., MSW
Professor

UCF | **College of Graduate Studies**

Graduate Program Recommendation Form - REVISIONS ONLY

This form is to be used to **REVISE** degree programs, tracks, or certificate programs. If there are changes to a program and the changes will also affect the program tracks, one form may be used for both the program and the track(s).

Please refer to the Graduate Council Curriculum Meeting Schedule for submission deadlines.

Checklist of items to be attached with completed form:

☒ Complete and current Graduate Catalog copy (www.graduatecatalog.ucf.edu), including description, curriculum, contact information, application requirements, and application deadlines. **Use Track Changes in Word to show revisions.**

☒ A list of faculty who will participate in the program, track or certificate and their credentials.

☒ All course action requests that will be needed to implement the curriculum changes.

☐ If applicable, a written agreement from all involved units that they are in support of the revisions.

College/Unit(s) Submitting Proposal: College of Optics and Photonics

Proposed Effective Term/Year: Fall 2018

Unit(s) Housing Program: College of Optics and Photonics

Name of program, track and/or certificate: Optics and Photonics PhD Program

Please check all that apply. This action affects a: ☒ Program ☐ Track ☐ Certificate

If the revision applies to multiple tracks, please list them here:

Brief description of **program and rationale** of the revision: **Do not add complete catalog copy here.**

The program faculty wish to add a course in Optical Fiber Communications to the Optics and Photonics PhD core. The existing core courses on Interference and Diffraction and Coherence, Light Matter Interaction, Optical Wave Propagation, Imaging and Optical Systems, and Laser Engineering, will remain in the core. This will ensure that all Optics and Photonics PhD students will take a course in this important area of Photonics.

Briefly list curriculum changes in bullet format. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. **Remember to attach the catalog copy showing changes, using Track Changes in Word.**

> Add course OSE 6474 Fundamentals of Optical Fiber Communications to the program core course required list. This change requires students to take the course for graduation, but will not be part of the Qualifying Examination process.
> The catalog change will increase the core courses from 15 hours to 18 hours and therefore reduce the restricted elective courses from 9 hours to 6 hours. The overall elective courses hours section will reduce from 36 to 33 hours.

Name Change

Are you changing the name of an existing program, track, or certificate? ☐ Yes ☒ No

If yes, provide the new name of the program, track, or certificate: _____

A proposed name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

If you are ONLY making a name change, skip the "Impact on Current Students" section.

Impact on Current Students

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate? ☐ Yes ☒ No

If yes, state the name of the program or track where students are currently enrolled and attach a list of students if possible:

_____

Will students have the option to stay in their existing program, track, or certificate? ☒ Yes ☐ No

If yes, how will current students be impacted by this change?

This change will only affect the new students enrolling in Fall 2018 and thereafter. The PhD program does not have any tracks or certificates.

If there are substantial revisions, please complete the following table on financial support: (Specify all forms of support assistantships, fellowships, and tuition remission.)

	Number of assistantship students	Source of funds	Number of fellowship students (specify fellowship)	Number of tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Signatures

Recommend Approval *(all approval levels must be signed)*

Graduate Faculty Program Coordinator:

Print: David J. Hagan, Associate Dean **Signature:** _____ **Date:** 9/6/17

Department Chair / Director:

Print: David J. Hagan, Associate Dean **Signature:** _____ **Date:** 9/6/17

College Academic Standards:

Print: David J. Hagan, Associate Dean **Signature:** _____ **Date:** 9/6/17

College Dean:

Print: Bahaa E. A Saleh, Dean **Signature:** _____ **Date:** 9/6/17

Graduate Council:

Print: _____ **Signature:** _____ **Date:** _____

Vice President for Research and Dean of the College of Graduate Studies:

Print: _____ **Signature:** _____ **Date:** _____

Approval

Provost and Executive Vice President:

Print: _____ **Signature:** _____ **Date:** _____

Distribution: After approval is received from the Provost, distribution will be to:

Department(s); College; Registrar; Associate Registrar; Institutional Knowledge Management; Academic Services; College of Graduate Studies

Catalog update reflecting changes resulting from Request for Program Revision 09/06/217

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PROGRAM DESCRIPTION

The Optics and Photonics PhD program provides the highest-quality education in optical science and engineering, allowing students to conduct scholarly, fundamental, and applied research, while aiding in the development of Florida's and the nation's technology-based industries.
Show Program Description

CURRICULUM

The Optics and Photonics PhD program is intended for students with a bachelors or master's degree in Optics, Electrical Engineering, Physics, or closely related fields who wish to pursue a career in research or academia. Students with degrees in related fields may be required to take undergraduate articulation courses determined by the program director on a case-by-case basis.

Total Credit Hours Required:

72 Credit Hours Minimum beyond the Bachelor's Degree

Students are required to pass a qualifying examination, usually taken after 12 months in the program. About one year after passing the qualifying exam, students must take a candidacy examination, form a dissertation committee, and submit an approved plan of study before being admitted to candidacy doctoral status. The PhD core courses are not absolutely required, but they have been designed to include a significant portion of the material upon which the qualifying examination is based. Consequently, students are strongly encouraged to include most of these courses in their plan of study.

The Optics and Photonics PhD program requires a minimum 72 credit hours beyond the bachelor's degree, of which more than 50 percent should be at the 6000 level or higher. These hours must be comprised of:

- At least 39 credit hours of formal course work satisfying the following requirements:
  - at least 30 credit hours must be Optics (prefix OSE) courses.
  - at least 6 credit hours must be science and engineering graduate research methods/laboratory courses of which at least 3 credit hours must be in Optics.
- at least 15 credit hours of Dissertation (OSE 7980)

Additional notes on the curriculum:

- Up to 30 credit hours of appropriate graduate courses earned in a master's program from accredited universities may be waived with approval from the graduate committee.
- Only courses with grades of "B" or better can be transferred.

Required Courses—~~21~~ 24 Credit Hours

Core Courses—~~15~~ 18 Credit Hours

- OSE 6111 Optical Wave Propagation (3 credit hours)

- OSE 5115 Interference and Diffraction (3 credit hours)
- OSE 5312 Light Matter Interaction (3 credit hours)
- OSE 6211 Imaging and Optical Systems (3 credit hours)
- OSE 6474 Fundamentals of Optical Fiber Communications (3 credit hours) ~~(will not be part of the Qualifying Exam)~~
- OSE 6525 Laser Engineering (3 credit hours) ~~(will not be part of the Qualifying Exam)~~

Research Methods/ Laboratory Courses—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 science and engineering labs may be taken with college approval.

Elective Courses—~~36~~ 33 Credit Hours Minimum

Restricted Electives—~~9~~ 6 Credit Hours

In addition to the required courses above, students will need to complete an additional ~~9~~ 6 credit hours to meet the 30 hours of formal Optics (OSE) course work required. An additional three hours of optics course work will also be required if the student waived out of one of the research methods/laboratory courses above, or if one of the laboratory courses taken is not an OSE prefix.

Other courses with significant optics content may be accepted toward the Optics (OSE) course work requirement, upon approval by the Associate Dean.

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.

Unrestricted Electives—27 Credit Hours Minimum

A combination of formal course work and research hours comprise the remaining unrestricted hours. At least 9 of these hours must be formal course work, which may be graduate optics, science or engineering courses. In addition to the 9 hours, 18 credits may be regular formal course work, doctoral research hours, independent study, or doctoral dissertation hours. The independent study hours are limited to a maximum of 3 credit hours. Any courses outside of the graduate optics, science or engineering disciplines must be approved by the college associate dean.

Dissertation—15 Credit Hours Minimum

- OSE 7980 Dissertation Research (15 credit hours)

Qualifying Examination

Before students are eligible to take the candidacy examination, they must pass a written qualifying examination, which for full-time students is normally taken at the end of the first year of graduate study. The purpose of the qualifying exam is for the student to demonstrate mastery of the fundamentals of optics and photonics. The exam is administered by the doctoral qualifying examination committee, which consists of several graduate faculty members representing the appropriate disciplines, appointed by the director or designee. The committee's duties include the preparation and grading of the examination material, and it may solicit input from other interested faculty. The exam is a closed book written exam in the ~~general~~ areas ~~of electromagnetic foundations of optics, interference, diffraction, coherence, linear systems imaging, and light matter interaction~~covered by the following core courses:

- OSE 6111 Optical Wave Propagation
- OSE 5115 Interference and Diffraction
- OSE 5312 Light Matter Interaction
- OSE 6211 Imaging and Optical Systems

Note that the material covered by remaining two core courses, OSE 6474 Fundamentals of Optical Fiber Communications and OSE 6525 Laser Engineering, will not be included in the qualifying exam.

~~.~~Students who do not pass the qualifying examination in two attempts will not continue in the program.

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Candidacy Examination

Students are required to successfully complete the candidacy examination before admission to full doctoral status. The purpose of the candidacy exam is for the student to demonstrate his or her readiness for the PhD program through preliminary research work in the chosen field of study. The candidacy exam is comprised of written and oral portions. The exam is administered by the members of the student's dissertation advisory committee who are full faculty members of the College of Optics and Photonics. External committee members of the dissertation advisory committee are not appointed until after the student has passed the candidacy exam. The exam is normally taken near the completion of required course work. Students must pass the candidacy exam before registering for doctoral dissertation hours (OSE 7980).

Admission to Candidacy

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

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

Dissertation Proposal and Defense

Approximately one year after passing the general candidacy examination, and after the student has begun research, the student will write a dissertation proposal and present it to their dissertation advisory committee for its approval. The proposal must include the research performed to date and the research planned to complete the dissertation. The committee, which consists of three graduate faculty members from the College of Optics and Photonics and one faculty member from outside the college, must be approved by the director or designee and will meet annually to review the student's progress. The dissertation advisory committee also administers the dissertation oral defense examination.

Independent Learning

The dissertation satisfies the independent learning experience.

Application Requirements

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the Admissions section of the Graduate Catalog. Applicants must apply online. All requested materials must be submitted by the established deadline.

Before completing general UCF graduate application requirements, all applicants for programs in the College of Optics and Photonics are recommended to complete the pre-application process. The pre-application is located at http://www.creol.ucf.edu/Academics/Prospective/PreApplication.aspx.

In addition to the general UCF graduate application requirements, applicants to this program must provide:

- One official transcript (in a sealed envelope) from each college/university attended.
- Bachelor's or master's degree in Optics, Electrical Engineering, Physics or closely related discipline.
- Official, competitive GRE score taken within the last five years.
- Three letters of recommendation
- Goal statements: Personal Statement and Research Statement
    - Personal Statement should describe your career goals. Please include why you want to come to CREOL and how the PhD will help you achieve your ultimate career goals. Do you want to work in industry or do you want to go into academia?
    - Research Statement should describe the type of research that you are most interested in or specific faculty members that you wish to work with. If there are multiple areas of research, please provide information for each area.
- Résumé

Students with degrees in related fields may be required to take undergraduate articulation courses determined by the program director on a case-by-case basis.

Application Deadlines

Optics and Photonics PhD	*Fall Priority	Fall	Spring	Summer
Domestic Applicants	Jan 15	Jul 15	Dec 1	Apr 15
International Applicants	Jan 15	Jan 15	Jul 1	Nov 1
International Transfer Applicants	Jan 15	Mar 1	Sep 1	Dec 15

*Applicants who plan to enroll full time in a degree program and who wish to be considered for university fellowships or assistantships should apply by the Fall Priority date.

FINANCIALS

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see the College of Graduate Studies Funding website, which describes the types of financial assistance available at UCF and provides general guidance in planning your graduate finances. The Financial Information section of the Graduate Catalog is another key resource.

Fellowships

Fellowships are awarded based on academic merit to highly qualified students. They are paid to students through the Office of Student Financial Assistance, based on instructions provided by the College of Graduate Studies. Fellowships are given to support a student's graduate study and do not have a work obligation. For more information, see UCF Graduate Fellowships, which includes descriptions of university fellowships and what you should do to be considered for a fellowship.

Contact Info

Graduate Program

David Hagan PhD
Associate Dean
hagan@creol.ucf.edu
Telephone: 407-823-6817
CROL 231 Map
Alma Montelongo
gradprog@creol.ucf.edu
Telephone: 407-823-4726
CREOL Room 208 Map

Graduate Admissions

Kara McCuller
gradadmissions@ucf.edu
Telephone: 407-823-2766
Millican Hall 230 Map
Online Application
Graduate Admissions

Mailing Address
UCF College of Graduate Studies
Millican Hall 230
PO Box 160112
Orlando, FL 32816-0112

Institution Codes

GRE: 5233
GMAT: RZT-HT-58
TOEFL: 5233
ETS PPI: 5233

Graduate Fellowships

Grad Fellowships
Telephone: 407-823-0127
gradfellowship@ucf.edu
https://funding.graduate.ucf.edu

Graduate Financial Aid

UCF Student Financial Assistance
Millican Hall 120
Telephone: 407-823-2827
Appointment Line: 407-823-5285
Fax: 407-823-5241
finaid@ucf.edu
http://finaid.ucf.edu

Optics and Photonics PhD

College : Optics and Photonics	**Degree** :PHD
Department :	**Option** : Dissertation
Program Websites : http://www.creol.ucf.edu/	

PROGRAM DESCRIPTION

The Optics and Photonics PhD program provides the highest-quality education in optical science and engineering, allowing students to conduct scholarly, fundamental, and applied research, while aiding in the development of Florida's and the nation's technology-based industries.

Show Program Description

CURRICULUM

The Optics and Photonics PhD program is intended for students with a bachelors or master's degree in Optics, Electrical Engineering, Physics, or closely related fields who wish to pursue a career in research or academia. Students with degrees in related fields may be required to take undergraduate articulation courses determined by the program director on a case-by-case basis.

Total Credit Hours Required:
72 Credit Hours Minimum beyond the Bachelor's Degree

Students are required to pass a qualifying examination, usually taken after 12 months in the program. About one year after passing the qualifying exam, students must take a candidacy examination, form a dissertation committee, and submit an approved plan of study before being admitted to candidacy doctoral status. The PhD core courses are not absolutely required, but they have been designed to include a significant portion of the material upon which the qualifying examination is based. Consequently, students are strongly encouraged to include most of these courses in their plan of study.

The Optics and Photonics PhD program requires a minimum 72 credit hours beyond the bachelor's degree, of which more than 50 percent should be at the 6000 level or higher. These hours must be comprised of:

- At least 39 credit hours of formal course work satisfying the following requirements:
  - at least 30 credit hours must be Optics (prefix OSE) courses.
  - at least 6 credit hours must be science and engineering graduate research methods/laboratory courses of which at least 3 credit hours must be in Optics.
- at least 15 credit hours of Dissertation (OSE 7980)

Additional notes on the curriculum:

- Up to 30 credit hours of appropriate graduate courses earned in a master's program from accredited universities may be waived with approval from the graduate committee.
- Only courses with grades of "B" or better can be transferred.

Required Courses—21 Credit Hours

Core Courses—15 Credit Hours

- OSE 6111 Optical Wave Propagation (3 credit hours)
- OSE 5115 Interference and Diffraction (3 credit hours)
- OSE 5312 Light Matter Interaction (3 credit hours)
- OSE 6211 Imaging and Optical Systems (3 credit hours)
- OSE 6525 Laser Engineering (3 credit hours)

Research Methods/ Laboratory Courses—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 science and engineering labs may be taken with college approval.

Elective Courses—36 Credit Hours Minimum

Restricted Electives—9 Credit Hours

In addition to the required courses above, students will need to complete an additional 9 credit hours to meet the 30 hours of formal Optics (OSE) course work required. An additional three hours of optics course work will also be required if the student waived out of one of the research methods/laboratory courses above, or if one of the laboratory courses taken is not an OSE prefix.

Other courses with significant optics content may be accepted toward the Optics (OSE) course work requirement, upon approval by the Associate Dean.

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.

Unrestricted Electives—27 Credit Hours Minimum

A combination of formal course work and research hours comprise the remaining unrestricted hours. At least 9 of these hours must be formal course work, which may be graduate optics, science or engineering courses. In addition to the 9 hours, 18 credits may be regular formal course work, doctoral research hours, independent study, or doctoral dissertation hours. The independent study hours are limited to a maximum of 3 credit hours. Any courses outside of the graduate optics, science or engineering disciplines must be approved by the college associate dean.

Dissertation—15 Credit Hours Minimum

- OSE 7980 Dissertation Research (15 credit hours)

Qualifying Examination

Before students are eligible to take the candidacy examination, they must pass a written qualifying examination, which for full-time students is normally taken at the end of the first year of graduate study. The purpose of the qualifying exam is for the student to demonstrate mastery of the fundamentals of optics and photonics. The exam is administered by the doctoral qualifying examination committee, which consists of several graduate faculty members representing the appropriate disciplines, appointed by the director or designee. The committee's duties include the preparation and grading of the examination material, and it may solicit input from other interested faculty. The exam is a closed book written exam in the general areas of electromagnetic foundations of optics, interference, diffraction, coherence, linear systems imaging, and light matter interaction. Students who do not pass the qualifying examination in two attempts will not continue in the program.

Candidacy Examination

Students are required to successfully complete the candidacy examination before admission to full doctoral status. The purpose of the candidacy exam is for the student to demonstrate his or her readiness for the PhD program through preliminary research work in the chosen field of study. The candidacy exam is comprised of written and oral portions. The exam is administered by the members of the student's dissertation advisory committee who are full faculty members of the College of Optics and Photonics. External committee members of the dissertation advisory committee are not appointed until after the student has passed the candidacy exam. The exam is normally taken near the completion of required course work. Students must pass the candidacy exam before registering for doctoral dissertation hours (OSE 7980).

Admission to Candidacy

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

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

Dissertation Proposal and Defense

Approximately one year after passing the general candidacy examination, and after the student has begun research, the student will write a dissertation proposal and present it to their dissertation advisory committee for its approval. The proposal must include the research performed to date and the research planned to complete the dissertation. The committee, which consists of three graduate faculty members from the College of Optics and Photonics and one faculty member from outside the college, must be approved by the director or designee and will meet annually to review the student's progress. The dissertation advisory committee also administers the dissertation oral defense examination.

Independent Learning

The dissertation satisfies the independent learning experience.

APPLICATION REQUIREMENTS

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the Admissions section of the Graduate Catalog. Applicants must apply online. All requested materials must be submitted by the established deadline.

Before completing general UCF graduate application requirements, all applicants for programs in the College of Optics and Photonics are recommended to complete the pre-application process. The pre-application is located at http://www.creol.ucf.edu/Academics/Prospective/PreApplication.aspx.

In addition to the general UCF graduate application requirements, applicants to this program must provide:

- One official transcript (in a sealed envelope) from each college/university attended.
- Bachelor's or master's degree in Optics, Electrical Engineering, Physics or closely related discipline.
- Official, competitive GRE score taken within the last five years.
- Three letters of recommendation
- Goal statements: Personal Statement and Research Statement
  - Personal Statement should describe your career goals. Please include why you want to come to CREOL and how the PhD will help you achieve your ultimate career goals. Do you want to work in industry or do you want to go into academia?
  - Research Statement should describe the type of research that you are most interested in or specific faculty members that you wish to work with. If there are multiple areas of research, please provide information for each area.
- Résumé

Students with degrees in related fields may be required to take undergraduate articulation courses determined by the program director on a case-by-case basis.

Application Deadlines

Optics and Photonics PhD	*Fall Priority	Fall	Spring	Summer
Domestic Applicants	Jan 15	Jul 15	Dec 1	Apr 15
International Applicants	Jan 15	Jan 15	Jul 1	Nov 1
International Transfer Applicants	Jan 15	Mar 1	Sep 1	Dec 15

*Applicants who plan to enroll full time in a degree program and who wish to be considered for university fellowships or assistantships should apply by the Fall Priority date.

FINANCIALS

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see the College of Graduate Studies Funding website, which describes the types of financial assistance available at UCF and provides general guidance in planning your graduate finances. The Financial Information section of the Graduate Catalog is another key resource.

Fellowships

Fellowships are awarded based on academic merit to highly qualified students. They are paid to students through the Office of Student Financial Assistance, based on instructions provided by the College of Graduate Studies. Fellowships are given to support a student's graduate study and do not have a work obligation. For more information, see UCF Graduate Fellowships, which includes descriptions of university fellowships and what you should do to be considered for a fellowship.

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Online Application
Graduate Admissions

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Course Action Request Form

☐ Add ☒ Revise ☐ Delete ☐ Continue ☐ Special Topic

College: OPT **Dept:** Department of Optics **Course Contact:** David Hagan **Phone:** 407-823-6817

AA Approved Instructor: Demetri Christodoulides **Contact Email:** hagan@creol.ucf.edu

Action	Prefix	#	Course Title	Credit
Revise	OSE	6474	~~Optical Communications Systems~~	3(3,0)
(changes)			Fundamentals Optical Fiber Communications	

30 Character Abbreviation:(23 of 30) Fund Optical ~~Communication Sys~~ Fiber Comm

Prerequisites:

PR: GS; OSE ~~5414.~~ 6111, or C.I.

Description:(24 of 25 words)

Introduces key principles and analysis of optical communication systems. Emphasis on developing the ability to analyze and design digital, analog fiber-based systems and networks.

Course Repeatable for Credit: ☐ Yes ☒ No If yes, syllabus must describe how content changes when repeated

If yes, how many times accepted in major: ☐ Unlimited **OR** a maximum of times; ☐ only if content different

Grading Basis: ☒ Letter Only ☐ SU Only ☐ SU or Letter **Graded NC** ☐ Yes ☒ No

Terms of Offering All that apply, or Occasional

☐ Odd Fall ☒ Odd Spring ☐ Odd Summer

☐ Even Fall ☒ Even Spring ☐ Even Summer ☐ Occasional

Course is dual-offered with another course: ☐ Yes ☒ No **Course:**

Source of Students: Optics, Physics, Electrical Engineering **Estimated annual enrollment:** 20

Discussion:

Submitted to EE and PHY for their review: EE: Approved by Kalpathy Sundaram (copy of approval email sent separately; attached) PHY: Approved by Eduardo Mucciolo (copy of approval email sent separately; attached)

Rationale:

This CAR is a name change to better reflect the focus of the course. The course content was slightly changed to prepare the student for the OSE 6143 Fiber Optics Communication Systems class. The pre-requisite is changed to remove OSE 5414 and add OSE 6111 which is a better preparatory class.

Recommending Authority	Status	Date
Department	Approved	05/08/2017 02:20:41 PM
College	Approved	2017-05-08 14:26:32.000
UCRC/Grad Council	Pending	
State		

Course Agenda- October 18, 2017

1. Course Additions

College of Arts and Humanities Course Additions

ENC 6XXX **CAH-WRITE** **3(3,0)**
Professional Writing Studies: PR: Graduate Standing or C.I. Foundational theories and practices in rhetoric and professional writing. *Fall.*
Abbrev: (28 of 30 chars) Professional Writing Studies
Discussion with others: We consulted with English and there are no issues. Email attached.
Rationale: Due to the variety of disciplines students come from, many who enter the Professional Writing Certificate program are unprepared to begin the study of rhetoric and professional writing. This course will be one of two required, core courses and will give students the necessary skills to continue their studies.
Majors taking course: Professional Writing Certificate and Rhet and Comp MA students

College of Engineering and Computer Science Course Additions

EEL 5XXX **ECS-ECE** **3(3,0)**
Advanced Microgrid Design and Operation: PR: EEL 4216. Advanced course to power systems engineering, designed to provide students with the knowledge of microgrid system fundamentals, design, and operation. *Occasional.*
Abbrev: (18 of 30 chars) Advanced Microgrid
Rationale: This course will provide students state-of-the-art knowledge in power system and smart grid, and provide students with hands-on experience using the newly established Siemens Digital Grid Lab.

College of Health and Public Affairs Course Additions

SOW 7XXX **HPA-SOWK** **3(3,0)**
Data Management for Decision Making in Behavioral Health Social Work: PR: Admission to DSW program or C.I. Evaluates types and uses of primary and secondary data relevant to behavioral health decision making and applications of data management and presentation through the use of innovative computer technology. *Summer.*
Abbrev: (30 of 30 chars) Data Mgmt Decsn Making in BHSW
Discussion with others: Departments of Anthropology, Counseling Education and Psychology were all contacted via e-mail. No conflicts were reported. This course is specifically designed for Social Work doctoral students only.

Rationale: The School of Social Work is proposing a DSW program in response to a community need. This course is in line with UCF's mission of "addressing pressing local, state, national and international issues in support of the global community" and COHPA's mission of "advocating for policy changes that improve the health and welfare of the community."
Majors taking course: Doctoral of Social Work program

SOW 7XXX **HPA-SOWK** **3(3,0)**
DSW Capstone I: Behavioral Health Leadership: PR: Admission to DSW Program. Mentored research experience for students to consolidate the DSW curriculum by developing a systematic review of evidence-based literature applied to an area of behavioral health practice in the student's area of interest. *Fall.*
Abbrev: (14 of 30 chars) DSW Capstone I
Discussion with others: Anthropology, Counseling Education, and Psychology were all contacted (by email) and no conflicts were reported.
Rationale: The School of Social Work is proposing a DSW program in response to a community need. This course is in line with UCF's mission of "addressing pressing local, state, national, and international issues in support of the global community" and COHPA's mission of "advocating for policy changes that improve the health and welfare of the community"
Majors taking course: Doctorate of Social Work

SOW 7XXX **HPA-SOWK** **3(3,0)**
DSW Capstone II: Behavioral Health Leadership: PR: Admission to the DSW Program and Completion of DSW Capstone I. A mentored research experience for students to complete a publishable article based on their completed review of evidence based literature on a topic from Capstone I. *Spring.*
Abbrev: (15 of 30 chars) DSW Capstone II
Discussion with others: Anthropology, Counseling Education, and Psychology were all contacted (by email) and no conflicts were reported.
Rationale: The School of Social Work is proposing a DSW program in response to a community need. This course is in line with UCF's mission of "addressing pressing local, state, national, and international issues in support of the global community" and COHPA's mission of "advocating for policy changes that improve the health and welfare of the community"
Majors taking course: Doctorate of Social Work

SOW 7XXX **HPA-SOWK** **3(3,0)**
Community Partnership and Leadership in Behavioral Health Organizations : PR: Admission to the DSW Program. Critical analysis of the field of community behavioral health practice, including community accountability, community behavioral health assessment, organizing, policy advocacy, and social services and social change leadership in behavioral health organizations. *Spring.*
Abbrev: (30 of 30 chars) Com Partnr/Leadr Bhvr Hlth Org

Discussion with others: Anthropology, Counseling Education, and Psychology were all contacted (by email) and no conflicts were reported. E-mails attached.
Rationale: The School of Social Work is proposing a DSW program in response to a community need. This course is in line with UCF's mission of "addressing pressing local, state, national, and international issues in support of the global community" and COHPA's mission of "advocating for policy changes that improve the health and welfare of the community"
Majors taking course: DSW

SOW 7XXX HPA-SOWK 3(3,0)
Grant Writing for Behavioral Health: PR: Admission to the DSW Program. Advances knowledge and skills in grant writing for behavioral health program planning , service delivery and intervention research. *Summer.*
Abbrev: (29 of 30 chars) Grant Writing Behavioral Hlth
Discussion with others: Anthropology, Counseling Education, and Psychology were all contacted
(by email) and no conflicts were reported. Emails attached
Rationale: The School of Social Work is proposing a DSW program in response to a community need. This course is in line with UCF's mission of "addressing pressing local, state, national, and international issues in support of the global community" and COHPA's mission of "advocating for policy changes that improve the health and welfare of the community"
Majors taking course: Doctorate of Social Work

SOW 7XXX HPA-SOWK 3(3,0)
Innovations in Behavioral Health: Current Topics and Program Development Workshop : PR: Admission to DSW Program. Seminar on current topics in the field of behavioral health aimed at developing expertise in the design of programmatic responses to these emergent topics. *Spring.*
Abbrev: (29 of 30 chars) Innov in Bhvr Hlth-Cur Topics
Discussion with others: Anthropology, Counseling Education, and Psychology were all contacted (by email) and no conflicts were reported.
Rationale: The School of Social Work is proposing a DSW program in response to a community need. This course is in line with UCF's mission of "addressing pressing local, state, national, and international issues in support of the global community" and COHPA's mission of "advocating for policy changes that improve the health and welfare of the community"
Majors taking course: Doctorate of Social Work

SOW 7XXX HPA-SOWK 3(3,0)
Teaching Skills for Social Work Programs : PR: Admission to the DSW Program. Critically examines theory-based and evidence-based learning theory and employs experiential training using today’s media and technology for teaching social work. *Fall.*
Abbrev: (25 of 30 chars) Teaching Skills SW Prgrms

Discussion with others: Anthropology, Counseling Education, and Psychology were all contacted (by email) and no conflicts were reported.
Rationale: The School of Social Work is proposing a DSW program in response to a community need. This course is in line with UCF's mission of "addressing pressing local, state, national, and international issues in support of the global community" and COHPA's mission of "advocating for policy changes that improve the health and welfare of the community"
Majors taking course: Doctorate of Social Work

SOW 7XXX **HPA-SOWK** **3(3,0)**
Workshop in Dissemination of Behavioral Health Research and Scholarship : PR: Admission to the DSW Program. Experiential practice in developing presentation and publishable works aimed at extrapolating from the literature state of the art theory informed evidence for advancing best practices in behavioral health management. *Spring.*
Abbrev: (28 of 30 chars) Wrkshp Behv Hlth Res Scholar
Discussion with others: Anthropology, Counseling Education, and Psychology were all contacted (by email) and no conflicts were reported. Emails attached.
Rationale: The School of Social Work is proposing a DSW program in response to a community need. This course is in line with UCF's mission of "addressing pressing local, state, national, and international issues in support of the global community" and COHPA's mission of "advocating for policy changes that improve the health and welfare of the community"
Majors taking course: Doctorate of Social Work

SOW 7XXX **HPA-SOWK** **3(3,0)**
Advances in Behavioral Health Policy in the US and Abroad: PR: Admission to DSW program. Critical analysis of the historical foundations and evolution of public policy in the United States and abroad. *Fall.*
Abbrev: (28 of 30 chars) Advances in Behv Hlth Policy
Rationale: The School of Social Work is proposing a DSW program in response to a community need. This course is in line with UCF's mission of "addressing pressing local, state, and national issues in support of the global community" and COHPA's mission of "advocating for policy changes that improve the health and welfare of the community."
Majors taking course: Doctorate of Social Work

SOW 7XXX **HPA-SOWK** **3(3,0)**
Program Evaluation in Behavioral Health Organization: PR: Admission to DSW program. Focuses on concepts, data, methods and dissemination of evaluation outcomes in behavioral health organizations that provide social work services. *Fall.*
Abbrev: (29 of 30 chars) Program Eval Behvrl Hlth Orgs
Rationale: The School of Social Work is proposing a DSW program in response to community need.
Majors taking course: Doctorate of Social Work

College of Medicine Course Additions

BMS 6XXX **COM-BSBS** **3(3,0)**

Statistics for Biomedical Scientists: PR: none. Introductory graduate course for Biomedical Sciences or related majors; outlines basic probabilistic and statistical concepts tailored to biomedical scientists. The course will be taught jointly by the Burnett School of Biomedical Sciences and Statistics Department with 50/50 work load split. *Occasional.*

Abbrev: (26 of 30 chars) Stat for Biomed Scientists

Discussion with others: There is no a duplication with any other courses because the proposed course is tailored to the BSBS students. Another course IDS 6694, mentioned above, includes different content and learning objectives. The course offered by Statistics Department STA 5176. Introduction to Biostatistics, is designed for a general audience and is not tailored to the BSBS students. While it covers essential topics in estimation and prediction, it is very advanced for the BSBS students who come with minimum statistics background. In addition, the course mainly covers modeling approaches that are not as widely used in basic biological science as are classical testing methods. The STA 5176 would be recommended as the higher-level course that should be taken after the proposed course in statistics sequences for the BSBS students.

Rationale: There is a lack of courses specifically designed for improving statistics background in biomedical graduate students. Currently, there is only one course available, IDS 6694: Experimental Design and Analysis in Biomedical Sciences. The latter course is a 2-credit introductory graduate course intended to provide a practical instruction about how to design experiments and critically analyze data, including a basic understanding of common statistical tests and their appropriate application. Despite its importance, the latter course does not include any theoretical probabilistic or statistical concepts. The proposed course will help fulfill the gap in the student's statistics background. The course will include essential theoretical concepts and illustrate them using a combination of math-style and scientific discovery exercises. The content will be tailored to biology, life, health and medical scientists.

Majors taking course: MS, PhD, and MD-PhD Biomedical Sciences, MS Biotechnology will recommend this course

2. Special Topics Additions

College of Optics and Photonics Special Topics Additions

OSE 6938 **OPT-OPT** **3(3,0)**

ST: Thin-Film Optoelectronics: PR: GS, OSE 5414, or CI. Modern thin-film optoelectronic materials and their applications.

Concepts learned in basic semiconductor optoelectronics courses are extended to the disordered and nanocrystalline materials of thin-film devices. *Occasional.*

Abbrev: (22 of 30 chars) ST: Thin-Film Optoelec
Discussion with others: EE/Kalpathy Sundaram: requested small change to topics list. Result: those topics were removed from syllabus. Phy/Eduardo Mucciolo: The Physics Graduate Curriculum Committee looked at the course proposal and have no specific comments to make. They did not identify any superposition with courses we offer. In fact, this special topic course could be of interest to our students.

3. Course Revisions

College of Arts and Humanities Course Revisions

ENC 6247 **~~Proposal~~ Grant Proposal Writing** **3(3,0)**
PR: Graduate standing ~~in English~~ or C.I.
~~Theory~~ Developing and ~~practice of~~ writing grant proposals.
Abbrev (22 of 30): ~~Proposal Writing~~ Grant Proposal Writing
Term Offered: ~~Occasional~~ Summer
Discussion with others: This course is shared with the English Department and they have no conflicts. Email attached.
Rationale: The current title of the course does not reflect the content or skills learned in the course. The ability to read, develop, and write grants is an important skill set for students in professional writing.
There are no programs that list ENC 6247.

4. Course Deletions

5. Course Continuations