Graduate Council Curriculum Committee
September 16, 2009
12:00 p.m., MH 243

Agenda

1. Welcome and call to order

2. General business
    - Graduate Council Curriculum Committee overview
    - Graduate Council website
    - Dates and start times for meetings
    - Proxy voting

3. Addition of portfolio as option in K-8 Math and Science Ed MEd program for fall 2009

4. Temporary suspension of admissions beginning Spring 2010 to the MA C&I program (has been removed from online applications and notation has been added to the website). Department will be making revisions to the program.

5. Program revision for Physics PhD effective fall 2009

6. Suspend admissions to the Visual Language track, MFA, F&DM beginning fall 2009. Reactivate for 2010-2011 academic year. (has been removed from online application and deadlines deleted from Graduate Programs website with notation)

7. Courses and special topics

8. Adjournment

Members of the Graduate Council Curriculum Committee:

David Boote, COE
Deborah Breiter, RCHM
Naim Kapucu, COHPA
Ram Mohapatra, COS -- Chair
Tison Pugh, CAH
Martin Richardson, COP
Sergio Tafur, GSA
James Turkson, COM
Art Weeks, CECS
Diane Wink, CON
Patricia Bishop, GS
Max Poole, GS

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Recommendation Form

College/Unit(s) Submitting Proposal: College of Education - Teaching Learning Principles **Proposed Effective Term/Year:** Fall 2009

Unit(s) Housing Program: Teaching Learning Principles **Name of Program:** K-8 Mathematics

Brief Statement of Program Change: (for suspensions or deletions of degree programs, tracks or certificates, please attach on a separate sheet the rationale for this action, including statement of how this action impacts faculty teaching in and students enrolled in the program, track or certificate. Please note the units that have been consulted if duplication of programs or conflict of interest with other units has occurred.)

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

Please check one: this action is a(n): ☐ Addition ☐ Suspension ☐ Deletion ☑ Revision

RECOMMENDATIONS

☐ Yes ☐ No
Department Chair: **Date:**

☐ Yes ☐ No
College Curriculum Committee Chair: **Date:**

☐ Yes ☐ No
College Dean or Unit Head: **Date:**

☐ Yes ☐ No
Chair, UPCC or GSC: **Date:**

☐ Yes ☐ No
Dean, Undergraduate Studies or Graduate Studies: **Date:**

Approval:

Provost: **Date:**

This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs.

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

_____Department(s) _____College _____Registrar _____ Associate Registrar

_____Institutional Research _____ Academic Services _____Faculty Senate _____ Information, Analysis & Assessment

MEMORANDUM

TO: Graduate Council

FROM: Lisa Dieker, program director of the K-8 Mathematics and Science Program

SUBJECT: Addition of portfolio as option in K-8 program

DATE: July 14, 2009

The K-8 Mathematics and Science Education MEd program requires a minimum of 36 credit hours beyond the bachelor's degree, including 15 credit hours of core courses, 12 credit hours of specialization content pedagogical courses, 3 credit hours of a supervised professional laboratory experience, and six credit hours of thesis work **or** submission of a portfolio that could be used by the student to obtain National Boards Certification.

Rationale to offer portfolio option

This option emerged during a half Lockheed Martin Academy leadership team retreat with input from Dr. Marty Hopkins who is a national leader in the area of NBC. The team decided to present this second option (keeping the thesis but providing an OR the submission of a portfolio that could be used to achieve National Board Certification) for our Academy teachers.

The National Board Certification process is described as creating teachers with "high and rigorous standards of practice." I also have attached a sample of the portfolio required in the area of mathematics to be a National Board Certified teacher to show the rigorous nature of what students would have to do to prepare the portfolio. National Board Certification leads to pay raises and professional advancement for teachers who can meet the rigorous standards. The students in the program will have to submit their National Board Certification portfolio to the K-8 Academy faculty for final review as well as submit it to the National Board Certification board. These teachers will be meeting comparable rigorous requirements for the development of comprehensive knowledge in the field as those engaged in research and completing a thesis requirement.

Curriculum for K-8 Mathematics and Science Education

The K-8 Mathematics and Science Education MEd program requires a minimum of 36 credit hours beyond the bachelor's degree, including 15 credit hours of core courses, 12 credit hours of specialization content pedagogical courses, 3 credit hours of a supervised professional laboratory experience, and six credit hours of either a thesis option or a non-thesis option that prepares you for National Board Certification for Teachers.

Total Credit Hours Required:

36 Credit Hours Minimum beyond the Bachelor's Degree

Required Courses—27 Credit Hours

Core—15 Credit Hours

- EDF 6481 Fundamentals of Graduate Research in Education (3 credit hours)
- IDS 6934 Using Technology in Mathematics and Science (3 credit hours)
- IDS 6937 Reflecting on Instruction of Mathematics and Science (3 credit hours)
- IDS 6939 Reforming Curriculum in Mathematics and Science Education (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)

Specialization—12 Credit Hours

The following courses provide the content pedagogical courses for the K-8 Mathematics and Science Education MEd program.

- MAE 6641 Problem Solving and Critical Thinking Skills (3 credit hours)
- SCE 5825 Space Science for Educators (3 credit hours)
- ISC 6146 Environmental Education for Educators (3 credit hours)
- Elective as approved by the adviser (3 credit hours)

Practicum—3 Credit Hours

- EDS 5356 Supervision of Professional Laboratory Experiences (3 credit hours)

Thesis Option—6 Credit Hours

The thesis option is designed to give the student practical experience in developing and completing a research project. It is ideal for those who aspire to seek a doctorate or wish to improve their research skills.

- IDS 6971 Thesis

Non Thesis Option – 6 Credit Hours

Some students may choose to complete a non-thesis option that is focused on developing a portfolio according to the guidelines of the National Board for Professional Teaching Standards (NBPTS). The portfolio requires a demonstration of professional growth, reflection, and proficiency and incorporates the concepts of "action research" in a classroom. In addition, all portfolios require a final reflective analysis of students' overall learning and professional development as the capstone portfolio entry. All portfolio entries are critical components of learning since they are the primary means of accessing the professional development of students as reflective practitioners. Students must submit and defend their portfolio before the program faculty as well as submit it for National Board Certification review.

- LAE 5295 Writing Workshop I (3 credit hours)
- EDG 6329. Quality Teaching Practices (3 credit hours)

(IDS 6933 – Portfolio (3 credit hours) With approval of the program director, may be substituted and repeated for LAE 5295 or EDG 6329 should one or both not be offered)

INDEPENDENT LEARNING

A thesis or portfolio is required.

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Recommendation Form

College of Education	Spring 2010
College/Unit(s) Submitting Proposal	Proposed Effective Term/Year
Department of Educational Studies	Master of Arts in Curriculum and Instruction
Unit(s) Housing Program	Name of Program

Brief Statement of Program Change: (for suspensions or deletions of degree programs, tracks or certificates, please attach on a separate sheet the rationale for this action, including statement of how this action impacts faculty teaching in and students enrolled in the program, track or certificate. Please note the units that have been consulted if duplication of programs or conflict of interest with other units has occurred.)

Please check one: this action affects a: ☒ program ☐ track ☐ certificate

Please check one: this action is a(n): ☐ addition ☒ suspension ☐ deletion ☒ revision

Temporary *

		Recommendations (please check)	
Department Chair	9-2-09 Date	☑ Yes	☐ No
College Curriculum Committee Chair	Date	☐ Yes	☐ No
College Dean or Unit Head	9-2-09 Date	☑ Yes	☐ No
Chair, UPCC or GSC	Date	☐ Yes	☐ No
Dean, Undergraduate Studies or Graduate Studies	Date	☐ Yes	☐ No
Approval:			
Provost	Date	☐ Yes	☐ No

* The department is requesting to temporarily suspend admissions to the program effective spring 2010 while they are in the process of making program revisions to the program.

This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs.

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

☐ Department(s) ☐ College ☐ Registrar ☐ Associate Registrar
☐ Institutional Research ☐ Academic Services ☐ Faculty Senate ☐ Information, Analysis & Assessment

University of Central Florida

Department of Educational Studies

Approved 6/23/09
Effective Spring 2010

To: Dr. Grant Hayes, Associate Dean for Graduate Studies, College of Education
From: Dr. David Boote, Program Coordinator, MA C&I program D.B.
Re: Suspension of admissions for MA C&I program

Dear Dr. Hayes

The Department of Educational Studies requests the suspension of admissions for the MA Curriculum & Instruction program.

The primary reason for this request is recent changes in the accreditation standards from the College of Education's national accreditation body, National Council for Accreditation of Teacher Education (NCATE). When this program was proposed 10 years ago it filled a particular niche by allowing students to complete the course requirements required by the State of Florida for certification as a teacher even though the program itself was not and is not a "State Approved" teacher education program. Under previous NCATE Standards such programs did not fall under NCATE's purview - i.e. they did not have to be approved as a teacher education by the Florida Department of Education (FLDOE) or meet NCATE's Standards. Under the new NCATE Standards such program must be approved by the FLDOE and will fall under NCATE's purview. Unfortunately this program does not and cannot meet the requirements for a State approved teacher education program.

In addition, despite continued enrollment growth, this program no longer serves a clear purpose in the College of Education. After reviewing various options for redesigning the program we have decided that it is in the best interests of the Department to no longer admit students to this degree program.

This suspension of admission will allow all students currently enrolled in the program to complete the program before the next NCATE visit in 2012. If this request is approved we will meet with all students to advise them of the suspension and how they can complete the program is a timely way. All required courses in the program are also required for other programs and offered regularly. For this reason we do not anticipate students having any difficulties completing the program. Once the students are through the program we will request the inactivation of the program.

Thank you for considering this request. Please contact me if you have any questions.

Curriculum and Instruction MA

College : Education	**Degree** : MA
Department : Educational Studies	**Option** : Thesis, Nonthesis
Program Websites : http://education.ucf.edu/curriinst/	

PROGRAM DESCRIPTION

The Master of Arts in Curriculum and Instruction program is designed for prospective teachers who want to obtain a degree that is flexible enough to meet their individual needs and helps them ensure quality instructional and curricular practices in schools and other educational settings.

CURRICULUM

The Curriculum and Instruction MA program requires 39-45 credit hours beyond the bachelor's degree, including 12 credit hours of core courses, 15 credit hours of professional teaching certificate courses, 12 credit hours of elective courses within a specialized subject area. Students without teaching experience must also complete 6 credit hours of internship thus inreasing their program to 45 credit hours.

Total Credit Hours Required:
39-45 Credit Hours Minimum beyond the Bachelor's Degree

Required Courses—27 Credit Hours

Core—12 Credit Hours

- EDF 6233 Analysis of Classroom Teaching (3 credit hours)
- EDF 6481 Fundamentals of Graduate Research in Education (3 credit hours)
- EDG 6223 Curriculum Theory and Organization (3 credit hours)
- EME 6602 Integration of Technology into the Curriculum (3 credit hours)

Professional Teaching Certificate Courses—15 Credit Hours

- EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)
- EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- EDF 6727 Critical Analysis of Social, Ethical, Legal and Safety Issues Related to Education (3 credit hours)
- RED 5147 Developmental Reading (3 credit hours)
- Special Methods: Course selection depends on the student's intended certification area
  - Art Education: ARE 5359 Teaching Art K-12 (4 credit hours)
  - English Language Arts: LAE 5346 Methods of Teaching English Language Arts (3 credit hours)
  - Math Education (Grades 5-9): MAE 5327 Teaching Middle School Mathematics (3 credit hours)
  - Math Education (Grades 6-12): MAE 5336 Current Methods in Secondary School Mathematics (3 credit hours)
  - Music Education: MUE 5348C K-12 Music Methods (4 credit hours)
  - Science Education (Grades 5-9): SCE 5325 Teaching Middle School Science (3 credit hours)
  - Science Education (Grades 6-12): SCE 5632 Issues and Methods in Secondary School Science Education (3 credit hours)
  - Social Science Education: SSE 5790 Inquiry and Instructional Analysis in Social Science Education (3 credit hours)
  - Business Education: BTE 6935 Seminar in Business Education (3 credit hours)
  - Other courses approved in the ITPP certificate, with approval of advisor and program coordinator (3 credit hours)

Elective Courses—12 Credit Hours

The electives allow students to specialize in a subject area. The program requires 12 credit hours of electives and students may select one of the following courses as an elective and complete 9 additional credit hours in Option I or II, or complete all 12 credit hours in one of the options.

- EDF 6259 Learning Theories Applied to Classroom Instruction and Management (3 credit hours)
- EDF 6446 Assessment of Learning (3 credit hours)
- EDF 6517 Perspectives on Education (3 credit hours)
- EDG 6047 Contemporary Issues in Education (3 credit hours)

Option I—9-12 Credit Hours

Students work with their adviser to select courses that support their desired area of teaching certification.

Option II—9-12 Credit Hours

Students select one of the specialization areas offered in the MEd in Teacher Leadership program.

Internship—6 Credit Hours

Required for students without teaching experience.

INDEPENDENT LEARNING

Students will complete an independent investigation of the effectiveness of their instructional practice in EDF 6233 Analysis of Classroom Teaching. Additional research studies are required in other required and elective courses in the program.

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(s).

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.
- Statement of goals.
- 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.

Students may not switch from an MA program to a MEd program, or vice versa, without going through the university's admission process.

Application Deadlines

Curriculum and Instruction MA	Fall Priority	Fall	Spring	Summer
Domestic Applicants	Jan 15	Jul 15	-	-
Effective Spring 2010, this program will no longer be accepting applications from prospective students.				
International Applicants	Jan 15	Jan 15	-	-
Effective Spring 2010, this program will no longer be accepting applications from prospective students.				
International Transfer Applicants	Jan 15	Mar 1	-	-
Effective Spring 2010, this program will no longer be accepting applications from prospective students.				

FINANCIALS

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

Contact INFO

Graduate Program

Courtney Bentley EdD
Assistant Professor
cbentley@mail.ucf.edu
Telephone: 407-823-1227
Education 220H Map

Graduate Admissions

Christopher LeGoullon
gradadmissions@mail.ucf.edu
Telephone: 407-823-2766 ext. 253
Millican Hall 230 Map
Online Application
Graduate Admissions

Mailing Address

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

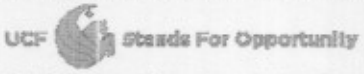
Institution Codes

GRE: 5233
GMAT: RZT-HT-58

Graduate Financial Aid

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

Catalog Home | About the Graduate Catalog | Events Calendar | Apply Now!



UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Recommendation Form

College/Unit(s) Submitting Proposal: College of Science Proposed Effective Term/Year: Fall 2009

Unit(s) Housing Program: PHYSICS Name of Program: PHYSICS Ph.D.

Brief Statement of Program Change: (for suspensions or deletions of degree programs, tracks or certificates, please attach on a separate sheet the rationale for this action, including statement of how this action impacts faculty teaching in and students enrolled in the program, track or certificate. Please note the units that have been consulted if duplication of programs or conflict of interest with other units has occurred.)

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

Please check one: this action is a(n): ☐ Addition ☐ Suspension ☐ Deletion ☑ Revision

RECOMMENDATIONS

☑ Yes ☐ No
Department Chair: [signature] Date: 3/31/09

☑ Yes ☐ No
College Curriculum Committee Chair: Date:

☑ Yes ☐ No
College Dean or Unit Head: [signature] Date: 7/27/09

☐ Yes ☐ No
Chair, UPCC or GSC: Date:

☐ Yes ☐ No
Dean, Undergraduate Studies or Graduate Studies: Date:

Approval:
Provost: Date:

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____ Institutional Research ____ Academic Services ____ Faculty Senate ____ Information, Analysis & Assessment

University of Central Florida

Aniket Bhattacharya
Graduate Coordinator
Department of Physics
April 10, 2009

To
Mike Johnson
Associate Dean
College of Science
University of Central Florida

The Physics Department would like to request a program revision to the catalog description of the Physics Ph. D. program. The most recent catalogue lists the following courses (left) those constitute the "core" of the Ph. D. program. We would like to reduce the number of core courses as listed below (right).

Old (catalogue 2007-2008)	Proposed New
Quantum Mechanics-I (3-credits)	Quantum Mechanics-I (3-credits)
Quantum mechanics –II (3-credits)	Quantum Mechanics-II (3-credits)
Electrodynamics-I (3-credits)	Electrodynamics-I (3-credits)
Electrodynamics-II (3-credits)	Electrodynamics-II (3-credits)
Statistical Physics (3-credits)	Statistical Physics(3-credits)
Computational Physics (3-credits)	Classical Mechanics (3-credits)
Method of Experimental Physics (3-credits)	
Physics Research Seminar (3(1+1+1) credits)	
Total = 24 credit hours	Total = 18 credit hours

The rational for the change is to make our program more competitive at per with other top research universities across the nation where typically the student after successful completion of 18 credit hours (typically during Fall and Spring) of the courses as listed in the right column above take the Ph. D. candidacy exam (the following summer). Therefore, **Classical Mechanics** has been transferred from an elective to the core as the qualifier exam will require knowledge at the level of a graduate course. The Method of of Experimental Physics and Computational Physics will be transferred as mandatory electives (to be decided internally) depending upon the research area of the individual students. **Physics Research Seminar** which used to be offered during summer in the previous years as a **3 credit** course will be removed from the core. Instead, students will be required to attend departmental seminars and colloquia on a regular basis. In addition, each student is required to give a research presentation at least once during their entire length of study. The total number of credit hours remains invariant. The changes are necessitated by the progressively better quality student that we have been able to recruit in last couple of years who we believe are better trained to take the Ph. D. candidacy exam after their 2nd semester and quickly move on to research.

Please advise if you need further information for the proposed changes.

Sincerley,

[redacted]

Aniket Bhattacharya
Associate Professor
(407)-823-5206

Web: http://physics.ucf.edu/~aniket

E-mail: aniket@physics.ucf.edu

PROGRAM DESCRIPTION

The doctoral program in Physics offers research opportunities in condensed matter physics, physics of nanostructured devices, surface science, optical physics, complex systems, biophysics, atomic and molecular physics, and planetary/space science. The department is characterized by its rapid growth and dynamic partnerships. The university's focus on industrial partnerships and research strengthens the department and provides research and employment opportunities for our students.

CURRICULUM

The Physics PhD program requires a total of 72 credit hours for completion, which include 18 hours of core courses, a minimum of 15 hours of dissertation, and a minimum of 12 hours of formal elective courses listed in the catalog, of which at least 3 hours must be a methods course selected from the department's approved list (see below). The remaining 27 credit hours should be filled, by combining directed research, independent study, other electives, and dissertation. Courses must be selected so that at least 36 credit hours are taken at the 6000 level or higher. In addition, students at their 4th semester and beyond will be required to attend a major fraction of seminars and colloquia hosted by the department and make presentation of their research work/independent study once every year.

Total Hours Required for PhD—72 Credit Hours Minimum beyond the Bachelors Degree; 42 Credit Hours Minimum beyond the Master's Degree

Required Core Courses—18 Credit Hours

All students are required to take the following core courses:

- PHY 5606 Quantum Mechanics I (3 credit hours)
- PHY 6624 Quantum Mechanics II (3 credit hours)
- PHY 5346 Electrodynamics I (3 credit hours)
- PHY 6347 Electrodynamics II (3 credit hours)
- PHY 5524 Statistical Physics (3 credit hours)
- PHY 6246 Classical Mechanics (3 credit hours)

Elective Courses—39 Credit Hours

Elective and research courses are determined by the student's chosen specialization. Students are required to meet their 39 credit hour elective requirement as follows:

- Formal Elective Courses (12 credit hours):

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Methods of Experimental Physics (PHY 5846C)¶
Computational Physics (PHZ 5156)¶
Advanced Astronomical Data Analysis (AST 5765)

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<#>PHY 5846C Methods of Experimental Physics (3 credit hours) ¶

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PHY 6939 Physics Research Seminar (1 credit hour, taken 3 times)

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- Methods Elective Course (3 credit hours):
  - Of the 12 credit hours of formal elective courses that are required, 3 credit hours must be completed in a methods course that the department has approved. Students should choose one methods course from:
    - PHY 5846C Methods of Experimental Physics (3 credit hours)
    - PHZ 5156 Computational Physics (3 credit hours)
    - AST 5765 Advanced Astronomical Data Analysis (3 credit hours)
- Elective Courses (9 credit hours):
  - Students should select 9 credit hours of formal elective courses from the specialization coursework lists below.

- Remaining Electives (27 credit hours):
  - As stated above, the remaining 27 credit hours of electives should be filled by combining directed research, independent study, other electives, and dissertation.

General Physics Specialization

The General Physics Specialization emphasizes strong preparation in physics fundamentals. It is intended to prepare students for careers in theoretical physics teaching at the college level. A number of active research programs exist in the department to accommodate such students.

Recommended Courses

- PHY 6667 Advanced Quantum Mechanics (3 credit hours)
- PHY 5933 Selected Topics in Biophysics and Macromolecules
- PHZ 5405 Introduction to Condensed Matter Physics (3 credit hours)
- PHZ 6426 Condensed Matter Physics I (3 credit hours)
- PHZ 6428 Condensed Matter Physics II (3 credit hours)
- PHY 6667 Quantum Field Theory I (3 credit hours)
- PHY 7669 Quantum Field Theory II (3 credit hours)
- PHZ 5505 Plasma Physics (3 credit hours)
- PHY 5650 Introduction to Quantum Computation (3 credit hours)
- PHZ 5304 Nuclear and Particle Physics (3 credit hours)
- PHZ 6234 Atomic Physics (3 credit hours)
- PHY 6420 First Principles Computational Methods in Condensed Matter Physics and Materials Science (3 credit hours)
- PHY 6938 Theory and Computation of Molecular Wave Functions (3 credit hours)
- PHY 6938 Selected Topics in Scattering Theory (3 credit hours)
- OSE 5312 Fundamentals of Optical Science (3 credit hours)
- OSE 6347 Quantum Optics (3 credit hours)
- PHY 7919 Directed Research
- Other courses from Physics, Math, Optics, Materials Science, Engineering.

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Condensed Matter Physics Specialization

The Condensed Matter Physics Specialization is intended to prepare students for careers in materials physics, nanoscale science and technology, semiconductors, and soft condensed matter physics. It emphasizes strong experimental preparation with hands-on courses in advanced materials characterization and processing instrumentation. Related research programs at UCF include magnetic nanostructures, soft condensed matter, electronic and optoelectronic devices, and nanoscale characterization.

Recommended Courses

- PHZ 5405 Introduction to Condensed Matter Physics (3 credit hours)
- PHZ 6426 Condensed Matter Physics I (3 credit hours)
- PHZ 6428 Condensed Matter Physics II (3 credit hours)
- PHY 6420 First Principles Computational Methods in Condensed Matter Physics and Materials Science (3 credit hours)
- PHZ 5437 Nanoscale Surface Physics (3 credit hours)
- PHZ 5432 Introduction to Soft Condensed Matter Physics (3 credit hours)
- PHZ 5933 Selected Topics in Biophysics of Macromolecules (3 credit hours)
- PHY 5650 Introduction to Quantum Computation (3 credit hours)
- PHY 6667 Quantum Field Theory I (3 credit hours)
- PHY 7669 Quantum Field Theory II (3 credit hours)
- PHY 6938 Theory and Computation of Molecular Wave Functions (3 credit hours)
- PHY 6938 Selected Topics in Scattering Theory (3 credit hours)
- Two "studio lab" courses: PHY 5140C Ion-solid interactions (3 credit hours) and PHZ 5425C Electron Solid Interactions (3 credit hours)
- One approved elective selected from Materials Science, Physics, Optical Science and Engineering, Electrical Engineering, or Industrial Chemistry
- PHY 7919 Directed Research

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Optical Physics Specialization

The Optics Specialization coordinator is David Hagan, PhD, College of Optics and Photonics. Students are recommended to take at least one of the following courses.

- OSE 6111 Optical wave propagation (3 credit hours)
- OSE 5115 Interference and Diffraction (3 credit hours)

Select at least one of the following laboratory courses.

- OSE 6526L Laser Engineering Laboratory (3 credit hours)
- OSE 6455L Photonics Laboratory (3 credit hours)

The remaining courses (up to three) may be selected from other graduate courses in Optics see www.creol.ucf.edu.

Dissertation—15 Credit Hours Minimum

- PHY 7980 Dissertation Research (15 credit hours minimum)

All students require a minimum of 15 credit hours of dissertation prepared in consultation with a dissertation adviser. A fifteen-page written proposal is presented orally to the student's dissertation committee within one year after the written candidacy exam. The final oral defense of the dissertation is administered by the student's dissertation committee following completion of a written dissertation describing the student's research.

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Examinations

Placement Exam—A Physics field test is taken during the first year, for advisement purposes only.

Candidacy Exam—Part 1 is a written exam covering the material of the core courses. Part 2 is an oral exam which takes place during the student's dissertation proposal presentation. The written exam is taken at the end of the first year. After passing the both parts of the candidacy examination, the student can register for Doctoral Research (PHY 7919). Before passing the candidacy, research credit can be earned as Directed Research (PHY 7919). Two attempts at the candidacy exam are permitted. The second attempt must happen within one year after failing the first. Students are only allowed to register for dissertation hours (PHY 7980) after presenting the dissertation proposal.

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INDEPENDENT LEARNING

The Physics PhD program requires a doctoral dissertation.

PROGRAM DESCRIPTION

The doctoral program in Physics offers research opportunities in condensed matter physics, physics of nanostructured devices, surface science, optical physics, complex systems, biophysics, atomic and molecular physics, and planetary/space science. The department is characterized by its rapid growth and dynamic partnerships. The university's focus on industrial partnerships and research strengthens the department and provides research and employment opportunities for our students.

CURRICULUM

The Physics PhD program requires a total of 72 credit hours for completion, which include18 hours of core courses, a minimum of 15 hours of dissertation, and a minimum of 12 hours of formal elective courses listed in the catalog, of which at least 3 hours must be a methods course selected from the department's approved list (see below). The remaining 27 credit hours should be filled by combining directed research, independent study, other electives, and dissertation. Courses must be selected so that at least 36 credit hours are taken at the 6000 level or higher. In addition, students at their 4th semester and beyond will be required to attend a major fraction of seminars and colloquia hosted by the department and make presentation of their research work/independent study once every year.

Total Hours Required for PhD—72 Credit Hours Minimum beyond the Bachelors Degree; 42 Credit Hours Minimum beyond the Master's Degree

Required Core Courses—18 Credit Hours

All students are required to take the following core courses:

- PHY 5606 Quantum Mechanics I (3 credit hours)
- PHY 6624 Quantum Mechanics II (3 credit hours)
- PHY 5346 Electrodynamics I (3 credit hours)
- PHY 6347 Electrodynamics II (3 credit hours)
- PHY 5524 Statistical Physics (3 credit hours)
- PHY 6246 Classical Mechanics (3 credit hours)

Elective Courses—39 Credit Hours

Elective and research courses are determined by the student's chosen specialization. Students are required to meet their 39 credit hour elective requirement as follows:

- Formal Elective Courses (12 credit hours):

- Methods Elective Course (3 credit hours):
    - Of the 12 credit hours of formal elective courses that are required, 3 credit hours must be completed in a methods course that the department has approved. Students should choose one methods course from:
        - PHY 5846C Methods of Experimental Physics (3 credit hours)
        - PHZ 5156 Computational Physics (3 credit hours)
        - AST 5765 Advanced Astronomical Data Analysis (3 credit hours)
- Elective Courses (9 credit hours):
    - Students should select 9 credit hours of formal elective courses from the specialization coursework lists below.

- Remaining Electives (27 credit hours):
    - As stated above, the remaining 27 credit hours of electives should be filled by combining directed research, independent study, other electives, and dissertation.

General Physics Specialization

The General Physics Specialization emphasizes strong preparation in physics fundamentals. It is intended to prepare students for careers in theoretical physics teaching at the college level. A number of active research programs exist in the department to accommodate such students.

Recommended Courses

- PHY 6667 Advanced Quantum Mechanics (3 credit hours)
- PHY 5933 Selected Topics in Biophysics and Macromolecules
- PHZ 5405 Introduction to Condensed Matter Physics (3 credit hours)
- PHZ 6426 Condensed Matter Physics I (3 credit hours)
- PHZ 6428 Condensed Matter Physics II (3 credit hours)
- PHY 6667 Quantum Field Theory I (3 credit hours)
- PHY 7669 Quantum Field Theory II (3 credit hours)
- PHZ 5505 Plasma Physics (3 credit hours)
- PHY 5650 Introduction to Quantum Computation (3 credit hours)
- PHZ 5304 Nuclear and Particle Physics (3 credit hours)
- PHZ 6234 Atomic Physics (3 credit hours)
- PHY 6420 First Principles Computational Methods in Condensed Matter Physics and Materials Science (3 credit hours)
- PHY 6938 Theory and Computation of Molecular Wave Functions (3 credit hours)
- PHY 6938 Selected Topics in Scattering Theory (3 credit hours)
- OSE 5312 Fundamentals of Optical Science (3 credit hours)
- OSE 6347 Quantum Optics (3 credit hours)
- PHY 7919 Directed Research
- Other courses from Physics, Math, Optics, Materials Science, Engineering.

Condensed Matter Physics Specialization

The Condensed Matter Physics Specialization is intended to prepare students for careers in materials physics, nanoscale science and technology, semiconductors, and soft condensed matter physics. It emphasizes strong experimental preparation with hands-on courses in advanced materials characterization and processing instrumentation. Related research programs at UCF include magnetic nanostructures, soft condensed matter, electronic and optoelectronic devices, and nanoscale characterization.

Recommended Courses

- PHZ 5405 Introduction to Condensed Matter Physics (3 credit hours)
- PHZ 6426 Condensed Matter Physics I (3 credit hours)
- PHZ 6428 Condensed Matter Physics II (3 credit hours)
- PHY 6420 First Principles Computational Methods in Condensed Matter Physics and Materials Science (3 credit hours)
- PHZ 5437 Nanoscale Surface Physics (3 credit hours)
- PHZ 5432 Introduction to Soft Condensed Matter Physics (3 credit hours)
- PHZ 5933 Selected Topics in Biophysics of Macromolecules (3 credit hours)
- PHY 5650 Introduction to Quantum Computation (3 credit hours)
- PHY 6667 Quantum Field Theory I (3 credit hours)
- PHY 7669 Quantum Field Theory II (3 credit hours)
- PHY 6938 Theory and Computation of Molecular Wave Functions (3 credit hours)
- PHY 6938 Selected Topics in Scattering Theory (3 credit hours)
- Two "studio lab" courses: PHY 5140C Ion-solid interactions (3 credit hours) and PHZ 5425C Electron Solid Interactions (3 credit hours)
- One approved elective selected from Materials Science, Physics, Optical Science and Engineering, Electrical Engineering, or Industrial Chemistry
- PHY 7919 Directed Research

Optical Physics Specialization

The Optics Specialization coordinator is David Hagan, PhD, College of Optics and Photonics. Students are recommended to take at least one of the following courses.

- OSE 6111 Optical wave propagation (3 credit hours)
- OSE 5115 Interference and Diffraction (3 credit hours)

Select at least one of the following laboratory courses.

- OSE 6526L Laser Engineering Laboratory (3 credit hours)
- OSE 6455L Photonics Laboratory (3 credit hours)

The remaining courses (up to three) may be selected from other graduate courses in Optics see www.creol.ucf.edu.

Dissertation—15 Credit Hours Minimum

- PHY 7980 Dissertation Research (15 credit hours minimum)

All students require a minimum of 15 credit hours of dissertation prepared in consultation with a dissertation adviser. A fifteen-page written proposal is presented orally to the student's dissertation committee within one year after the written candidacy exam. The final oral defense of the dissertation is administered by the student's dissertation committee following completion of a written dissertation describing the student's research.

Examinations

Placement Exam—A Physics field test is taken during the first year, for advisement purposes only.

Candidacy Exam—Part 1 is a written exam covering the material of the core courses. Part 2 is an oral exam which takes place during the student's dissertation proposal presentation. . The written exam is taken at the end of the first year. After passing the both parts of the candidacy examination, the student can register for Doctoral Research (PHY 7919). Before passing the candidacy, research credit can be earned as Directed Research (PHY 7919). Two attempts at the candidacy exam are permitted. The second attempt must happen within one year after failing the first. Students are only allowed to register for dissertation hours (PHY 7980) after presenting the dissertation proposal.

INDEPENDENT LEARNING

The Physics PhD program requires a doctoral dissertation.

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Recommendation Form

College/Unit(s) Submitting Proposal: College of Arts and Humanities **Proposed Effective Term/Year:** Fall 2009

Unit(s) Housing Program: Department of Digital Media **Name of Program:** MFA in Film & Digital Media, Visual Languages Track

Brief Statement of Program Change: (for suspensions or deletions of degree programs, tracks or certificates, please attach on a separate sheet the rationale for this action, including statement of how this action impacts faculty teaching in and students enrolled in the program, track or certificate. Please note the units that have been consulted if duplication of programs or conflict of interest with other units has occurred.)

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

Please check one: this action is a(n): ☐ Addition ☑ Suspension ☐ Deletion ☐ Revision

RECOMMENDATIONS

☑ Yes ☐ No
Department Chair: [signature] **Date:** 4 Aug 2009

☑ Yes ☐ No
College Curriculum Committee Chair: [signature] **Date:** 8/6/09

☑ Yes ☐ No
College Dean or Unit Head: [signature] **Date:** 8/6/09

☐ Yes ☐ No
Chair, UPCC or GSC: **Date:**

☐ Yes ☐ No
Dean, Undergraduate Studies or Graduate Studies: **Date:**

Approval:

Provost: **Date:**

This form is to be used to revise, add, suspend, or delete degree programs, tracks, or certificate programs.

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

_____ Department(s) _____ College _____ Registrar _____ Associate Registrar

_____ Institutional Research _____ Academic Services _____ Faculty Senate _____ Information, Analysis & Assessment

University of Central Florida

College of Arts and Humanities
Department of Digital Media

August 4, 2009

Dr. Patricia Bishop, Dean
College of Graduate Studies
University of Central Florida
Orlando, FL 32816-0112

Dear Dr. Bishop:

This is a brief statement of program change regarding the Master of Fine Arts in Film and Digital Media, Visual Language Track program. Given the severe constraints placed upon us by the last two budget cuts, we will be unable to admit new students in the aforementioned track for the 2009-2010 academic year.

This will have no effect on the existing Digital Media faculty loads; all faculty who teach in the graduate programs have continuously had teaching assignments in our undergraduate program. Further, this program change will not affect current graduate students in the program. They will be able to graduate in a timely fashion according to their academic year and status.

We will, however, continue to recruit and plan to admit students into the Master of Fine Arts in Film and Digital Media, Visual Language Track. Additionally, the program changes will not affect our MA in Film and Digital Media, Visual Languages Track, as students in that program do not receive financial assistance from the department.

Our intent is to reactivate the MFA program in Film and Digital Media, Visual Language Track program in the 2010-2011 academic year.

Sincerely,

Dr. Jose Maunez-Cuadra
Interim Chair

12461 Research Parkway, Suite 500 • Orlando, FL 32826-3121 • 407-823-6100 • Fax 407-823-6103

Additions or Changes to Courses and Programs That Require Graduate Council Approval

Overview:

It is the responsibility of the Graduate Curriculum Committee of the Graduate Council to review new graduate courses and special topic requests, and recommend approval to the Vice Provost and Dean of the College of Graduate Studies on new tracks and certificates, and revisions to and deletions of existing graduate programs and courses. This committee must also approve changes to existing degree programs, such as the hours required, changes to core curriculum or significant changes to the curriculum, and the addition, deletion, or modification of an option, track, or specialty area.

Additions or changes requiring approval include:

1. **New graduate tracks and certificates**

2. **Changes to existing graduate programs, including:**
    a. Deletions and suspensions of existing graduate programs
    b. Program length
    c. Minimum number of hours needed to complete a program
    d. Revisions to the required core of the program
    e. Significant changes to the electives
    f. Adding new areas of specialization
    g. Revisions to courses taught outside the program
    h. Providing for online delivery of the program or delivery through continuing education
    i. For additional information on program development and program changes, please refer to the Program Director's Guide on the College of Graduate Studies website: http://www.admin.graduate.ucf.edu/sitemap/index.cfm?RsrcID=10

3. **New course actions and changes to existing courses, including: prerequisites, titles, hours, and course description.**
    - Course action and special topics request forms are available under the Duties of the Graduate Curriculum Committee section on the Graduate Council website: http://www.graduatecouncil.ucf.edu/Curriculum/

Reminder:

1. All requests for new courses must use the course prefix and the course level with "XXX" such as PSY 5XXX, PSY 6XXX, or PSY 7XXX.
2. The course prefix is not "owned" by a department or college; it corresponds to the discipline, and can be used by different departments/ colleges. Course numbers are assigned by Tallahassee.
3. Even if a course had a number in use by another SUS institution or had a number at one time at UCF, it should not be used on the course addition request form.
4. After Graduate Council action, course action requests are forwarded to the Academic Services Office for transmittal to Tallahassee for assignment of common course numbering.
5. Approved Special Topics requests are sent to course scheduling in the Registrar's Office so they may be made available for registration. (Special topics may be taught two times before a new request should be submitted.)
6. For additional information on course development, please refer to the Program Director's Guide on the College of Graduate Studies website: http://www.admin.graduate.ucf.edu/sitemap/index.cfm?RsrcID=10

All additions and revisions to programs and courses should be discussed with programs/ colleges who have courses and program offerings in similar content areas. Include approval documentation from the other programs/colleges.

All requests being sent to Graduate Council must have all necessary program and college approval signatures. Requests should be forwarded through your college to UCF College of Graduate Studies.

Graduate Council Curriculum Committee
Course Agenda for 09-16-2009

College of Optics & Photonics Course Action Additions

OSE 6XXX OPT-Optics 3(3,0)

Applied Quantum Mechanics for Optics and Engineering: PR: Graduate standing or C.I. Presents the elements of quantum mechanics that are essential for understanding many areas in modern optics and photonics.

30 character abbreviation: **Ap Quantum Mechan Opt & Eng**

OSE 6XXX OPT-Optics 3(3,0)

Computational Photonics: PR: Graduate standing, OSE 6111 and OSE 6432, or C.I. Computational methods for photonic guided wave structures, periodic structures, and integrated photonic structures and devices.

30 character abbreviation: **Computational Photonics**

College of Medicine Course Action Revisions

BSC 6431 Practice of Biomolecular Science ~~2(2,0)~~ 3(3,0)

PR: Graduate standing.

Introduces students to the practice of biomolecular science. Graded S/U.

Engineering & Computer Science Course Action Revisions

~~CDA 5530~~ Performance Models of Computers and Networks 3(3,0)
CDA 6XXX

~~PR: Senior standing or beginning~~ PR: graduate student.

Performance Models of Computer Systems and Networks using probability models and discrete event simulations. Queuing Theory and modeling tools.

College of Optics & Photonics Course Action Revisions

OSE 5312 ~~Fundamentals of Optical Science~~ 3(3,0)
Light Matter Interaction

PR: Graduate standing or C.I.

~~Microscopic theory of absorption, dispersion, and refraction of materials; wave propagation, introduction to lasers and nonliner optics.~~

Microscopic theory of absorption, dispersion, and refraction of materials; classical and quantum mechanical description of optical properties.

30 character abbreviation: **Light Matter Interaction**

OSE 6432 ~~**Fundamentals of Photonics**~~ **3(3,0)**
Guided Waves and Optoelectronics

PR: Graduate standing and OSE 6111 or OSE 5041 or C.I.

Principles of guided wave optics, electro-optics, acousto-optics and optoelectronics.

30 character abbreviation: **Guided Waves and Optoelectroni**