Graduate Council Curriculum Subcommittee December 11, 2007 12:30 p.m., 243 MH

Agenda

- 1. Welcome and call to order
- 2. Approval of minutes from November 27
- 3. Courses and special topics
- 4. Addition of a Social Science Education track, Ph.D. in Education, COEd
- Course revisions to the MA in Art Education, Counselor Education (School Counseling Track), Elementary Education, English Language Arts Education, Mathematics Education, Science Education, Social Science Education, Technical & Career Education, COEd
- 6. Reactivation of the MA in Film and Digital Media, Visual Language and Interactive Media Track, CAH
- 7. Announcements and adjournment

Ph.D. in Education Social Science Education Track

Proposed Program: Ph.D. in Education
(New Program Track) Social Science Education

Program Level: Doctoral

Proposed Implementation Date: Fall Semester, 2008

Other Programs in the State of Florida

The University of Central Florida is the *only* major research university in the state of Florida *without* a Ph.D. program (track) or equivalent in Social Science Education. FSU, UF, USF, and FIU all have doctoral programs in Social Science Education. The proposed course of study presented for this Ph.D. in Social Science Education is strong in all areas integral to a comprehensive social science education program. The combination of topics proposed for this program are rigorous and will prepare a robust group of professionals who are capable of addressing the complex issues in social science education as they relate to curriculum, teaching and research.

Other Programs which can be used as Models

Florida State University, University of Florida, University of South Florida and Florida International University all have many common courses across programs. This proposed program includes similar course (such as core research courses and methods for social science education). Furthermore, this proposed program includes new courses, which emphasize important topics, such as research in social science education, curriculum design, technology and film in social science education, and the history of social science education, which is not evident in many of the other programs throughout the state and/or country.

Articulation and Conceptualization of the Proposed Program

The purpose of this program is to prepare doctoral-level personnel to meet the critical need for authentic and bonafide social science education professors. In particular, this program will prepare faculty with in depth course work and experiences in research in social science education teaching, learning and assessment. In a recent article from Social Education, the flagship publication from the National Council for the Social Studies, "twenty-nine states have mandated tests for social studies" (p.315). Since this article, many other states, including Florida, are looking to add a social studies component to their state test. This proposed program would play a vital role in the development of effective and qualified teachers to help meet the needs of the state in developing a strong social science education work force at all levels.

The doctoral students prepared through this program will have the knowledge, skills, and experiences to meet the challenge of educating the next generation of social science teachers.

Doctoral students in this program will have the opportunity to develop research skills in social science education through course work assignments and participation on social science related research projects. The research opportunities provided to students will promote the development of skills in both the quantitative and qualitative methodologies.

Furthermore, the doctoral students in this program will be a great resource because they will teach many of the undergraduate courses.

Curriculum Overview:

This program of study is interdisciplinary in nature. Program faculty have gathered support of colleagues in the Department of Political Science, Department of History, and from several other colleagues of the various departments in the College of Education. The program is open to all qualified candidates, and it will parallel other Ph.D. Tracks in Education (Minimum hours required=69 credit hours).

Core Courses:

24 Credit Hours (issues and research in education, research methods, seminar in education research, qualitative research in education, quantitative foundations of educational research, analysis of survey, record and other qualitative data, case studies in research design)

Specialization Coursework:

21 Credit Hours (Social Science Education and Cognate), including an Internship

Dissertation:

24 Credit Hours. Doctoral students must present prospectus for the dissertation to a doctoral advisor, prepare a research proposal and present to the dissertation committee, and defend the final research submission with the dissertation committee.

Student Demand

The anticipated number of students for the first year of the program ranges from 4-6. But as the program becomes more prominent and visible through outreach and networking at state, national, and international conferences, the number is likely to increase.

Identification of Program Demand

Currently, in higher education there is demand for social science education faculty, particularly, those who have the following:

- 1) Ph.D. with emphasis in Social Science Education
- 2) Ability to teach elementary, middle, and secondary social science education courses
- 3) Strong research background
- 4) Strong content background (18 hours or more of graduate content courses)
- 5) Bonafide teaching experience

The proposed program meets all these demands. Furthermore, many of the current social science education faculty is nearing retirement. Graduates from a social science education program are in demand and have numerous employment opportunities at all levels.

Relationship to University mission and strategic directions, local economic development and community need.

Orlando and the University of Central Florida are positioned in a state, which is inundated with history, sociology, political science, geography, and all the other various social sciences. Presidents Hitt's vision is that the University of Central Florida becomes the number one metropolitan research university in the country. The focus of this program aligns with Presidents Hitt's vision, by producing social science educators with strong backgrounds in research, technology, and the social sciences. Our graduates will be able to take their place in the state and across the country and meet the need of educating the next generation and producing important research findings on social science education at all levels.

Program Faculty:

Bai, Haiyan
Beverly, Monifa
Boote, David
Dieker, Lisa
Dixon, Juli
Hahs-Vaughn, Debbie
Hayes, Grant
Hirumi, Atsusi
Roberts, Sherron
Robinson, Edward (Mike)
Russell, William
Sivo, Stephen
Waring, Scott
Witta, Eleanor Lea

^{*}There maybe additional faculty not listed who currently teach courses appropriate for this Ph.D. in Social Science Education Track.

 $^{\ ^{**}}$ Cognate courses will be taught by faculty from the History Department & Political Science Department.

This track is designed to prepare social science educators for successful careers in research and teaching. The program will assist students in providing options to careers in preparing social science teachers, teaching postsecondary social science (history, political science, economics, etc.), and conducting research activities in social science education. Doctoral students in the track engage in research activities with an interdisciplinary faculty, experiences internships, and interact with various social science educators and social science experts. Throughout this program, students are mentored by experienced and successful university social science education faculty.

Doctor of Philosophy in Education

Social Science Education Track

Minimum Hours Required for Ph.D. in Education — 69 Credit Hours

Ph.D. Core Courses —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)
- IDS 7938 Research Cluster Seminar (3 credit hours) or Research elective

Social Science Education Specialization – 21 Credit Hours Minimum

- SSE 7XXX History of Social Studies Education Seminar (3 credit hours)
- SSE 7XXX Research in Social Science Education Seminar (3 credit hours)
- SSE 7XXX Content and Program Analysis in Social Science Education (3 credit hours)
- SSE 6XXX Teaching with Film in the Social Studies (3 credit hours)
- SSE 6XXX Digital History in the K-12 Classroom (3 credit hours)
- Cognate Courses in the social sciences (3 credit hours) *Course must be approved by advisor
- SSE 7XXX Internship in Social Science Education (3 credit hours) (Course may be repeated)

Dissertation—24 Credit Hours Minimum

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

Candidacy

To enter candidacy for the Ph.D., students must have an overall 3.0 grade point average on all graduate work included in the planned program and pass all required examinations.

Candidacy Examinations

- Examinations must be completed prior to admission to candidacy.
- 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.
- All Ph.D. candidates will be required to complete two examinations. Students must be enrolled in the university during the semester an examination is taken.
 - o Research in the Specialization—8-hour written examination
 - Specialization—3-hour oral examination

Resource Reallocation

Little resource reallocation will be necessary for this program. Six new classes will be taught by existing faculty members. These faculty members currently teach some courses at the undergraduate level. It is anticipated that PhD students in this track with teach these undergraduate courses which will allow the existing faculty to teach at the graduate level. The new classes are taught on a rotation. Therefore, all six courses will not be taught in the same semester. Funds currently being used to hire adjuncts to teach undergraduate courses will be used to support doctoral students in this track as Graduate Teaching Assistants (GTA).

From: Grant Hayes To: Patricia Bishop

CC: E Robinson; Michael Hynes; William Russell

Date: 11/29/2007 10:52 AM

Subject: Re: social science education track

Dr. Bishop,

Please see below.

History of Social Studies Ed. - Dr. William Russell Teaching with Film - Dr. William Russell Digital History - Dr. Scott Waring Content/Program - Dr. Scott Waring Research in Soc. St. Ed. - Dr. William Russell Internship - Dr. Scott Waring or Dr. William Russell

If you have any questions, please let me know.

Thanks, Grant

>>> Patricia Bishop 11/29/2007 9:09 AM >>>

Grant - on the proposal that you submitted to the Graduate Council --would you please match up the 6 new courses with the faculty who will likely be teaching them? Some of the faculty you list will be teaching the core courses in the PHD, but I would like to see who is teaching the specialization courses. An email will do and we will attach it to the proposal.

Patricia Bishop, Vice Provost and Dean of Graduate Studies Office of Graduate Studies University of Central Florida

Phone: 407-823-6432 Fax: 407-823-6442

email: pbishop@mail.ucf.edu

Stands for opportunity



Office of the Associate Dean for Graduate Studies

MEMORANDUM

TO:

Dr. Patricia Bishop, Vice Provost and Dean

Division of Graduate Studies

FROM:

Karen Biraimah, Ph.D., Chair, Dept. of Educational Studies

Anne M. Culp, Ph.D. Chair, Dept. of Child, Family and Community

Sciences William Sciences William Michael Hynes, Ph.D., Chair, Dept. of Teaching and Learning Principles Harmaniate Deable Management of Teaching and Learning Principles (Management of Teaching and Teaching and

College of Education

DATE:

October 1, 2007

SUBJECT:

Curricula Changes Mandated by Revised STATE RULE 6A-4.006

MA in Art Education

*MA in Counselor Education - School Counseling Track

MA in Elementary Education

MA in English Language Arts Education

MA in Mathematics Education

MA in Science Education

MA in Social Science Education

MA in Technical & Career Education

The Florida Department of Education-RULE 6A-4.006, General and Professional Preparation, was recently revised so that course requirements will more closely align to the state-mandated teacher competencies and requirements revised and approved by the State Board of Education.

Faculty members in the College of Education redesigned several courses in order to address the most critical competencies for teacher success in raising student achievement. It is believed that these changes will result in better-trained and more effective teachers. To address the competencies mandated by the State of Florida, several changes were made to the curriculum of UCF's initial teacher preparation programs at the graduate level, including replacing four, 3-credit hour courses with the following 3-credit hour courses:

*EDG 6415 - Principles of Instruction and Classroom Management <u>will replace</u> EDG 6236 Principles of Instruction and Learning

EDF 6727 - Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education will replace EDF 6608 - Social Factors in Education

EDF 6237 - Principles of Learning and Introduction to Classroom Assessment will replace EDF 6155 - Lifespan Human Development & Learning

*The only change to the School Counseling track is the replacement of EDG 6236 with EDG 6415.

Please note that beginning fall 2008, EDG 6236 and EDF 6608 will no longer be offered by the College. Course Action Request forms deleting these courses from the College's inventory will be forthcoming after summer 2008. EDF 6155 will continue to be offered other advanced graduate programs.

For the programs that require ESOL endorsement (MA English Language Arts Education, MA Elementary Education), the following 2 courses were added to the curriculum in order to address the state-mandated requirements:

TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)
TSL 6250 Applied Linguistics in ESOL (3 credit hours)

The MA in Elementary Education now includes the Reading endorsement as well. This was not a mandated change. However, the faculty reacted to requests from school districts to include this endorsement in this specific program.

Master of Arts in Art Education

Minimum Hours Required for M.A.—37 Credit Hours

The M.A. requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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.

Area A: Core—15 Credit Hours (reduced Corely 3)

- EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- EDG 6415 Principles of Instruction and Classroom Management (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) old course was RED 6336
- ✓ TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization-16 Credit Hours (increased by 3)

- ✓ ARE 5359 Teaching Art K-12 (4 credit hours)
- ✓ ARE 6905 Research Trends in Art Education (3 credit hours)
- ✓ ARE Elective Number One (with approval of advisor, 3 credit hours)
- ✓ ARE Elective Number Two (with approval of advisor, 3 credit hours)
- added --> ARE Elective Number Three (with approval of advisor, 3 credit hours)

Area C: Internship-6 Credit Hours

ARE 6946 Graduate Internship (6 credit hours)

Satisfactory completion of Graduate Internship (ARE 6946, 6 credit hours) requires the student to demonstrate proficiency in all 12 Florida Educator Accomplished Practices at the pre-professional level in accordance with State Board of Education Rule 6A-5.065.

Additional Program Graduation Requirements

- Complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices.
- Pass all required sections of the Florida Teacher Certification Examination.
- Students are required to have 30 credit hours of art course work to meet certification requirements to teach art in grades K-12. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

MASTER OF ARTS IN ART EDUCATION

Minimum Hours Required for M.A.—37 Credit Hours

The M.A. requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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.

Area A: Core-18 Credit Hours

- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- EDG 6236 Principles of Instruction (3 credit hours)
- EDF 6432 Measurement and Evaluation in Education (3 credit hours)
- RED 6336 Reading in the Content Areas (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Select one course:

- EDF 6517 Perspectives on Education (3 credit hours)
- EDF 6608 Social Factors in American Education (3 credit hours)

Area B: Specialization—13 Credit Hours

- ARE 5359 Teaching Art K-12 (4 credit hours)
- ARE 6905 Research Trends in Art Education (3 credit hours)
- ARE Elective Number One (3 credit hours)
- ARE Elective Number Two (3 credit hours)

Area C: Internship—6 Credit Hours

ARE 6946 Graduate Internship (6 credit hours)

Satisfactory completion of Graduate Internship (ARE 6946, 6 credit hours) requires the student to demonstrate proficiency in all 12 Florida Educator Accomplished Practices at the pre-professional level in accordance with State Board of Education Rule 6A-5.065.

Additional Program Graduation Requirements

- Complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices.
- Pass all required sections of the Florida Teacher Certification Examination.
- Students are required to have 30 credit hours of art course work to meet certification requirements to teach art in grades K-12. Only six hours of independent study courses may be used to satisfy

degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Master of Arts in Counselor Education

The master's program in Counselor Education requires an internship or practicum. Practica and internship are independent learning activities that take place in authentic settings in which students must apply, reflect on, and refine knowledge and skills acquired in the program. The internship experience gives students full control of the operational setting where they are placed (e.g., such as primary classroom teacher while being observed and mentored by a supervising teacher and UCF faculty member).

School Counseling Track (No real change)

Minimum Hours Required for M.A.-60 Credit Hours

Area A: Core-12 Credit Hours

- * EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- * EDF 6481 Fundamental of Graduate Research in Education (3 credit hours)
- * EGC 6971 Thesis or 2 approved electives (6 credit hours)

Area B: Specialization-30 Credit Hours

- * MHS 5005 Introduction to the Counseling Profession (3 credit hours)
- * MHS 6220 Individual Psychoeducational Testing I (3 credit hours)
- * MHS 6400 Theories of Counseling and Personality (3 credit hours)
- * MHS 6401 Techniques of Counseling (3 credit hours)
- * MHS 6420 Counseling Special Populations (3 credit hours)
- * MHS 6500 Group Procedures and Theories in Counseling (3 credit hours)
- * SPS 6815 Legal and Ethical Issues in Professional School Counseling (3 credit hours)
- * SDS 6347 Career Development (3 credit hours)
- * SDS 6411 Counseling with Children and Adolescents (3 credit hours)
- * SDS 6620 Coordination of Comprehensive Professional School Counseling Programs (3 credit hours)

Area C: Professional Clinical Experience—9 Credit Hours

- * MHS 6803 Practicum in Counselor Education (3 credit hours)
- * SDS 6947 Internship in Professional School Counseling (3 credit hours)
- * SDS 6947 Internship in Professional School Counseling (3 credit hours)

Area D: Required DOE Certification—9 Credit Hours

- * TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)
- * RED 5147 Developmental Reading (3 credit hours)

* EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)

MASTER OF ARTS IN COUNSELOR EDUCATION

The master's program in Counselor Education requires a practica and internships or practicum. Practica and internships are independent learning activities that take place in authentic settings in which students must apply, reflect on, and refine knowledge and skills acquired in the program. The internship experience gives students full control of the operational setting where they are placed (e.g., such as primary classroom teacher while being observed and mentored by a supervising teacher and UCF faculty member).

School Counseling Track

Minimum Hours Required for M.A.—60 Credit Hours

Area A: Core-12 Credit Hours

- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- EDF 6481 Fundamentals of Graduate Research in Education (3 credit hours)
- EGC 6971 Thesis or 2 approved electives (6 credit hours)

Area B: Specialization-30 Credit Hours

- MHS 5005 Introduction to the Counseling Profession (3 credit hours)
- MHS 6220 Individual Psychoeducational Testing I (3 credit hours)
- MHS 6400 Theories of Counseling and Personality (3 credit hours)
- MHS 6401 Techniques of Counseling (3 credit hours)
- MHS 6420 Counseling Special Populations (3 credit hours)
- MHS 6500 Group Procedures and Theories in Counseling (3 credit hours)
- SPS 6815 Legal and Ethical Issues in Professional School Counseling (3 credit hours)
- SDS 6347 Career Development (3 credit hours)
- SDS 6411 Counseling with Children and Adolescents (3 credit hours)
- SDS 6620 Coordination of Comprehensive Professional School Counseling Programs (3 credit hours)

Area C: Professional Clinical Experience—9 Credit Hours

- MHS 6803 Practicum in Counselor Education (3 credit hours)
- SDS 6947 Internship in Professional School Counseling (3 credit hours)
- SDS 6947 Internship in Professional School Counseling (3 credit hours)

Area D: Required DOE Certification-9 Credit Hours

Foundations:

- TSL 5373 Teaching Language to Minority Students in K-12 Classrooms (3 credit hours)
- RED 5147 Developmental Reading (3 credit hours)
- EDG 6236 Principles of Instruction (3 credit hours)

Financial Support

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.

Key points about financial support:

- If you are interested in financial assistance, you are strongly encouraged to apply for admission
 early. A complete application for admission, including all supporting documents, must be received
 by the priority date listed for your program under "Admissions."
- You must be admitted to a graduate program before the university can consider awarding financial assistance to you.
- If you want to be considered for loans and other need-based financial assistance, review the UCF Student Financial Assistance website at http://finaid.ucf.edu and complete the FAFSA (Free Application for Federal Student Aid) form, which is available online at http://www.fafsa.ed.gov. Apply early and allow up to six weeks for the FAFSA form to be processed.
- UCF Graduate Studies awards university graduate fellowships, with most decisions based on nominations from the colleges and programs. To be eligible for a fellowship, students must be accepted as a graduate student in a degree program and be enrolled full-time. University graduate fellowships are awarded based on academic merit and therefore are not affected by FAFSA determination of need.
- Please note that select fellowships do require students to fill out a fellowship application (either a
 university fellowship application, an external fellowship application, or a college or school fellowship
 application). For university fellowship applications, see Financing Grad School.
- For information on assistantships (including teaching, research, and general graduate assistantships) or tuition support, contact the graduate program director of your major.

Contact Info

Master of Arts in Counselor Education

Mike Robinson, Ph.D., Professor Phone Number: 407-823-3819 erobinso@mail.ucf.edu

Master of Education in Counselor Education

Counselor Education Program Phone Number: 407-823-2401 counsel@mail.ucf.edu

Mental Health Counseling Track

K. Dayle Jones, Ph.D., LMHC, NCC, Associate Professor Phone Number: 407-823-6477 counsel@mail.ucf.edu

School Counseling Track

Proposed

Master of Arts in Elementary Education

Minimum Hours Required for M.A.—36 Credit Hours

The Master of Arts in Elementary Education can be completed in the minimum 36 credit hours only if the student has completed previous initial certification in another area, including a supervised internship, and the state-approved beginning teacher program. Students without previous certification must complete all requirements listed. Please note that if this M.A. program provides your initial certification, 80 clock hours of field experience must be completed prior to enrolling in internship.

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. All portfolio entries are critical components of learning since they are the primary means of assessing the professional development of students as reflective practitioners. The program also requires an internship.

Area A: Seminars-3 Credit Hours

- EDE 6933 Elementary Education Seminar I (2 credit hours)
- EDE 6935 Elementary Education Seminar II (1 credit hour)

Area B: 15 Credit Hours (deleted Fund of Good Research + Mees + Eval in Ed)

- 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)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)
- TSL 6250 Applied Linguistics in ESOL (3 credits)

Area C: PR or CR EDE 6933-21 Credit Hours

- LAE 5319 Methods of Elementary School Language Arts (3 credit hours)
- LAE 5415 Children's Literature in Elementary Education (3 credit hours)
- MAE 5318 Current Methods in Elementary School Mathematics (3 credit hours)
- SCE 5315 Methods in Elementary School Science (3 credit hours)
- RED 5147 Developmental Reading (3 credit hours)
- RED 5517 Classroom Diagnosis and Development of Reading Proficiencies (PR: RED 5147) (3 credit hours)
- SSE 5115 Methods in Elementary School Social Science (3 credit hours)

Area D: Internship-6 Credit Hours

EDE 6946 Graduate Internship (6 credit hours)

Satisfactory completion of graduate internship requires the student to demonstrate proficiency in all 12 Florida Educator Accomplished Practices at the pre-professional level in accordance with State Board of Education Rule 6A-5.065.

Co-requisites (6 credit hours)

- ARE 4313 Art in the Elementary School (1 credit hours)
- HLP 4722 Teaching Elementary School Health and Physical Education (1 credit hours)
 MUE 3210 Music in the Elementary School (1 credit hours)
- RED 4942 Practicum in Assessment and Instruction in Reading (3 credit hours)

Additional Program Graduation Requirements

- · Complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices.
- · Pass all applicable sections of the Florida Teacher Certification Examination.

MASTER OF ARTS IN ELEMENTARY EDUCATION

Minimum Hours Required for M.A.-36 Credit Hours

The Master of Arts in Elementary Education can be completed in the minimum 36 credit hours only if the student has completed previous initial certification in another area, including a supervised internship, and the state-approved beginning teacher program. Students without previous certification must complete all requirements listed. Please note that if this M.A. program provides your initial certification, 80 clock hours of field experience must be completed prior to enrolling in internship.

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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. The program also requires an internship.

Area A: Seminars-3 Credit Hours

- EDE 6933 Elementary Education Seminar I (2 credit hours)
- EDE 6935 Elementary Education Seminar II (1 credit hour)

Area B: 15 Credit Hours

- EDF 6481 Fundamentals of Graduate Research in Education (3 credit hours)
- EDF 6432 Measurement and Evaluation in Education (3 credit hours)
- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- EDG 6236 Principles of Instruction (3 credit hours)
- One elective from EDF 6608, EDF 6517, or EDF 6886 (3 credit hours)

Area C: PR or CR EDE 6933-21 Credit Hours

- LAE 5319 Methods of Elementary School Language Arts (3 credit hours)
- LAE 5415 Children's Literature in Elementary Education (3 credit hours)
- MAE 5318 Current Methods in Elementary School Mathematics (3 credit hours)
- SCE 5315 Methods in Elementary School Science (3 credit hours)
- RED 5147 Developmental Reading (3 credit hours)
- RED 5517 Classroom Diagnosis and Development of Reading Proficiencies (PR: RED 5147) (3 credit hours)
- SSE 5115 Methods in Elementary School Social Science (3 credit hours)

Area D: Internship-6 Credit Hours

EDE 6946 Graduate Internship (6 credit hours)

Satisfactory completion of graduate internship requires the student to demonstrate proficiency in all 12 Florida Educator Accomplished Practices at the pre-professional level in accordance with State Board of Education Rule 6A-5.065.

Co-requisites

- ARE 4313 Art in the Elementary School (3 credit hours)
- HLP 4722 Teaching Elementary School Health and Physical Education (3 credit hours)
- MUE 3210 Music in the Elementary School (3 credit hours)

Additional Program Graduation Requirements

- Complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices.
- Pass all applicable sections of the Florida Teacher Certification Examination.

Financial Support

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.

Key points about financial support:

- If you are interested in financial assistance, you are strongly encouraged to apply for admission early. A complete application for admission, including all supporting documents, must be received by the priority date listed for your program under "Admissions."
- You must be admitted to a graduate program before the university can consider awarding financial assistance to you.
- If you want to be considered for loans and other need-based financial assistance, review the UCF Student Financial Assistance website at http://finaid.ucf.edu and complete the FAFSA (Free Application for Federal Student Aid) form, which is available online at http://www.fafsa.ed.gov. Apply early and allow up to six weeks for the FAFSA form to be processed.
- UCF Graduate Studies awards university graduate fellowships, with most decisions based on nominations from the colleges and programs. To be eligible for a fellowship, students must be accepted as a graduate student in a degree program and be enrolled full-time. University graduate fellowships are awarded based on academic merit and therefore are not affected by FAFSA determination of need.
- Please note that select fellowships do require students to fill out a fellowship application (either a
 university fellowship application, an external fellowship application, or a college or school fellowship
 application). For university fellowship applications, see Financing Grad School.
- For information on assistantships (including teaching, research, and general graduate assistantships) or tuition support, contact the graduate program coordinator of your major.

Contact Info

Master of Arts in Elementary Education

Karri Williams, Ph.D., Associate Professor Phone Number: 321-433-7922 kiwillia@mail.ucf.edu

Master of Education in Elementary Education

Master of Arts in English Language Arts Education

Minimum Hours Required for M.A.—42 Credit Hours

The Master of Arts program is a secondary (grades 6-12) program for non-education majors or previously certified teachers in another field.

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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. In addition, an internship is required.

Area A: Core-12 Credit Hours (reduced from 18 to 21 down to 12)

- EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)
- EDF 6727 Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education (3 credit hours)
 - EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- M. TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization-24 Credit Hours (inc. from 15 to 24)

- · Elective (3 credit hours)
- LAE 5338 Teaching Writing in Middle and High School (3 credit hours)
- LAE 5346 Methods of Teaching English Language Arts (3 credit hours)
- LAE 5465 Literature for Adolescents (3 credit hours)
- LAE 6637 Research in Teaching English (3 credit hours)
- new RED 5147 Developmental Reading (3 credit hours)
- RED 5517 Classroom Diagnosis and Development of Reading Proficiencies (3 credit hours)
- TSL 6250 Applied Linguistics in ESOL (3 credits)

Area C: Internship-6 Credit Hours (reduced by deleting Internship I).

- ESE 6946 Graduate Internship II (6 credit hours)
- RED 4942 Practicum in Assessment and Instruction in Reading (3 credit hours)

Satisfactory completion of graduate internship requires the student to demonstrate proficiency in all 12 Florida Educator Accomplished Practices at the pre-professional level in accordance with State Board of Education Rule 6A-5.065.

Additional Graduation Requirements

 Complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices. Students are required to have 30 credit hours of co-requisite undergraduate and graduate English course work to meet certification requirements to teach English in grades 6-12. These may be previously earned undergraduate or graduate English credits, or include graduate credits in English approved for electives in the program. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Pass all applicable sections of the Florida Teacher Certification Examination.

MASTER OF ARTS IN ENGLISH LANGUAGE ARTS EDUCATION

Minimum Hours Required for M.A.—42-45 Credit Hours

The Master of Arts program is a secondary (grades 6-12) program for noneducation majors or previously certified teachers in another field.

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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. In addition, an internship is required.

Area A: Core-18 or 21 Credit Hours

- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- EDG 6236 Principles of Instruction (3 credit hours)
- EDF 6481 Fundamentals of Graduate Research in Education (3 credit hours)
- EDF 6517 Perspectives on Education (3 credit hours)
- EDG 6253 Curriculum Inquiry (3 credit hours)
- ESE 6909 Research Report (2,1 credit hours) or 2 approved electives (6 credit hours)

Area B: Specialization-15 Credit Hours

- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- LAE 5338 Teaching Writing in Middle and High School (3 credit hours)
- LAE 5346 Methods of Teaching English Language Arts (3 credit hours)
- LAE 5465 Literature for Adolescents (3 credit hours)
- LAE 6637 Research in Teaching English (3 credit hours)

Area C: Internship—9 Credit Hours

- ESE 6946 Graduate Internship I (3 credit hours)
- ESE 6946 Graduate Internship II (6 credit hours)

Satisfactory completion of graduate internships requires the student to demonstrate proficiency in all 12 Florida Educator Accomplished Practices at the pre-professional level in accordance with State Board of Education Rule 6A-5.065.

Co-requisites Taken with ESE 6946 Graduate Internship I

- LAE 5346 Methods of Teaching English Language Arts (3 credit hours)
- LAE 5338 Teaching Writing in Middle and High School (3 credit hours)

Additional Graduation Requirements

 A comprehensive examination or another appropriate culminating activity is required of all master's degree students. Please contact the graduate adviser for more information.

- Complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices.
- Students are required to take 30 credit hours of English course work to meet certification
 requirements to teach English, grades 6-12. Only six credit hours of independent study courses
 may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult
 to schedule in content areas.
- Pass all applicable sections of the Florida Teacher Certification Examination.

ProposED

MASTER OF ARTS IN MATHEMATICS EDUCATION

Minimum Hours Required for M.A.—36 Credit Hours

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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 choose one of three options:

- Option 1: Secondary (grades 6-12)
- Option 2: Middle School Education Track (grades 5-9)
- Option 3: Community College Teaching Track

Option 1: Middle School Mathematics Track (grades 6-12)

Area A: Core -15 Credit Hours

- EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)
- EDF 6727 Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education (3 credit hours)
- EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization-15 Credit Hours

- MAE 5336 Current Methods in Secondary School Mathematics (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- Electives (9 credit hours)
 - Choose One: MAE 6641, MAE 6899 OR IDS 6939 (3 credit hours)
 - Choose One: MAE 6517, MAE 6656, OR IDS 6915 (3 credit hours)
 - o Choose One: MAE 6337 OR MAE 6338 (3 credit hours)
 - Substitutions can be made with approval of advisor.

Students are required to have 30 credit hours of co-requisite mathematics course work to meet certification requirements to teach mathematics in grades 6-12. These may be previously earned undergraduate or graduate mathematics credits, or include graduate credits in mathematics approved for electives in the program. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship-6 Credit Hours

MAE 6946 Graduate Internship (6 credit hours)

Satisfactory completion of the Graduate Internship requires the student to demonstrate proficiency in all 12 Florida Educator Accomplished Practices at the pre-professional level in accordance with State Board of Education Rule 6A-5.065.

Additional Program Graduation Requirements

- All students must complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices.
- Pass all applicable sections of the Florida Teacher Certification Examination.

Option 2: Middle School Mathematics Track (grades 5-9)

Area A: Core -15 Credit Hours

- EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)
- EDF 6727 Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education (3 credit hours)
- EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization—15 Credit Hours

- MAE 5327 Teaching Middle School Mathematics (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- Electives (9 credit hours)
 - o Choose One: MAE 6641, MAE 6899 OR IDS 6939 (3 credit hours)
 - Choose One: MAE 6517, MAE 6656, OR IDS 6915 (3 credit hours)
 - o Choose One: MAE 6337 OR MAE 6338 (3 credit hours)
 - Substitutions can be made with approval of advisor.

Students are required to have 18 credit hours of mathematics course work to meet certification requirements to teach mathematics in grades 5-9. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship-6 Credit Hours

MAE 6946 Graduate Internship (6 credit hours)

Satisfactory completion of the Graduate Internship requires the student to demonstrate proficiency in all 12 Florida Educator Accomplished Practices at the pre-professional level in accordance with State Board of Education Rule 6A-5.065.

Additional Program Graduation Requirements

- All students must complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices.
- Pass all applicable sections of the Florida Teacher Certification Examination.

Option 3: Community College Teaching Track

The Community College Teaching Track in this program is designed for individuals whose goal is teaching mathematics at the community college level. Every attempt is made to build at least the required 18 hours of graduate-level mathematics courses into the program of study. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in the content area. Students electing this track will not meet state requirements for teacher certification in middle school (grades 5-9) or secondary (grades 6-12) mathematics.

Required Courses—42 Credit Hours Minimum

Area A: Core-15 Credit Hours

Students in this track should consult with the Community College Teaching Track adviser regarding Core requirements prior to registering for Core courses.

- EDF 6155 Lifespan Human Development and Learning (3 hours)
- EDF 6401 Statistics for Educational Data (3 hours) or EDF 6432 Measurement and Evaluation in Education (3 hours)
- EDF 6481 Fundamentals of Graduate Research Education (3 hours)
- EDF 6517 Perspectives on Education (3 hours)
- ESE 6909 Research Report (2 hours)
- ESE 6909 Research Report (1 hour)

Area B: Specialization—27 Credit Hours

Electives must be approved by adviser

MASTER OF ARTS IN MATHEMATICS EDUCATION

Minimum Hours Required for M.A.-36 Credit Hours

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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 choose one of three options:

- Option 1: Secondary (grades 6-12)
- Option 2: Middle School Education Track (grades 5-9)
- Option 3: Community College Teaching Track

Area A: Core (Options 1 and 2) -18 Credit Hours

- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- EDG 6236 Principles of Instruction (3 credit hours)
- EDF 6432 Measurement and Evaluation in Education (3 credit hours)
- EDF 6608 Social Factors in American Education (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization-12 Credit Hours

Option 1: Secondary (grades 6-12)

- MAE 5336 Current Methods in Secondary School Mathematics (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- Electives approved by adviser (6 credit hours)

Students are required to have 30 credit hours of mathematics course work to meet certification requirements to teach mathematics in grades 6-12. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Option 2: Middle School Mathematics Track (grades 5-9)

- MAE 5327 Teaching Middle School Mathematics (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- Electives approved by adviser (6 credit hours)

Students are required to have 18 credit hours of mathematics course work to meet certification requirements to teach mathematics in grades 5-9. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship (Options 1 and 2)-6 Credit Hours

MAE 6946 Graduate Internship (6 credit hours)

Satisfactory completion of the Graduate Internship requires the student to demonstrate proficiency in all 12 Florida Educator Accomplished Practices at the pre-professional level in accordance with State Board of Education Rule 6A-5.065.

Additional Program Graduation Requirements (Options 1 and 2)

- All students must complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices.
- Pass all applicable sections of the Florida Teacher Certification Examination.

Proposed

Master of Arts in Science Education

Minimum Hours Required for M.A. — 36 Credit Hours

Students must choose one of five tracks:

- Biology Track (grades 6-12)
- Chemistry Track (grades 6-12)
- · Community College Teaching Track
- Middle School Science Track (grades 5-9)
- Physics Track (grades 6-12)

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre-professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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.

BIOLOGY TRACK (GRADES 6-12)

Required Courses—36 Credit Hours Minimum

Area A: Core-15 Credit Hours (16 -> 15 Ws, deleted Meas + Eval)

- EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)
- EDF 6727 Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education (3 credit hours)
- EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization-15 Credit Hours (inc 3 hrs w 1 elective)

- SCE 5337 Issues and Methods in Secondary School Science (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- Electives approved by adviser (9 credit hours)

Students are required to have 30 credit hours of co-requisite science course work to meet certification requirements to teach science in grades 6-12. These may be previously earned undergraduate or graduate science credits, or include graduate credits in science approved for electives in the program. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship—6 Credit Hours

SCE 6946 Graduate Internship (6 credit hours)

Additional Program Requirements

All students must complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices. Portfolio defense will be a part of IDS 6933.

Pass all required sections of the Florida Teacher Certification Examination prior to graduation.

CHEMISTRY TRACK (GRADES 6-12)

Required Courses—36 Credit Hours Minimum

Area A: Core-15 Credit Hours (Reduced 18 +15, delated Mees + Eval in Ed)

- EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)
- EDF 6727 Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education (3 credit hours)
- EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization-15 Credit Hours (inc 3 lm3 w 1 add elective)

- SCE 5337 Issues and Methods in Secondary School Science (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- Electives approved by adviser (9 credit hours)

Students are required to have 30 credit hours of co-requisite science course work to meet certification requirements to teach science in grades 6-12. These may be previously earned undergraduate or graduate science credits, or include graduate credits in science approved for electives in the program. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship—6 Credit Hours

SCE 6946 Graduate Internship (6 credit hours)

Additional Program Requirements

All students must complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices. Portfolio defense will be a part of IDS 6933.

Pass all required sections of the Florida Teacher Certification Examination prior to graduation.

COMMUNITY COLLEGE TEACHING TRACK

The Community College Teaching Track in this program is designed for individuals whose goal is teaching science at the community college level. Every attempt is made to build at least the

required 18 hours of graduate-level science courses into the program of study. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in the content area. Students electing this track will not meet state requirements for teacher certification in middle school (grades 5-9) or secondary (grades 6-12) science.

Required Courses-42 Credit Hours Minimum

MIDDLE SCHOOL SCIENCE TRACK (GRADES 5-9)

Required Courses-36 Credit Hours Minimum

Area A: Core—15 Credit Hours (Same)

- EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)
- EDF 6727 Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education (3 credit hours)
- EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization—15 Credit Hours (same)

- SCE 5325 Teaching Middle School Science (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- IDS 6915 Classroom Management Strategies
- Electives (SCE 6146, SCE 5825 or a course approved by adviser (6 credit hours)

Students are required to have 18 credit hours of co-requisite science course work to meet certification requirements to teach science in grades 6-12. These may be previously earned undergraduate or graduate science credits, or include graduate credits in science approved for electives in the program. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship—6 Credit Hours

SCE 6946 Graduate Internship (6 credit hours)

Additional Program Requirements

All students must complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices. Portfolio defense will be a part of IDS 6933.

Pass all required sections of the Florida Teacher Certification Examination prior to graduation.

PHYSICS TRACK (GRADES 6-12)

Required Courses—36 Credit Hours Minimum

Area A: Core—18 Credit Hours (Jame)

- EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)
- EDF 6727 Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education (3 credit hours)
- EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization—12 Credit Hours (same)

- SCE 5337 Issues and Methods in Secondary School Science (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- Electives approved by adviser (6 credit hours)

Students are required to have 30 credit hours of co-requisite science course work to meet certification requirements to teach science in grades 6-12. These may be previously earned undergraduate or graduate science credits, or include graduate credits in science approved for electives in the program. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship-6 Credit Hours

ESE 6946 Graduate Internship (6 credit hours)

Additional Program Requirements

All students must complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices. Portfolio defense will be a part of IDS 6933.

Pass all required sections of the Florida Teacher Certification Examination prior to graduation.



MASTER OF ARTS IN SCIENCE EDUCATION

Minimum Hours Required for M.A.— 36 Credit Hours

Students must choose one of five tracks:

- Biology Track (grades 6-12)
- · Chemistry Track (grades 6-12)
- Community College Teaching Track
- Middle School Science Track (grades 5-9)
- Physics Track (grades 6-12)

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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.

Biology Track (Grades 6-12)

Required Courses—36 Credit Hours Minimum

Area A: Core-18 Credit Hours

- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- EDG 6236 Principles of Instruction (3 credit hours)
- EDF 6432 Measurement and Evaluation in Education (3 credit hours)
- EDF 6608 Social Factors in American Education (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization—12 Credit Hours

- SCE 5632 Issues and Methods in Secondary School Science (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- Electives approved by adviser (6 credit hours)

Students are required to have 30 credit hours of science course work to meet certification requirements to teach science in grades 6-12. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship-6 Credit Hours

SCE 6946 Graduate Internship (6 credit hours)

Additional Program Requirements

All students must complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices. Portfolio defense will be a part of IDS 6933.

Pass all required sections of the Florida Teacher Certification Examination prior to graduation.

Chemistry Track (Grades 6-12)

Required Courses-36 Credit Hours Minimum

Area A: Core-18 Credit Hours

- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- EDG 6236 Principles of Instruction (3 credit hours)
- EDF 6432 Measurement and Evaluation in Education (3 credit hours)
- EDF 6608 Social Factors in American Education (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization—12 Credit Hours

- SCE 5632 Issues and Methods in Secondary School Science (3 credit hours)
- IDS 6933 Seminar in Teaching Mathematics and Science (3 credit hours)
- Electives approved by adviser (6 credit hours)

Students are required to have 30 credit hours of science course work to meet certification requirements to teach science in grades 6-12. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship-6 Credit Hours

SCE 6946 Graduate Internship (6 credit hours)

Additional Program Requirements

All students must complete a portfolio according to program guidelines. This portfolio requires demonstration of professional growth, reflection, and proficiency in the 12 Florida Educator Accomplished Practices. Portfolio defense will be a part of IDS 6933.

Pass all required sections of the Florida Teacher Certification Examination prior to graduation.

Proposed

Master of Arts in Social Science Education

The Master of Arts Program is designed for non-education majors or previously certified teachers in another field.

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre-professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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. An internship is also required.

Minimum Hours Required for M.A.—39 Credit Hours

Area A: Core-15 Credit Hours

- EDG 6415 Principles of Instruction and Classroom Management (3 credit hours)
- EDF 6727 Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education (3 credit hours)
- EDF 6237 Principles of Learning and Introduction to Classroom Assessment (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching language Minority Students in K-12 Classrooms (3 credit hours)

Area B: Specialization—18 Credit Hours

- SSE 5790 Inquiry and Instructional Analysis in Social Science Education (3 credit hours)
- 9 credit hours of SSE electives at the 5000 level or above
- 6 credit hours of social science content electives (AFH, AMH, ASH, CPO, EUH, HIS, INR, LAH, or POS) at the 5000 level or above
- Substitutions may be approved by your advisor.

Students are required to have 30 credit hours of co-requisite social science course work to meet certification requirements to teach social studies in grades 6-12. These may be previously earned undergraduate or graduate social science credits, or include graduate credits in social science approved for electives in the program. Only six hours of independent study courses may be used to satisfy degree requirements. It is important to see an adviser if courses are difficult to schedule in content areas.

Area C: Internship-6 Credit Hours

ESE 6946 Graduate Internship (6 credit hours)

Additional Requirements

- Complete a portfolio according to program guidelines to demonstrate understanding of social studies education scholarship.
- Pass all applicable sections of the Florida Teacher Certification Examination.

MASTER OF ARTS IN SOCIAL SCIENCE EDUCATION

The Master of Arts Program is designed for noneducation majors or previously certified teachers in another field.

The M.A. program requires a portfolio of both reflective practice/analysis of professional development and demonstration of attainment of the pre professional level of performance for all twelve of the Florida Educator Accomplished Practices. Multiple artifacts and reflective analysis are required for each of the accomplished practices. 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. An internship is also required.

Minimum Hours Required for M.A.—39 Credit Hours

Area A: Core-18 Credit Hours

- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- EDG 6236 Principles of Instruction (3 credit hours)
- EDF 6432 Measurement and Evaluation in Education (3 credit hours)
- EDF 6608 Social Factors in American Education (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching Language Minority Students in K-12 Classroom (3 credit hours)

Area B: Specialization-15 Credit Hours

- SSE 5790 Inquiry and Instructional Analysis in Social Science Education (3 credit hours)
- SSE 5391 Global Education: Theory and Practice (3 credit hours)
- SSE 5776 Democracy and Education (3 credit hours)
- EDG 6253 Curriculum Inquiry (3 credit hours)
- · 3 credit hours of elective approved by adviser

Area C: Internship-6 Credit Hours

ESE 6946 Graduate Internship (6 credit hours)

Co-requisites

Students are required to take 30 credit hours of social science course work to meet certification requirements to teach social science in grades 6-12.

Additional Requirements

- Complete a portfolio according to program guidelines.
- Pass a comprehensive exam to demonstrate understanding of social studies ed scholarship.
- Pass all applicable sections of the Florida Teacher Certification Examination.

Master of Arts in Career & Technical Education

Description

The Master of Arts degree is designed for the students who have a baccalaureate degree in education; completed course work for regular vocational Florida State or District Teaching Certification or have a baccalaureate degree in a discipline other than education.

Admission

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the Admissions and Registration section of the Graduate Catalog. Applicants must apply online. Please be sure to submit all requested material by the established deadline(s).

The Master of Arts degree is designed for the students who have a baccalaureate degree in education; completed course work for regular vocational Florida State or District Teaching Certification or have a baccalaureate degree in a discipline other than education.

Applicants to the Master of Arts program must (1) submit official scores on the Graduate Record Examination (GRE), which must have been taken within the last five years, and (2) have a GPA of 3.0 and GRE of 840; if GPA is below 3.0, GRE of 1000 (in lieu of the GRE, a GMAT score of 500 or higher may be used for admission consideration).

For applicants from countries where English is not the official language, or for an applicant whose bachelor's degree is not from an accredited U.S. institution, an official score of at least 220 (computer-based test; or equivalent score on the paper-based test) on the Test of English as a Foreign Language (TOEFL) is required.

Application Due Dates

All students applying for fellowships must apply by the Fall Priority deadline date.

U.S. Applicants

Late applications will be considered on a space-available basis.

Program(s)	Fall Priority	Fall	Spring	Summer
Master of Arts in Career & Technical Education	Jan 15	Jul 15	Dec 1	Apr 15

International Applicants

Program(s)	Fall Priority	Fall	Spring	Summer
Master of Arts in Career & Technical Education	Jan 15	Jan 15	Jul 1	Nov 1

International Transfer Applicants

Program(s)	Fall Priority	Fall	Spring	Summer
Master of Arts in Career & Technical Education	Jan 15	Mar 1	Sep 1	Dec 15

Minimum Hours Required for M.A.—42 - 45 Credit Hours

Area A: Core- 12 - 15 Credit Hours

Select three courses from the following list:

- EDF 6727 Critical Analysis of Social, Ethical, Legal, and Safety Issues Related to Education (3 credit hours)
- IDS 6504 Adult Learning (3 credit hours)
- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- LAE 5337 Literacy Strategies for Middle and Secondary Teaching (3 credit hours)
- TSL 5373 Teaching language Minority Students in K-12 Classrooms (3 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 6432 Measurement and Evaluation in Education (3 credit hours) or EDF 6401 Statistics for Educational Data
- EDF 6886 Multicultural Education (3 credit hours)
- EDF 6725 Critical Issues in Urban Education (3 credit hours)
- EDF 6481 Fundamentals of Graduate Research in Education (3 credit hours)
- EDF 6517 History and Philosophy of American Education (3 credit hours)
- EDG 6329 Quality Teaching Practices (3 credit hours)

Select one option:

- EVT 6946 Graduate Internship (6 credit hours)
- EVT 6909 Research Report (2,1 credit hours)

Area B: Career Education Core-9 Credit Hours

- EVT 6067 History of Career Education in the United States (3 credit hours)
- EVT 6095 Issues in Career Education (3 credit hours)
- EVT 6791 Research in Career Education (3 credit hours)

Area C: Specialization-21 Credit Hours-Approved by adviser

Areas of focus may include: health, technical training, teaching adults, or business education.

Area D: Co-requisites

If initial certification is desired, see adviser.

Financial Support

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.

Key points about financial support:

- If you're interested in financial assistance, you're strongly encouraged to apply for admission early. A complete application for admission, including all supporting documents, must be received by the priority date listed for your program under "Admissions."
- You must be admitted to a graduate program before the university can consider awarding financial assistance to you.
- If you want to be considered for loans and other need-based financial assistance, review
 the UCF Student Financial Assistance website at http://finaid.ucf.edu and complete the
 FAFSA (Free Application for Federal Student Aid) form, which is available online at
 http://www.fafsa.ed.gov. Apply early and allow up to six weeks for the FAFSA form to be
 processed.
- UCF Graduate Studies awards university graduate fellowships, with most decisions based on nominations from the colleges and programs. All admitted graduate students are automatically considered in this nomination process. To be eligible for a fellowship, students must be accepted as a graduate student in a degree program and be enrolled full-time. University graduate fellowships are not affected by FAFSA determination of need.
- Please note that select fellowships do require students to fill out a fellowship application (either a university fellowship application, an external fellowship application, or a college or school fellowship application). For university fellowship applications, see Financing Grad School.
- For information on assistantships (including teaching, research, and general graduate assistantships) or tuition support, contact the graduate program director of your major.

Contact Info

Master of Arts in Career & Technical Education

Jo Ann Whiteman, Ed.D., Program Coordinator Phone Number: 407-823-2848 jwhitema@mail.ucf.edu

MASTER OF ARTS IN CAREER AND TECHNICAL EDUCATION

The Master of Arts degree in Career and Technical Education is designed for students who have a baccalaureate degree in education, have completed course work for regular vocational/career and technical District Teaching Certification, or have a baccalaureate degree in a discipline other than education.

The M.A. program requires either an internship or a research report. Also, a core class in the curriculum, required of all students, is the research methods course where examples are related directly to career education. The internship is an independent learning activity that takes place in authentic settings in which students must apply, reflect on, and refine knowledge and skills acquired in the program. The internship experience gives students full control of the operational setting where they are placed (e.g., such as primary classroom teacher while being observed and mentored by a supervising teacher and UCF faculty member).

Degree Requirements

Minimum Hours Required for M.A.—42 Credit Hours

Area A: Core-12 or 15 Credit Hours

- EDF 6432 Measurement and Evaluation in Education (3 credit hours)
- EDF 6481 Fundamentals of Graduate Research in Education (3 credit hours)

Select one course from the following list:

- EDF 6155 Lifespan Human Development and Learning (3 credit hours)
- EDG 6236 Principles of Instruction (3 credit hours)
- EDF 6517 Perspectives on Education (3 credit hours)
- EDF 6608 Social Factors in American Education (3 credit hours)
- EDF 6886 Multicultural Education (3 credit hours)

Select one option:

- EVT 6946 Graduate Internship (6 credit hours)
- EVT 6909 Research Report (2,1 credit hours)

Area B: Career Education Core-9 Credit Hours

- EVT 6067 History of Career Education in the United States (3 credit hours)
- EVT 6095 Issues in Career Education (3 credit hours)
- EVT 6791 research in Career Education (3 credit hours)

Area C: Specialization—21 Credit Hours—Approved by adviser

Areas of focus may include: health, technical training, teaching adults, or business education.

Area D: Co-requisites

If initial certification is desired, see adviser.

Financial Support

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.

Key points about financial support:

- If you are interested in financial assistance, you are strongly encouraged to apply for admission early. A complete application for admission, including all supporting documents, must be received by the priority date listed for your program under "Admissions."
- You must be admitted to a graduate program before the university can consider awarding financial assistance to you.
- If you want to be considered for loans and other need-based financial assistance, review the UCF Student Financial Assistance website at http://finaid.ucf.edu and complete the FAFSA (Free Application for Federal Student Aid) form, which is available online at http://www.fafsa.ed.gov. Apply early and allow up to six weeks for the FAFSA form to be processed.
- UCF Graduate Studies awards university graduate fellowships, with most decisions based on nominations from the colleges and programs. To be eligible for a fellowship, students must be accepted as a graduate student in a degree program and be enrolled full-time. University graduate fellowships are awarded based on academic merit and therefore are not affected by FAFSA determination of need.
- Please note that select fellowships do require students to fill out a fellowship application (either a
 university fellowship application, an external fellowship application, or a college or school fellowship
 application). For university fellowship applications, see Financing Grad School.
- For information on assistantships (including teaching, research, and general graduate assistantships) or tuition support, contact the graduate program director of your major.

Contact Info

Jo Ann Whiteman, Ed.D. Phone Number: 407-823-2848 jwhitema@mail.ucf.edu



To:

From:

Lynn Hepner, Director, Academic Programs

Date:

November 21, 2007

Re:

Request to reactivate the MA in Film and Digital Media, Visual Language and

Interactive Media track

The College of Arts & Humanities and the Departments of Film and Digital Media request the reactivation of the MA in Film and Digital Media, Visual Language and Interactive Media track.

Rationale for reactivation: To provide opportunities for students who desire an advanced degree in Digital Media. The reactivated program would target students who seek to develop additional expertise for career advancement but do not wish to pursue a terminal degree. These students typically pursue a variety of goals that address media convergence: increasing media skills, extending these skills into new areas, or in the case of educators and media professionals, expanding their expertise and credentials for use in their professions.

The target population for the MA in Film and Digital Media is local and place-bound and would include the following groups:

- Educators
- Media Professionals
- Students pursuing undergraduate degrees in a media-related creative or technical field such as art, film, animation, theater, music, digital media, computer science, English, or education in the arts.
- Current students in the Film and Digital Media MFA (Visual Language and Interactive track) who do not wish to earn a terminal degree. (Note-five current MFA students would convert immediately, with another 10 expected to change in fall 08 [excludes new admissions]).

Curriculum: The attached catalog copy has been emended (1) to reflect the permanent course numbers assigned after the program was deactivated and (2) to include a non-thesis option for those students not wishing to pursue the research-oriented option.

Participating faculty members: see attached

Program Administrator: Dr. José Maunez-Cuadra, Associate Professor

Start date: Spring 2008 or ASAP

Please feel free to contact me at hepner@mail.ucf.edu or 823-5121 if the committee has questions or concerns.

Cc: José Fernandez, Dean, College of Arts & Humanities David Vickers, Interim Chair, Digital Media Steve Schlow, Interim Director, Film

Master of Arts in Film and Digital Media

Visual Language and Interactive Media Track

The Master of Arts Track in Visual Language and Interactive Media is based on an apprenticeship model. Students will explore new media under the guidance of a faculty member and collaborate with this faculty member in creative and research projects that foster a unique contribution characterized as innovative in approach. This degree program builds on undergraduate knowledge to build a mature set of conceptual, design, and technical skills needed to communicate stories and messages in a single discipline or in an interdisciplinary environment. A six hour thesis project is required. A typical thesis might involve designing content that is imparted through integrating traditional media with computer-based and computer-enhanced formats where the content is enriched by the use of novel interactive modalities and techniques. Work in the thesis will extend the capabilities of interfaces and measure the effectiveness of new ways of telling stories and conveying messages.

This M.A. track is embedded in a rich environment of film and digital media work at UCF and in the surrounding community. The following are active areas of work at UCF:

- · Digital media in instructional applications
- Experience design
- Interactive performance
- Sound and music design

The School of Film and Digital Media faculty have extensive professional and academic experience in areas spanning film, video, multimedia, interactive and web design, human centered interactive design, exhibition and theme park design, simulation and training, game development, broadcast design and motion graphics, animation, visual language, immersive design environments, database design, e-commerce, and educational technology and community development.

During the first academic year, the student will take core courses and electives suggested by the student's designated mentor/professor. The student will also take intensive short (possibly non-credit) courses in software and technical skills, to complement the skills with which they enter the program.

During the second year, the student will concentrate on the coursework in his or her chosen field, as well as thesis research. Students must be accepted by a faculty member for supervision in order to carry out the required thesis report. Students are encouraged to begin this process immediately upon entering the program by meeting faculty who work in areas of interest to the students.

Requirements for M.A., Visual Language and Interactive Media Track—36 Credit Hours Minimum

Core Requirements—12 Credit Hours

DIG 5647 Science and Technology of Dynamic Media (3 credit hours)

DIG <u>5810</u>, Ways of Seeing: Cultural and Technological Perspectives (3 credit hours)

FIL 5165 Visual Storytelling (3 credit hours)

Deleted: XXX

Deleted: Media

Deleted: Technology

Deleted: 6XXX

Deleted: XXX

Deleted: XXX

FIL 5810 Transmedia Story Creation (3 credit hours)

Required Courses—9 Credit Hours

Choose three from the following:

- . DIG 6165 Principles of Interaction (3 credit hours)
- DIG 6137, Information Architecture (3 credit hours)
- DIG 6487 Principles of Visual Language (3 credit hours)
- FIL 6454, Microbudget Production Design, (3 credit hours)

Program Electives-9 Credit Hours

All graduate level Film or Digital Media courses can be used as electives, based on an advisor approved program of study. In addition other graduate courses may be used in place of those listed above, with permission of the advisor. These courses must be selected so as to ensure that at least one-half of the courses in the students program of study are taken at the 6000 level.

Non-Thesis Option-6 Elective Credit Hours

Students selecting the non-thesis option will be required (1) to complete 6 additional hours of elective credit and (2) to pass a final oral and/or written examination administered by a committee to include the Digital Media MA Coordinator and two other graduate faculty (one of whom may be graduate faculty outside the program).

"Thesis Option—6 Credit Hours

DIG 6971 Thesis (6 credit hours)

Each candidate for the Master of Arts will submit a thesis prospectus and preliminary bibliography, on a topic selected in consultation with the advisor. The formal thesis is initiated by the preparation of a proposal that will meet both departmental and university requirements for the thesis. Prior to enrollment into thesis, the advisor, in consultation with the student, will designate a Thesis Committee to be further approved by the College Graduate Dean. This committee is chaired by the adviser and includes two or more additional faculty members from the School of Film and Digital Media.

The members of the student's thesis committee will judge the proposal as the preliminary step to beginning the thesis. This committee must approve the Thesis Proposal before academic credit can accrue.

The thesis is a formal written document. The introduction cites similar, related and antecedent work, the body explains the purposes of the project, the method of its production, and any evaluation that was performed, and it concludes with plans for future work. The thesis will also include an archival copy of the resulting creative product. Both the thesis and the creative product must be delivered in a digital form, acceptable by the UCF library according to its standards for digital dissertations and theses.

Thesis Defense

In addition to a written thesis, the final step in completing the thesis requirement is an oral defense before the thesis committee. Candidates must present their creative or research work

Deleted: 5XXX

Deleted: 5XXX

Deleted: 6XXX

Deleted: Process

Deleted: 6XXX

Deleted: ¶

and explain its creation in an oral defense. These presentations are made to the student's committee, in a public meeting that other faculty and students may attend.

Faculty List—Digital Media MA

College of Arts and Humanities

Bowers, Clint	ú	1	
Cannon-Bowers, Janis	Ó	3	
Frederick, Terry	ú	1	
Hughes, Charles	ú	1	(23)
Kenny, Robery	Ó	©	23
Maunez-Cuadra, José	Ó	E	23
McDaniel, Thomas	Ó	1	
Moshell, Jack M	ú	1	
Peters, Philip	Ó	13	23
Sung, Stella	ú	13	
Underberg, Natalie	ú	1	
Wirth, Jeff	ú	1	

Graduate Council Curriculum Subcommittee Course Agenda 12-11-2007

College of Arts & Humanities Special Topics

DIG 6938 Sect 01 CAH-Digital Media 3(3,0)

ST:Digital Media Research Methods: PR: Graduate Standing and C.I. A review of quantitative research methods needed for digital media professionals.

30 character abbreviation: **ST:Digital Media Res Methods** *AGENDA NOTES: Course Addition also being proposed.*

Engineering & Computer Science Special Topics

CAP 6938 Sect 01 ECS-Computer Science 3(3,0)

ST: Comparative Genomics: PR: knowledge of algorithms and molecular biology. This course will summarize current research on comparative genomics. Topics include state of the art computational techniques and their applications: understanding of hereditary diseases and cancer, genetic mobile elements, genome rearrangements, genome evolution, and the identification of RNA elements and other regulatory elements in genomes

30 character abbreviation: ST: Comparative Genomics

College of Arts & Humanities Course Action Additions

DIG 6XXX CAH-Digital Media 3(3,0)

Digital Media Research Methods: PR: Graduate Standing and C.I. A review of quantitative research methods needed for digital media professionals.

30 character abbreviation: **Digital Media Res Methods**

AGENDA NOTES: Special Topic also being proposed.

College of Sciences Course Action Additions

CLP 7XXXC COS-Psychology 3(2,2)

Adult Psychological Assessment: PR: Admission to Psychology PhD - Clinical Psychology track and CI. Theory and techniques of adult psychological assessment with emphasis on intake interviewing, cognitive and personality assessment, and report writing.

30 character abbreviation: **Adult Psychological Assessment**

CLP 7XXXC COS-Psychology 3(2,2)

Child Psychological Assessment: PR: Admission to Psychology PhD Clinical track and CI. Emphasis is placed on theories and techniques of psychological assessment with children and adolescents. Primary emphasis on interviewing, observation skills, and administering intelligence tests.

30 character abbreviation: Child Psychological Assessment

Engineering & Computer Science Course Action Additions

CET 5XXX ECS-Engineering Technology 3(3,0)

Information and Communications Infrastructure: PR: Graduate standing or C.I. This course provides an overview of information systems in the technology world. Topics include hardware, software, databases and related technologies, telecommunications systems.

30 character abbreviation: Info & Com Infrastructure

CET 6XXX ECS-Engineering Technology 3(3,0)

Advanced Topics in Technology: PR: Graduate Status. An in-depth study of feasibility, capabilities, impact, and acceptance of various technologies. Research paper required.

30 character abbreviation: Advanced Topics in Technology

CET 6XXX ECS-Engineering Technology 3(3,0)

The Practice of Digital Forensics: PR: CGS 5131 or C.I. Application of digital scientific techniques to solve information assurance, forensic and legal problems

30 character abbreviation: **Practice of Digital Forensics**

ETG 5XXX ECS-Engineering Technology 3(3,0)

Applied Research Methods: PR: Bachelors degree or senior standing. Broad overview of applied research methods from the literature review process to the investigation, modeling, experimental design, analysis of results, and technical reports.

30 character abbreviation: **Applied Research Methods**

ETI 6XXX ECS-Engineering Technology 3(3,0)

Technology and Analysis for Enterprises: PR: STA 2023 or STA 3032 or equivalent. Provides a set of sequential activities that must be implemented to achieve enterprise quality. Also provides tools to identify gaps in their current quality plan.

30 character abbreviation: **Tech & Analysis for Enterpr**____

ETI 6XXX ECS-Engineering Technology 3(3,0)

Technology for Project Management: PR: CET 3010, ENC 3241, ETI 4448 or equivalent courses. This course offers a global perspective on how IT is transforming businesses. It provides information on how organizations operate and compete in the digital economy.

30 character abbreviation: **Tech for Project Management**

College of Education Course Action Additions

EEX 6XXX ED-Child, Family & Comm Sci 3(3,0)

Transition Planning and Interdisciplinary Teaming for Students with Disabilities: Interdisciplinary teaming to include available resources, the recognition of the role of parents, teachers, and other professionals, functional community-based curriculum, employability skills, and transition planning.

30 character abbreviation: Transition Plan & Interdis Tea

EDP 6XXX ED-Educational Studies 3(3.0)

Seminar in Applied Learning and Instruction I: PR: Graduate Standing or CI. An overview of contemporary theories and research related to human learning and instruction with a focus on affective and motivational issues surrounding learning and instruction.

30 character abbreviation: **Sem in Applied Learn & Inst I**

EDP 6XXX ED-Educational Studies 3(3,0)

Seminar in Applied Learning and Instruction II: PR: EDP 6XXX I or CI. An overview of contemporary theories and research in human learning and instruction. Emphasis on cognition, critical thinking, problem-solving, individual differences, and assessment of learning outcomes.

30 character abbreviation: Sem in Applied Learn & Inst II

ARE 7XXX ED-Teaching & Learning Princ 3(3,0)

Advanced Research Seminar in Art Education: This course will help prepare art education doctoral students to identify and review landmark research and to conduct relevant art education research. Emphasis is placed on examining the nature of past and present research in art education, various methods of conducting art education research, and how research can translate into practical classroom application. Students will review, critique, apply, and develop research topics and proposals. May be used in the degree program a maximum of 2 times only when course content is different.

30 character abbreviation: Adv Res Seminar in Art Educ

ARE 7XXX ED-Teaching & Learning Princ 3(3,0)

Assessment Seminar in Art Education: This course will further prepare art education doctoral students to identify and review landmark assessment research, and to design and conduct relevant art education research. Emphasis is placed on examining the nature of past and present assessment research in art education, various methods of conducting this research, and how it can translate into application and contribute to the knowledge base in the field.

30 character abbreviation: **Assess Seminar in Art Educ**

ARE 7XXX ED-Teaching & Learning Princ 3(3,0)

Internship Seminar in Art Education: Doctoral Internship is "hands on experience" in pre K-16 or as a community based art educator under supervision of a certified classroom teacher. The purpose of this course is for candidates to assume the roles and responsibilities of a classroom teacher in a public/private school or as a community based art educator and be able to demonstrate competence in the Florida Accomplished Practices; the Professional Education Competencies; the ESOL Standards of Practice; and, the Teacher as a Reflective Practioner Attributes in order to optimally develop as a Facilitating Reflective Practitioner in a format designed to identify, stimulate, and promote the academic and professional objectives of its participants. Reading list supplements practical experience.

30 character abbreviation: Intrn Seminar in Art Education

SSE 6XXX ED-Teaching & Learning Princ 3(3,0)

Digital History in the K-12 Classroom: This course looks at the concept of digital history and how this pedogogical approach can and should be applied in the K-12 social studies classroom environment.

30 character abbreviation: **Digital History in K 12 Classr**

SSE 7XXX ED-Teaching & Learning Princ 3(3,0)

Content and Program Analysis in Social Science Education: Analysis of social science instructional programs including development of content, materials, processes, and assessment procedures in light of current research and practice.

30 character abbreviation: Content & Prog Analy Soc Sci E

SSE 7XXX ED-Teaching & Learning Princ 3(3,0)

History of Social Studies Education: Major themes, ideas, and personalities in the historical development of curriculum and instruction in social studies in the United States since 1880.

30 character abbreviation: **History Social Studies Educ___**

SSE 7XXX ED-Teaching & Learning Princ 3(3,0)

Internship in Social Science Education: Student teaching in a classroom under supervision of a certified classroom teacher. May be used in the degree program a maximum of 3 times.

30 character abbreviation: Intrn in Social Science Educ___

SSE 7XXX ED-Teaching & Learning Princ 3(3,0)

Research in Social Science Education Seminar: Analysis and evaluation of scholarly research in social studies education.

30 character abbreviation: **Research in SSE**

College of Optics & Photonics Course Action Additions

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

Liquid Crystal Materials and Devices: PR: Graduate standing or C.I. Basic liquid crystal materials and their physical, optical, and electro-optic properties; photonic devices for amplitude and phase modulations.

30 character abbreviation: Liquid Crystal Mat & Devices_

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

Optical Waves and Materials: PR: Graduate Standing or C.I. Reviews Optics and material properties important for propagation and control of light. This is a review course in preparation for Ph.D. Qualifying Exam.

30 character abbreviation: Optical Waves and Materials

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

Theoretical Foundations: PR: Graduate Standing or C.I. Mathematical concepts used in Optics. Topics covered include linear algebra, orthogonal expansions of functions, Fourier transforms, ordinary differential equations, partial differential equations.

30 character abbreviation: **Theoretical Foundations**

College of Nursing Course Action Deletions

NGR 5252 CON-Nursing 3(3,0)

Psycho-Social Factors and Health Care Outcomes in the Elderly: PR: Post-baccalaureate or graduate status or C.I. Interdisciplinary perspective to examine the

relationship between client characteristics, client health care provider interactions and health care outcomes in the elderly.

NGR 5635 CON-Nursing 3(3,0)

Transdisciplinary and Community-Based Strategies of Health Professionals: PR: Graduate standing or C.I. A study of healthcare issues and strategies encountered by speech-language pathologists and nurse practitioners when promoting transdisciplinary and collaborative interactions.

NGR 5637 CON-Nursing 3(3,0)

Advanced Practice Nursing in Rural Settings: PR: Graduate student in COHPA. Focus is on advance practice nursing in rural environments and delivery services within constraints of sparse resources and geographical remoteness.

NGR 5930 CON-Nursing 3(3,0)

Issues in Health Care for the Homeless: PR: Pre-senior level baccalaureate status or admission to the graduate program; CI. Emphasis on socioeconomic, political, nursing, medical, health practice and research related to care of the homeless.

NGR 6940 CON-Nursing 5(0,5)

NP Certificate Practicum: PR: Pre NGR 6334 or NGR 6242. Supervised advanced clinical practice in the role of the nurse practitioner in an individual preceptorship. May be repeated for credit. Graded S/U.

College of Sciences Course Action Deletions

PSY 6918 COS-Psychology 3(3,0)

Directed Research: PR: PSY 6217, EXP 6257, PSY 6935, ten additional graduate hours in PSY, and C.I. Directed Research involves supervised research activity in an agency setting. The student will devote 15 hours per week in the assigned setting to work on an applied research problem with joint supervision by faculty and agency staff. May be repeated for credit.

College of Business Adm Course Action Revisions

ECP 7307 Research Seminar in Environmental and Natural Resource Economics 3(3,0)

Research Seminar

PR: ECO 7426, ECP 7311, ECP 7306, or C.I.

Students conduct and evaluate research in environmental and resource economics. their chosen field of specialization. Student projects are prepared with faculty consultation and are presented as part of the seminar.

30 character abbreviation: Research Seminar

College of Arts & Humanities Course Action Revisions

THE 6086 Careers in Professional Theater 3(3,0)
THE 6086C 3(2,2)

PR: MFA Theater Graduate Candidates (Muscial Theater, Acting, Design/Tech, Research Methods). candidates.

Practical courses focusing on job search skills and other aspects of marketing yourself

TPA 5042C Costume Design Studio

3(3,0) 3(2,2)

PR: Admission into the graduate program, TPA 3043C, TPA 3044C, program or C.I.

Project oriented course in the advance study of Costume Design

Project oriented course in the advance study of Costume Design.

TPA 5081 Design Concepts for Youth Theatre 3(3,0) TPA 5081C 3(3,3)

PR: Admission to MFA graduate program or C.I.

A study of design elements (lighting, costume, set) as they apply to youth theatre.

TPA 5095 Rendering for Theatre I 1(1,0) TPA 5095C 1(1,1)

PR: Admission to Theatre MFA Design Track.

Traditional visual communication skills necessary for scenic, costume, and lighting design.

TPA 5175	Rendering for Theatre II	1(1,0)
TPA 5175C		1(1,1)

PR: TPA 5095.

Software and technology available for visual communication and documentation.

TPA 6029 Lighting Design Studio

3(2,2)

TPA 5XXXC

PR: Design Studio & Costume Design Studio. PR: TPA 5042C and TPA 5062C.

Advanced work in the process of designing light for the stage with and emphasis on the use of light as artistic expression

TPA 6096C Advanced Rendering and Modeling for Theatre I 3(2,2)

PR: TPA 5095.

Technology relating to visual communication as well as 3 dimensional communication tools.

Technology relating to visual communication as well as 3 dimensional communication tools.

May be used in the degree program a maximum of 3 times.

Will now be repeatable for credit.

TPP 5289C Acting Methodologies $\frac{2(2,2)}{2(2,3)}$

PR: Admission to Theatre graduate program or C.I. Approaches to acting.

TPP 5386	Directing for Young Audiences	3(3,0)
TPP 5386C		<u>3(3,3)</u>

PR: THE 5910 and Dramatic Literature for Children. THE 5385.

Study of the principles, procedures, and practices of stage direction as it applies to theatre for young audiences.

College of Nursing Course Action Revisions

NGR 5745 Professional Obligations and Activities of Advanced Practice Nursing 1(1,0)

PR: NGR 5746 and NGR 5744. Admission to MSN program or C.I. Student must be in last or second to last semester of program.

Examine professional obligations of advanced practice nursing. Opportunity to develop skills for taking certification exam.

ERRORS: Syllabus is missing.

NGR 6099C Advanced Skills for the Management of Illness and Injuries 3(2,1)

PR: Pre or Co - NGR 6240 or NGR 6331, or C.I. PR: Admission to MSN program or a nursing certificate track. Completion of one clinical course, or C.I.

Development of pathological, theoretical, and clinical skills for the evaluation, diagnosis, intervention, and management of illnesses and injuries.

Materials & Supply Fee: \$45.00 ERRORS: Syllabus is missing.

NGR 6105 Management of Symptoms and Outcomes of Disease 3(3,0)

PR: NGR 5800, PR: or CR: NGR 5800, NGR 5141. 5141.

Focused examination of the concepts, theories and research evidence that provide the basis for assessment and management of the patient experiences related to disease outcomes. ERRORS: Syllabus is missing.

NGR 6240 Adult I for APNs

PR: PreAdmit MSN Prog ANP/FNP PR: Admission to MSN program or a nursing certificate FNP and ANP track, NGR 5003, NGR 5141, NGR 6334. CR: Adult I APN clin or C.I. 5004L, NGR 5141. PR or CR: NGR 6192; CR: NGR 6240L (for ANP and FNP tracks).

3(3,0)

2(2,0)

Development of theoretical skills for evaluation, diagnosis, and managment of health needs of adults and communities.

ERRORS: Syllabus is missing.

NGR 6240L Adult I Clinical for APNs 3(0,3)

PR: Preadmit PR: Admission to MSN prog FNP/ANP track, NGR 5003, NGR 5004L, NGR 5141, NGR 6334, NGR 6192. program or nursing certificate, ANP or FNP track. CR: NGR 6240.

Application of skills for evaluation, diagnosis, and management of health needs of adults and communities. Graded S/U.

Materials & Supply Fee: \$10.00 ERRORS: Syllabus is missing.

NGR 6242 Adult II for APNs

PR: NGR 6242, NGR 6334, NGR 6192. CR: Adult II for APN Clinical or CI. PR: Admission to MSN program or a nursing certificate track; NGR 6240. CR: NGR 6242L (for ANP track).

Development of theoretical foundation for the evaluation, diagnosis, and management of the complex health needs of adults.

ERRORS: Syllabus is missing.

NGR 6242L Adult II Clinical for APNs 2(0,2)

PR: NGR 6240, NGR 6334, NGR 6192 CO-NGR 6242. PR: Admission to MSN program or nursing certificate ANP track, NGR 6240; NGR 6240L (FNA, ANP tracks). CR: NGR 6242. Application of theory and skills for the evaluation, diagnosis, and management of the complex health needs of adults. Graded S/U. May be repeated for credit.

ERRORS: Syllabus is missing.

NGR 6331 Pediatrics I for APNs 2(2,0)

PR: Admission to MSN program FNP or PNP tract, or a nursing certificate track, NGR 5003, NGR 5141.; CR: Pediatrics I Clinical, NGR 6192, Focused Pediatrics (PNP students only). 5004L, NGR 5141. PR or CR: NGR 6192. CR: NGR 6331L (for PNP, FNP tracks).

Evaluation, diagnosis, and management of the primary care needs of children, their families and communities.

ERRORS: Syllabus is missing.

NGR 6331L Pediatrics I Clinical for APNs 2(0,2)

PR: Admission of to MSN program PNP or FNP track, NGR 5003, NGR 5141. CR: Pediatrics I, NGR 6192, Focused Pediatrics. or nursing certificate, FNP or PNP track. CR: NGR 6331. Evaluation diagnosis and management of the primary care needs of children and their families. Graded S/U.

Materials & Supply Fee: \$12.00 ERRORS: Syllabus is missing.

NGR 6332 Pediatrics II for APNs 3(3,0)

PR: Pediatrics I, Pediatrics I Clinical, NGR 6192; CR: Pediatrics II, Clinical or CI. PR: Admission to MSN program or nursing certificate program, NGR 6331, NGR 6331L (for FNP and PNP tracks). CR: NGR 6332L (for PNP track).

Foundation for the evaluation, diagnosis, and management of the complex health needs of children and their families.

NGR 6332L Pediatrics II Clinical for APNs 3(0,3)

PR: Pediatrics I, Pediatrics I Clinical, NGR 6192.; CR: Peidatrics II. PR: Admission to MSN program or nursing certificate, PNP track, NGR 6332.

Evaluation, diagnosis, and management of the complex health needs of children and their families. Graded S/U.

Materials & Supply Fee: \$15.00 ERRORS: Syllabus is missing.

NGR 6334 Women's Health for APNs 2(2,0)

PR: Admit MSN prog ANP/FNP PR: Admission to MSN program or nursing certificate track, NGR 5003, NGR 5141. CR: Wmns Hlth APN Clin. 6192 or Cl. 5004L, NGR 5141, NGR 6192. CR: NGR 6482L (for ANP and FNP tracks).

Development of theoretical skills for evaluation, diagnosis, and management of women.

ERRORS: Syllabus is missing.

NGR 6335 Focused Pediatrics for APNs 2(2,0)

PR: PR: Admission to MSN program or nursing certificate track, NGR 6331, NGR 6331L. CR: 6335L. 6331L (for PNP students). CR: 6335L (for PNP students).

Development of advanced knowledge in the physical and developmental assessment of children and families across the lifespan.

ERRORS: Syllabus is missing.

NGR 6335L Focused Pediatrics Clinical for APNs 1(0,3)

CR: PR: Admission to MSN program or nursing certificate PNP track, NGR 6335.

Application of theory and skills for the in depth developmental and physical assessment of children and their families. Graded S/U. May be repeated for credit.

Materials & Supply Fee: \$30.00 ERRORS: Syllabus is missing.

NGR 6482L Women's Health for APNs Clinical 1(0,3)

PR: Admission to MSN program or nursing certificate ANP or FNP track. CR: NGR 6334. Application of skills for evaluation, diagnosis, and management of the health needs of women. Graded S/U.

Materials & Supply Fee: \$45.00 ERRORS: Syllabus is missing.

NGR 6714 Clinical Teaching Strategies for Nursing 3(3,0)

PR: NGR <u>5791Teaching</u> <u>6XXXTeaching</u> Strategies for <u>Health Professionals</u>, <u>Nurse</u> Educators or C.I.

Synthesis of research-based literature and best practice in the development, implementation and evaluation of clinical education for nursing students.

ERRORS: Syllabus is missing.

NGR 6813 Evidence Based Nursing Practice 3(3,0)

PR: NGR 5800 and NGR 5801; Must be in last 12 hours of MSN program. second to last semester of program.

Apply research, theory and other evidence to advanced practice nursing. Processes for implementation, evaluation and synthesis of evidence-based nursing practice are included. *ERRORS: Syllabus is missing.*

NGR 6941 Advanced Practice Practicum Variable, 1-7

PR: NGR 5003, NGR 5141, NGR 6192, NGR 6240 and NGR 6334, or NGR 6332; CR: NGR 6242 - ANP/FNP. PR: Admission to MSN program or Nursing certificate program. Can be started concurrently with final clinical course in program of study. (Varies with plan of study.). Supervised advanced clinical practice in the role of the nurse practitioner in an individualized preceptorship. Graded S/U.

ERRORS: Syllabus is missing.

College of Sciences Course Action Revisions

MAA 5405 Complex Variables 3(3,0)

MAA 6XXX

PR: MAC 2313, PR: MAA 4226, MAP 4307, and graduate status or senior standing or C.I.

Analytic functions. series and <u>Harmonic functions</u>. Integration in the complex plane. Laurent <u>series</u>. Residue calculus. Inversion of Laplace transformations. Applications in engineering and the physical sciences. <u>Maximum Modulus Principle</u>. Conformal mappings.

MAA 6239 Asymptotic Methods in Mathematical Statistics 3(3,0) MAA 7XXX

PR: MAP 6111 (Mathematical Statistics) or C.I.

Large sample theory, martingale sequences, probability measures on metric spaces, absolute continuity and singularity, Hellinger distance, functions of statistics, asymptotic theory of estimation.

<u>Large sample theory, martingale sequences, probability measures on metric spaces, absolute continuity and singularity, Hellinger distance, functions of statistics, asymptotic theory of estimation and applications.</u>

MAP 5407 Applied Mathematics I 3(3,0) MAP 6XXX

PR: MAP 2302, and graduate status or senior standing MAS 3105, MAA 4226, MAP 4307, MAP 4363, or C.I.

variations. <u>Linear functionals</u>, calculus of introduction to integral equations <u>variations</u>, Hamilton's principle, Rayleigh-Ritz method, Sturm-Liouville theory, Green's functions for ordinary differential equations, <u>Volterra and Fredholm integral equations</u>.

MAP 5385 Applied Numerical Mathematics 3(3,0) MAP 6XXX

PR: MAP 2302, graduate status or senior standing, 5117, MAA 5210, graduate status, or C.I. Classical topics or numerical analysis and their applications, Romberg integration, Richardson extrapolation, Gaussian quadrature schemes.

Numerical linear algebra, Gaussian elimination, Gauss-Seidel iteration, optimization procedures, numerical solution of ordinary differential equations.

MAP 6386 Numerical Solutions of PDE 3(3,0) MAP 7XXX

PR: MAP 6356, MAP 5385, MAP6XXX (Applied Numerical Mathematics) or C.I.

Numerical solution of linear and nonlinear partial differential equations of parabolic, elliptic and hyperbolic type type. Solution of PDE using finite difference and spectral methods.

POS 6743 Geographic Information Systems for Environmental Politics 3(3,0) Geographic Tools for Political Science Research

PR: Graduate standing or C.I.

Provides an introduction to the theoretical assumptions, analytical possibilities and application of geographic Information Systems (GIS) tools of analysis for political science research.

30 character abbreviation: **Geo Tools for Political Sci**

EXP 5254 Human Factors and Aging

3(3,0)

PR: Graduate status, post-bac, or senior standing or C.I. with C.I.

An overview of issues related to enhancing quality of life of elderly through the implementation of basic human factors principles in environmental and task design.

Engineering & Computer Science Course Action Revisions

EML 5152 Intermediate Heat Transfer

3(3,0)

PR: EML 4142, EML 5713, EML 5060. 5060.

An intermediate-level course dealing with heat and mass diffusion, boundary layer problems, and radiation from real bodies. Emphasis on combined modes, numerical methods.

Health & Public Affairs Course Action Revisions

SOW 5846 Spirituality in Professional Counseling 3(3,0)

SOW 6XXX Spirituality in Clinical Social Work Practice

PR: graduate standing, post-bac status, seniors, or C.I. PR: Admission to MSW or Social Work Certificate program.

Examination of spirituality as it relates to professional counseling.

<u>Faith development theory, study of spirituality in various settings and development of strategies for use in practice designed to heighten sensitivity to spiritual dimensions of life.</u>

30 character abbreviation: Spirituality Clinical SW Pract

College of Optics & Photonics Course Action Revisions

OSE 5143 Fiber Optics Communication

3(3.0)

OSE 6XXX

PR: EEL 3552C, EEL 3470. PR: Graduate Standing and OSE 6432 or C.I.

Use of Fiber Optics as a communication channel. Principles of Fiber optics. Mode theory, transmitters, modulators, sensors detectors and demodulators.

OSE 5421 Integrated Optics

3(3,0)

OSE 6XXX

PR: Graduate standing or C.I.

The propagation and loss characteristics in dielectric optica waveguides, fundamental concepts of both integrated and fiber optic devices, numerical modeling of complex integrated optical components.

OSE 5111 Optical Wave Propagation

3(3,0)

OSE 6XXX

PR: Graduate standing or C.I.

Optical propagation of light waves as applied to isotropic, anisotropic, and inhomogeneous media, guided waves and Gaussian beams