

## **Graduate Council Curriculum Committee**

**April 1, 2013  
12:00 p.m., MH 395**

### **Agenda**

1. Welcome and call to order
2. Review of minutes from the 02/25 meeting
3. Revisions to the PhD Math program, COS
4. Revisions to the MS Optics program and track, COP
5. Suspension of the Nonprofit Management graduate certificate (out of state cohort track only), COHPA
6. Name change to the PreK Disabilities graduate certificate, CED
7. Suspend admissions to the MS ECDE program, CED
8. Revisions to the PhD Education program (involves all tracks), CED
9. Revisions to the PhD MSE program, CECS
10. Revisions to the MS MSE program, CECS
11. Revisions to the MS MSE Accelerated BS to MS track, CECS
12. Review of the graduate certificates established in: 2000, 2003, 2006, 2009
13. Cellular and Molecular Neuroscience split class, COM (Tabled at last 2 meetings)
14. Courses and special topics
15. Adjournment

### **Members of the Graduate Council Curriculum Committee:**

Charles Kelliher, CBA (chair)  
Donna Malvey, COHPA  
Kerry Purmzensky, CAH  
Art Weeks, CECS  
Harry Weger, COS  
Deborah Breiter, RCHM  
Joyce Nutta, CED  
Terrie Sypolt, LIB  
Julee Waldrop, CON  
Boris Zeldovich, COP  
Antonis Zervos, COM  
Lucretia Cooney, GSA  
Max Poole, CGS Liaison



## Program Recommendation Form

**This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs. If there are changes to a program and the changes will affect the program tracks also, one form may be used for this type of change.**

PLEASE NOTE: The deadline for new tracks or certificates is **February 1 of each year**. Any proposal for new tracks or certificates received after this date will not be included in the next year's catalog. Revisions to existing programs, tracks, or certificates are **due by March 15**. Any proposals for revisions received after that date will not be included in the next year's catalog. Please include catalog copy (description, curriculum, contact information, application requirements, and application deadlines). For revisions – attach the catalog copy showing changes (use **Track Changes in Word**).

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

Proposed Effective Term/Year: Fall 2013

Unit(s) Housing Program: Mathematics

Name of program, track and/or certificate: Ph. D. Mathematics

Brief description of program (this description will show up in the graduate catalog copy): *Do not add complete catalog copy here.*

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

DELIVERY - Will program be delivered: ☐ Face to face ☐ Completely online ☒ Mixed delivery

Admissions deadlines: (Please specify if you have a different deadline for the track than for the program?)

Application requirements: (Please specify if you have different application requirements for the track than for the program? Will you admit directly to the track?)

Program Director(s) and contact information: (name, email, phone, campus address, program website address)

Joseph P. Brennan, Joseph.Brennan@ucf.edu, MSB 212, <http://math.cos.ucf.edu/main/graduate/pages/Welcome.php>

Please check one: this action affects a: ☒ Program ☐ Track ☐ Certificate

Please check one: this action is a(n):

☐ Addition. Please proceed to Part A.

☒ Revision. If a revision applies to multiple tracks, please list them here and then proceed to Part A:

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☒ Inactivation

☒ Temporary Suspension of Admissions. Give Length of Suspension:

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**Temporary suspension of admissions:** The program will be removed from the online application. A notation will be entered in the graduate catalog indicating the length of the suspension of admissions. Currently enrolled students will not experience any issues with continued enrollment.

**Inactivation:** Admissions will be suspended for new students and the program will be removed from the online application. Students active in the program are eligible to complete the program under the appropriate criteria and an appropriate teach-out plan is required. The program will be removed from the catalog as of the approved term.

If you checked inactivation or you are temporarily suspending admissions, please go to Part B and complete it.

## Signature Page

### RECOMMENDATIONS

☒ Yes ☐ No Department Chair: [Signature] Date: 2/11/13  
☒ Yes ☐ No College Curriculum Committee Chair: [Signature] Date: 2/25/13  
☒ Yes ☐ No College Dean: [Signature] Date: 2/26/13  
☐ Yes ☐ No Chair or GSC: \_\_\_\_\_ Date: \_\_\_\_\_  
☐ Yes ☐ No Dean, College of Graduate Studies: \_\_\_\_\_ 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 Research; Academic Services; Faculty Senate;  
University Analysis and Planning Support; College of Graduate Studies

**Part A – For additions or revisions of programs, tracks or certificates**

**Brief statement of rationale:** (Please indicate the rationale, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate.)

Revisions are necessary to better advance students to candidacy in a timely fashion. Establishment of the Dissertation Proposal Examination will enable students to enter candidacy at the end of their coursework and postpone giving a dissertation proposal to a more appropriate time in their graduate career.

**For Revisions:**

**Brief listing of Program Changes:** (Please indicate the 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.**)

Establishment of a Dissertation Proposal Examination  
Small editorial amendments

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 provide a list of students if possible:

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

**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:

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Provide the name of the current program, track, or certificate:

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**When is the name change effective?** Please note: A 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.

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

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If you are requesting a CIP Code change for an existing program, track, or certificate, please provide:

old CIP:

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new CIP:

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If a name change is your only revision, stop here. Otherwise, complete the rest of Part A.

**Part A - Continued**

**Specify the faculty who will participate in the program, track or certificate and their credentials to do so:** (List faculty and a brief paragraph of their credentials.)

See attached list.

**Impact of changes on students:** Will current students be impacted by the addition or revision of a program, track or certificate? If so, how?

Establishment of the Dissertation Proposal Examination will enable students to enter candidacy at the end of their coursework and postpone giving a dissertation proposal to a more appropriate time in their graduate career.

If **applicable**, provide a written agreement (email is fine) from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate. Please attach the correspondence and also list the units here.

N/A

If **an addition**, 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			
SCHs			

If **an addition**, indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

**Part A - Continued**

If **an addition** or there are **substantial REVISIONS** to existing tracks or certificates, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	No. assistantship students	Source of funds	No. fellowship students (specify fellowship)	No. tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Checklist of items to be provided:

- ☒ Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)
- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☒ Emails showing consultation with other units. (if applicable)
- ☐ If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.
- ☐ If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.

Part B – For inactivations or suspensions of programs, tracks, or certificates

Are students currently enrolled in the program? ☐ Yes ☐ No

If yes, number of current students:

Please specify the intended time period of inactivation or suspension:

If program, track, or certificate is being inactivated or suspended, then attach a “teach out” plan for all current students specifying how they can finish the program or where students will be placed if moving to another program. The “teach out” plan should specify when courses will be offered to enable students to finish. Specify whether students will remain in the existing program to finish, and if so, when the completion date will be, whether students will be moved to another program, etc. Please provide a list of students where applicable.

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Sample teach out plan: Enter the terms and courses that will be taught for each term throughout the last semester. Please delete course prefixes and numbers in this section if no teach out plan is required.

Fall 2012	Spring 2013	Summer 2013	Fall 2013	Spring 2014

Checklist of items to be provided:

- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ E-mails showing consultation with other units. (if applicable)



# **Program Faculty**

## **Graduate Faculty Mathematics Dept.**

<b>Name</b>	<b>Date of Ph.D. Degree</b>	<b>University</b>
Brennan, Joseph	1984	University of Illinois at Urban-Champaign
Cannon, John	1962	Rice University
Capursi, Maria	2006	University of Delaware, Newark, Delaware
Choudhury, S. Roy	1985	Cornell University
Dutkay, Dorin	2004	University of Iowa
Han, Deguang	1998	Texas A & M University
Katsevch, Alexander	1994	Kansas State University
Kaup, David	1967	University of Maryland
Lee, Junho	2001	Michigan State University
Li, Xin	1989	University of South Florida
Martin, Heath	1993	Louisiana State University
Mikusinski, Piotr	1983	Polish Academy of Sciences, Institute of Mathematics, Warsaw, Poland
Mohapatra, Ram	1968	University of Jabalpur, India
Moore, Brian	2003	University of Surrey, Guildford, UK
Muise, Robert	2003	University of Central Florida
Nashed, Zuhair	1963	University of Michigan at Ann Arbor
Nevai, Andrew	2005	University of California, Los Angeles
Pensky, Mariana	1988	Moscow State University, Russia
Qi, Yuanwei	1990	University of Oxford
Reid, Michael	2000	Brown University
Richardson, Gary	1969	North Carolina State University
Rollins, David	1986	California Institute of Technology
Schober, Constance	1991	University of Arizona
Shivamoggi, Bhimsen	1978	University of Colorado
Shuai, Zhisheng	2010	University of Alberta, Edmonton, Canada

Song, Zixia	2004	School of Mathematics, Georgia Institute of Technology
Sun, Qiyu	1990	Hangzhou University, Hangzhou, China
Swanon, Jason	2004	University of Washington
Tamasan, Alexandru	2002	University of Washington
Tovbis, Alexander	1985	University of Voronezh, Voronezh, Russia
Vajravelu, Kuppalapalle	1979	Indian Institute of Technology, Kharagpur, India
Yong, Jiongmin	1986	Purdue University
Young, Cynthia	1996	University of Washington
Zhao, Yue	1992	The Ohio State University

Prepared by Norma on 12/19/2012

# **New Program Description**

# PROGRAM DESCRIPTION

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

Read More

## 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. 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.

Total Credit Hours Required:

75 Credit Hours Minimum beyond the Bachelor's Degree

### Required Courses—18 Credit Hours

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)
- MAA 6405 Complex Variables (3 credit hours) or MAP 5336 Ordinary Differential Equations and Applications (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 Applied Mathematics I (3 credit hours) / MAP 6408 Applied Mathematics II (3 credit hours)
- MAA 6405 Complex Variables (3 credit hours) / MAA 6404 Complex Analysis (3 credit hours)
- MAD 6309 Advanced Graph Theory I (3 credit hours) / MAD 5205 Combinatorics and Graph Theory II (3 credit hours)
- MAS 5145 Advanced Linear Algebra and Matrix Theory (3 credit hours) / MAS 5311 Abstract Algebra with Applications (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 (3 credit hours) / MAP 6111 Mathematical Statistics (3 credit hours)
- MAA 6306 Real Analysis (3 credit hours) / MAA 6506 Functional Analysis (3 credit hours)

### **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. If a student takes MAP 4363 (Applied Boundary Value Problems I) previously as part of an undergraduate program, then MAP 5435 (Advanced Mathematics for Engineers) cannot be applied toward the graduate program of study, but another alternative can be taken.

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. 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 before the Fall semester and one 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 material from two of the selected two-semester sequence courses taken by the students beyond the core courses. A committee formed or selected by the Graduate Committee 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.
- Applicants to this program are strongly encouraged to complete the necessary information requested for the ETS PPI (Personal Potential Index) report that is available



during the GRE examination. All official PPI reports must be submitted directly to the UCF College of Graduate Studies (use UCF Institution Code: 5233).

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.

### **Application Deadlines**

<b>Mathematics PhD</b>	<b>Fall Priority</b>	<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
<b>Domestic Applicants</b>	Jan 15	Jul 15	Dec 1	Apr 15
<b>International Applicants</b>	Jan 15	Jan 15	Jul 1	Nov 1
<b>International Transfer Applicants</b>	Jan 15	Mar 1	Sep 1	Dec 15

## **FINANCIALS**

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see [Funding for Graduate School](#), 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 [Fellowships](#), which includes descriptions of UCF fellowships and what you should do to be considered for a fellowship.

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

# **Program Description with Track Changes**

## PROGRAM DESCRIPTION

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

MAA 6228 75

## 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. 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.

Total Credit Hours Required:

75 Credit Hours Minimum beyond the Bachelor's Degree

### Required Courses—18 Credit Hours

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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 Applied Mathematics I (3 credit hours) / MAP 6408 Applied Mathematics II (3 credit hours)
- MAA 6405 Complex Variables (3 credit hours) / MAA 6404 Complex Analysis (3 credit hours)
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#### **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. If a student takes MAP 4363 (Applied Boundary Value Problems I) previously as part of an undergraduate program, then MAP 5435 (Advanced Mathematics for Engineers) cannot be applied toward the graduate program of study, but another alternative can be taken.

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. 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 before the Fall semester and one 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~~ includes two parts.

~~Part 1:~~ a written examination based on the materials from two of the selected two-semester sequence courses taken by the students beyond the core courses. A committee formed or selected by the Graduate Committee is responsible for preparing and grading the written examinations.

~~Part 2:~~ an oral examination administered by the student's dissertation committee and based on the student's research proposal.

After passing ~~both parts of~~ 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 written part of the Candidacy Examination can be attempted after passing the qualifying examination, and the oral examination can be taken anytime after passing the written part of the examination; both parts of~~ 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 in each part.

## Admission to Candidacy

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

- Completion of all course work, except for dissertation hours.
- Successful completion of the candidacy examination.
- ~~Successful defense of the written dissertation proposal.~~

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- 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.

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<b>International Transfer Applicants</b>	Jan 15	Mar 1	Sep 1	Dec 15

## FINANCIALS

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see [Funding for Graduate School](#), 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 [Fellowships](#), which includes descriptions of UCF fellowships and what you should do to be considered for a fellowship.

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





## Program Recommendation Form

This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs. If there are changes to a program and the changes will affect the program tracks also, one form may be used for this type of change.

PLEASE NOTE: The deadline for new tracks or certificates is **February 1** of each year. Any proposal for new tracks or certificates received after this date will not be included in the next year's catalog. Revisions to existing programs, tracks, or certificates are **due by March 15**. Any proposals for revisions received after that date will not be included in the next year's catalog. Please include catalog copy (description, curriculum, contact information, application requirements, and application deadlines). For revisions – attach the catalog copy showing changes (use Track Changes in Word).

College/Unit(s) Submitting Proposal: COLLEGE OF OPTICS AND PHOTONICS

Proposed Effective Term/Year: 2013-2014

Unit(s) Housing Program: \_\_\_\_\_

Name of program, track and/or certificate: OPTIC - MS

Brief description of program (this description will show up in the graduate catalog copy): *Do not add complete catalog copy here.*

Core—9 Credit Hours  
The following foundation courses are strongly required 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 Geometric Optics (3 credit hours)  
• OSE 6432 Guided Waves and Optoelectronics  
• OSE 6525 Laser Engineering (3 credit hours)  
\*Note that OSE 5041 may be substituted by BOTH OSE 6111 Optical Wave Propagation AND OSE 6115 Interference, Diffraction and Coherence

DELIVERY - Will program be delivered: ☐ Face to face ☐ Completely online ☒ Mixed delivery

Admissions deadlines: (Please specify if you have a different deadline for the track than for the program?)

Deadlines for the Optics MS program are not different

Application requirements: (Please specify if you have different application requirements for the track than for the program? Will you admit directly to the track?)

Application Requirements have not changed

Program Director(s) and contact information: (name, email, phone, campus address, program website address)

David J Hagan hagan@creol.ucf.edu

407-823-6817 CREOL, Room 208

http://www.creol.ucf.edu/Academics/Programs/MSPProgram.aspx

Please check one: this action affects a: ☒ Program ☐ Track ☐ Certificate

Please check one: this action is a(n):

☐ Addition. Please proceed to Part A.

☒ Revision. If a revision applies to multiple tracks, please list them here and then proceed to Part A:

Applies to General Optics MS and Optics MS -International track

---

☐ Inactivation

☐ Temporary Suspension of Admissions. Give Length of Suspension:

---

**Temporary suspension of admissions:** The program will be removed from the online application. A notation will be entered in the graduate catalog indicating the length of the suspension of admissions. Currently enrolled students will not experience any issues with continued enrollment.

**Inactivation:** Admissions will be suspended for new students and the program will be removed from the online application. Students active in the program are eligible to complete the program under the appropriate criteria and an appropriate teach-out plan is required. The program will be removed from the catalog as of the approved term.

If you checked inactivation or you are temporarily suspending admissions, please go to Part B and complete it.



## Signature Page

### RECOMMENDATIONS

☒ Yes ☐ No Department Chair: Den Jh Date: 3/6/13  
☒ Yes ☐ No College Curriculum Committee Chair: Den Jh Date: 3/7/13  
☒ Yes ☐ No College Dean: J. A. Sale Date: 3/7/13  
☐ Yes ☐ No Chair or GSC: \_\_\_\_\_ Date: \_\_\_\_\_  
☐ Yes ☐ No Dean, College of Graduate Studies: \_\_\_\_\_ 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 Research; Academic Services; Faculty Senate;  
University Analysis and Planning Support; College of Graduate Studies

**Part A – For additions or revisions of programs, tracks or certificates**

**Brief statement of rationale:** (Please indicate the rationale, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate.)

Our curriculum committee decided that the core of the MS program should have more required components. Currently only one course is required.

**For Revisions:**

**Brief listing of Program Changes:** (Please indicate the 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.)

The core requirements are to be changed from:  
OSE 5041 Introduction to Wave Optics (3 credit hours)  
to

OSE 5041 Introduction to Wave Optics (3 credit hours)  
And two of the following three courses:  
OSE 5203 Geometric Optics (3 credit hours)  
OSE 6432 Guided Waves and Optoelectronics  
OSE 6525 Laser Engineering (3 credit hours)

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 provide a list of students if possible:

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

**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:

n/a

Provide the name of the current program, track, or certificate:

OPTIC - MS

When is the name change effective? Please note: A 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.

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

n/a no CIP change

If you are requesting a CIP Code change for an existing program, track, or certificate, please provide:

old CIP:

n/a no CIP change

new CIP:

n/a

If a name change is your only revision, stop here. Otherwise, complete the rest of Part A.

Part A - Continued

Specify the faculty who will participate in the program, track or certificate and their credentials to do so: (List faculty and a brief paragraph of their credentials.)

No changes to faculty.

Impact of changes on students: Will current students be impacted by the addition or revision of a program, track or certificate? If so, how?

No, We will allow existing students to graduate based on current requirements.

If applicable, provide a written agreement (email is fine) from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate. Please attach the correspondence and also list the units here.

N/A

If an addition, 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.

N/A

	Year 1	Year 2	Year 3
Headcount			
SCHs			

If an addition, indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

N/A

Part A - Continued

If an addition or there are substantial **REVISIONS** to existing tracks or certificates, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	No. assistantship students	Source of funds	No. fellowship students (specify fellowship)	No. tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					



Checklist of items to be provided:

- ☒ Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)
- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ Emails showing consultation with other units. (if applicable)
- ☐ If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.
- ☐ If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.

Part B – For inactivations or suspensions of programs, tracks, or certificates

Are students currently enrolled in the program? ☐ Yes ☐ No

If yes, number of current students:

---

Please specify the intended time period of inactivation or suspension:

---

If program, track, or certificate is being inactivated or suspended, then attach a "teach out" plan for all current students specifying how they can finish the program or where students will be placed if moving to another program. The "teach out" plan should specify when courses will be offered to enable students to finish. Specify whether students will remain in the existing program to finish, and if so, when the completion date will be, whether students will be moved to another program, etc. Please provide a list of students where applicable.

Sample teach out plan: Enter the terms and courses that will be taught for each term throughout the last semester. Please delete course prefixes and numbers in this section if no teach out plan is required.

Fall 2012	Spring 2013	Summer 2013	Fall 2013	Spring 2014

Checklist of items to be provided:

- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ E-mails showing consultation with other units. (if applicable)

# Graduate Catalog copy for Optics MS program

## PROGRAM DESCRIPTION

The Master of Science in Optics program is intended for students with a bachelor's degree in optics, electrical engineering, physics, or closely related fields. The program is interdisciplinary and combines optical science and engineering.

## CURRICULUM

The Optics 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.

### Total Credit Hours Required:

30 Credit Hours Minimum beyond the Bachelor's Degree

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—~~9-12~~15 Credit Hours

#### Core—~~3-6~~9 Credit Hours

The following foundation courses are strongly required 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 Geometric Optics (3 credit hours)
- OSE 6432 Guided Waves and Optoelectronics
- OSE 6525 Laser Engineering (3 credit hours)

\*Note that OSE 5041 may be substituted by BOTH OSE 6111 Optical Wave Propagation AND OSE 6115 Interference, Diffraction and Coherence

### **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—~~12-15~~9 Credit Hours**

All students are required to take a minimum of ~~12-9~~9 credit hours of electives ~~and an additional elective is required if the student took OSE 5041 (3 credit hours) as a core course. 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 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 ~~6~~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.

### **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. Nonthesis students also engage in directed research or research report. Thesis students enroll in 6 hours of thesis credits during the completion of their research study.

### **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.
- A bachelor's degree in Optics, Electrical Engineering, Physics, or closely related fields.
- Official, competitive GRE score taken within the last five years.
- Goal Statement: Please choose the Personal Statement option. Your Personal statement should describe your career goals. Please include why you want to come to CREOL and how the MS will help you achieve your ultimate career goals.
- Three letters of recommendation.
- 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**

<b>Optics MS</b>	<b>Fall Priority</b>	<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
<b>Domestic Applicants</b>	Jan 15	Jul 15	Dec 1	Apr 15
<b>International Applicants</b>	Jan 15	Jan 15	Jul 1	Nov 1
<b>International Transfer Applicants</b>	Jan 15	Mar 1	Sep 1	Dec 15

### **FINANCIALS**

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see [Funding for Graduate School](#), 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 [Fellowships](#), which includes descriptions of UCF fellowships and what you should do to be considered for a fellowship.



## Program Recommendation Form

This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs. If there are changes to a program and the changes will affect the program tracks also, one form may be used for this type of change.

PLEASE NOTE: The deadline for new tracks or certificates is **February 1** of each year. Any proposal for new tracks or certificates received after this date will not be included in the next year's catalog. Revisions to existing programs, tracks, or certificates are **due by March 15**. Any proposals for revisions received after that date will not be included in the next year's catalog. Please include catalog copy (description, curriculum, contact information, application requirements, and application deadlines). For revisions – attach the catalog copy showing changes (use Track Changes in Word).

College/Unit(s) Submitting Proposal: COHPA

Proposed Effective Term/Year: Sum 2013

Unit(s) Housing Program: School of Public Administration

Name of program, track and/or certificate: Graduate Certificate in Nonprofit Management/Nonresident Cohort

Brief description of program (this description will show up in the graduate catalog copy): *Do not add complete catalog copy here.*

The Out-of-State Cohort in the Graduate Certificate in Nonprofit Management is designed specifically for students who are not Florida residents and who reside outside of the state of Florida. The certificate is delivered completely online and offers specialized, graduate-level knowledge in nonprofit management, resource development, strategic planning, volunteerism, and program evaluation.

DELIVERY - Will program be delivered: ☐ Face to face ☒ Completely online ☐ Mixed delivery

Admissions deadlines: (Please specify if you have a different deadline for the track than for the program?)

Standard

Application requirements: (Please specify if you have different application requirements for the track than for the program? Will you admit directly to the track?)

N/A

Program Director(s) and contact information: (name, email, phone, campus address, program website address)

Dr. Mary Ann Feldheim (407)823 2604; Mary.Feldheim@ucf.edu

HPA 2, suite 238

www.cohpa.ucf.edu/pubadm



Please check one: this action affects a: ☐ Program ☐ Track ☒ Certificate

Please check one: this action is a(n):

☐ Addition. Please proceed to Part A.

☐ Revision. If a revision applies to multiple tracks, please list them here and then proceed to Part A:

---

☒ Inactivation

☒ Temporary Suspension of Admissions. Give Length of Suspension:

1 year

---

**Temporary suspension of admissions:** The program will be removed from the online application. A notation will be entered in the graduate catalog indicating the length of the suspension of admissions. Currently enrolled students will not experience any issues with continued enrollment.

**Inactivation:** Admissions will be suspended for new students and the program will be removed from the online application. Students active in the program are eligible to complete the program under the appropriate criteria and an appropriate teach-out plan is required. The program will be removed from the catalog as of the approved term.

If you checked inactivation or you are temporarily suspending admissions, please go to Part B and complete it.

## Signature Page

### RECOMMENDATIONS

☒ Yes    ☐ No    Department Chair: May G. Steffen    Date: January 15, 2013

☒ Yes    ☐ No    College Curriculum Committee Chair: \_\_\_\_\_    Date: 1/23/13

☒ Yes    ☐ No    College Dean: Mark Zamboni    Date: 1/19/13

☐ Yes    ☐ No    Chair or GSC: \_\_\_\_\_    Date: \_\_\_\_\_

☐ Yes    ☐ No    Dean, College of Graduate Studies: \_\_\_\_\_    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 Research; Academic Services; Faculty Senate;  
University Analysis and Planning Support; College of Graduate Studies

**Part A – For additions or revisions of programs, tracks or certificates**

**Brief statement of rationale:** (Please indicate the rationale, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate.)

**For Revisions:**

**Brief listing of Program Changes:** (Please indicate the 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.**)

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 provide a list of students if possible:

---

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

**Name Change**

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

*Page 5 of UCF Program Recommendation Form*

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

---

Provide the name of the current program, track, or certificate:

---

**When is the name change effective?** Please note: A 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.

---

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

---

If you are requesting a CIP Code change for an existing program, track, or certificate, please provide:

old CIP:

---

new CIP:

---

If a name change is your only revision, stop here. Otherwise, complete the rest of Part A.

**Part A - Continued**

**Specify the faculty who will participate in the program, track or certificate and their credentials to do so:** (List faculty and a brief paragraph of their credentials.)

**Impact of changes on students:** Will current students be impacted by the addition or revision of a program, track or certificate? If so, how?



Page 6 of UCF Program Recommendation Form

If applicable, provide a written agreement (email is fine) from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate. Please attach the correspondence and also list the units here.

If an addition, 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			
SCHs			

If an addition, indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

Part A - Continued

If an addition or there are substantial REVISIONS to existing tracks or certificates, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	No. assistantship students	Source of funds	No. fellowship students (specify fellowship)	No. tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Checklist of items to be provided:

- ☐ Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)
- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ Emails showing consultation with other units. (if applicable)
- ☐ If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.
- ☐ If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.

Part B – For inactivations or suspensions of programs, tracks, or certificates

Are students currently enrolled in the program? ☐ Yes ☒ No

If yes, number of current students:

---

Please specify the intended time period of inactivation or suspension:

1 year

---

If program, track, or certificate is being inactivated or suspended, then attach a "teach out" plan for all current students specifying how they can finish the program or where students will be placed if moving to another program. The "teach out" plan should specify when courses will be offered to enable students to finish. Specify whether students will remain in the existing program to finish, and if so, when the completion date will be, whether students will be moved to another program, etc. Please provide a list of students where applicable.

N/A - no students currently enrolled in the Graduate Certificate in Nonprofit Management - Nonresident Cohort

Sample teach out plan: Enter the terms and courses that will be taught for each term throughout the last semester. Please delete course prefixes and numbers in this section if no teach out plan is required.

Fall 2012	Spring 2013	Summer 2013	Fall 2013	Spring 2014
EDF 7041	EDF 7041	EDF 7041	EDF 7041	EDF 7041
EDF 6442	EDF 6442	EDF 6442	EDF 6442	
EDF 7848	EDF 7848	EDF 7848		
EDF 6543	EDF 6543			
EDA 7503				

Checklist of items to be provided:

- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ E-mails showing consultation with other units. (if applicable)

## Program Action Request Form

This form is to be used to revise, add, suspend, or inactivate degree programs, tracks, or certificate programs. A new form must be used for each program, track, or certificate. Any proposals for revisions received after that date will not be included in the next year's catalog. Please include catalog copy.

**College/Unit(s) Submitting Proposal:** Education

**Proposed Effective Term/Year:** Summer 2013 (2013-2014 Catalog)

**Unit(s) Housing Program:** Department of Child, Family and Community Sciences

**Action:**

**Description of program and Admissions deadlines:** Refer to the catalog copy below.

**DELIVERY – The certificate will be delivered:** Mixed-Mode delivery

**Application requirements:** Refer to the catalog copy below.

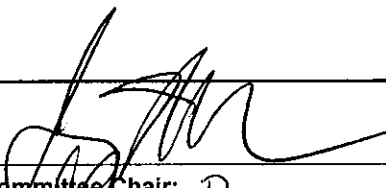
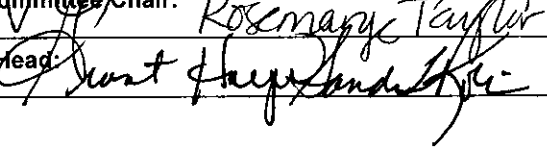
**Program Director(s) and contact information:** (name, email, phone, campus address, program website address): Mary Little, Ph.D., Professor E-mail: [Mary.Little@ucf.edu](mailto:Mary.Little@ucf.edu) Telephone: 407-823-3275; Office: Orlando Campus ED 315J

**\* ACTION-Certificate Name Change:**

**From:** "Pre-Kindergarten Handicapped Endorsement Certificate"

**To:** "Prekindergarten Disabilities Certificate"

**Signatures:**

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Department Chair:		Date: 2/26/13
<input type="checkbox"/> Yes	<input type="checkbox"/> No	College Curriculum Committee Chair:	Rosemary Taylor	Date: 2/26/13
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	College Dean or Unit Head:		Date: 3/4/13
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Chair or GSC:		Date:
<input type="checkbox"/> Yes	<input type="checkbox"/> No	Dean, College of Graduate Studies:		Date:

### APPROVAL

**Provost and Vice President for Academic Affairs:**

**Date:**

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

Department(s); College; Registrar; Associate Registrar; Institutional Research; Academic Services; Faculty Senate;  
University Analysis and Planning Support; College of Graduate Studies

## Part A –Certificate Name Change

**Brief Statement of Rationale** for Certificate name change: The certificate name change is to reflect the current appropriate language used by the Florida Department of Education.

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

Will students have the option to stay in their existing program, track, or certificate? ☒ N/A

Name Change: Are you changing the name of an existing program, track, or certificate? **Yes, Certificate**

New name of the Certificate: **Prekindergarten Disabilities Certificate**

Current name of the Certificate: **Pre-Kindergarten Handicapped Endorsement Certificate**

When will the name changes become effective? **Summer 2013 (2013-2014 Catalog)**

Will students have the option to stay in their existing program, track, or certificate? ☒ yes

If you are requesting a CIP Code change for an existing program, track, or certificate, please provide: **N/A**

**Specify the faculty who will teach in the certificate and their credentials:** (List faculty and a brief paragraph of their credentials.)

**Dr. Mary Little**, Professor; Exceptional Education. Currently serves as the Coordinator of ESE Graduate Programs. She received her graduate and undergraduate degrees in Special Education and Curriculum and Instruction from the State University College at Buffalo and her doctorate in Special Education from the University of Kansas. Her professional experiences in the K-12 schools include roles as a secondary teacher, co-teacher, program coordinator and principal. Her interests include evidence-based instructional practices, interventions, teacher efficacy, and student learning related to teacher learning. She teaches courses at the graduate and undergraduate levels using traditional and on-line formats, specifically in mathematics, assessment, instruction, action research, and program evaluation. In addition, she has received in excess of \$15 million in external funding for research and development from federal, state, and private funding agencies including the Institute for Educational Sciences (IES) and the Office of Special Education Programs (OSEP). Currently, she serves as the Principal Investigator for *Building Bridges in Teacher Education*, a federally-funded research and development project through OSEP.

**Dr. Lisa Dieker** Professor in Exceptional Education and Lockheed Martin Eminent Scholar at the University of Central Florida. She coordinates the doctoral program in special education and is Director of the Lockheed Martin Mathematics and Science Academy. She received her undergraduate and master's degree from Eastern Illinois University and her Ph.D. from the University of Illinois. Her primary area of research focuses on collaboration between general and special education at the secondary level with a specific interest in the unique opportunities that exist in urban schools. She also has a passion for how technology and specifically virtual classrooms can be used to impact teacher preparation. She currently serves on numerous editorial review boards and is the Associate Editor for *Teaching Exceptional Children*, *Journal of Psychological and Education Consultation* and past co-editor of the *Journal of International Special Needs Education*. She has been awarded the Council for Exceptional Children: Children Advocacy Network Advocate of the Year Award, the UCF Graduate Student Mentor of the Year Award and Eastern Illinois University Outstanding Alumni of the Year Award. She has published numerous articles on reflective thinking, teacher assistance teams, co-teaching, virtual environments and secondary inclusion.

**Dr. Martha Lue Stewart** is a Professor in Exceptional Education and the Program Coordinator for the Graduate Certificate Program in Urban Education. She has worked in the field of exceptional student education and urban and multicultural education for more than 35 years, ranging from serving as a Speech-Language Pathologist, a teacher of students with special needs, to her current position as a Professor at UCF. Dr. Stewart has received college and university awards in the areas of teaching, research, and service. Her research interest focuses on emphasis in domestic diversity, with heightened interests in racially, culturally, linguistically, and ethnically diverse learners and exceptional learners. Specific research strands include: students considered "at risk" for academic failure; underrepresentation of persons of color in teacher education; recruitment, retention, and induction of students of color into teacher education; efficacy of support systems on retention of postsecondary education students of color; and developing partnerships and support systems with urban schools in an effort to retain qualified teachers in those settings.

**Dr. Matthew Marino** is an Associate Professor in Exceptional Education. His research, which has been supported in part by 1.5 million dollars in federal grants from the Institute of Education Sciences, the Office of Special Education Programs, and the National Science Foundation, focuses on the design and implementation of technology-enhanced STEM curricular materials. He is currently examining how the Universal Design for Learning framework can be included in videogames, iPad apps, and online courses. Dr. Marino was a member of the design team for the national award-winning videogame "You Make Me Sick!" and award winning technology-enhanced science

curriculum "Alien Rescue". He is on the editorial review board for a number of special education and science education journals. Dr. Marino is a technical reviewer for the National Science Foundation and a member of the leadership team for the Universal Design for Learning Implementation and Research Network, an international organization dedicated to increasing the accessibility of curricular materials for individuals with disabilities and other traditionally marginalized groups.

**Dr. Suzanne Martin**, Professor; Exceptional Education. Dr. Martin holds a Ph. D. in Special Education Administration. Dr. Martin has over 30 years of teaching experience at the school and higher education levels. She has been a teacher educator at four different universities and has had responsibilities including instruction, curriculum planning, research, program and personnel assessment, accreditation, department chair in Exceptional Education, liaison with families, communities and businesses, sponsor of student professional groups, and wide ranging participation in local, state, national and international professional organizations. She was with the Office of Special Education Programs (OSEP) for four years including service as Acting Branch Chief of the Leadership Personnel Branch of the Department of Personnel Preparation. She has authored many scholarly works and has completed co-editorship of a book on women in leadership roles in special education. She also serves as a Past President of the CEC and previously was President of the Teacher Education Division of CEC.

**Dr. María E. Reyes-MacPherson: Assistant Professor; Exceptional Education.** Holds a Doctor of Philosophy Degree in Special Education with emphasis in Multilingual-Multicultural Education from the University of Florida. Dr. Reyes has professionally committed to serve the culturally diverse community in exceptional education and their families. Her interest on this population is evident in her professional publications and research projects. Dr. Reyes was a Co-PI for the Nuestros Niños/Our Children Project, an OSERS research grant studying the quality of early childhood services for Latino children. She was also the principal investigator on a student-initiated grant to compare the needs and sources of support of Latino mothers of young children with disabilities residing in Florida and Puerto Rico. One current contribution to this population is her work with Latino parents of children with behavioral issues. She is fluent in both English and Spanish and her cultural background, academic preparation, and research interests provide her with a solid set of skills and competencies as an educator and researcher.

**Dr. Eleazar Vasquez;** Assistant Professor. Dr Vasquez's research focuses on the use of behavior analysis and technology to enhance educational outcomes for preservice teachers, teachers, parents, and students. He is a licensed behavior analyst and director of the Clinic for Academic and Behavioral Interventions (CABI) hosted by the Toni Jennings Exceptional Education Institute.

**Impact of changes on students:** No impact by changing the name of the Certificate.

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. Please attach the correspondence and also list the units here. N/A

**Statement of who is likely to enroll and why. Is licensure or certification dependent upon this education?** Students likely to enroll in this program are individuals interested in careers related to the prekindergarten setting.

**Indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?):** Prekindergarten classroom teachers, instructional coaches, child life specialists, Head Start teachers, daycare directors and staff, school and district Interventionist Specialists. Educators may also wish to use the courses/certificate to fulfill continuing education requirements for certifications or licensure.

### **Items provided:**

✳ Attached is the graduate catalog copy indicating the new name of the program in the title as well as the catalog description.

**Terms to provide additional links for prospective students to search in the online graduate catalog:** prekindergarten, exceptional student education; special education; disabilities.

# MEMORANDUM

**TO:** CED Graduate Curriculum and Standards Committee (GCSC)

**FROM:** Dr. Jay Hoffman, Chair / Dr. Roanne Brice, Faculty Administrator / Dr. Mary Little, ESE Graduate Program Coordinator

Department of Child, Family and Community Sciences (CFCS)

**RE:** Proposal to the Graduate Curriculum and Standards Committee to revise the name of the Graduate Certificate Program from "Pre-Kindergarten Handicapped Endorsement Certificate" to "Prekindergarten Disabilities Certificate".

**Date:** January 28, 2013

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**Overview / Rationale:** The certificate name change is to reflect the current appropriate language used by the Florida Department of Education.

## Prekindergarten Disabilities Certificate (Catalog Copy with revisions) CERTIFICATE PROGRAM DESCRIPTION

### PROGRAM DESCRIPTION

The Prekindergarten Disabilities Certificate prepares candidates to teach young children with disabilities who are in prekindergarten settings. Four graduate courses are offered to provide additional training for professionals to meet the requirements for the Pre-K Disabilities ESE Endorsement.

The courses focus on knowledge, skills and competencies for working with children birth to age 5 with disabilities, developmental delays and/or at-risk conditions: development and implementation of individualized educational programs; formal and informal evaluation techniques; developmentally appropriate curriculum, teaching methods, intervention strategies; teaming approaches to facilitate inclusion in appropriate learning environments; multidisciplinary approaches and techniques for serving the child and family; child development to include theories of the atypical child, the stages and sequences of development, and the impact of disabilities and biomedical risk factors on learning; family collaboration and support to include family systems theory and interaction; community resources; service coordination; and transition. The four courses in the Prekindergarten Disabilities Certificate can be taken as electives, or in addition to the required coursework in a graduate degree program (e.g., Exceptional Student Education, Elementary Education (K-6), etc.). Pending state approval, persons holding the Florida teaching certifications listed may apply the four courses toward the State Prekindergarten (Pre-K) Endorsement (Administrative Rule 6A-4.01792).

### CURRICULUM

**Total Credit Hours Required:**

**12 Credit Hours Minimum beyond the Bachelor's Degree**

#### **Required Courses—12 Credit Hours**

- EEX 5702 Planning Curriculum for Pre-Kindergarten Children with Disabilities (3 credit hours)
- EEX 5750 Communication with Parents and Agencies (3 credit hours)
- EEX 6017 Typical and Atypical Applied Child Development (3 credit hours)
- EEX 6222 Observation and Assessment of Young Children (3 credit hours)

## APPLICATION REQUIREMENTS

Admission is open to those with a bachelor's or higher degree from a regionally accredited institution, with certification in any exceptional student education area, preschool education, primary education, prekindergarten/primary education, elementary education (K-6), or early childhood education.

An application to the graduate certificate program and official transcripts must be submitted. Applicants must apply online. All requested materials must be submitted by the established deadline.

### Application Deadlines

<b>Prekindergarten Disabilities Endorsement Certificate</b>	<b>Fall Priority</b>	<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
<b>Domestic Applicants</b>	-	Jul 15	Dec 1	Apr 15
<b>International Applicants</b>	-	-	-	-
<b>International Transfer Applicants</b>	-	-	-	-



## Program Recommendation Form

**This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs. If there are changes to a program and the changes will affect the program tracks also, one form may be used for this type of change.**

PLEASE NOTE: The deadline for new tracks or certificates is **February 1 of each year**. Any proposal for new tracks or certificates received after this date will not be included in the next year's catalog. Revisions to existing programs, tracks, or certificates are **due by March 15**. Any proposals for revisions received after that date will not be included in the next year's catalog. Please include catalog copy (description, curriculum, contact information, application requirements, and application deadlines). For revisions – attach the catalog copy showing changes (use **Track Changes in Word**).

College/Unit(s) Submitting Proposal: \_\_\_\_\_

Proposed Effective Term/Year: \_\_\_\_\_

Unit(s) Housing Program: \_\_\_\_\_

Name of program, track and/or certificate: \_\_\_\_\_

Brief description of program (this description will show up in the graduate catalog copy): *Do not add complete catalog copy here.*

DELIVERY - Will program be delivered: ☐ Face to face ☐ Completely online ☐ Mixed delivery

Admissions deadlines: (Please specify if you have a different deadline for the track than for the program?)

\_\_\_\_\_

Application requirements: (Please specify if you have different application requirements for the track than for the program? Will you admit directly to the track?)

\_\_\_\_\_

Program Director(s) and contact information: (name, email, phone, campus address, program website address)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



**Please check one: this action affects a:**    ☐ Program    ☐ Track    ☐ Certificate

**Please check one: this action is a(n):**

- ☐ Addition. Please proceed to Part A.
- ☐ Revision. If a revision applies to multiple tracks, please list them here and then proceed to Part A:

- 
- ☐ Inactivation
- ☐ Temporary Suspension of Admissions. Give Length of Suspension:
- 

**Temporary suspension of admissions:** The program will be removed from the online application. A notation will be entered in the graduate catalog indicating the length of the suspension of admissions. Currently enrolled students will not experience any issues with continued enrollment.

**Inactivation:** Admissions will be suspended for new students and the program will be removed from the online application. Students active in the program are eligible to complete the program under the appropriate criteria and an appropriate teach-out plan is required. The program will be removed from the catalog as of the approved term.

**If you checked inactivation or you are temporarily suspending admissions, please go to Part B and complete it.**

## Signature Page

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### RECOMMENDATIONS

☐ Yes    ☐ No    Department Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Curriculum Committee Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Dean: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Chair or GSC: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Dean, College of Graduate Studies: \_\_\_\_\_ 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 Research; Academic Services; Faculty Senate;  
University Analysis and Planning Support; College of Graduate Studies

**Part A – For additions or revisions of programs, tracks or certificates**

**Brief statement of rationale:** (Please indicate the rationale, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate.)

**For Revisions:**

**Brief listing of Program Changes:** (Please indicate the 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.**)

**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 provide a list of students if possible:

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

**Name Change**

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

*Page 5 of UCF Program Recommendation Form*

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

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Provide the name of the current program, track, or certificate:

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**When is the name change effective?** Please note: A 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.

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

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If you are requesting a CIP Code change for an existing program, track, or certificate, please provide:

old CIP:

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new CIP:

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If a name change is your only revision, stop here. Otherwise, complete the rest of Part A.

**Part A - Continued**

**Specify the faculty who will participate in the program, track or certificate and their credentials to do so:** (List faculty and a brief paragraph of their credentials.)

**Impact of changes on students:** Will current students be impacted by the addition or revision of a program, track or certificate? If so, how?

If applicable, provide a written agreement (email is fine) from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate. Please attach the correspondence and also list the units here.

If an addition, 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			
SCHs			

If an addition, indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

#### Part A - Continued

If an addition or there are substantial REVISIONS to existing tracks or certificates, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	No. assistantship students	Source of funds	No. fellowship students (specify fellowship)	No. tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Checklist of items to be provided:

- ☐ Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)
- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ Emails showing consultation with other units. (if applicable)
- ☐ If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.
- ☐ If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.

**Part B – For inactivations or suspensions of programs, tracks, or certificates**

Are students currently enrolled in the program? ☐ Yes ☐ No

If yes, number of current students:

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Please specify the intended time period of inactivation or suspension:

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If program, track, or certificate is being inactivated or suspended, then attach a “teach out” plan for all current students specifying how they can finish the program or where students will be placed if moving to another program. The “teach out” plan should specify when courses will be offered to enable students to finish. Specify whether students will remain in the existing program to finish, and if so, when the completion date will be, whether students will be moved to another program, etc. Please provide a list of students where applicable.

Sample teach out plan: Enter the terms and courses that will be taught for each term throughout the last semester. **Please delete course prefixes and numbers in this section if no teach out plan is required.**

Fall 2012	Spring 2013	Summer 2013	Fall 2013	Spring 2014

Checklist of items to be provided:

- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ E-mails showing consultation with other units. (if applicable)



# Memorandum

**To:** Graduate Curriculum and Standards Committee  
**From:** Department of Child, Family and Community Sciences (CFCS)  
**Date:** February 8, 2013  
**Re:** **Suspension of Admission: Early Childhood Development and Education M.S. Program**

**Proposed implementation date to suspend admission to the Early Childhood Development and Education (ECDE) M.S. Program is effective with the 2013-2014 catalog.** Final semester students were admitted to the program was spring 2013.

## **1. Rationale:**

The rationale to suspend admission to the Early Childhood Development and Education (ECDE) M.S. program is the decline consecutively over the past five (5) years indicating the decrease in demand for the program. Currently, 16 students are enrolled in the program. Early Childhood Faculty will be transitioned to the School of Teaching, Learning and Leadership in the College of Education to provide students with a comprehensive Elementary Education program that combines the knowledge and theories of both early childhood and elementary education. The more comprehensive program will meet the knowledge and skills requirements for the current demand in teaching students Kindergarten through grade 6. The goal is to fully prepare our students to effectively teach grades Kindergarten to 6<sup>th</sup> grade by utilizing the knowledge and skills of the EC and Elementary Education faculty within one program.

The College of Education will continue to monitor the national, state, and local education trends and policies over the next two years. Within two years, the decision to suspend admission to the Early Childhood Development and Education M.S. will be reviewed to determine if the program should be re-activated.

## **2. Impact on Program Faculty:**

The Early Childhood faculty will be transitioning from the Department of Child, Family and Community Sciences (CFCS) to the School of Teaching, Learning and Leadership (STLL). The EC faculty will support the Elementary Education Program by developing course content to reflect early childhood development as the foundation of academic success.

## **3. Impact on Students:**

**Impact on students currently admitted in the M.S. in Early Childhood Development and Education:** Current students will not be adversely affected. The teach-out and advising measures to be implemented will assure the least amount of impact to current students in the program. Program graduate faculty will advise students by means of group advising meetings as well as individually, as needed.

## **4. Itemized description of each change:**

- a. The change being requested is to suspend admission of students to the Early Childhood Development and Education M.S. degree program. The request is for the suspension of admission as of the 2013-14 Graduate Catalog (Summer 2013).

- b. We request that the **Early Childhood Development and Education M.S.** program **NOT** be published in the UCF Graduate Catalog for the 2013-14 Catalog year.

**5. Original catalog copy:**

The current/original catalog copy is attached.

- 6. Email discussions/approvals:** Discussions were held with the Provost and administrators regarding the request for program suspension of admission to the ECDE M.S.

**7. Any other supporting documentation:**

- a. Departmental and Dean Support: Decisions were made with consultation between College of Education administrators, the Provost, and program faculty. Approval of administrative support as evidenced by signatures on the Program Recommendation Form.

**Teach Out Plan:**

**1. Explanation of the Teach Out Plan:**

The Teach out plan is a clear description of what courses students will need to take, in what sequence, and within what time frame, in order to graduate from the Early Childhood Development and Education M.S. degree program. Graduate Faculty will advise the remaining students in the program using the course sequence and each student's *Graduate Plan of Study* (GPS). The GPS assures students as to the commitment to offer the designated courses as well as the student's responsibility to follow the agreed upon plan to complete their degree within the designated time frame in order to graduate by Summer 2015.

- 2. Current Student Enrollment:** As of Fall 2012, the Early Childhood Development and Education M.S. program has 16 students.

**3. Student Advising /Program of Study**

The ECDE M.S. students will meet with their faculty advisors to review their *Graduate Program of Study* previously developed. At that time, the advisor will assure that the student is aware of the requirement to complete the program by the Summer 2015 semester. Students will be closely monitored during the teach out phase to assist students who may have difficulty completing the required courses in the provided time frame. Individual student advising will provide support to students individually to facilitate the best options for graduating from the program, or another degree program if they cannot meet the Summer 2015 end date.

**4. Course Offerings for Teach Out Plan**

To ensure that all students are able to complete their coursework as suggested by their *Graduate Plan of Study* (GPS), all course offerings for the Early Childhood Development and Education program will be extended until Summer 2015.

**Sequence of course offerings for Teach Out Plan**

Summer 2013	Fall 2013	Spring 2014	Summer 2014	Fall 2014	Spring 2015	Summer 2015
EEC 5205	EEC	EEC	EEC 5205	EEC 6606	EEC 6216	EEC 6947

	6606	6216				
EEC 6269	EEC 6405	EEC 6406	EEC 6269	EEC 6405	EEC 6406	
EEC 6947	RED 6947	RED 6947	EEC 6947	EEC 6947	EEC 6947	

#### Appendices:

- 1) ECDE M.S. Program Recommendation Form

## 2012-13 UCF GRADUATE CATALOG:

### EARLY CHILDHOOD DEVELOPMENT AND EDUCATION M.S.

#### PROGRAM DESCRIPTION

The program is designed for candidates with undergraduate degrees in a wide range of areas either related to early childhood education, such as child development, psychology, communication disorders, sociology, nursing, theatre, music or other degrees. The program of study includes advanced professional development in early care and education for careers with direct and indirect services for young children and families. Direct early education services to young children and families can include homes, schools, and other community settings, such as child care and Head Start. Indirect services can include: child assessment, program evaluation, child care resource and referral, early learning coalitions, community college instruction, and child advocacy. Graduates of this program are encouraged to serve as a bridge among schools and community agencies and to nurture leadership skills in these areas. Please note that this program does not lead to initial teacher preparation.

In addition to fostering the professional development of previously certified early childhood teachers, this program will also serve as a bridge among schools and community agencies and will provide the educational experiences to nurture educational leaders who will work within and across these areas.

#### CURRICULUM

The Early Childhood Development and Education MS program requires a minimum of 36 credit hours beyond the bachelor's degree, including 6 credit hours of core courses, 18 credit hours of specialization courses, 6 credit hours of electives, and 6 credit hours of a capstone experience in the form of a thesis or nonthesis/practicum option.

#### Total Credit Hours Required:

36 Credit Hours Minimum beyond the Bachelor's Degree

Students should initially and periodically meet with an academic adviser to plan their program of electives in relation to their desired career goals, develop a program of study and timeline for their course work completion, and plan for the capstone culminating experience.

The MS does not lead to initial teacher preparation through the state-approved program route. Students interested in certification may contact the Florida Bureau of Teacher Certification Florida Department of Education directly at [www.fldoe.org/edcert/](http://www.fldoe.org/edcert/).

## **Required Courses—24 Credit Hours**

### **Core—6 Credit Hours**

- EDF 6481 Fundamentals of Graduate Research in Education (3 credit hours; prerequisite for EDF 6401)
- EDF 6401 Statistics for Educational Data (3 credit hours)

### **Specialization—18 Credit Hours**

- EEC 5205 Programs and Trends in Early Childhood Education (3 credit hours)
- EEC 6269 Play Development, Intervention, and Assessment (3 credit hours)
- EEC 6405 Home-School-Community Interaction in Early Childhood Education (3 credit hours)
- EEC 6406 Guiding and Facilitating Social Competence (3 credit hours)
- EEC 6606 Global Issues in Early Childhood (3 credit hours)
- EEX 6222 Observation and Assessment of Young Children (3 credit hours)

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

- EEC 6216 Communicative Arts in Early Childhood Education (3 credit hours)
- EEX 6017 Typical and Atypical Applied Child Development (3 credit hours) (Required if no undergraduate course in child development)
- EEX 5702 Planning Curriculum for Pre-Kindergarten Children with Disabilities (3 credit hours)
- EEX 5750 Communication with Parents and Agencies (3 credit hours)
- MHS 6403 Techniques of Play Therapy and Expressive Arts (3 credit hours)
- MHS 6421 Foundations of Play Therapy and Play Process (3 credit hours)
- SOW 6726 Social Work Practice with Children from Birth to Age Five and Their Families (3 credit hours)
- SPS 6125 Infant Development Assessment (3 credit hours)
- SPS 6700 Advanced Educational Psychology (3 credit hours)
- Other courses of interest with consent of faculty

### **Thesis Option—6 Credit Hours**

- EEC 6971 Thesis (6 credit hours)

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

- EEC 6947 Practicum (6 credit hours) OR 6 credit hours of approved electives with a written comprehensive examination

## **INDEPENDENT LEARNING**

A thesis, practicum, or a written comprehensive examination is required as the culminating experience for the program.



## Program Recommendation Form

**This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs. If there are changes to a program and the changes will affect the program tracks also, one form may be used for this type of change.**

PLEASE NOTE: The deadline for new tracks or certificates is **February 1 of each year**. Any proposal for new tracks or certificates received after this date will not be included in the next year's catalog. Revisions to existing programs, tracks, or certificates are **due by March 15**. Any proposals for revisions received after that date will not be included in the next year's catalog. Please include catalog copy (description, curriculum, contact information, application requirements, and application deadlines). For revisions – attach the catalog copy showing changes (use **Track Changes in Word**).

College/Unit(s) Submitting Proposal: \_\_\_\_\_

Proposed Effective Term/Year: \_\_\_\_\_

Unit(s) Housing Program: \_\_\_\_\_

Name of program, track and/or certificate: \_\_\_\_\_

Brief description of program (this description will show up in the graduate catalog copy): *Do not add complete catalog copy here.*

DELIVERY - Will program be delivered: ☐ Face to face ☐ Completely online ☐ Mixed delivery

Admissions deadlines: (Please specify if you have a different deadline for the track than for the program?)

\_\_\_\_\_

Application requirements: (Please specify if you have different application requirements for the track than for the program? Will you admit directly to the track?)

\_\_\_\_\_

Program Director(s) and contact information: (name, email, phone, campus address, program website address)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Please check one: this action affects a:**    ☐ Program    ☐ Track    ☐ Certificate

**Please check one: this action is a(n):**

- ☐ Addition. Please proceed to Part A.
- ☐ Revision. If a revision applies to multiple tracks, please list them here and then proceed to Part A:

- 
- ☐ Inactivation
- ☐ Temporary Suspension of Admissions. Give Length of Suspension:
- 

**Temporary suspension of admissions:** The program will be removed from the online application. A notation will be entered in the graduate catalog indicating the length of the suspension of admissions. Currently enrolled students will not experience any issues with continued enrollment.

**Inactivation:** Admissions will be suspended for new students and the program will be removed from the online application. Students active in the program are eligible to complete the program under the appropriate criteria and an appropriate teach-out plan is required. The program will be removed from the catalog as of the approved term.

**If you checked inactivation or you are temporarily suspending admissions, please go to Part B and complete it.**



## Signature Page

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### RECOMMENDATIONS

☐ Yes    ☐ No    Department Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Curriculum Committee Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Dean: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Chair or GSC: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Dean, College of Graduate Studies: \_\_\_\_\_ 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 Research; Academic Services; Faculty Senate;  
University Analysis and Planning Support; College of Graduate Studies

**Part A – For additions or revisions of programs, tracks or certificates**

**Brief statement of rationale:** (Please indicate the rationale, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate.)

**For Revisions:**

**Brief listing of Program Changes:** (Please indicate the 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.**)

**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 provide a list of students if possible:

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

**Name Change**

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

*Page 5 of UCF Program Recommendation Form*

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

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Provide the name of the current program, track, or certificate:

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**When is the name change effective?** Please note: A 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.

---

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

---

If you are requesting a CIP Code change for an existing program, track, or certificate, please provide:

old CIP:

---

new CIP:

---

If a name change is your only revision, stop here. Otherwise, complete the rest of Part A.

**Part A - Continued**

**Specify the faculty who will participate in the program, track or certificate and their credentials to do so:** (List faculty and a brief paragraph of their credentials.)

**Impact of changes on students:** Will current students be impacted by the addition or revision of a program, track or certificate? If so, how?

If applicable, provide a written agreement (email is fine) from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate. Please attach the correspondence and also list the units here.

If an addition, 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			
SCHs			

If an addition, indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

Part A - Continued

If an addition or there are substantial REVISIONS to existing tracks or certificates, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	No. assistantship students	Source of funds	No. fellowship students (specify fellowship)	No. tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Checklist of items to be provided:

- ☐ Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)
- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ Emails showing consultation with other units. (if applicable)
- ☐ If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.
- ☐ If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.

Part B – For inactivations or suspensions of programs, tracks, or certificates

Are students currently enrolled in the program? ☐ Yes ☐ No

If yes, number of current students:

---

Please specify the intended time period of inactivation or suspension:

---

If program, track, or certificate is being inactivated or suspended, then attach a “teach out” plan for all current students specifying how they can finish the program or where students will be placed if moving to another program. The “teach out” plan should specify when courses will be offered to enable students to finish. Specify whether students will remain in the existing program to finish, and if so, when the completion date will be, whether students will be moved to another program, etc. Please provide a list of students where applicable.

Sample teach out plan: Enter the terms and courses that will be taught for each term throughout the last semester. **Please delete course prefixes and numbers in this section if no teach out plan is required.**


Fall 2012	Spring 2013	Summer 2013	Fall 2013	Spring 2014

Checklist of items to be provided:

- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ E-mails showing consultation with other units. (if applicable)

• • • • •

# Education PhD

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- ☒ [Program Description](#)
  - ☒ [Curriculum](#)
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## Program Tracks

- [Communication Sciences and Disorders](#)
- [Counselor Education](#)
- [Elementary Education](#)
- [Early Childhood](#)
- [Exceptional Education](#)
- [Exercise Physiology](#)
- [Higher Education](#)
- [Instructional Technology](#)
- [Mathematics Education](#)
- [Methodology, Measurement and Analysis](#)
- [Reading Education](#)
- [Science Education](#)
- [Social Science Education](#)
- [Teaching English to Speakers of Other Languages](#)

## Graduate Handbook

- [Education PhD Handbook](#)

## Program Disciplines

This program belongs to the following disciplines:

- [Education](#)



College : [Education](#) Degree :PHD  
 Department : Option : Dissertation  
 Program Websites : <http://education.ucf.edu/phd/>

## PROGRAM DESCRIPTION

The PhD in Education is a research-oriented degree appropriate for those who seek positions in the professoriate or in school districts, businesses, industry, educational agencies and other educational settings that require a strong research base.

It is the intent of this program to be interdisciplinary, allowing flexibility for students who will work in research clusters and learning communities with faculty on education-related research. Programs of study can be designed for those who seek faculty positions in a research university or research-oriented education positions in business and industry.



## CURRICULUM

The Education PhD requires a minimum of 69 credit hours beyond the master's degree; minimum credit hour requirements vary by track. Students from all tracks must complete 24 credit hours of core courses, 24 credit hours of dissertation, and 3 credit hours of internship; the Communication Sciences and Disorders track requires 2 credit hours in university teaching and 2 credit hours in clinical supervision. Additional course requirements vary by track. All students must also complete the candidacy examination.

### Total Credit Hours Required:

69 Credit Hours Minimum beyond the Master's Degree

This section describes the elements of the curriculum that are in common for all of the tracks. The internship requirement is common to most of the tracks but not all, and more detail is provided on the internship in each specialization section.

### Required Courses

#### Core—24 Credit Hours

- IDS 7501 Issues and Research in Education (3 credit hours)
- IDS 7500 Seminar in Educational Research (variable credit and repeatable, 6 credit hours)
- EDF 7475 Qualitative Research in Education (3 credit hours)
- EDF 7403 Quantitative Foundations of Educational Research (3 credit hours)

- EDF 7463 Analysis of Survey, Record and Other Qualitative Data (3 credit hours)
- IDS 7502 Case Studies in Research Design (3 credit hours) [or one of the following approved research electives:](#)

[EDF 7406 Multivariate Statistics](#)

[EDF 7405 Quantitative Methods II](#)

[EDF 7410 Application of Nonparametric & Categorical Data Analysis in Education](#)

[EDF 7415 Latent Variable Modeling](#)

[EDF 7473 Ethnography in Qualitative Research](#)

[EDF 7474 Multilevel Data Analysis in Education](#)

[EDF 7487 Monte Carlo Simulation](#)

- [SPA 7495 Doctoral Seminar in Spoken and Written Language Disorders II](#)  
(Communication Sciences Track students only)

- ~~IDS 7938 Research Cluster Seminar (3 credit hours) or approved research methods elective~~
- [EDF 7406 Multivariate \(3 credit hours\) or one of the follow approved research electives:](#)

[IDS 7938 Research Cluster Seminar](#)

[EDF 7405 Quantitative Methods II](#)

[EDF 7410 Application of Nonparametric & Categorical Data Analysis in Education](#)

[EDF 7415 Latent Variable Modeling](#)

[EDF 7473 Ethnography in Qualitative Research](#)

[EDF 7474 Multilevel Data Analysis in Education](#)

[EDF 7487 Monte Carlo Simulation](#)

- [SPA 7495 Doctoral Seminar in Spoken and Written Language Disorders II](#)  
(Communication Sciences Track students only)

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## Internship—3 Credit Hours



Specialization in all tracks must include a professional internship. In the Communication Sciences and Disorders Track, however, students must complete a three-part internship: one in university teaching (2 credit hours), one in clinical supervision (2 credit hours) for children, adolescents and adults with disorders in language and literacy, and one in professional development (2 credit hours).

### **Dissertation—24 Credit Hours**

Doctoral students must present a prospectus for the dissertation to the doctoral adviser, prepare a proposal and present it to the dissertation committee, and defend the final research submission with the dissertation committee.

### **Candidacy**

To enter candidacy for the PhD, students must have an overall 3.0 GPA on all graduate work included in the planned program and pass all required examinations. Examinations will be scheduled by the student and major adviser. The associate dean for graduate studies and research must be notified of the date and location of the exam 30 days in advance. Students must be enrolled in the university during the semester an examination is taken.

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

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

### **Candidacy Examinations**

All PhD candidates will be required to complete two examinations.

- Research in the Specialization—8-hour written examination.
- Specialization—3-hour oral examination.

### **INDEPENDENT LEARNING**

The dissertation fulfills the independent learning requirement.

## **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.

## Application Deadlines

Education PhD	Fall Priority	Fall	Spring	Summer
Domestic Applicants	Dec 20	Feb 15	-	-
International Applicants	Dec 20	Jan 15	-	-
International Transfer Applicants	Dec 20	Feb 15	-	-

## FINANCIALS

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see [Funding for Graduate School](#), 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 [Fellowships](#), which includes descriptions of UCF fellowships and what you should do to be considered for a fellowship.

## Contact Info

### Graduate Program

#### Mike Robinson PhD

Professor

[edward.robinson@ucf.edu](mailto:edward.robinson@ucf.edu)

Telephone: 407-823-6106

ED 209E [Map](#)

### Graduate Admissions

#### Admissions Counselor

[gradadmissions@ucf.edu](mailto:gradadmissions@ucf.edu)

Telephone: 407-823-2766 ext. 253

Millican Hall 230 

[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](mailto:gradfellowship@ucf.edu)

[www.graduate.ucf.edu](http://www.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](mailto:finaid@ucf.edu)

<http://finaid.ucf.edu>



## Program Recommendation Form

**This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs. If there are changes to a program and the changes will affect the program tracks also, one form may be used for this type of change.**

PLEASE NOTE: The deadline for new tracks or certificates is **February 1 of each year**. Any proposal for new tracks or certificates received after this date will not be included in the next year's catalog. Revisions to existing programs, tracks, or certificates are **due by March 15**. Any proposals for revisions received after that date will not be included in the next year's catalog. Please include catalog copy (description, curriculum, contact information, application requirements, and application deadlines). For revisions – attach the catalog copy showing changes (use **Track Changes in Word**).

College/Unit(s) Submitting Proposal: \_\_\_\_\_

Proposed Effective Term/Year: \_\_\_\_\_

Unit(s) Housing Program: \_\_\_\_\_

Name of program, track and/or certificate: \_\_\_\_\_

Brief description of program (this description will show up in the graduate catalog copy): *Do not add complete catalog copy here.*

DELIVERY - Will program be delivered: ☐ Face to face ☐ Completely online ☐ Mixed delivery

Admissions deadlines: (Please specify if you have a different deadline for the track than for the program?)

\_\_\_\_\_

Application requirements: (Please specify if you have different application requirements for the track than for the program? Will you admit directly to the track?)

\_\_\_\_\_

Program Director(s) and contact information: (name, email, phone, campus address, program website address)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Please check one: this action affects a:**    ☐ Program    ☐ Track    ☐ Certificate

**Please check one: this action is a(n):**

- ☐ Addition. Please proceed to Part A.
- ☐ Revision. If a revision applies to multiple tracks, please list them here and then proceed to Part A:

- 
- ☐ Inactivation
- ☐ Temporary Suspension of Admissions. Give Length of Suspension:
- 

**Temporary suspension of admissions:** The program will be removed from the online application. A notation will be entered in the graduate catalog indicating the length of the suspension of admissions. Currently enrolled students will not experience any issues with continued enrollment.

**Inactivation:** Admissions will be suspended for new students and the program will be removed from the online application. Students active in the program are eligible to complete the program under the appropriate criteria and an appropriate teach-out plan is required. The program will be removed from the catalog as of the approved term.

**If you checked inactivation or you are temporarily suspending admissions, please go to Part B and complete it.**

## Signature Page

---

### RECOMMENDATIONS

☐ Yes    ☐ No    Department Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Curriculum Committee Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Dean: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Chair or GSC: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Dean, College of Graduate Studies: \_\_\_\_\_ 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 Research; Academic Services; Faculty Senate;  
University Analysis and Planning Support; College of Graduate Studies

**Part A – For additions or revisions of programs, tracks or certificates**

**Brief statement of rationale:** (Please indicate the rationale, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate.)

**For Revisions:**

**Brief listing of Program Changes:** (Please indicate the 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.**)

**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 provide a list of students if possible:

---

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

**Name Change**

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

*Page 5 of UCF Program Recommendation Form*

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

---

Provide the name of the current program, track, or certificate:

---

**When is the name change effective?** Please note: A 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.

---

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

---

If you are requesting a CIP Code change for an existing program, track, or certificate, please provide:

old CIP:

---

new CIP:

---

If a name change is your only revision, stop here. Otherwise, complete the rest of Part A.

**Part A - Continued**

**Specify the faculty who will participate in the program, track or certificate and their credentials to do so:** (List faculty and a brief paragraph of their credentials.)

**Impact of changes on students:** Will current students be impacted by the addition or revision of a program, track or certificate? If so, how?



If applicable, provide a written agreement (email is fine) from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate. Please attach the correspondence and also list the units here.

If an addition, 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			
SCHs			

If an addition, indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

#### Part A - Continued

If an addition or there are substantial REVISIONS to existing tracks or certificates, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	No. assistantship students	Source of funds	No. fellowship students (specify fellowship)	No. tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Checklist of items to be provided:

- ☐ Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)
- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ Emails showing consultation with other units. (if applicable)
- ☐ If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.
- ☐ If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.

Part B – For inactivations or suspensions of programs, tracks, or certificates

Are students currently enrolled in the program? ☐ Yes ☐ No

If yes, number of current students:

---

Please specify the intended time period of inactivation or suspension:

---

If program, track, or certificate is being inactivated or suspended, then attach a “teach out” plan for all current students specifying how they can finish the program or where students will be placed if moving to another program. The “teach out” plan should specify when courses will be offered to enable students to finish. Specify whether students will remain in the existing program to finish, and if so, when the completion date will be, whether students will be moved to another program, etc. Please provide a list of students where applicable.

Sample teach out plan: Enter the terms and courses that will be taught for each term throughout the last semester. **Please delete course prefixes and numbers in this section if no teach out plan is required.**

Fall 2012	Spring 2013	Summer 2013	Fall 2013	Spring 2014

Checklist of items to be provided:

- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ E-mails showing consultation with other units. (if applicable)

# Materials Science and Engineering MSMSE

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  - ☒ [Curriculum](#)
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- 



[This program/track is offered online.](#)

## Program Tracks

- [Accelerated BS to MSMSE](#)

## Graduate Handbook

- [Materials Science and Engineering MSMSE Handbook](#)

## Program Disciplines

This program belongs to the following disciplines:

- [Materials Engineering](#)
- [Engineering](#)



College : [Engineering and Computer Science](#)

Department : [Mechanical, Materials Science and Aerospace Engineering](#)

Program Websites :

<http://mse.ucf.edu/graduateprogram/index.php><http://www.mmae.ucf.edu/Academics/graduate.htm>  
[↑](#)

Degree :MSMS

Option : Thesis,  
Nonthesis

## PROGRAM DESCRIPTION

The Master of Science in Materials Science and Engineering program is primarily for students with bachelor's degrees in Materials Science and Engineering or a closely related discipline.

[Read More ▼▲](#)

International students (F or J visa) are required to enroll in a full-time course load of 9 credit hours during the fall and spring semesters. Only 3 of the 9 credit hours may be taken in a completely online format. For a detailed listing of enrollment requirements for international students, please visit [www.intl.ucf.edu](http://www.intl.ucf.edu). If you have any questions, please consult the International Services Center at 407-823-2337.

## CURRICULUM

The Materials Science and Engineering MSMSE program offers both thesis and non-thesis options with each requiring a minimum of 30 credit hours beyond the bachelor's degree. In general, the program includes 12-15 credit hours of required courses with the remaining courses being electives except for at least six credit hours of thesis work for students in the thesis option.

### Total Credit Hours Required:

30 Credit Hours Minimum beyond the Bachelor's Degree

The thesis option is primarily for those students who can devote a full-time effort to completing an independent research project that leads to a thesis. A student pursuing the thesis option may not register for thesis credit hours until an advisory committee has been appointed and the committee has reviewed the program of study and the proposed thesis topic.

The non-thesis option is primarily designed for part-time and online students and requires 30 credit hours of course work. In addition, students pursuing the non-thesis option are required to take EML 6085 Research Methods in MMAE or EMA/~~EML~~ 6918 Directed Research as part of their 30-credit-hour course requirement to demonstrate their ability to perform independently in research conditions. See the MSMSE program director for specific details.

All students are expected to identify an adviser and file an official degree program of study prior to the completion of 9 credit hours of study. All programs of study must consist of at least 24 credit hours of required and elective courses, exclusive of thesis and research. At least half of the credit hours in a program of study must be at the 6000 level. The appropriate program of study form can be found at the program website listed above and students should consult with the [MSEaterials](#) program director for assistance in filling out the program of study form and approval. Substitutions to the program of study must meet with the approval of the adviser and the [MSEaterials](#) program director.

A student with an undergraduate degree outside of the materials science and engineering discipline is required to satisfy an articulation program and may have to take additional prerequisite courses.

### Prerequisites (or equivalent)

- Mathematics through Differential Equations (MAP 2302 )
- Structure and Properties of Materials (EGN 3365 )
- Mechanics of Materials (EGN 3331) or Thermodynamics (EGN 3343 )
- Experimental Techniques in Mechanics and Materials (EMA 3012C)

### Required Courses—15 Credit Hours

All students must take ~~the following~~ five required courses unless they hold a materials engineering undergraduate degree, in which case they may substitute an additional elective for EMA 5104.

- EMA 5104 Intermediate Structure and Properties of Materials (3 credit hours)
- EMA 5106 Metallurgical Thermodynamics (3 credit hours)
- EMA 5317 Materials Kinetics (3 credit hours)

• All students must take one of the two following pairs of required courses.

- EMA 6126 Physical Metallurgy (3 credit hours)
- EMA 6626 Mechanical Behavior of Materials (3 credit hours)

Or

- EMA 5060 Polymer Engineering (3 credit hours)
- EMA 6319 Colloid and Interface Engineering (3 credit hours)

• Students taking the courses in one required pair may also take courses in the other required pair as electives.

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### Elective Courses—9 Credit Hours

All students, both thesis and non-thesis, must take at least 9 credit hours of electives. Additional electives are listed from the lists below. Students waived from EMA 5104 in the required courses above must also choose an additional elective. Courses should be selected with faculty adviser approval.

- EMA 5108 Surface Science (3 credit hours)
- EMA 5140 Introduction to Ceramic Materials (3 credit hours)
- EMA 5504 Modern Characterization of Materials (3 credit hours)
- EMA 6130 Phase Transformation in Metals and Alloys (3 credit hours)
- EMA 6136 Diffusion in Solids (3 credit hours)
- EMA 5585 Materials Science of Thin Film (3 credit hours)
- EMA 6516 X-ray Diffraction and Crystallography (3 credit hours)
- EMA 5586 Photovoltaic Solar Energy Materials (3 credit hours)
- EMA 5584 Biomaterials (3 credit hours)
- EMA 6149 Imperfections in Crystals (3 credit hours)
- EMA 5505 Scanning Electron Microscopy (3 credit hours)

- EMA 5060 Polymer Science and Engineering (3 credit hours)
- EMA 6518 Transmission Electron Microscopy (3 credit hours)
- EMA 5705 High Temperature Materials (3 credit hours)
- EMA 6605 Materials Processing Techniques (3 credit hours)
- EMA 5610 Laser Materials Processing (3 credit hours)
- EMA 5587C Characterization and Reliability of PV Cells (3 credit hours)
- EML 6085 Research Methods in MMAE (3 credit hours)
- EMA 6515 X-ray and Auger Electron Spectroscopic Techniques (3 credit hours)
- EMA 6938 Electronic and Optical Materials Processing (3 credit hours)

#### **Electives Outside EMA Offerings**

- CHM 5450 Polymer Chemistry (3 credit hours)
- CHM 5451C Techniques in Polymer Science (3 credit hours)
- CHM 5715C Materials Processing and Characterization Techniques (3 credit hours)
- CHM 6711 Materials Chemistry (3 credit hours)
- EEE 5332C Thin Film Technology (3 credit hours)
- EEE 5352 Semiconductor Material and Device Characterization (3 credit hours)
- EEE 6326C MEMS Fabrication Laboratory (3 credit hours)
- EML 5290 Introduction to MEMS and Micromachining (3 credit hours)
- EML 5291 MEMS Materials (3 credit hours)
- OSE 5312 Fundamentals of Optical Science (3 credit hours)
- OSE 6432 Fundamentals of Photonics (3 credit hours)
- PHY 5140C Ion-Solid Interactions (3 credit hours)
- PHY 7423 Physics of Nanostructures (3 credit hours)
- PHZ 5405 Condensed Matter Physics (3 credit hours)

#### **Thesis Option—6 Credit Hours**

Thesis students must complete an independent research project, and write and successfully defend their thesis that describes the project.

- EM~~AL~~ 6971 Thesis (6 credit hours)

The College of Engineering and Computer Science requires that all thesis defense announcements be approved by the student's adviser and posted on the college's [website](#) and on the [Events Calendar](#) at the College of Graduate Studies website at least two weeks before the defense date.

#### **Non-thesis Option—6 Credit Hours**

Non-thesis students are required to demonstrate their ability to perform independently in research conditions by completing either EML 6085 or EM~~A~~~~EML~~ 6918. In addition, they must take another elective beyond the 9 credit hours of electives described above.

- EML 6085 Research Methods in M~~MAE~~AE (3 credit hours) or EMA/~~EML~~ 6918 Directed Research (3 credit hours)
- Elective (3 credit hours)

### **Equipment Fee**

~~Students in the Materials Science and Engineering MSMSE program pay a \$90 equipment fee each semester that they are enrolled.~~

## **INDEPENDENT LEARNING**

The Independent Learning Requirement is met by successful completion of a master's thesis or EML 6085 Research Methods or EMA 6918 Directed Research for non-thesis students.

## **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.

The College of Engineering and Computer Science strongly encourages prospective applicants to request a free pre-screening ([www.cecs.ucf.edu/prescreen](http://www.cecs.ucf.edu/prescreen)) of their qualifications prior to submitting an online application for graduate admission. However, a pre-screening is not required; rather, it is offered as a courtesy to all prospective applicants before they commit to submitting a complete online application and paying an application processing fee.

Admissions decisions are made on the basis of a complete online application only, and not on the basis of any pre-screening. Prospective applicants who are encouraged to apply to their intended graduate program based on the information provided for their pre-screening are not assured of admission or financial assistance when they submit a complete online application. Although it is possible, it is not likely; that prospective applicants who are discouraged from formally applying to a graduate program at the pre-screening stage will be admitted if they elect to submit a complete online application anyway.

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.
- A bachelor's degree in Materials Science and Engineering or a closely related discipline.
- Résumé.
- Statement of educational, research, and professional career objectives.
- Applicants applying to this program who have attended a college/university outside the United States must provide a course-by-course credential evaluation with GPA calculation. Credential evaluations are accepted from [World Education Services \(WES\)](#) or [Josef Silny and Associates, Inc.](#) only.

Faculty members may choose to conduct face-to-face or telephone interviews before accepting an applicant into their research program.

Additional courses may be required to correct deficiencies. Students should contact the [MSE materials](#) graduate program director for more information.

## Application Deadlines

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

Materials Science and Engineering MSMSE	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

## FINANCIALS

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## Program Recommendation Form

**This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs. If there are changes to a program and the changes will affect the program tracks also, one form may be used for this type of change.**

PLEASE NOTE: The deadline for new tracks or certificates is **February 1 of each year**. Any proposal for new tracks or certificates received after this date will not be included in the next year's catalog. Revisions to existing programs, tracks, or certificates are **due by March 15**. Any proposals for revisions received after that date will not be included in the next year's catalog. Please include catalog copy (description, curriculum, contact information, application requirements, and application deadlines). For revisions – attach the catalog copy showing changes (use **Track Changes in Word**).

College/Unit(s) Submitting Proposal: \_\_\_\_\_

Proposed Effective Term/Year: \_\_\_\_\_

Unit(s) Housing Program: \_\_\_\_\_

Name of program, track and/or certificate: \_\_\_\_\_

Brief description of program (this description will show up in the graduate catalog copy): *Do not add complete catalog copy here.*

DELIVERY - Will program be delivered: ☐ Face to face ☐ Completely online ☐ Mixed delivery

Admissions deadlines: (Please specify if you have a different deadline for the track than for the program?)

\_\_\_\_\_

Application requirements: (Please specify if you have different application requirements for the track than for the program? Will you admit directly to the track?)

\_\_\_\_\_

Program Director(s) and contact information: (name, email, phone, campus address, program website address)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Please check one: this action affects a:**    ☐ Program    ☐ Track    ☐ Certificate

**Please check one: this action is a(n):**

- ☐ Addition. Please proceed to Part A.
- ☐ Revision. If a revision applies to multiple tracks, please list them here and then proceed to Part A:

- 
- ☐ Inactivation
- ☐ Temporary Suspension of Admissions. Give Length of Suspension:
- 

**Temporary suspension of admissions:** The program will be removed from the online application. A notation will be entered in the graduate catalog indicating the length of the suspension of admissions. Currently enrolled students will not experience any issues with continued enrollment.

**Inactivation:** Admissions will be suspended for new students and the program will be removed from the online application. Students active in the program are eligible to complete the program under the appropriate criteria and an appropriate teach-out plan is required. The program will be removed from the catalog as of the approved term.

**If you checked inactivation or you are temporarily suspending admissions, please go to Part B and complete it.**

## Signature Page

---

### RECOMMENDATIONS

☐ Yes    ☐ No    Department Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Curriculum Committee Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Dean: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Chair or GSC: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Dean, College of Graduate Studies: \_\_\_\_\_ 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 Research; Academic Services; Faculty Senate;  
University Analysis and Planning Support; College of Graduate Studies

**Part A – For additions or revisions of programs, tracks or certificates**

**Brief statement of rationale:** (Please indicate the rationale, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate.)

**For Revisions:**

**Brief listing of Program Changes:** (Please indicate the 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.**)

**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 provide a list of students if possible:

---

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

**Name Change**

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

*Page 5 of UCF Program Recommendation Form*

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

---

Provide the name of the current program, track, or certificate:

---

**When is the name change effective?** Please note: A 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.

---

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

---

If you are requesting a CIP Code change for an existing program, track, or certificate, please provide:

old CIP:

---

new CIP:

---

If a name change is your only revision, stop here. Otherwise, complete the rest of Part A.

**Part A - Continued**

**Specify the faculty who will participate in the program, track or certificate and their credentials to do so:** (List faculty and a brief paragraph of their credentials.)

**Impact of changes on students:** Will current students be impacted by the addition or revision of a program, track or certificate? If so, how?

If applicable, provide a written agreement (email is fine) from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate. Please attach the correspondence and also list the units here.

If an addition, 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			
SCHs			

If an addition, indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

Part A - Continued

If an addition or there are substantial REVISIONS to existing tracks or certificates, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	No. assistantship students	Source of funds	No. fellowship students (specify fellowship)	No. tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Checklist of items to be provided:

- ☐ Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)
- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ Emails showing consultation with other units. (if applicable)
- ☐ If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.
- ☐ If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.

Part B – For inactivations or suspensions of programs, tracks, or certificates

Are students currently enrolled in the program? ☐ Yes ☐ No

If yes, number of current students:

---

Please specify the intended time period of inactivation or suspension:

---

If program, track, or certificate is being inactivated or suspended, then attach a “teach out” plan for all current students specifying how they can finish the program or where students will be placed if moving to another program. The “teach out” plan should specify when courses will be offered to enable students to finish. Specify whether students will remain in the existing program to finish, and if so, when the completion date will be, whether students will be moved to another program, etc. Please provide a list of students where applicable.

Sample teach out plan: Enter the terms and courses that will be taught for each term throughout the last semester. **Please delete course prefixes and numbers in this section if no teach out plan is required.**

Fall 2012	Spring 2013	Summer 2013	Fall 2013	Spring 2014

Checklist of items to be provided:

- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ E-mails showing consultation with other units. (if applicable)

# Materials Science and Engineering PhD

 [Hide](#) preferences menu.

- 
- ☒ [Program Description](#)
  - ☒ [Curriculum](#)
  - ☒ [Application Requirements](#)
  - ☒ [Application Deadlines](#)
  - ☒ [Financials](#)
  - ☒ [Contact Information](#)
- 

## Graduate Handbook

- [Materials Science and Engineering PhD Handbook](#)

## Program Disciplines

This program belongs to the following disciplines:

- [Materials Engineering](#)
- [Engineering](#)

 FEEDBACK

College : [Engineering and Computer Science](#)

Degree :PHD

Department : [Mechanical, Materials Science and Aerospace Engineering](#)

Option :  
Dissertation

Program Websites :

<http://mse.ucf.edu/graduateprogram/index.php><http://www.mmae.ucf.edu/Academics/graduate.htm>  
[1](#)

## PROGRAM DESCRIPTION

The Materials Science and Engineering PhD program provides students with a fundamental and applied research-based education suitable for seeking employment in industry or academia.

[Read More](#) ▼▲

## CURRICULUM



The Materials Science and Engineering PhD program requires a minimum of 72 credit hours beyond the bachelor's degree. The program requires 27 hours of formal course work exclusive of independent study and a minimum of 15 hours of dissertation research (~~XXX-EMA 7980~~). A minimum of 12 credit hours of elective coursework is required to be ~~No more than 12 credit hours of combined research (XXX 6918 or XXX 7919) and independent study (XXX 6908) hours may be taken~~ at UCF toward fulfilling the degree program of study course work requirements. Details of program requirements are located in the Materials Science and Engineering PhD Handbook.

### **Total Credit Hours Required:**

72 Credit Hours Minimum beyond the Bachelor's Degree

Students entering the Materials Science and Engineering PhD program with a bachelor's degree are required to complete 72 credit hours of graduate coursework, of which ~~57 credit hours are the minimum hours of coursework (may include up to 12 credit hours of research (XXX 6918 or XXX 7919) and independent study (XXX 6908) with approved Program of Study and must include 27 hours of~~ must be formal coursework, of which 12 credit hours must be elective courses taken at UCF, exclusive of independent study and directed and doctoral research hours, and a minimum of 15 dissertation credit hours ~~minimum~~.

The rest of the hours in the PhD program can be chosen by the student in consultation with the adviser and the dissertation committee and with the approval of the program director.

Unless a completed (signed) program of study itemizing the study plan is approved prior to the end of the first semester of studies, the program director may choose not to accept any part of the coursework (including independent studies and/or directed research) taken by the student on a program of study subsequently submitted by the student.

### **Core Courses – 12 Credit Hours**

The following core courses are used as the basis for the doctoral qualifying exam and are recommended, but not required:

- EMA 5104 Intermediate Structure and Properties of Materials (3 credit hours)
- EMA 5106 Metallurgical Thermodynamics (3 credit hours)
- EMA 5317 Materials Kinetics (3 credit hours)

and

- EMA 6126 Physical Metallurgy (3 credit hours)

or

- EMA 6319 Colloids and Interface Engineering (3 credit hours)

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## Elective Courses—57 Credit Hours

The program requires ~~a minimum of that 57-27 credit credit hours of elective courses approved by a faculty adviser, with no more than 12 hours of research (XXX 6918 or XXX 7919) or independent study (XXX 6908). At least 27~~ hours must be formal course work, exclusive of independent study. Of these it is required that 12 credit hours consist of elective courses taken at UCF outside of the core courses listed above. Note that if both EMA 6126 Physical Metallurgy and EMA 6319 Colloids and Interface Engineering are taken, one of them may be taken as an elective. Elective cCourses that are commonly taught in Materials Science and Engineering are listed below:

- EMA 5104 Intermediate Structure and Properties of Materials (3 credit hours)
- EMA 5106 Metallurgical Thermodynamics (3 credit hours)
- EMA 5317 Materials Kinetics (3 credit hours)
- EMA 6126 Physical Metallurgy (3 credit hours)
- EMA 6626 Mechanical Behavior of Materials (3 credit hours)
- EMA 5108 Surface Science (3 credit hours)
- EMA 5140 Introduction to Ceramic Materials (3 credit hours)
- EMA 6130 Phase Transformation in Metals and Alloys (3 credit hours)
- EMA 6136 Diffusion in Solids (3 credit hours)
- EMA 5585 Materials Science of Thin Films (3 credit hours)
- EMA 6516 X-ray Diffraction and Crystallography (3 credit hours)
- EMA 5586 Photovoltaic Solar Energy Materials (3 credit hours)
- EMA 5584 Biomaterials (3 credit hours)
- EMA 5060 Polymer Science and Engineering (3 credit hours)
- EMA 6518 Transmission Electron Microscopy (3 credit hours)
- EMA 5705 High Temperature Materials (3 credit hours)
- EMA 5610 Laser Materials Processing (3 credit hours)
- EMA 5587C Characterization and Reliability of PV Cells (3 credit hours)
- EML 6085 Research Methods in MMAE (3 credit hours)

- ~~EMA 6319 Colloids and Interface Engineering (3 credit hours)~~

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## Electives Outside EMA Offerings

- CHM 5450 Polymer Chemistry (3 credit hours)
- CHM 5451C Techniques in Polymer Science (3 credit hours)
- CHM 5715C Optical Materials Processing and Characterization Techniques (3 credit hours)
- CHM 6711 Chemistry of Materials (3 credit hours)
- EEE 5332C Thin Film Technology (3 credit hours)
- EEE 5352 Semiconductor Material and Device Characterization (3 credit hours)
- EEE 6326C MEMS Fabrication Laboratory (3 credit hours)
- EML 5290 Introduction to MEMS and Micromachining (3 credit hours)
- EML 5291 MEMS Materials (3 credit hours)
- OSE 5312 Light Matter Interaction (3 credit hours)

- OSE 6432 Guided Waves and Optoelectronics (3 credit hours)
- PHY 5140C Ion-Solid Interactions (3 credit hours)
- PHY 7423 Physics of Nanostructures (3 credit hours)
- PHZ 5405 Condensed Matter Physics (3 credit hours)

Other courses may be included in the elective hours with the approval of the student's faculty advisor and the Materials Science and Engineering graduate program director.

### Dissertation—15 Credit Hours

- ~~XXX-EMA~~ 7980 (15 credit hours minimum)

The College of Engineering and Computer Science requires that all dissertation defense announcements are approved by the student's adviser and posted on the college's website, [www.cecs.ucf.edu/graddefense](http://www.cecs.ucf.edu/graddefense) and on the Events Calendar of the College of Graduate Studies website at least two weeks before the defense date.

### Examinations

Both a qualifying exam and a candidacy exam are required. The doctoral qualifying exam is offered twice each year, during the fall and [shortly after the end of the](#) spring semesters. This is a two-day written examination and is intended to evaluate the student's mastery of the field of Materials Science and Engineering. Depending on their area of research specialization and with their faculty adviser's approval, students may choose to take one of two versions of the exam. One focuses on Nanomaterials and the second is more broadly based in Materials Science Engineering. Details of the content of the two exams may be found at the departmental website, <http://mse.ucf.edu/graduateprogram/CurrentStudents.php> ~~mae.ucf.edu/Academics/graduate.html~~. The candidacy exam should be taken in the academic semester immediately following the student's passing of the qualifying exam and is scheduled by mutual agreement of the student and his/her dissertation committee. The student must prepare a written description of their proposed dissertation research prior to the examination, and present that to their dissertation committee [to review prior to](#) ~~during~~ the candidacy examination. Additionally, the student may be questioned orally [during the exam](#) by his/her committee on topics relevant to the proposed dissertation research.

### Dissertation Committee

The doctoral committee must consist of a minimum of five members: three must be faculty members of the graduate program faculty approved to direct dissertations by the Materials Science and Engineering program (see [www.graduatecatalog.ucf.edu/GradFaculty/](http://www.graduatecatalog.ucf.edu/GradFaculty/)), one must be at large from outside the degree program. The committee Chair must also be a member of the UCF Graduate Faculty approved to direct dissertations by the Materials Science and Engineering program. Adjunct faculty and off-campus experts, if approved as Graduate Faculty Scholars, may serve as the outside-the-~~program~~[college](#) person ~~on~~ in the committee. Off-campus experts and adjunct faculty, if Graduate Faculty Scholars, may not serve as committee chairs but

may be co-chairs. The College of Graduate Studies reserves the right to review appointments to advisory committees, place a representative on any advisory committee, or appoint a co-adviser.

~~All members vote on acceptance or rejection of the dissertation proposal and the final dissertation. The dissertation proposal and final dissertation must be approved by a majority of the advisory committee.~~

## Admission to Candidacy

The following are required to be admitted to candidacy and enroll in dissertation hours (enrollment in dissertation hours begins the semester following the completion of these requirements). Evidence of meeting these requirements must be received by the College of Graduate Studies by the day before the first day of classes for the semester in which a student wishes to enroll in dissertation hours.

- Completion of all course work, except for dissertation hours.
- Successful completion of the candidacy examination.
- Successful defense of the written dissertation proposal.
- The dissertation advisory committee is formed, consisting of approved Graduate Faculty and Graduate Faculty Scholars.
- Submission of an approved program of study.
- 

## Dissertation Defense

All dissertations in the Materials Science and Engineering must represent high quality scientific work and the dissertation proposal must be successfully defended and accepted by the Dissertation Committee in a meeting convened for that purpose. The dissertation proposal must be a complete dissertation document provided to the committee at least two weeks prior to the date of the defense. In addition, the high quality of the research must be evidenced by two refereed journal publications of the doctoral candidate as first author that are in print, or formally accepted for publication, prior to the dissertation proposal defense.

All members of the Dissertation Committee vote on acceptance or rejection of the dissertation proposal and the final dissertation. The dissertation proposal and final dissertation must be approved by a majority of the advisory committee.

## Equipment Fee

Students in the Materials Science and Engineering PhD program pay a \$90 equipment fee each semester that they are enrolled.

## INDEPENDENT LEARNING

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The Independent Learning Requirement is met by successful completion of the student's candidacy and dissertation defense examinations.

## 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.

The College of Engineering and Computer Science strongly encourages prospective applicants to request a free pre-screening ([www.cecs.ucf.edu/prescreen](http://www.cecs.ucf.edu/prescreen)) of their qualifications prior to submitting an online application for graduate admission. However, a pre-screening is not required; rather, it is offered as a courtesy to all prospective applicants before they commit to submitting a complete online application and paying an application processing fee.

Admissions decisions are made on the basis of a complete online application only, and not on the basis of any pre-screening. Prospective applicants who are encouraged to apply to their intended graduate program based on the information provided for their pre-screening are not assured of admission or financial assistance when they submit a complete online application. Although it is possible, it is not likely; that prospective applicants who are discouraged from formally applying to a graduate program at the pre-screening stage will be admitted if they elect to submit a complete online application anyway.

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.
- Master's and/or bachelor's degree in Materials Science and Engineering or a closely related discipline.
- Résumé.
- Statement about educational, research, and professional career objectives should include the student's intention for full or part-time study and their desire for a assistantship or fellowship.
- Three letters of recommendation.

Applicants to this program are strongly encouraged to complete the necessary information requested for the ETS PPI (Personal Potential Index) report that is available during the GRE examination. All official PPI reports must be submitted directly to the UCF College of Graduate Studies (use UCF Institution Code: 5233).

Faculty members may choose to conduct face-to-face or telephone interviews before accepting an applicant into their research program.

## Application Deadlines

Materials Science and Engineering PhD	Fall Priority	Fall	Spring	Summer
<b>Domestic Applicants</b>	Jan 15	Jul 15	Dec 1	Apr 15
<b>International Applicants</b>	Jan 15	Jan 15	Jul 1	Nov 1
<b>International Transfer Applicants</b>	Jan 15	Mar 1	Sep 1	Dec 15

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### Program Profile

## Student Profile

## Satyanarayana Kuchibhatla



[Read Profile +](#)

**Ajay Karakoti**

**Uma Seelam**

**Faculty Profile**



[Read Profile +](#)

**Program Stats**

**Contact Info**

**Graduate Program**

**Kevin Coffey PhD**

Professor

[kevin.coffey@ucf.edu](mailto:kevin.coffey@ucf.edu)

Telephone: 407-823-2175

ENG I Rm 381 [Map](#)

**Graduate Admissions**

**Kory Kilgore**

[gradadmissions@ucf.edu](mailto:gradadmissions@ucf.edu)

Telephone: 407-823-2766 ext. 254

Millican Hall 230 

[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](mailto:gradfellowship@ucf.edu)

[www.graduate.ucf.edu](http://www.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](mailto:finaid@ucf.edu)

<http://finaid.ucf.edu>





## Program Recommendation Form

**This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs. If there are changes to a program and the changes will affect the program tracks also, one form may be used for this type of change.**

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Proposed Effective Term/Year: \_\_\_\_\_

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Name of program, track and/or certificate: \_\_\_\_\_

Brief description of program (this description will show up in the graduate catalog copy): *Do not add complete catalog copy here.*

DELIVERY - Will program be delivered: ☐ Face to face ☐ Completely online ☐ Mixed delivery

Admissions deadlines: (Please specify if you have a different deadline for the track than for the program?)

\_\_\_\_\_

Application requirements: (Please specify if you have different application requirements for the track than for the program? Will you admit directly to the track?)

\_\_\_\_\_

Program Director(s) and contact information: (name, email, phone, campus address, program website address)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Please check one: this action affects a:**    ☐ Program    ☐ Track    ☐ Certificate

**Please check one: this action is a(n):**

- ☐ Addition. Please proceed to Part A.
- ☐ Revision. If a revision applies to multiple tracks, please list them here and then proceed to Part A:

- 
- ☐ Inactivation
- ☐ Temporary Suspension of Admissions. Give Length of Suspension:
- 

**Temporary suspension of admissions:** The program will be removed from the online application. A notation will be entered in the graduate catalog indicating the length of the suspension of admissions. Currently enrolled students will not experience any issues with continued enrollment.

**Inactivation:** Admissions will be suspended for new students and the program will be removed from the online application. Students active in the program are eligible to complete the program under the appropriate criteria and an appropriate teach-out plan is required. The program will be removed from the catalog as of the approved term.

**If you checked inactivation or you are temporarily suspending admissions, please go to Part B and complete it.**

## Signature Page

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### RECOMMENDATIONS

☐ Yes    ☐ No    Department Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Curriculum Committee Chair: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    College Dean: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Chair or GSC: \_\_\_\_\_ Date: \_\_\_\_\_

☐ Yes    ☐ No    Dean, College of Graduate Studies: \_\_\_\_\_ 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 Research; Academic Services; Faculty Senate;  
University Analysis and Planning Support; College of Graduate Studies

**Part A – For additions or revisions of programs, tracks or certificates**

**Brief statement of rationale:** (Please indicate the rationale, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate.)

**For Revisions:**

**Brief listing of Program Changes:** (Please indicate the 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.**)

**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 provide a list of students if possible:

---

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

**Name Change**

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

*Page 5 of UCF Program Recommendation Form*

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

---

Provide the name of the current program, track, or certificate:

---

**When is the name change effective?** Please note: A 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.

---

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

---

If you are requesting a CIP Code change for an existing program, track, or certificate, please provide:

old CIP:

---

new CIP:

---

If a name change is your only revision, stop here. Otherwise, complete the rest of Part A.

**Part A - Continued**

**Specify the faculty who will participate in the program, track or certificate and their credentials to do so:** (List faculty and a brief paragraph of their credentials.)

**Impact of changes on students:** Will current students be impacted by the addition or revision of a program, track or certificate? If so, how?

If applicable, provide a written agreement (email is fine) from all involved units that they are in support of, will provide courses to, or will participate in the program, track, or certificate. Please attach the correspondence and also list the units here.

If an addition, 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			
SCHs			

If an addition, indicate likely career or student outcomes upon completion: (What will students do? What will their job titles be?)

Part A - Continued

If an addition or there are substantial REVISIONS to existing tracks or certificates, please complete the following table on financial support: (Specify all forms of support – assistantships, fellowships, and tuition remission.)

	No. assistantship students	Source of funds	No. fellowship students (specify fellowship)	No. tuition remissions	Source of funds
Year 1					
Year 2					
Year 3					

Checklist of items to be provided:

- ☐ Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)
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- ☐ Emails showing consultation with other units. (if applicable)
- ☐ If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.
- ☐ If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.

Part B – For inactivations or suspensions of programs, tracks, or certificates

Are students currently enrolled in the program? ☐ Yes ☐ No

If yes, number of current students:

---

Please specify the intended time period of inactivation or suspension:

---

If program, track, or certificate is being inactivated or suspended, then attach a “teach out” plan for all current students specifying how they can finish the program or where students will be placed if moving to another program. The “teach out” plan should specify when courses will be offered to enable students to finish. Specify whether students will remain in the existing program to finish, and if so, when the completion date will be, whether students will be moved to another program, etc. Please provide a list of students where applicable.


Sample teach out plan: Enter the terms and courses that will be taught for each term throughout the last semester. **Please delete course prefixes and numbers in this section if no teach out plan is required.**







Fall 2012	Spring 2013	Summer 2013	Fall 2013	Spring 2014

Checklist of items to be provided:

- ☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)
- ☐ E-mails showing consultation with other units. (if applicable)

# Accelerated BS to MSMSE

 [Hide](#) preferences menu.

- 
-  [Program Description](#)
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  -  [Application Requirements](#)
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  -  [Contact Information](#)
- 

## Program Tracks

- [Accelerated BS to MSMSE](#)

## Program Disciplines

This program belongs to the following disciplines:

- [Materials Engineering](#)
- [Engineering](#)

 **FEEDBACK**

College : [Engineering and Computer Science](#)

Degree :MSMS

Department : ~~Mechanical~~ [Materials Science and Aerospace Engineering](#)

Option : Thesis, Nonthesis

Program Websites :

<http://mse.ucf.edu/graduateprogram/index.php><http://www.mmae.ucf.edu/Academics/graduate.html>

## TRACK DESCRIPTION

The accelerated undergraduate/graduate program in Materials Science and Engineering allows highly qualified undergraduate majors in Mechanical Engineering (Materials Option) to begin taking graduate-level courses that will count toward their master's degree while completing their baccalaureate degree program. Participation will enable completion of the Bachelor of Science and Master of Science degrees in five instead of six years for students enrolled in full-time course work.

 **Read More** 

## CURRICULUM



### Total Credit Hours Required:

30 Credit Hours Minimum beyond the Bachelor's Degree

The BSMSE is awarded after completing university requirements for the degree, including 128 total credit hours and completing of 71 credit hours of engineering courses. The MSMSE is awarded upon completion of the master's program. Courses designated in General Education Program and Common Program Prerequisites are usually completed in the first 60 hours (see engineering major requirements in the Undergraduate Catalog).

Up to 12 credit hours of approved graduate-level courses of grades "B" (3.0) or better may be counted toward the BS and MS degrees. Additional notes on the Accelerated Undergraduate and Graduate Program in Materials Science and Engineering are as follows:

- Students who change degree programs and select this major must adopt the most current catalog.
- Students must earn at least a "B" (3.0) in each undergraduate and graduate engineering course for them to be counted toward the major.

## Undergraduate Requirements

Please see the current edition of the Undergraduate Catalog for additional information about this program.

## Graduate Requirements

Please see the Materials Science and Engineering MSME program in the Graduate Catalog for additional information.

## INDEPENDENT LEARNING

The Independent Learning Requirement is met by successful completion of a master's thesis or EML 6085 Research Methods or EMA/EML 6918 Directed Research for nonthesis students.

## 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.

The **Accelerated BS to MS Program** in Materials Science ~~and~~ Engineering allows highly qualified University of Central Florida undergraduate majors in ~~Mechanical Materials Science~~ Engineering to begin taking graduate level courses that will count toward their master's degree while completing their baccalaureate degree program. Students apply for admission to the accelerated program in either their junior year or senior year. If the student has a degree in the discipline, but were not previously part of this accelerated program, then they should apply to **Materials Science Engineering MS Program** without a track selection. Additional information about this track may be located at: <http://www.cecs.ucf.edu/academics/acceleratedbstomsprograms>.

The College of Engineering and Computer Science strongly encourages prospective applicants to request a free pre-screening ([www.cecs.ucf.edu/prescreen](http://www.cecs.ucf.edu/prescreen)) of their qualifications prior to submitting an online application for graduate admission. However, a pre-screening is not required; rather, it is offered as a

courtesy to all prospective applicants before they commit to submitting a complete online application and paying an application processing fee.

Admissions decisions are made on the basis of a complete online application only, and not on the basis of any pre-screening. Prospective applicants who are encouraged to apply to their intended graduate program based on the information provided for their pre-screening are not assured of admission or financial assistance when they submit a complete online application. Although it is possible, it is not likely, that prospective applicants who are discouraged from formally applying to a graduate program at the pre-screening stage will be admitted if they elect to submit a complete online application anyway.

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.
- A bachelor's degree in Materials Science and Engineering or a closely related discipline.
- Résumé.
- Statement of educational, research, and professional career objectives.

Faculty members may choose to conduct face-to-face or telephone interviews before accepting an applicant into their research program.

Additional courses may be required to correct deficiencies. Students should contact the Materials graduate program director for more information.

## Application Deadlines

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

<b>Accelerated BS to MSMSE</b>	<b>Fall Priority</b>	<b>Fall</b>	<b>Spring</b>	<b>Summer</b>
<b>Domestic Applicants</b>	Jan 15	Jul 15	Dec 1	Apr 15
<b>International Applicants</b>	Jan 15	Jan 15	Jul 1	Nov 1
<b>International Transfer Applicants</b>	Jan 15	Mar 1	Sep 1	Dec 15

## FINANCIALS

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see [Funding for Graduate School](#), 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.

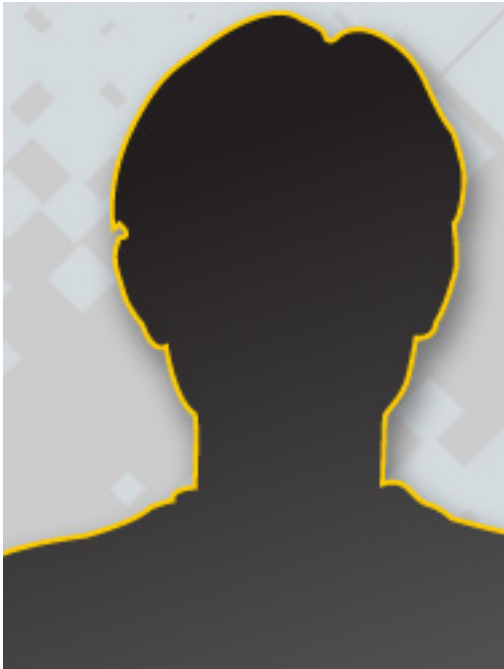
## Fellowships

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 [Fellowships](#), which includes descriptions of UCF fellowships and what you should do to be considered for a fellowship.

## Program Profile

## **Student Profile**

**Monica Hopkins**



[Read Profile +](#)

**Adrian Little**

**Faculty Profile**

**Program Stats**


**Contact Info**

**Graduate Program**

**Kevin Coffey PhD**

Professor

[kevin.coffey@ucf.edu](mailto:kevin.coffey@ucf.edu)

Telephone: 407-823-175 

ENG I Rm 381

## **Graduate Admissions**

### **Kory Kilgore**

[gradadmissions@ucf.edu](mailto:gradadmissions@ucf.edu)

Telephone: 407-823-2766 ext. 254

Millican Hall 230 

[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](mailto:gradfellowship@ucf.edu)

[www.graduate.ucf.edu](http://www.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](mailto:finaid@ucf.edu)

<http://finaid.ucf.edu>

## Graduate Certificate Report 2012-2013

College	Program	Term Established	2010 Apps	2010 Admits	2010 New Enroll	2010 Total Enroll	2010 Grads	2011 Apps	2011 Admits	2011 New Enroll	2011 Total Enroll	2011 Grads	2012 Apps	2012 Admits	2012 New Enroll	2012 Total Enroll	2012 Grads
CAH	Engl - Prof Writing - Cert	Fall 1998	39	15	10	15	7	36	25	19	27	7	30	27	13	23	6
CAH	ESOL Endorsement K-12 - Cert	Spring 2003	29	27	20	26	2	13	10	8	21	12	27	24	18	19	8
CAH	Gender Studies - Cert	Fall 1999	9	9	5	10	1	5	5	2	8	2	6	6	4	7	
CAH	Tch Eng As a For Lang - Cert	Spring 1999	24	24	15	20	12	42	38	20	27	12	44	36	27	32	5
CAH	Theoret & App Ethics Cert	Fall 2002						2	1	1	1		2	2	2	3	
CBA	Entrepreneurship Cert	Fall 2006	9	8	7	12	3	29	27	16	21	7	38	32	24	33	5
CBA	Technology Ventures Cert	Fall 2006	2	2	2	5	5	19	17	16	16	7	13	9	6	11	1
COHPA	CJ - Corrections Leadrshp Cert	Fall 2002	8	8	5	7	4	9	9	6	8	6	7	7	5	7	
COHPA	CJ - Crime Analysis - Cert	Fall 1998	21	21	15	21	12	21	21	19	24	12	13	11	11	19	5
COHPA	CJ - Juvenile Justice Lead Crt	Fall 2002	8	8	5	9	4	6	5	3	5	1	8	6	4	6	1
COHPA	CJ - Police Leadership Cert	Fall 2002	17	17	14	16	14	36	35	31	33	16	54	53	33	40	8
COHPA	Health Care Informatics Cert	Fall 2010	13	12	12	12	2	4	2	1	7	8					
COHPA	Medical Spch/Lang Path Cert	Fall 2002	12	12	10	10		7	5	4	10	8	4	2	2	1	1
COHPA	PA-Urban & Regional Plng-Cert	Fall 2000	12	10	8	16	8	13	13	8	13	1	12	12	9	17	1
COHPA	SW - Administration Cert	Fall 2004	1	1	1	1		2	2	1	1	1	1				
COHPA	SW - Children's Svcs Cert	Fall 2000	2	2	2	3	3	2	2	2	2	1	4	3	3	4	
CON	DNP-Adlt-Ger Cln Nrs Spec Cert	Spring 2011						1	1	1	1						
CON	DNP-Adlt-Geront Nrs Pract Cert	Spring 2011						2	2	1	1	1	1				
CON	DNP-Family Nurse Pract Cert	Spring 2011											2	2	2	2	
CON	NU-Nursing Educ-Cert	Spring 2000	11	10	5	8	3	20	17	11	12	7	4	2	1	4	1
COS	AS - Maya Studies - Cert	Summer 1999	4	4	3	6	4	9	9	7	8	3	5	5	5	9	
COS	Bio -Conservation Biology-Cert	Fall 1999	9	5	3	6	4	4	2	1	2	1	4	2		1	1
COS	Corporate Communication Cert	Spring 2012						16	16	16	16	1	22	21	16	27	2
COS	IC - Computer Forensics Cert	Fall 2001	23	19	13	23	8	19	15	14	20	6	9	5	4	9	3
COS	Mathematics Certificate	Fall 2009	36	30	9	15		68	48	16	22	1	66	41	21	30	1
COS	ST - SAS Data Mining - Cert	Fall 2000	14	13	10	17	10	13	13	8	17	3	21	20	11	20	2
EDUC	Autism Spectrum Disorders Cert	Fall 2005	91	90	70	89	19	73	73	59	83	33	100	100	75	95	30
EDUC	CI - Gifted Education Cert	Fall 2003	27	27	15	21	2	24	24	14	20	7	20	19	12	21	4
EDUC	CI - Urban Education Cert	Summer 2003	5	5	5	9	1	6	6	1	5	4	7	7	7	8	3
EDUC	CI-Community College Educ Cert	Spring 2000	30	30	18	32	11	37	36	21	34	13	41	41	20	30	5
EDUC	CI-Initial Tchr Prof Prep Cert	Fall 1999						1	1		10						
EDUC	CouEd-Marriage & Fam Thrp Cert	Fall 2001	14	14	13	19	10	33	33	28	29	17	36	35	35	44	12
EDUC	Couns Ed - Career Couns Cert	Fall 2003	22	22	16	20	9	25	25	17	17	12	18	18	9	13	7
EDUC	Couns Ed - Play Therapy - Cert	Fall 2001	25	25	21	23	3	25	25	15	21	12	26	26	20	28	6

EDUC	ED - e-Learning Prof Dev Cert	Spring 2004	26	26	19	29	3	25	25	15	25	6	28	28	13	25	5
EDUC	EX-PreK Handicap Endorse-Cert	Fall 1999	9	9	5	10	7	11	11	7	10	1	5	5	4	4	2
EDUC	Global, Int'l & Cmpartv Ed Crt	Summer 2006						7	7	4	4		5	5	4	8	
EDUC	Instruct Desgn Simulation Cert	Fall 2005	13	13	9	12	5	19	19	14	18	7	30	30	15	21	2
EDUC	IT/M - Instr/Educ Tech Cert	Summer 2001	7	7	3	9		9	9	5	13	1	5	5	3	9	1
EDUC	K-8 Math & Science Ed Cert	Summer 2006	2	2	1	2	1						3	1			
EDUC	PE - Heath & Wellness Cert	Summer 2002	2	1				3	2	1	1						
EDUC	PE - Sprts Leadership Cert	Fall 2002	5	5	1	4	2	1	1	1	1	1	1	1	1		1
EDUC	Severe/Profound Disabl Cert	Spring 2008	8	8	7	12	11	6	6	5	7	6	4	4	4	5	2
EDUC	Social Scienc Educ Cert	Summer 2010	2	2	1	1		2	2		1	1	5	5	2	2	
ENGR	CE - Construction Engr - Cert	Fall 2000	3	3	3	3		4	3				8	8	4	4	1
ENGR	CE - Structural Engr - Cert	Fall 1998	2	2	2	3		9	7	4	6		11	9	4	8	
ENGR	CE - Transportation Engr -Cert	Fall 1998	6	6	5	7		10	10	5	9	4	6	6	4	5	2
ENGR	IE - Applied Oper Rsrch - Cert	Fall 1998	5	4	3	4	2	7	7	5	6	2	2	2	2	5	1
ENGR	IE - Indst Ergo & Safety -Cert	Fall 1998	2	1	1	2		1	1	1	2	1	1	1	1	2	
ENGR	IE - Project Engineering -Cert	Fall 1998	48	47	33	43	29	32	31	24	31	24	25	21	18	22	6
ENGR	IE - Quality Assurance - Cert	Fall 1998	9	9	6	7	4	24	23	20	24	13	14	14	10	14	6
ENGR	IE - Systems Engineering Cert	Fall 2008	9	7	6	6	2	6	6	4	6	5	8	8	4	5	2
ENGR	IE - Systems Simulation - Cert	Fall 1998	6	5	4	5	2	2	2	2	3	2	3	2	1	3	
ENGR	IE - Training Simulation -Cert	Fall 1998	12	12	9	12		3	2	1	9		3	2	2	7	3
ENGR	IE -Design for Usability -Cert	Fall 1998	7	7	7	9	1	3	2	1	3	1	7	7	5	6	2
ENGR	ME - CAD/CAM Tech - Cert	Fall 1998	6	3	1	2		2									
GRDST	Mod & Sim of Tech Sysys Cert	Summer 2012											17	17	17	17	
HSPMG	Hospitality Mgt Cert	Fall 2010	6	4				65	32	30	30	18	58	28	24	24	23

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**MCB 5XXX**  
**Cellular and Molecular Neuroscience – Graduate Level**  
Spring 2012  
Dr. Alvaro G. Estévez  
Dr. Yoon-Seong Kim

**Lecture: TBA**  
**Location: TBA**

**Contacting the Professor:** Alvaro G. Estévez, Ph.D.

Office: BBS 241

Office hours: MW 3:30-5:00 PM, F 3:00-5:00 PM

*You are strongly encouraged to make an appointment during these hours by e-mail in advance to gain access to this area of BMS building due to security requirements*

E-mail: [aest@mail.ucf.edu](mailto:aest@mail.ucf.edu)

**Course Text:** Fundamental Neuroscience, Third Edition (2008) by Larry R. Squire, Drawin Berg, Floyd E. Bloom, Sacha du Lac, Anirvan Ghosh and Nicholas C. Spitzer. Additional handout material will be given during the course and lecture notes will be posted on WebCT prior to class whenever possible. Writing assignments will be posted on WebCT at least 2 weeks before the due date.

### **Requirements:**

Standing graduate student status

**Course Description:** This course will give the students a thorough understanding of the nervous tissue at the cellular and molecular level. The interactions between the different cell types and the communication between the cells is emphasized. Understanding not only of the intracellular pathway governing the communication between neurons, but the interactions of different cell populations in the nervous system to define shape and function is central to the study of the nervous system. Analysis of classical literature that are the basis to the current understanding of the nervous system and current literature on new advances on cellular and molecular neuroscience will be emphasized.

**Course Objectives:** Students will gain an advance understanding of the basic cellular components of the nervous systems and the molecular mechanisms involved in their survival and communication. The students will be taken from a refreshment of neuroscience history and the hierarchies of the nervous system to the detailed intracellular pathways involved in neurotransmission and cellular communications. The goal is for the students to understand that the regulation of the nervous systems involves more than neurons and electrical impulses, and that the final architecture and functions of the nervous systems are dependent on all its cellular components. Students will be exposed to critical analysis of the literature to



learn how to formulate scientifically sound hypothesis and experimental design testing to investigate the hypothesis.

**Exams, Assignments and Grading:** Exams will be given only at the indicated times; early or late exams will not occur. Make-up exams will not be offered. Graduate student exams include 2-3 additional questions that will involve data interpretation and a more in depth understanding of course material.

Graduate students in this course are expected to carry additional assignments related to writing, oral presentation and critical thinking. In addition to the in class exams and final exam:

Graduate students will write a short synopsis (no more than 2 pages) of the assigned research papers. Each synopsis should include the major findings of the paper and how the findings contribute to the current state of the field. Graduate students will propose a hypothesis and a brief experimental design to test it based on the findings of each paper that could be a future direction of research. The written synopsis and hypothesis statement for each paper will be turned in on no later than two week after the assignment is given. The hypothesis statement will be discussed with the instructor to help refining before presentation. The last 15 minutes of each class will be dedicated to presentations and discussion of the additional materials.

<b>Four exams:</b> <i>Each covers a specific portion of course material</i> <i>Lowest grade dropped automatically</i>	<b>15 % each</b>	<b>45%</b>
<b>Homework assignments:</b>		<b>25%</b>
<b>Final Exam:</b> <i>Cumulative, with an emphasis on new material</i>	<b>20%</b>	<b>20%</b>
<b>Discussion session – and participation</b>		<b>10%</b>
<b>Total</b>		<b>100%</b>

**Exams, including the final examination may include question related to the topics and papers assigned.**

**Grades will be assigned as follow:**

<b>90-100 %</b>	<b>A</b>
<b>80-89 %</b>	<b>B</b>
<b>70-79 %</b>	<b>C</b>
<b>50-69 %</b>	<b>D</b>

## 0-49 % F

**Attendance:** Attendance at lectures is strongly encouraged, although formal class attendance will not be taken. Homework assignments will be assigned throughout the course (usually without prior warning), and may be due at the next lecture meeting. Thus, missing a lecture may result in an incomplete homework assignment. No make up exams will be given since one of the midterm exams is automatically dropped. There will be no make-up for missed homework assignments.

### **Academic Integrity:**

Students are reminded of the Code of Conduct (Section 3a of the Golden Rule document) that is available for full review at [www.goldenrule.sdes.ucf.edu](http://www.goldenrule.sdes.ucf.edu)

**Disability access:** The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need accommodations in this course must contact the professor at the beginning of the semester (by the end of the second week) to discuss needed accommodations. No accommodation will be provided until the student has met with the professor to request accommodations. Students who need accommodations must be registered with Student Disability Services, Student Resource Center Room 132, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.”

### **Lecture schedule (Tentative – may change during the course as needed)**

<b>Date</b>	<b>Topic</b>	<b>Chapter</b>
22-Jan	Introduction and syllabus overview	
	Fundamentals of Neuroscience	1
	Basic Plan of the Nervous System	2
24-Jan	Cellular Components of Nervous Tissue	3
29-Jan	Subcellular Organization of the Nervous System: Organelles and Their Functions	4
31-Jan	Electrical Properties of Axons and dendrites	5
	Membrane Potential and Action Potential	6
5-Feb	Review and discussion	
7-Feb	<b>Exam #1</b> - during class period	
12-Feb	Neurotransmitters	7
14-Feb	Release of neurotransmitters	8
19-Feb	Neurotransmitter Receptors	9
	Intracellular Signaling	10
21-Feb	Postsynaptic Potentials and Synaptic Integration	11
26-Feb	Review and discussion	
28-Feb	<b>Exam #2</b> - during class period	
5-Mar	Spring Break	
7-Mar	Spring Break	
12-Mar	Complex Information Processing in Dendrites	12
14-Mar	Brain Energy Metabolism	13
19-Mar	Neural Induction and Pattern Formation	14
21-Mar	Review and discussion	
26-Mar	<b>Exam #3</b> - during class period	
28-Mar	Cellular Determination	15

2-Apr	Neurogenesis and Migration	16
	Growth Cone and Axon Pathfinding	17
4-Apr	Target Selection Topographic Maps and synapsis formation	18
9-Apr	Programmed Cell Death and Neurotrophic Factors	19
11-Apr	Review and discussion	
16-Apr	<b>Exam #4</b> - during class period	
18-Apr	Synapse elimination	20
23-Apr	Dendritic Development	21
25-Apr	Review and discussion	
1-May	Final exam as per UCF schedule	

### **The Burnett School of Biomedical Sciences Statement on Academic Integrity**

The Burnett School of Biomedical Sciences holds students to the highest standards of academic conduct. Without exception, students who violate these standards will be reported to the Office of Student Conduct. It is critical that students read and understand the Rules of Conduct described in the student handbook, "The Golden Rule."

**This document describes examples of student misconduct, but the faculty of the Burnett School of Biomedical Sciences want to convey the following positive message to our students:**

- The lifelong pursuit of a professional career in biomedical science and its related disciplines is achieved through one's own hard work.
- If you encounter difficulties in your courses of study, cheating is not the solution. Seek assistance from your instructor, early and often.
- If you devote the necessary energy and resources to your study, and you are prepared for the coursework, you can achieve success.

**Students will be reported to the Office of Student Conduct and disciplinary action will be taken for violation of the following rules. Each rule is stated in full in the Golden Rule document. Here we provide examples that relate best to our courses and discipline.**

**The following (1-6) are violations of the Rules of Conduct and are prohibited:**

#### **1. Unauthorized assistance**

Examples:

- A student copies another student's answers during an exam.
- A student uses notes or electronic devices during an exam when they are not allowed.
- A student obtains a lab report from another student who previously took the course, and uses the materials to complete a lab assignment for the class. Both students are in violation of the Rules of Conduct.

- Two students work together on an online assignment or exam when they were instructed to work alone.

**2. Communication to another through written, visual, electronic or oral means**

Example: Two students are working on an assignment in the library that the instructor has assigned as an individual assignment. One student is finished with the assignment and offers to allow the second student to use the webpage he has found which contains information related to the assignment. Both students are in violation of the Rules of Conduct.

**Commercial use of academic material**

Examples:

- A student takes an extra copy of an exam and sells it to another student.
- A student offers to sell lab reports and class notes on a website, and sells them to the highest bidder. Both the student who sold the materials and the student who purchased them are in violation of this rule.
- A student sells class notes to a note-taking service who sells these notes to other students in the course.

**3. Falsifying or misrepresenting your academic work**

Examples:

- Two students work together and share answers on a homework assignment where specific instructions to work alone were given.
- Two students who are lab partners shared the results of a lab session. They collaborated during the process of writing the lab report and are consequently in violation of this rule.

**4. Plagiarism: Whereby another's work is used or appropriated without any indication of the source, thereby attempting to convey the impression that such work is the student's own**

Examples:

- Text taken verbatim from any source and presented as a student's own original work, including the course book and lab manual, is plagiarism.
- Copying and pasting existing text, either through electronic means or otherwise, and editing the copied text is plagiarism.
- Quotations must be used around text taken verbatim and the source must be cited. While not plagiarism per se, the inclusion of numerous quotes is strongly discouraged, and quotes may even be prohibited by the instructor. Ask the instructor when in doubt about what is acceptable on an assignment.
- Note: Assignments will be evaluated by analytical software to detect plagiarism.

5. Any student who knowingly assists another to violate the academic behavior standards listed above is also in violation of the Rules of Conduct
6. **Disciplinary Actions:**  
BSBS will take full disciplinary action against student misconduct.
  - Violation of any of the Rules of Conduct indicated above on an exam, assignment, or report will automatically result in a score of zero for that exam, assignment, or report and a lowering of the final grade for the course by one letter grade. Grave violations of the rules, at a minimum, may result in a final grade of F for the course.
  - The student's misconduct will be reported to the Office of Student Conduct, which may result in additional penalties such as suspension or expulsion from UCF

**MCB 4XXX**  
**Cellular and Molecular Neuroscience – Undergraduate Level**  
Spring 2012  
Dr. Alvaro G. Estévez  
Dr. Yoon-Seong Kim

**Lecture:** TBA  
**Location:** TBA

**Contacting the Professor: Alvaro G. Estevez, Ph.D.**

Office: Lake Nona BBS 241

Office hours: MW 3:30-5:00 PM, F 3:00-5:00 PM

*You are strongly encouraged to make an appointment during these hours by e-mail in advance to gain access to this area of BMS building due to security requirements*

E-mail: [aest@mail.ucf.edu](mailto:aest@mail.ucf.edu)

**Course Text:** Fundamental Neuroscience, Third Edition (2008) by Larry R. Squire, Drawin Berg, Floyd E. Bloom, Sacha du Lac, Anirvan Ghosh and Nicholas C. Spitzer. Additional handout material will be given during the course and lecture notes will be posted on WebCT prior to class whenever possible.

**Requirements:**

ZOO-3744 Biological principles governing the physiology of the nervous system including electrical properties, chemical signaling, cellular composition, development, injury and regeneration.

**Course Description:** This course will give the students a thorough understanding of the nervous tissue at the cellular and molecular level. The interactions between the different cell types and the communication between the cells is emphasized. Understanding not only of the intracellular pathway governing the communication between neurons, but the interactions of different cell populations in the nervous system to define shape and function is central to the study of the nervous system.

**Course Objectives:** Students will gain an advance understanding of the basic cellular components of the nervous systems and the molecular mechanisms involved in their survival and communication. The students will be taken from a refreshment of neuroscience history and the hierarchies of the nervous system to the detailed intracellular pathways involved in neurotransmission and cellular communications. The goal is for the students to understand that the regulation of the nervous systems involves more than neurons and electrical impulses, and that the final architecture and functions of the nervous systems is dependent on all its cellular components.

**Grading:****Four exams:****20 % each****60%***Each covers a specific portion of course material**Lowest grade dropped automatically***Homework assignments:****Total 15%****15%****Final Exam:****25%****25%***Cumulative, with an emphasis on new material***Total****100%**

**Attendance:** Attendance at lectures is strongly encouraged, although formal class attendance will not be taken. Homework assignments will be assigned throughout the course (usually without prior warning), and may be due at the next lecture meeting. Thus, missing a lecture may result in an incomplete homework assignment. No make up exams will be given since one of the midterm exams is automatically dropped. There will be no make-up for missed homework assignments.

**Academic Integrity:**

Students are reminded of the Code of Conduct (Section 3a of the Golden Rule document) that is available for full review at [www.goldenrule.sdes.ucf.edu](http://www.goldenrule.sdes.ucf.edu)

**Disability access:** The University of Central Florida is committed to providing reasonable accommodations for all persons with disabilities. This syllabus is available in alternate formats upon request. Students with disabilities who need accommodations in this course must contact the professor at the beginning of the semester (by the end of the second week) to discuss needed accommodations. No accommodation will be provided until the student has met with the professor to request accommodations. Students who need accommodations must be registered with Student Disability Services, Student Resource Center Room 132, phone (407) 823-2371, TTY/TDD only phone (407) 823-2116, before requesting accommodations from the professor.”

## Lecture schedule (Tentative – may change during the course as needed)

Date	Topic	Chapter
22-Jan	<b>Introduction and syllabus overview</b>	
	Fundamentals of Neuroscience	1
	Basic Plan of the Nervous System	2
24-Jan	Cellular Components of Nervous Tissue	3
29-Jan	Subcellular Organization of the Nervous System: Organelles and Their Functions	4
31-Jan	Electrical Properties of Axons and dendrites	5
	Membrane Potential and Action Potential	6
5-Feb	Review and discussion	
7-Feb	<b>Exam #1 - during class period</b>	
12-Feb	Neurotransmitters	7
14-Feb	Release of neurotransmitters	8
19-Feb	Neurotransmitter Receptors	9
	Intracellular Signaling	10
21-Feb	Postsynaptic Potentials and Synaptic Integration	11
26-Feb	Review and discussion	
28-Feb	<b>Exam #2 - during class period</b>	
5-Mar	Spring Break	
7-Mar	Spring Break	
12-Mar	Complex Information Processing in Dendrites	12
14-Mar	Brain Energy Metabolism	13
19-Mar	Neural Induction and Pattern Formation	14
21-Mar	Review and discussion	
26-Mar	<b>Exam #3 - during class period</b>	
28-Mar	Cellular Determination	15
2-Apr	Neurogenesis and Migration	16
	Growth Cone and Axon Pathfinding	17
4-Apr	Target Selection Topographic Maps and synapsis formation	18
9-Apr	Programmed Cell Death and Neurotrophic Factors	19
11-Apr	Review and discussion	
16-Apr	<b>Exam #4 - during class period</b>	
18-Apr	Synapse elimination	20
23-Apr	Dendritic Development	21
25-Apr	Review and discussion	
1-May	<b>Final exam as per UCF schedule</b>	



## **The Burnett School of Biomedical Sciences Statement on Academic Integrity**

The Burnett School of Biomedical Sciences holds students to the highest standards of academic conduct. Without exception, students who violate these standards will be reported to the Office of Student Conduct. It is critical that students read and understand the Rules of Conduct described in the student handbook, "The Golden Rule."

**This document describes examples of student misconduct, but the faculty of the Burnett School of Biomedical Sciences want to convey the following positive message to our students:**

- The lifelong pursuit of a professional career in biomedical science and its related disciplines is achieved through one's own hard work.
- If you encounter difficulties in your courses of study, cheating is not the solution. Seek assistance from your instructor, early and often.
- If you devote the necessary energy and resources to your study, and you are prepared for the coursework, you can achieve success.

**Students will be reported to the Office of Student Conduct and disciplinary action will be taken for violation of the following rules. Each rule is stated in full in the Golden Rule document. Here we provide examples that relate best to our courses and discipline.**

**The following (1-6) are violations of the Rules of Conduct and are prohibited:**

**1. Unauthorized assistance**

Examples:

- A student copies another student's answers during an exam.
- A student uses notes or electronic devices during an exam when they are not allowed.
- A student obtains a lab report from another student who previously took the course, and uses the materials to complete a lab assignment for the class. Both students are in violation of the Rules of Conduct.
- Two students work together on an online assignment or exam when they were instructed to work alone.

**2. Communication to another through written, visual, electronic or oral means**

Example: Two students are working on an assignment in the library that the instructor has assigned as an individual assignment. One student is finished with the assignment and offers to allow the second student to use the webpage he has

found which contains information related to the assignment. Both students are in violation of the Rules of Conduct.

## **Commercial use of academic material**

Examples:

- A student takes an extra copy of an exam and sells it to another student.
- A student offers to sell lab reports and class notes on a website, and sells them to the highest bidder. Both the student who sold the materials and the student who purchased them are in violation of this rule.
- A student sells class notes to a note-taking service who sells these notes to other students in the course.

### **3. Falsifying or misrepresenting your academic work**

Examples:

- Two students work together and share answers on a homework assignment where specific instructions to work alone were given.
- Two students who are lab partners shared the results of a lab session. They collaborated during the process of writing the lab report and are consequently in violation of this rule.

### **4. Plagiarism: Whereby another's work is used or appropriated without any indication of the source, thereby attempting to convey the impression that such work is the student's own**

Examples:

- Text taken verbatim from any source and presented as a student's own original work, including the course book and lab manual, is plagiarism.
- Copying and pasting existing text, either through electronic means or otherwise, and editing the copied text is plagiarism.
- Quotations must be used around text taken verbatim and the source must be cited. While not plagiarism per se, the inclusion of numerous quotes is strongly discouraged, and quotes may even be prohibited by the instructor. Ask the instructor when in doubt about what is acceptable on an assignment.
- Note: Assignments will be evaluated by analytical software to detect plagiarism.

### **5. Any student who knowingly assists another to violate the academic behavior standards listed above is also in violation of the Rules of Conduct**

### **6. Disciplinary Actions:**

**BSBS will take full disciplinary action against student misconduct.**

- **Violation of any of the Rules of Conduct indicated above on an exam, assignment, or report will automatically result in a score of zero for that exam, assignment, or report and a lowering of the final grade for the course by one letter grade. Grave violations of the rules, at a minimum, may result in a final grade of F for the course.**

- **The student's misconduct will be reported to the Office of Student Conduct, which may result in additional penalties such as suspension or expulsion from UCF**

## **Graduate Council Curriculum Committee**

### **Course Agenda for 04-01-2013**

#### **College of Business Adm Special Topics**

**REE 7939 Sect 01 BA-Finance 3(3,0)**

**ST: Seminar in Real Estate Research:** PR: Admission to business doctoral program and ECO 6416 or equivalent. An introduction to doctoral-level topics in real estate research; including land economics, spatial markets for real property, and the economics of property law. *Occasional*.

29 of 30 character abbreviation: **ST:Seminar in Real Estate Res**

Rationale: Expose doctoral students to academic research in real estate.

Discussion with others: N/A

#### **College of Business Adm Course Action Additions**

**QMB 7XXX BA-College-BA 3(3,0)**

**Survey and Other Qualitative Data Analysis:** PR: Admission to business doctoral program. This course provides doctoral students with a foundation in survey development and the analysis of survey and other qualitative data applicable to business research. *Occasional*.

30 of 30 character abbreviation: **Survey & Other Qual Data Analy**

Rationale: Course provides key research skills required for business doctoral students doing survey-based research to examine psychological and sociological research issues in business. Course will be critical to students in multiple business doctoral program concentrations who plan to use survey methods for their dissertation research.

Discussion with others: Course is being proposed as other options sought on campus have continually shrunk amidst budget cuts, and the Business PhD program has been unable to find appropriate level coursework in the area offered in any other college that would adequately prepare our students.

Majors taking course: PhD in Business: Accounting, Management and Marketing concentrations

**QMB 7YYY BA-College-BA 3(3,0)**

**Measurement Theory in Business Research:** PR: Admission to business doctoral program. This course provides doctoral students with a foundation in psychometrics and general measurement theory for economic, psychological and sociological-based business research. *Even Fall*.

29 of 30 character abbreviation: **Measur Theory in Bus Research**

Rationale: Course provides key research skills required for business doctoral students doing behavioral research to successfully complete subsequent research methods coursework and to be adequately prepared for dissertation research within the research focus of several business doctoral program concentrations.

Discussion with others: Course is being proposed as other options sought on campus have continually shrunk amidst budget cuts, and the Business PhD program has been unable to find appropriate level coursework in the area offered in any other college that would adequately prepare our students.

Majors taking course: PhD in Business Administration concentrations in Accounting and Management.

### **College of Arts & Humanities Special Topics**

**AMH 6938 Sect 01 CAH-History 3(3,0)**

**ST: Seminar in the History of American Automobility:** PR: Graduate Standing of C.I. Readings and research in the development of American automobility. *Occasional*.

30 of 30 character abbreviation: **ST: Seminar in US Automobility**

Rationale: To expand the range of graduate research offerings in American History.

Discussion with others: No conflicts foreseen.

*AGENDA NOTES: Course Addition also being proposed.*

### **College of Arts & Humanities Course Action Additions**

**AMH 6XXX CAH-History 3(3,0)**

**Seminar in the History of American Automobility:** PR: Graduate Standing or C.I. Readings and research in the development of American automobility. *Odd Fall*.

26 of 30 character abbreviation: **Seminar in US Automobility**

Rationale: To expand the range of graduate offerings in American History at the 6000-level.

Discussion with others: No conflicts foreseen.

Majors taking course: History MA (including Public History track)

*AGENDA NOTES: Special Topic also being proposed.*

**HIS 5XXX CAH-History 3(3,0)**

**Cultural Heritage Management:** PR: Graduate Standing, HIS 5067, or C.I. Readings in the debates and issues of international management of cultural heritage and property, including introduction to UNESCO standards. *Occasional*.

30 character abbreviation: **Cultural Heritage Management**

Rationale: To expand the range of graduate offerings in the field of Public History.

Discussion with others: Discussion with Anthropology but no conflict of interest foreseen per email from department.

Majors taking course: History MA students (including Public History track)

### **College of Sciences Special Topics**

**INR 6938 Sect 01 COS-Political Science 3(3,0)**

**ST:Politics of Civil War:** PR: Admission to degree-seeking program or C. I. Exploration of the causes, the dynamics of violence, the international aspects, and the resolution of civil wars.; . *Occasional*.

30 character abbreviation: **ST:Politics of Civil War**

Rationale: Elective course to strengthen the course offerings for the new Ph.D. program in Security Studies as well as the existing MA program in Political Science.

Discussion with others: No objections from Criminal Justice and from History.

### **College of Sciences Course Action Additions**

**INR 6XXX      COS-Political Science    3(3,0)**

**Politics of Civil Wars:** PR: Admission to degree-seeking program or C.I. Exploration of the causes, the dynamics of violence, the international aspects, and the resolution of civil wars. *Occasional*.

30 character abbreviation: **Politics of Civil Wars**

Rationale: Elective course to strengthen the course offerings for the new Ph.D. program in Security Studies as well as the existing MA program in Political Science.

Discussion with others: No objections from Criminal Justice and from History.

**PHY 5XXX      COS-Physics 3(3,0)**

**General Relativity:** PR: Graduate standing or C.I. Introduction to Einstein's theory of gravitation. *Odd Spring*.

30 character abbreviation: **General Relativity**

Rationale: This is an important course for graduate students working in particle physics, astrophysics, and cosmology.

Discussion with others: n/a

### **College of Education Course Action Revisions**

**RED 5147      Developmental Reading      3(3,0)**

~~PR: EDG 4323.~~ PR: Graduate standing or C.I.

Principles, procedures, organization, and current practices in the elementary reading program. Materials and methods of instruction.

### **College of Medicine Course Action Additions**

**Tabled. Split class. Need additional clarification on 5000 level.**

**ZOO 5XXX      COM-Molecular & Microbiology    3(3,0)**

**Cellular and Molecular Neuroscience:** PR: Graduate Standing. An advanced and thorough course providing understanding of the cellular components and molecular signaling pathways involved in the nervous system function. *Spring*.

29 of 30 character abbreviation: **Cellular & Molecular Neurosci**

Rationale: The course provides thorough understanding of the cellular components and molecular signaling pathways involved in the nervous system function.

Majors taking course: Biomedical Sciences MS, Ph.D., Biology MS