Graduate Council Curriculum Committee
November 16, 2011
12:00 p.m., MH 395

Agenda

1. Welcome and call to order

2. Review of minutes from last meeting

3. Addition of a graduate certificate in Corporate Communication, COS

4. Review of equipment fee requests and M&S fee requests
    - College of CECS equipment fees
    - COHPA M&S fee

5. Revisions to the Engineering Management PSM degree, CECS
    - Engineering Management track inactivation
    - Professional Engineering track inactivation

6. Revisions to the Education PhD, Social Science Education track, CED

7. Courses and special topics
    - One split class from COS

8. Adjournment

Members of the Graduate Council Curriculum Committee:

Tosha Dupras, COS
Cristina Fernandez-Valle, COM
Charles Kelliher, CBA
Kerry Purmensky, CAH
Art Weeks, CECS
Youngsoo Choi, RCHM
Naim Kapucu, COHPA
Joyce Nutta, CED
Terrie Sypolt, LIB
Julee Waldrop, CON
Boris Zeldovich, COP
Jay Jay Stroup, GSA
Patricia Bishop, EX Officio
Max Poole, CGS Liaison

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Recommendation Form

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

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

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

Proposed Effective Term/Year: Spring 2012

Unit(s) Housing Program: Nicholson School of Communication

Name of program, track and/or certificate: Graduate Certificate in Corporate Communication

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

The Graduate Certificate in Corporate Communication offers students additional training in creating, managing, and communicating corporate reputation. Coursework will focus on theory, research, and practical applications of principles related to corporate communication. The curriculum includes courses in crisis public relations, theories of public relations, and electives designed to enhance students communication skills in corporate environments.

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

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

June 1st and December 1st (no summer admission for the certificate program)

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

Bachelors Degree from a regionally accredited institution and undergraduate GPA 3.0 or above

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

Harry Weger, Jr.; Harry.Weger@ucf.edu; Communication Building #252

http://communication.cos.ucf.edu/content/index.html#loader=http%3A//communication.cos.ucf.edu/content/graduate/degrees/communication.html

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

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

■ Addition. Please proceed to Part A.

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

☐ Inactivation

☐ Temporary Suspension of Admissions. Give Length of Suspension:

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

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

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

Signature Page

RECOMMENDATIONS

☒ Yes	☐ No	Department Chair:		Date: 10/18/11
☐ Yes	☐ No	College Curriculum Committee Chair:		Date:
☐ Yes	☐ No	College Dean:		Date:
☐ Yes	☐ No	Chair or GSC:		Date:
☐ Yes	☐ No	Dean, College of Graduate Studies:		Date:

APPROVAL

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

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

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

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

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

A recent survey of our graduates indicates a strong desire for courses or other program elements that will enhance their marketability and skills on the job market. Also, undergraduates in Nicholson School have indicated that they desire additional training in professional communication but do not wish to spend the time and resources completing an entire M.A. program. Overall, the program should have a very positive impact on students' marketability since demand for people trained in corporate communication is increasing generally. This certificate program will have only a small impact on the faculty and program as a whole. We will use courses that are already on the books and that are regularly offered. One small impact may involve the need to offer the required core courses in additional semesters if demand for the program is high, however, we have commitment from the faculty and School Director to deliver these courses if needed.

For Revisions:

Brief listing of Program Changes: (Please indicate the changes in bullet format. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. **Remember to attach the catalog copy showing changes, using Track Changes in Word.**)

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate?

☐ **Yes** ■ **No**

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

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

Name Change

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

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

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

When is the name change effective? Please note: A name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

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

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

old CIP:

new CIP:

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

Part A - Continued

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

Please see attached "Proposal for a Graduate Certificate Program in Corporate Communication."

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

Current students will have the option of enrolling in the certificate program which will have a positive impact on their job search efforts following graduation. We do not foresee any negative impacts on current students. If additional students in elective courses creates greater demand, we will offer the courses more often to meet demand.

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

We contacted Dr. Goodman from Management and Dr. Michaels from Marketing. Only Dr. Michaels replied and he was supportive. See emails attached.

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

The graduate program in the Nicholson School of Communication envisions that the certificate program will appeal to four groups of students. First, because the proposed Certificate Program in Corporate Communication does not specify the focus of the applicant's Bachelor's degree, it is likely to attract professionals who lack formal undergraduate preparation in corporate communication but have found that communication is a primary part of their job responsibilities. Second, the Certificate Program is likely to attract professionals who have a background in communication but wish to update their knowledge and skills. Third, the certificate Program is likely to attract students who have recently completed their Bachelor's degrees and view the program as a way to develop an advanced skills set to enhance their marketability. Fourth, the program may be attractive to professionals are contemplating the pursuit of a Master's degree in Communication and view the Certificate Program as a good entrance point for the Master's.

	Year 1	Year 2	Year 3
Headcount	10	15	20
SCHs	30	63	90

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

Students will work in fields requiring professional training in communication. Examples include public relations, corporate branding, advertising, corporate reputation management, digital communications management, and strategic media management. Job titles include Internal Communications Manager, Director of Public Relations, Director of Industry Communications, Corporate Communications Manager, Media Relations Manager, Director of Employees Communications, and so on.

Part A - Continued

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

	No. assistantship students	Source of funds	No. fellowship students (specify fellowship)	No. tuition remissions	Source of funds
Year 1	0				
Year 2	0				
Year 3	0				

Checklist of items to be provided:

☒ Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)

☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)

☒ Emails showing consultation with other units. (if applicable)

☐ If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.

☒ If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.

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

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

If yes, number of current students:

Please specify the intended time period of inactivation or suspension:

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

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

Fall 2010	Spring 2011	Summer 2011	Fall 2011	Spring 2012
EDF 7041	EDF 7041	EDF 7041	EDF 7041	EDF 7041
EDF 6442	EDF 6442	EDF 6442	EDF 6442	
EDF 6442	EDF 6442	EDF 6442		
EDF 6543	EDF 6543			
EDA 7503				

Checklist of items to be provided:

☐ Attach all appropriate course action requests that will be necessary to implement the changes. (required)

☐ E-mails showing consultation with other units. (if applicable)

Catalogue Copy

PROGRAM DESCRIPTION

The Graduate Certificate in Corporate Communication offers students additional training in creating, managing, and communicating corporate reputation. Coursework will focus on theory, research, and practical applications of principles related to corporate communication. The curriculum includes courses in crisis public relations, theories of public relations, and electives designed to enhance students' communication skills in corporate environments.

CURRICULUM

The program is composed of two required graduate courses and three elective courses that can be incorporated into a master's program of study in Mass or Interpersonal Communication or taken as an add-on to a graduate degree. The required and elective courses are drawn from a limited list of courses that reflect current professional development needs corporate communication.

Total Hours Required—15 Credit Hours

Required Courses— 6 Credit Hours

- PUR 6005 **–** Theories of Public Relations
- PUR 6403 – Crisis Public Relations

Elective Courses— 9 Credit Hours

- MMC 6402 – Mass Communication Theory
- MMC 6307 – International Communication
- MMC 6567 – Seminar in New Media
- MMC 6600 -- Media Effects and Audience Analysis
- ADV 6209 – Advertising and Society
- COM 6025 – Health Communication
- COM 6525 – Communication Strategy and Planning
- COM 6145 – Organizational Communication
- COM 6468 – Communication and Conflict
- COM 6047 – Interpersonal Support in the Workplace
- COM 6467 – Studies in Persuasion
- COM 6407 – Visual Communication Theory
- COM 6266 – Communications Convergence and Media Planning
- MMC 6445 – Quantitative Research Methods in Mass Communication OR COM 6304 – Quantitative Research Methods in Interpersonal Communication
- MMC 6446 – Qualitative Research Methods in Mass Communication OR COM 6303 – Qualitative Research Methods in Interpersonal Communication

Admissions

Admission is open to people holding a Bachelor's Degree from a regionally accredited institution and who have a grade point average of 3.0 and above. An application to the graduate certificate program and official transcripts must be submitted. Applicants must apply online. All requested materials must be submitted by the established deadline(s). The Corporate Communication Certificate Program does not admit students in the Summer Semester. Admission to, and successful completion of, the Corporate Communication Certificate Program does not guarantee admission to the Communication M.A. program as additional requirements exist for this program.

Application Deadlines

Corporate Communication Certificate	Fall	Spring
Domestic Applicants	Jun 1	Dec 1
International Applicants	Jan 15	Jul 1
International Transfer Applicants	Mar 1	Sep 1

Proposal for a Graduate Certificate Program in Corporate Communication Nicholson School of Communication September 2011

Table of Contents

Purpose and Goals
Proposed Catalogue Description of the Certificate Program in Corporate Communication
Curriculum
Target Audience
Requirements for Admission to the Certificate Program in Corporate Communication
Program Administration
Budget
Faculty Resources and Qualifications

Purpose and Goals

The Nicholson School of Communication is proposing a Graduate Certificate Program in Corporate Communication. The certificate program will focus on both internal and external communication and will emphasize the areas of public relations, organizational communication, and advertising. The importance of communication

The Certificate Program in Corporate Communication will serve two functions: (1) first, it would meet the goals of community members who would like to pursue educational opportunities in order to enhance their employment/career/professional development options. (2) Second, the program will generate additional credit hours for NSC within the existing framework of the graduate program.

Proposed Catalogue Description of the Certificate Program in Corporate Communication

"The Graduate Certificate in Corporate Communication offers students additional training in creating, managing, and communicating corporate reputation. Coursework will focus on theory, research, and practical applications of principles related to corporate communication. The curriculum includes courses in crisis public relations, theories of public relations, and electives designed to enhance students communication skills in corporate environments."

Curriculum

The Certificate Program's curriculum is comprised of courses that have been approved as part of the existing graduate program. A total of 15 hours is required. Elective courses are drawn from a limited list of courses that reflect current professional development needs corporate communication. Existing faculty and course offerings can meet the certificate requirements.

Group A: 2 Core (Required) Courses *(6 hours)*

PUR 6005 **–** Public Relations Theory
PUR 6403 – Crisis Public Relations

Group B: Elective Courses *(9 hours; select 3 courses from the following)*

MMC 6402 **–** Mass Communication Theory
MMC 6307 – International Communication
MMC 6567 – Seminar in New Media
MMC 6600 – Media Effects and Audience Analysis
ADV 6209 – Advertising and Society
COM 6025 – Health Communication
COM 6525 – Communication Strategy and Planning
COM 6145 – Organizational Communication
COM 6468 – Communication and Conflict
COM 6047 – Interpersonal Support in the Workplace
COM 6467 – Studies in Persuasion
COM 6407 – Visual Communication Theory
COM 6266 – Communications Convergence and Media Planning
MMC 6445 – Mass Media Research I or COM 6304 - Communication Research I *(Quantitative Research Methods)*
MMC 6446 – Mass Media Research II or COM 6303 – Communication Research II *(Qualitative Research Methods)*

Target Audience

The target audience is professionals who have earned a Bachelor's degree and wish to enhance their education and professional opportunities through advanced study in corporate communication. The graduate program in the Nicholson School of Communication envisions that the certificate program will appeal to four groups of students. First, because the proposed Certificate Program in Corporate Communication does not specify the focus of the applicant's Bachelor's degree, it is likely to attract professionals who lack formal undergraduate preparation in corporate communication but have found that communication is a primary part of their job responsibilities. Second, the Certificate Program is likely to attract professionals who have a background in communication but wish to update their knowledge and skills. Third, the certificate Program is likely to attract students who have recently completed their Bachelor's degrees and view the program as a way to develop an advanced skills set to enhance their marketability. Fourth, the program may be attractive to professionals are contemplating

the pursuit of a Master's degree in Communication and view the Certificate Program as a good entrance point for the Master's.

Conversations with members of the local chapter of Florida Public Relations Association indicate that these professionals are most likely to be interested in coursework that focuses on current trends in communication, including issues like social media, crisis public relations, health communication, and issues pertaining to globalization/internationalization.

In addition, the ability to apply Certificate Program coursework to a Master's degree appealed to some professionals.

Requirements for Admission to the Certificate Program

Potential applicants must have earned a bachelor's degree (or equivalent) and meet the requirements for admission to the Graduate School. The application form is available at the Graduate Certificate Programs site (http://www.admissions.graduate.ucf.edu/nondegree_applicants/graduate_certificate_programs/)

Program Administration

The Graduate Certificate Program in Corporate Communication will be administered by the Graduate Coordinator in the Nicholson School of Communication. The Graduate Coordinator will have the responsibility of tracking the progress of students in the certificate Program. The faculty who teach courses offered within the Certificate Program will serve as an advisory committee to the Graduate Coordinator.

Students who complete the Certificate Program may apply their coursework toward an M.A. in Communication (Interpersonal or Mass Communication tracks). Successful completion of the Corporate Communication Certificate does not guarantee admission to the Communication M.A. program.

Budget

The primary expenses that will be incurred involve advertising the program. Using the Nicholson School of Communication's website as well as UCF's website will provide no-cost options for informing potential students about the program. In addition, press releases and emails can be sent to professional organizations in the surrounding area (e.g., the Florida Public Relations Association), local colleges, and NSC alumni. Information about the program also can be supplied in NSC's newsletters.

Faculty Resources and Qualifications

The full-time faculty and courses in the Nicholson School of Communication provide an excellent opportunity for students to gain advanced knowledge in Corporate Communication.

UCF Faculty who will teach in the Graduate Certificate Program in Corporate Communication includes the following individuals. Full C.V.s are available upon request.

Dr. Kimiko Akita (Associate Professor of Communication). Dr. Akita's areas of expertise include international and intercultural communication as well as qualitative research methods. Her teaching interests include MMC 6307 and COM 6303.

Dr. Tim Brown (Associate Professor of Communication). Dr. Brown specializes in new media technologies and will teach MMC 6567.

Dr. W. Timothy Coombs (Professor of Communication). Dr. Coombs' areas of expertise include public relations, crisis communication, and organizational communication. He is likely to teach courses that include PUR 6005, PUR 6403, and COM 6525.

Dr. Steve Collins (Associate Professor of Communication). Dr. Collins is an expert in quantitative research methods and will teach MMC 6446.

Dr. Kristin Davis (Assistant Professor of Communication). Dr. Davis is likely to teach COM 6468.

Dr. Denise DeLorme (Professor of Communication). Dr. DeLorme specializes in advertising, mass communication theory, and qualitative research methods. Her teaching interests include courses such as MMC 6402, ADV 6209, and MMC 6446.

Dr. Sally Hastings (Associate Professor of Communication). Dr. Hastings' areas of expertise include interpersonal and intercultural communication. She is likely to teach COM 6407.

Dr. Daniel Holsenbeck (Associate Professor; Vice President for University Relations, Senior Counsel to the President & Director of Governmental Relations). Dr. Holsenbeck will teach crisis public relations, PUR 6403.

Dr. Sherry Holladay (Professor of Communication). Dr. Holladay's specializations include public relations and organizational communication. She is likely to teach courses such as COM 6525 and COM 6938.

Dr. John Malala (Associate Professor of Communication). Dr. Malala is likely to teach courses such as COM 6407 and COM 6266.

Dr. Jonathan Matusitz (Assistant Professor of Communication). Dr. Matusitz is likely to teach courses in Health Communication and International Communication, including COM 6025 and MMC 6307.

Dr. Ann Miller (Assistant Professor of Communication). Dr. Miller's areas of expertise include health communication, persuasion, and qualitative research methods. She will likely teach courses such as COM 6303, COM 6025, and COM 6467.

Dr. George Musambira (Assistant Professor of Communication). Dr. Musambira's teaching interests include organizational communication and intercultural communication. He is likely to teach courses such as COM 6938, MMC 6307, and COM 6463.

Dr. Lindsay Neuberger (Assistant Professor of Communication). Dr. Neuberger's specializations pertain to research methods and health communication. Her teaching interests include MMC 6445 and COM 6025.

Dr. Jennifer Sandoval (Assistant Professor of Communication). Dr. Sandoval specializes in conflict management and mediation and is likely to teach COM 6468.

Dr. Harry Weger, Jr. (Associate Professor of Communication, Graduate Program Coordinator). Dr. Weger's published scholarship includes conflict, persuasion, and interpersonal communication. Dr. Weger has experience teaching graduate courses in both Conflict (COM 6048) and quantitative research methods (COM 6304). Dr. Weger will serve as the program administrator for the certificate program.

Harry Weger

From: Ronald Michaels
Sent: Saturday, July 09, 2011 9:17 AM
To: Harry Weger
Cc: Taylor Ellis
Subject: RE: Corporate Communication Certificate Program

Good Morning Harry,

Thank you for the opportunity to review your proposal; the program looks very solid and should be attractive for students seeking careers in corporate PR, etc. The Department of Marketing has never offered graduate courses in advertising, PR, etc., and so there really would not be anything we can contribute in the way of electives. I am speaking only from the marketing side....Dr. Goodman may have different perspectives. I wish you the best of luck in this venture. Ron

---

From: Harry Weger
Sent: Tuesday, June 28, 2011 3:22 PM
To: Ronald Michaels; sgoodman@bus.ucf.edu
Cc: Sherry Holladay; Taylor Ellis; Teresa Dorman; Robert Chandler
Subject: Corporate Communication Certificate Program

Dear Dr.'s Goodman and Michaels:

I am contacting you to let you know that the Nicholson School of Communication M.A. program intends to request a new certificate program in Corporate Communication. I have attached a working outline of the program that we will be proposing in the Fall and I am hoping to get feedback from the two of you about the program. Most importantly, I would like to know whether the two of you have any reservations about the title or the content of the certificate program we are proposing. We would be happy to entertain any courses in the College of Business that you think would fit as electives.

In addition, the NSC is considering developing the certificate program into a full-fledged M.A. program track. This program track would replace the Business Communication track developed jointly with Business several years ago that never actually enrolled any students. We would very much appreciate any input or potential partnership the College of Business might offer on the development of this track.

Best,

Harry

Harry Weger, Jr., Ph.D.
Associate Professor and
Graduate Program Director
Nicholson School of Communication
University of Central Florida
Orlando, FL 32816-1344
407.823.2859

University of Central Florida

Academic Affairs

October 28, 2011

To: Dr. Patricia Bishop, College of Graduate Studies
From: Chuck Reilly, CECS Academic Affairs
Subj: Equipment Fee Proposals for 2012-13

C.H. Reilly

Every graduate (and undergraduate) student in an engineering program at UCF now pays the maximum amount for equipment fees each semester: $90 for full-time students and $45 for part-time students. Over the last few months, every chair and program coordinator has re-evaluated the equipment needs of each program in our college, both in terms of replacing existing equipment and planning for purchases of new equipment needed to maintain program quality. This has been a time-consuming effort, and I commend all of my colleagues who have participated in this process.

I am pleased to support each of the programs' new equipment fee proposals which accompany this cover memo. If these proposals are approved, the graduate equipment fees for all but two of our graduate programs would be reduced between 16.7% and 100%. The fee reductions are possible for a number of reasons including prudent stewardship of the equipment in place and the equipment fees already collected, the thorough analysis of equipment needs and costs by our programs, and our faculty's concern for the rising costs of a college education that is now being borne by our students.

The College of Engineering and Computer Science respectfully requests that the new equipment fees shown in the table on the next page be approved for implementation for 2012-13.

The college thanks you and the Graduate Council for your consideration of these new fee proposals. If there are any questions about these equipment fee proposals, please contact me as soon as possible.

cc: Dean Simaan; Drs. Jayasuriya, Leavens, Qu, Radwan, and Karwowski

College of Engineering and Computer Science
P.O. Box 162993 • Orlando, Florida 32816-2993 • 407-823-2455 • FAX: 407-823-6334

An Equal Opportunity and Affirmative Action Institution

Table 1. Proposed Graduate Equipment Fees in CECS for 2012-13

			Graduate			
Dept	Major		Old FT	New FT	Old PT	New PT
CECE	Civil Engr		90	16	45	8
	Environmental Engr		90	16	45	8
EECS	Electrical Engr		90	63	45	31
	Computer Engr		90	23	45	11
	Computer Science		90	75	45	37.50
	Digital Forensics		90	0	45	0
IEMS	Industrial Engr		90	58	45	29
	Engr Management		0	0	0	0
MMAE	Mechanical Engr		90	90	45	45
	Aerospace Engr		90	90	45	45
	Materials Science & Engr		90	0	45	0

University of Central Florida

Graduate Equipment Fee Request Form

Forward to your college office

This form is to be used for requests to add, change, or delete equipment fee requests for a program. All requests for the next catalog must be submitted by October 29 for the November agenda deadline of the Graduate Council Committee (Dean Patricia Bishop).

Request routing: 1) Department Chair to College Dean's Office; 2) Dean's Office; 3) Graduate Council Curriculum Committee; 4) Provost's office; 5) University Board of Trustees — information only.

Under the rules of the Board of Trustees for the University of Central Florida, equipment fees may be assessed for the use and replacement of equipment. Fees take effect in the fall semester of each year. Departments must maintain detailed accounting of all expenditures and report them to the Dean of the Graduate College on July 1 of each year.

Use one form for each program request:

Date Submitted: August 29, 2011 **College:** CECS

Department: CECE **Submitted by:** _____

Degree program: Civil & Environmental Engineering

Equipment Fees:

Fall graduate student enrollment: 201 Students (Fall 2011) / 464 total 3 semseters (Spring, Su $ Fall) **Full-time** 98 / 232 **Part-time** 103 /232

Fee amount per semester: _____ **Full-time** $16 **Part-time** $8

Provide Justification for the Request:

The computers in Engr II 183 are at the end of the lifespan and need to be replaced soon. The units are shared among programs/courses , thus the costs are to be split. There are 30 computers in Engr 183 that needs to be replaced over about 4 years (life span). Since this lab is shared by both the graduate and undergraduate programs in CECE. We estimate that the share of the graduate programs would be to replace 15 computers over 2 years.

Provide detailed cost information about the expenses for which the fee is to be assessed.

Equipment	Cost	Lifetime
15 High end PCs @ $1500 per unit	22500	4 years
Total of Costs:	22500	

Equipment replacement/upgrade cost/year: 5625

Maintenance Plans	Cost	Lifetime
Total of Costs:		

Maintenance plans and maintenance cost/year: _____

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: 5625

Any special conditions or exemptions must be identified:

Payment Details

Account Number to Deposit Fees: 16200802

Item Type: _____

Contact Person: Pauline Strauss

Phone Number: 407-823-4535

Approval Signatures

Department Chair _____ **Date** 10/28/11

College Academic Standards _____ **Date** _____

College Dean _____ **Date** _____

Graduate Council _____ **Date** _____

Academic Affairs _____ **Date** _____

University of Central Florida

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Department: CECE **Submitted by:**

Degree program: Civil & Environmental Engineering

Equipment Fees:

Fall graduate student enrollment: 201 Students (Fall 2011) / 470 total 3 semseters (Spring, Su $ Fall) **Full-time** 98 / 237 **Part-time** 103 /233

Fee amount per semester: **Full-time** $16 **Part-time** $8

Provide Justification for the Request:

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15 High end PCs @ $1500 per unit	22500	4 years
Total of Costs:		

Equipment replacement/upgrade cost/year:

Maintenance Plans	Cost	Lifetime
Total of Costs:		

Maintenance plans and maintenance cost/year: _____

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: _____

Any special conditions or exemptions must be identified:

Payment Details

Account Number to Deposit Fees: 16200802

Item Type: _____

Contact Person: Pauline Strauss

Phone Number: 407-823-4535

Approval Signatures

Department Chair _____ Date _____

College Academic Standards _____ Date _____

College Dean _____ Date _____

Graduate Council _____ Date _____

Academic Affairs _____ Date _____

University of Central Florida

Graduate Equipment Fee Request Form

Forward to your college office

This form is to be used for requests to add, change, or delete equipment fee requests for a program. All requests for the next catalog must be submitted by October 28 for the **November** agenda deadline of the Graduate Council Committee (Dean Patricia Bishop).

Request routing: 1) Department Chair to College Dean's Office; 2) Dean's Office; 3) Graduate Council Curriculum Committee; 4) Provost's office; 5) University Board of Trustees — information only.

Under the rules of the Board of Trustees for the University of Central Florida, equipment fees may be assessed for the use and replacement of equipment. Fees take effect in the fall semester of each year. Departments must maintain detailed accounting of all expenditures and report them to the Dean of the Graduate College on July 1 of each year. Equipment Fee maximum per semester: $90.00 Full-time; $45.00 Part-time.

Use one form for each program request:

Date Submitted: August 31, 2011 **College:** Engr. and Computer Science

Department: Electrical Engr. and Computer Science **Submitted by:** Zhihua Qu

Degree program: Electrical Engineering M.S. and Ph. D.

Equipment Fees:

Fall graduate student enrollment: 209 **Full-time** 122 **Part-time** 87

Fee amount per semester: _____ **Full-time** $63 **Part-time** $31

Provide Justification for the Request:

See attached. Please note that enrollment numbers above only reflect Fall enrollment. Annual enrollment is projected on attached sheets.

Provide detailed cost information about the expenses for which the fee is to be assessed.

Equipment	Cost	Lifetime
See attached.		
Total of Costs:		

Equipment replacement/upgrade cost/year: _____

Maintenance Plans	Cost	Lifetime
Total of Costs:		

Maintenance plans and maintenance cost/year: _____

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: _____

Any special conditions or exemptions must be identified:

Payment Details

Account Number to Deposit Fees: 16220802

Item Type: _____

Contact Person: Theresa Collins

Phone Number: 407-823-2637

Approval Signatures

Department Chair _____ Date 10/14/2011

College Academic Standards _____ Date _____

College Dean _____ Date _____

Graduate Council _____ Date _____

Academic Affairs _____ Date _____

Laboratory Equipment Cost Report

Department of Electrical Engineering and Computer Science

Revision Date: October 14, 2011

Room	Annualized Cost	Cost	EE BS	CpE BS	EE Grad	CpE Grad
ENGR-163	$ 5,669.74	$ 148,808.00	0%	0%	100%	0%
ENGR-257	$ 12,592.74	$ 93,598.00	55%	45%	0%	0%
ENGR-274	$ 23,155.98	$ 83,216.00	39%	31%	15%	15%
ENGR-456	$ 12,552.42	$ 149,277.00	55%	45%	0%	0%
ENGR-461	$ 23,746.18	$ 294,043.00	30%	0%	70%	0%
ENGR-471	$ 14,263.86	$ 135,238.00	55%	45%	0%	0%
ENGR-474	$ 71,952.09	$ 403,204.00	55%	45%	0%	0%
HEC-338	$ 10,092.84	$ 110,229.00	50%	40%	5%	5%
Total	$ 174,025.85	$ 1,397,812.00				

BSEE Only

Room	Annualized Cost	%UG	Fee Cost
ENGR-257	$ 12,592.74	55%	$ 6,926.01
ENGR-274	$ 23,155.98	39%	$ 9,030.83
ENGR-456	$ 12,552.42	55%	$ 6,903.83
ENGR-461	$ 23,746.18	30%	$ 7,123.85
ENGR-471	$ 14,263.86	55%	$ 7,845.12
ENGR-474	$ 71,952.09	55%	$ 39,573.65
HEC-338	$ 10,092.84	50%	$ 5,046.42
Total	$ 168,356.11		$ [illegible]

Status	AY Total	Fall 2011	Summer 2011	Spring 2012
Full Time	[illegible]	526	16	441
Part Time		208	407	185
Total	1783	734	423	626

FT EQ Fee	Fee=Fee Cost / (FT + PT/2)
PT EQ Fee	

BCpEE Only

Room	Annualized Cost	%UG	Fee Cost
ENGR-257	$ 12,592.74	45%	$ 5,666.73
ENGR-274	$ 23,155.98	31%	$ 7,178.35
ENGR-456	$ 12,552.42	45%	$ 5,648.59
ENGR-471	$ 14,263.86	45%	$ 6,418.74
ENGR-474	$ 71,952.09	45%	$ 32,378.44
HEC-338	$ 10,092.84	40%	$ 4,037.14
Total	$ 144,609.93		$ [illegible]

Status	AY Total	Fall 2011	Summer 2011	Spring 2012
Full Time	[illegible]	466	8	369
Part Time		124	315	95
Total	1377	590	323	464

FT EQ Fee	Fee=Fee Cost / (FT + PT/2)
PT EQ Fee	

Graduate EE Only

Room	Annualized Cost	%G	Fee Cost
ENGR-163	$ 5,669.74	100%	$ 5,669.74
ENGR-274	$ 23,155.98	15%	$ 3,473.40
ENGR-461	$ 23,746.18	70%	$ 16,622.33
HEC-338	$ 10,092.84	5%	$ 504.64
Total	$ 66,995.00		$ [illegible]

Status	AY Total	Fall 2011	Summer 2011	Spring 2012
Full Time	[illegible]	138	68	119
Part Time		77	27	84
Total	513	215	95	203

FT EQ Fee	Fee=Fee Cost / (FT + PT/2)
PT EQ Fee	

Graduate CpE Only

Room	Annualized Cost	%G	Fee Cost
ENGR-274	$ 23,155.98	15%	$ 3,473.40
HEC-338	$ 10,092.84	5%	$ 504.64
Total	$ 100,336.66		$ [illegible]

Status	AY Total	Fall 2011	Summer 2011	Spring 2012
Full Time	[illegible]	50	24	44
Part Time		36	23	56
Total	233	86	47	100

FT EQ Fee	Fee=Fee Cost / (FT + PT/2)
PT EQ Fee	

ENGR-163 Microelectronics Laboratory

Revision Date: October 14, 2011

Some equipment items are used for both instruction and research.
The percentage of instructional use is shown.

Item	Annualized Cost	Cost	Class Use	Purchased	Replace
Edwards Diffusion Evaporator	$ 50.00	$ 1,500.00	100%	1983	2013
Bruce Oxidation Furnace	$ 119.00	$ 5,100.00	70%	1983	2013
Bruce Diffusion Furnaces	$ 340.00	$ 10,200.00	100%	1983	2013
Headway Resist Spinner	$ 124.35	$ 6,715.00	50%	1986	2013
3 Resist Bake Ovens	$ 41.67	$ 4,500.00	25%	1986	2013
Zeiss Aligner	$ 805.56	$ 29,000.00	75%	1986	2013
2 Probe Stations	$ 570.37	$ 15,400.00	100%	1986	2013
2 Curve Tracers	$ 272.73	$ 3,000.00	100%	2002	2013
3-Chamber Cryo system	$ 11.11	$ 3,000.00	10%	1986	2013
Jandel 4pt Probe	$ 225.00	$ 5,000.00	90%	2005	2025
4 Vacuum Pumps	$ 535.99	$ 11,284.00	95%	2010	2030
3 Micropositioners, Lucus Signatone S-725SRM	$ 353.40	$ 1,767.00	100%	2010	2015
3 Micropositioners, Lucus Signatone S-725SLM	$ 353.40	$ 1,767.00	100%	2010	2015
8 Probe Tip Holders, Lucus Signatone U-S-1-CB	$ 128.00	$ 640.00	100%	2010	2015
4 Probe Tips, Lucus Signatone SE-20TB	$ 80.00	$ 160.00	100%	2010	2012
Profilometer, Bruker Dektek 150	$ 1,659.17	$ 49,775.00	100%	2010	2040
Total	**$ 5,669.74**	**$ 148,808.00**			

ENGR-274 Computer Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
21 PC's	$ 3,000.00	$ 21,000.00	2009	2016
17 PC's	$ 3,400.00	$ 17,000.00	2011	2016
1 Network Printer	$ 112.06	$ 1,793.00	2000	2016
20 Lab Chairs	$ 384.62	$ 5,000.00	2000	2013
TCAD Software Suite Unlimited License	$ 2,000.00	$ 2,000.00	annual cost	
PSCAD Academic 25 seat Academic License	$ 3,740.00	$ 3,740.00	annual cost	
Eesof W2030UT 50 seat Academic License	$ 1,404.00	$ 1,404.00	annual cost	
Cadence EDA Software Suite	$ 5,000.00	$ 5,000.00	annual cost	
MatLab Simulink 25 seat Network License	$ 3,875.00	$ 3,875.00	annual cost	
2 Security Cameras	$ 240.30	$ 2,403.00	2011	2021
Total	**$ 23,155.98**	**$ 63,215.00**		

ENGR-257 Computing Systems Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
41 PC's	$ 8,200.00	$ 41,000.00	2009	2014
1 Network Printer	$ 327.07	$ 4,579.00	2002	2016
20 Digital Trainer, Global PB505	$ 666.67	$ 10,000.00	2000	2015
41 Lab Stools	$ 899.23	$ 11,690.00	2000	2013
41 Logic Analyzers	$ 1,921.57	$ 13,451.00	2009	2016
12 Lab Benches	$ 337.90	$ 10,475.00	2010	2041
2 Security Cameras	$ 240.30	$ 2,403.00	2011	2021
Total	**$ 12,592.74**	**$ 93,598.00**		

ENGR-456 Senior Design Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
1 Video Projector, EIKI LC-SM2	$ 239.50	$ 2,395.00	2001	2011
1 Network Printer	$ 178.33	$ 2,140.00	2002	2014
10 PCs	$ 1,428.57	$ 10,000.00	2009	2016
1 SMT Soldering/Desoldering Station	$ 495.08	$ 6,436.00	2002	2015
1 LCR Meter	$ 36.79	$ 699.00	2000	2019
4 Power Supplies, Tektronix PWS4323	$ 58.60	$ 1,172.00	2011	2031
4 Power Supplies, Tektronix PWS2721	$ 48.38	$ 1,016.00	2010	2031
10 Function Generators, Tektronix AFG3022B	$ 1,803.09	$ 19,834.00	2010	2021
10 Multimeters, Tektronix DMM4050	$ 800.55	$ 8,806.00	2010	2021
10 Oscilloscopes, Tektronix MSO4034B	$ 5,189.64	$ 57,086.00	2010	2021
12 Triple Output Power Supply, Agilent E3630A	$ 312.60	$ 6,252.00	2009	2029
Storage Cabinets	$ 128.00	$ 3,200.00	1989	2014
32 Lab Chairs	$ 615.38	$ 8,000.00	2000	2013
8 Lab Benches	$ 475.67	$ 14,270.00	2007	2037
2 Lab Benches	$ 101.94	$ 3,568.00	1985	2020
2 Security Cameras	$ 240.30	$ 2,403.00	2011	2021
50 Seat Licence for Eagle PCB Software	$ 400.00	$ 2,000.00	2011	2016
Total	**$ 12,552.42**	**$ 149,277.00**		

ENGR-461 RF & Microwave Laboratory

Revision Date: October 14, 2011

Some equipment items are used for both instruction and research.
The percentage of instructional use is shown.

Item	Annualized Cost	Cost	Class Use	Purchased	Replace
6 PC's	$ 1,000.00	$ 6,000.00	100%	2009	2015
1 Network Printer	$ 90.00	$ 900.00	100%	2005	2015
Network Analyzer, Agilent 8357A	$ 9,271.93	$ 139,079.00	100%	2002	2017
3 Network Analyzers, Agilent 8753ES	$ 2,904.40	$ 43,566.00	100%	2003	2018
Network Analyzer, Agilent N5230A	$ 2,593.93	$ 38,909.00	100%	2005	2020
2 Spectrum Analyzers, Rohde $ Schwarz	$ 1,070.00	$ 21,400.00	100%	2007	2027
Spectrum Analyzer, Agilent 8594E	$ 378.85	$ 7,577.00	100%	2003	2023
2 Signal Generators, Rohde $ Schwarz	$ 585.45	$ 12,880.00	100%	2007	2029
4 Soldering Stations	$ 65.45	$ 720.00	100%	2005	2016
UV Source	$ 154.22	$ 9,870.00	50%	1986	2018
Bake Oven	$ 41.67	$ 1,500.00	50%	2000	2018
Headway Resist Spinner	$ 66.12	$ 3,835.00	50%	1986	2015
ADS from Agilent Design Software - 50 seats	$ 1,404.00	$ 1,404.00	100%	annual cost	
Ansoft EM Analysis Software	$ 4,000.00	$ 4,000.00	100%	annual cost	
2 Security Cameras	$ 120.15	$ 2,403.00	50%	2011	2021
Total	**$ 23,746.18**	**$ 294,043.00**			

ENGR-471
Signals and Communications Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
13 Oscilloscopes, Tektronix DPO4034B	$ 7,258.00	$ 72,580.00	2009	2019
13 Arbitrary Func. Generators, Tektronix AFG3022B	$ 2,077.00	$ 20,770.00	2009	2019
13 Digital Multimeter, Tektronix DMM4050	$ 1,144.80	$ 11,448.00	2010	2020
13 Power Supplies, Tektronix PWT4301	$ 395.45	$ 7,909.00	2011	2031
13 PC's	$ 2,600.00	$ 13,000.00	2009	2014
25 Lab Stools	$ 548.31	$ 7,128.00	2000	2013
Security Cameras	$ 240.30	$ 2,403.00	2011	2021
Total	**$ 14,263.86**	**$ 135,238.00**		

ENGR-474 Electronics Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
21 Oscilloscopes, Tektronix DPO4034B	$ 10,716.20	$ 107,162.00	2011	2021
13 Arbitrary Func. Generators, Tektronix AFG3022B	$ 3,080.90	$ 30,809.00	2011	2021
21 Multimeters, Tektronix DMM4050	$ 1,564.90	$ 15,649.00	2011	2021
21 Power Supplies, Tektronix PWT4301	$ 638.75	$ 12,775.00	2011	2031
8 Lab Benches	$ 361.81	$ 11,216.00	2010	2041
41 Lab Stools	$ 899.23	$ 11,690.00	2000	2013
21 PC's	$ 4,200.00	$ 21,000.00	2009	2014
Security Cameras	$ 240.30	$ 2,403.00	2011	2021
21 Texas Instrument DSP Boards	$ 5,250.00	$ 10,500.00	2011	2013
20 Quanser Linear Controls Experiment Station	$ 45,000.00	$ 180,000.00	2011	2015
Total	**$ 71,952.09**	**$ 403,204.00**		

HEC-338 Harris Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
2 Logic Analyzer & Pattern Generator, Tektronix TLA715	$ 2,030.50	$ 32,488.00	2003	2019
31 PC's	$ 6,200.00	$ 31,000.00	2011	2016
11 Lab Benches	$ 937.20	$ 32,802.00	2004	2039
4 Lab Benches	$ 116.40	$ 3,492.00	2011	2041
11 Lab Stools	$ 241.31	$ 3,137.00	2000	2013
20 Lab Stools	$ 327.13	$ 4,907.00	2004	2019
2 Security Cameras	$ 240.30	$ 2,403.00	2011	2021
Total	**$ 10,092.84**	**$ 110,229.00**		

University of Central Florida

Graduate Equipment Fee Request Form

Forward to your college office

This form is to be used for requests to add, change, or delete equipment fee requests for a program. All requests for the next catalog must be submitted by October 28 for the **November** agenda deadline of the Graduate Council Committee (Dean Patricia Bishop).

Request routing: 1) Department Chair to College Dean's Office; 2) Dean's Office; 3) Graduate Council Curriculum Committee; 4) Provost's office; 5) University Board of Trustees — information only.

Under the rules of the Board of Trustees for the University of Central Florida, equipment fees may be assessed for the use and replacement of equipment. Fees take effect in the fall semester of each year. Departments must maintain detailed accounting of all expenditures and report them to the Dean of the Graduate College on July 1 of each year. Equipment Fee maximum per semester: $90.00 Full-time; $45.00 Part-time.

Use one form for each program request:

Date Submitted: August 31, 2011 College: Engr. and Computer Science

Department: Electrical Engr. and Computer Science Submitted by: Zhihua Qu

Degree program: Computer Engineering M.S. and Ph. D.

Equipment Fees:

Fall graduate student enrollment: 108 Full-time 59 Part-time 49

Fee amount per semester: _____ Full-time $23 Part-time $11

Provide Justification for the Request:

See attached. Please note that enrollment numbers above only reflect Fall enrollment. Annual enrollment is projected on attached sheets.

Provide detailed cost information about the expenses for which the fee is to be assessed.

Equipment	Cost	Lifetime
See attached.		
Total of Costs:		

Equipment replacement/upgrade cost/year: _____

Maintenance Plans	Cost	Lifetime
Total of Costs:		

Maintenance plans and maintenance cost/year: _____

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: _____

Any special conditions or exemptions must be identified:

Payment Details

Account Number to Deposit Fees: 16220802

Item Type: _____

Contact Person: Theresa Collins

Phone Number: 407-823-2637

Approval Signatures

Department Chair _____ Date 10/14/2011

College Academic Standards _____ Date _____

College Dean _____ Date _____

Graduate Council _____ Date _____

Academic Affairs _____ Date _____

Laboratory Equipment Cost Report

Department of Electrical Engineering and Computer Science

Revision Date: October 14, 2011

Room	Annualized Cost	Cost	EE BS	CpE BS	EE Grad	CpE Grad
ENGR-163	$ 5,669.74	$ 148,808.00	0%	0%	100%	0%
ENGR-257	$ 12,592.74	$ 93,598.00	55%	45%	0%	0%
ENGR-274	$ 23,155.98	$ 63,215.00	39%	31%	15%	15%
ENGR-456	$ 12,552.42	$ 149,277.00	55%	45%	0%	0%
ENGR-461	$ 23,746.18	$ 294,043.00	30%	0%	70%	0%
ENGR-471	$ 14,263.86	$ 135,238.00	55%	45%	0%	0%
ENGR-474	$ 71,952.09	$ 403,204.00	55%	45%	0%	0%
HEC-338	$ 10,092.84	$ 110,229.00	50%	40%	5%	5%
Total	$ 174,025.85	$ 1,397,612.00				

BSEE Only

Room	Annualized Cost	%UG	Fee Cost
ENGR-257	$ 12,592.74	55%	$ 6,926.01
ENGR-274	$ 23,155.98	39%	$ 9,030.83
ENGR-456	$ 12,552.42	55%	$ 6,903.83
ENGR-461	$ 23,746.18	30%	$ 7,123.85
ENGR-471	$ 14,263.86	55%	$ 7,845.12
ENGR-474	$ 71,952.09	55%	$ 39,573.65
HEC-338	$ 10,092.84	50%	$ 5,046.42
Total	$ 168,356.11		$ 82,449.72

Status	AY Total	Fall 2011	Summer 2011	Spring 2012
Full Time	983	526	16	441
Part Time	800	208	407	185
Total	1783	734	423	626

FT EQ Fee	[illegible]
PT EQ Fee	[illegible]

Fee=Fee Cost / (FT + PT/2)

BCpEE Only

Room	Annualized Cost	%UG	Fee Cost
ENGR-257	$ 12,592.74	45%	$ 5,666.73
ENGR-274	$ 23,155.98	31%	$ 7,178.35
ENGR-456	$ 12,552.42	45%	$ 5,648.59
ENGR-471	$ 14,263.86	45%	$ 6,418.74
ENGR-474	$ 71,952.09	45%	$ 32,378.44
HEC-338	$ 10,092.84	40%	$ 4,037.14
Total	$ 144,609.93		$ 61,327.99

Status	AY Total	Fall 2011	Summer 2011	Spring 2012
Full Time	843	466	8	369
Part Time	534	124	315	95
Total	1377	590	323	464

FT EQ Fee	[illegible]
PT EQ Fee	[illegible]

Fee=Fee Cost / (FT + PT/2)

Graduate EE Only

Room	Annualized Cost	%G	Fee Cost
ENGR-163	$ 5,669.74	100%	$ 5,669.74
ENGR-274	$ 23,155.98	15%	$ 3,473.40
ENGR-461	$ 23,746.18	70%	$ 16,622.33
HEC-338	$ 10,092.84	5%	$ 504.64
Total	$ 56,995.00		$ 26,270.11

Status	AY Total	Fall 2011	Summer 2011	Spring 2012
Full Time	325	138	68	119
Part Time	188	77	27	84
Total	513	215	95	203

FT EQ Fee	[illegible]
PT EQ Fee	[illegible]

Fee=Fee Cost / (FT + PT/2)

Graduate CpE Only

Room	Annualized Cost	%G	Fee Cost
ENGR-274	$ 23,155.98	15%	$ 3,473.40
HEC-338	$ 10,092.84	5%	$ 504.64
Total	$ 100,336.66		$ 3,978.04

Status	AY Total	Fall 2011	Summer 2011	Spring 2012
Full Time	118	50	24	44
Part Time	115	36	23	56
Total	233	86	47	100

FT EQ Fee	[illegible]
PT EQ Fee	[illegible]

Fee=Fee Cost / (FT + PT/2)

ENGR-163 Microelectronics Laboratory

Revision Date: October 14, 2011

Some equipment items are used for both instruction and research.
The percentage of instructional use is shown.

Item	Annualized Cost	Cost	Class Use	Purchased	Replace
Edwards Diffusion Evaporator	$ 50.00	$ 1,500.00	100%	1983	2013
Bruce Oxidation Furnace	$ 119.00	$ 5,100.00	70%	1983	2013
Bruce Diffusion Furnaces	$ 340.00	$ 10,200.00	100%	1983	2013
Headway Resist Spinner	$ 124.35	$ 6,715.00	50%	1986	2013
3 Resist Bake Ovens	$ 41.67	$ 4,500.00	25%	1986	2013
Zeiss Aligner	$ 805.56	$ 29,000.00	75%	1986	2013
2 Probe Stations	$ 570.37	$ 15,400.00	100%	1986	2013
2 Curve Tracers	$ 272.73	$ 3,000.00	100%	2002	2013
3-Chamber Cryo system	$ 11.11	$ 3,000.00	10%	1986	2013
Jandel 4pt Probe	$ 225.00	$ 5,000.00	90%	2005	2025
4 Vacuum Pumps	$ 535.99	$ 11,284.00	95%	2010	2030
3 Micropositioners, Lucus Signatone S-725SRM	$ 353.40	$ 1,767.00	100%	2010	2015
3 Micropositioners, Lucus Signatone S-725SLM	$ 353.40	$ 1,767.00	100%	2010	2015
8 Probe Tip Holders, Lucus Signatone U-S-1-CB	$ 128.00	$ 640.00	100%	2010	2015
4 Probe Tips, Lucus Signatone SE-20TB	$ 80.00	$ 160.00	100%	2010	2012
Profilometer, Bruker Dektek 150	$ 1,659.17	$ 49,775.00	100%	2010	2040
Total	**$ 5,669.74**	**$ 148,808.00**			

ENGR-274 Computer Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
21 PC's	$ 3,000.00	$ 21,000.00	2009	2016
17 PC's	$ 3,400.00	$ 17,000.00	2011	2016
1 Network Printer	$ 112.06	$ 1,793.00	2000	2016
20 Lab Chairs	$ 384.62	$ 5,000.00	2000	2013
TCAD Software Suite Unlimited License	$ 2,000.00	$ 2,000.00	annual cost	
PSCAD Academic 25 seat Academic License	$ 3,740.00	$ 3,740.00	annual cost	
Eesof W2030UT 50 seat Academic License	$ 1,404.00	$ 1,404.00	annual cost	
Cadence EDA Software Suite	$ 5,000.00	$ 5,000.00	annual cost	
MatLab Simulink 25 seat Network License	$ 3,875.00	$ 3,875.00	annual cost	
2 Security Cameras	$ 240.30	$ 2,403.00	2011	2021
Total	**$ 23,155.98**	**$ 63,215.00**		

ENGR-257 Computing Systems Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
41 PC's	$ 8,200.00	$ 41,000.00	2009	2014
1 Network Printer	$ 327.07	$ 4,579.00	2002	2016
20 Digital Trainer, Global PB505	$ 666.67	$ 10,000.00	2000	2015
41 Lab Stools	$ 899.23	$ 11,690.00	2000	2013
41 Logic Analyzers	$ 1,921.57	$ 13,451.00	2009	2016
12 Lab Benches	$ 337.90	$ 10,475.00	2010	2041
2 Security Cameras	$ 240.30	$ 2,403.00	2011	2021
Total	**$ 12,592.74**	**$ 93,598.00**		

ENGR-456 Senior Design Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
1 Video Projector, EIKI LC-SM2	$ 239.50	$ 2,395.00	2001	2011
1 Network Printer	$ 178.33	$ 2,140.00	2002	2014
10 PCs	$ 1,428.57	$ 10,000.00	2009	2016
1 SMT Soldering/Desoldering Station	$ 495.08	$ 6,436.00	2002	2015
1 LCR Meter	$ 36.79	$ 699.00	2000	2019
4 Power Supplies, Tektronix PWS4323	$ 58.60	$ 1,172.00	2011	2031
4 Power Supplies, Tektronix PWS2721	$ 48.38	$ 1,016.00	2010	2031
10 Function Generators, Tektronix AFG3022B	$ 1,803.09	$ 19,834.00	2010	2021
10 Multimeters, Tektronix DMM4050	$ 800.55	$ 8,806.00	2010	2021
10 Oscilloscopes, Tektronix MSO4034B	$ 5,189.64	$ 57,086.00	2010	2021
12 Triple Output Power Supply, Agilent E3630A	$ 312.60	$ 6,252.00	2009	2029
Storage Cabinets	$ 128.00	$ 3,200.00	1989	2014
32 Lab Chairs	$ 615.38	$ 8,000.00	2000	2013
8 Lab Benches	$ 475.67	$ 14,270.00	2007	2037
2 Lab Benches	$ 101.94	$ 3,568.00	1985	2020
2 Security Cameras	$ 240.30	$ 2,403.00	2011	2021
50 Seat Licence for Eagle PCB Software	$ 400.00	$ 2,000.00	2011	2016
Total	**$ 12,552.42**	**$ 149,277.00**		

ENGR-461 RF & Microwave Laboratory

Revision Date: October 14, 2011

Some equipment items are used for both instruction and research.
The percentage of instructional use is shown.

Item	Annualized Cost	Cost	Class Use	Purchased	Replace
6 PC's	$ 1,000.00	$ 6,000.00	100%	2009	2015
1 Network Printer	$ 90.00	$ 900.00	100%	2005	2015
Network Analyzer, Agilent 8357A	$ 9,271.93	$ 139,079.00	100%	2002	2017
3 Network Analyzers, Agilent 8753ES	$ 2,904.40	$ 43,566.00	100%	2003	2018
Network Analyzer, Agilent N5230A	$ 2,593.93	$ 38,909.00	100%	2005	2020
2 Spectrum Analyzers, Rohde $ Schwarz	$ 1,070.00	$ 21,400.00	100%	2007	2027
Spectrum Analyzer, Agilent 8594E	$ 378.85	$ 7,577.00	100%	2003	2023
2 Signal Generators, Rohde $ Schwarz	$ 585.45	$ 12,880.00	100%	2007	2029
4 Soldering Stations	$ 65.45	$ 720.00	100%	2005	2016
UV Source	$ 154.22	$ 9,870.00	50%	1986	2018
Bake Oven	$ 41.67	$ 1,500.00	50%	2000	2018
Headway Resist Spinner	$ 66.12	$ 3,835.00	50%	1986	2015
ADS from Agilent Design Software - 50 seats	$ 1,404.00	$ 1,404.00	100%	annual cost	
Ansoft EM Analysis Software	$ 4,000.00	$ 4,000.00	100%	annual cost	
2 Security Cameras	$ 120.15	$ 2,403.00	50%	2011	2021
Total	**$ 23,746.18**	**$ 294,043.00**			

ENGR-471
Signals and Communications Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
13 Oscilloscopes, Tektronix DPO4034B	$ 7,258.00	$ 72,580.00	2009	2019
13 Arbitrary Func. Generators, Tektronix AFG3022B	$ 2,077.00	$ 20,770.00	2009	2019
13 Digital Multimeter, Tektronix DMM4050	$ 1,144.80	$ 11,448.00	2010	2020
13 Power Supplies, Tektronix PWT4301	$ 395.45	$ 7,909.00	2011	2031
13 PC's	$ 2,600.00	$ 13,000.00	2009	2014
25 Lab Stools	$ 548.31	$ 7,128.00	2000	2013
Security Cameras	$ 240.30	$ 2,403.00	2011	2021
Total	**$ 14,263.86**	**$ 135,238.00**		

ENGR-474 Electronics Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
21 Oscilloscopes, Tektronix DPO4034B	$ 10,716.20	$ 107,162.00	2011	2021
13 Arbitrary Func. Generators, Tektronix AFG3022B	$ 3,080.90	$ 30,809.00	2011	2021
21 Multimeters, Tektronix DMM4050	$ 1,564.90	$ 15,649.00	2011	2021
21 Power Supplies, Tektronix PWT4301	$ 638.75	$ 12,775.00	2011	2031
8 Lab Benches	$ 361.81	$ 11,216.00	2010	2041
41 Lab Stools	$ 899.23	$ 11,690.00	2000	2013
21 PC's	$ 4,200.00	$ 21,000.00	2009	2014
Security Cameras	$ 240.30	$ 2,403.00	2011	2021
21 Texas Instrument DSP Boards	$ 5,250.00	$ 10,500.00	2011	2013
20 Quanser Linear Controls Experiment Station	$ 45,000.00	$ 180,000.00	2011	2015
Total	**$ 71,952.09**	**$ 403,204.00**		

HEC-338 Harris Laboratory

Revision Date: October 14, 2011

Item	Annualized Cost	Cost	Purchased	Replace
2 Logic Analyzer & Pattern Generator, Tektronix TLA715	$ 2,030.50	$ 32,488.00	2003	2019
31 PC's	$ 6,200.00	$ 31,000.00	2011	2016
11 Lab Benches	$ 937.20	$ 32,802.00	2004	2039
4 Lab Benches	$ 116.40	$ 3,492.00	2011	2041
11 Lab Stools	$ 241.31	$ 3,137.00	2000	2013
20 Lab Stools	$ 327.13	$ 4,907.00	2004	2019
2 Security Cameras	$ 240.30	$ 2,403.00	2011	2021
Total	**$ 10,092.84**	**$ 110,229.00**		

University of Central Florida

Graduate Equipment Fee Request Form

Forward to your college office

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Request routing: 1) Department Chair to College Dean's Office; 2) Dean's Office; 3) Graduate Council Curriculum Committee; 4) Provost's office; 5) University Board of Trustees — information only.

Under the rules of the Board of Trustees for the University of Central Florida, equipment fees may be assessed for the use and replacement of equipment. Fees take effect in the fall semester of each year. Departments must maintain detailed accounting of all expenditures and report them to the Dean of the Graduate College on July 1 of each year. Equipment Fee maximum per semester: $90.00 Full-time; $45.00 Part-time.

Use one form for each program request:

Date Submitted: October 25, 2011 **College:** CECS

Department: EECS **Submitted by:** Gary Leavens

Degree program: Computer Science M.S. and Ph.D.

Equipment Fees:

Fall graduate student enrollment: 164 **Full-time** 102 **Part-time** 62

Fee amount per semester: **Full-time** $75 **Part-time** $37.50

Provide Justification for the Request:

See attached. Please note that enrollment numbers above reflect only Fall enrollment. Annual enrollment is projected on attached sheets.

Provide detailed cost information about the expenses for which the fee is to be assessed.

Equipment	Cost	Lifetime
see attached.		
Total of Costs:		

Equipment replacement/upgrade cost/year:

Maintenance Plans	Cost	Lifetime
Total of Costs:		

Maintenance plans and maintenance cost/year: _____

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: _____

Any special conditions or exemptions must be identified:

Payment Details

Account Number to Deposit Fees: 16400802

Item Type: _____

Contact Person: Theresa Collins

Phone Number: 407-823-2637

Approval Signatures

Department Chair See attached email. **Date** 10/26/11

College Academic Standards _____ **Date** _____

College Dean _____ **Date** _____

Graduate Council _____ **Date** _____

Academic Affairs _____ **Date** _____

GRADUATE EQUIPMENT FEE REQUEST
Computer Science

Justification/Explanation of request. Provide detail on cost of equipment to be replaced and maintained by the fee.

We calculate the total cost of the Department of EECS equipment dedicated to teaching of the CS graduate program. We then calculate the per year costs of all equipment.

Equipment Costs of the Laboratories
(The descriptions of the laboratories are in the Appendix.)

CS Virtual Lab

Item	Cost (including maintenance)	Yrs of Use	Yearly Cost
Servers (5)	$120,000	5	$24,000
Software	$30,000	5	$6,000
Total	$150,000		$30,000

Yearly replacement and maintenance cost of the CS Virtual Lab = $30,000

208 Harris Engineering Center – ISUE Lab

Item	Cost	Yrs of Use	Yearly Cost	CS Use (50%)
Workstations (8)	$24,000	3	$8,000	$4,000
3D HDTVs (8)	$20,000	5	$4,000	$2,000
Tablet PCs (12)	$16,000	2	$8,400	$4,200
Game Consoles and Accessories	$2,000	2	$1,000	$500
Total	$62,800		$21,400	$10,700

Yearly replacement cost of HEC 208 attributable to CS Graduate = $10,700

Total Yearly Equipment Replacement Cost $40,700

Fall 2010 Major Headcount

CS GRADUATE		Full Time	Part-time
	COMPUTER SCIENCE	102	62
	TOTAL CS	**102**	**62**

Summer 2011 Major Headcount

CS GRADUATE	Full Time	Part-time
COMPUTER SCIENCE	66	21
TOTAL CS	**66**	**21**

Spring 2011 Major Headcount

CS GRADUATE		Full Time	Part-time
	COMPUTER SCIENCE	99	52
	TOTAL CS	**99**	**52**

Formulas for Calculation

Total CS Graduate full time students enrollment per year=267 (includes Fall, Spring, and Summer)

Total CS Graduate part time students enrollment per year=135 (includes Fall, Spring, and Summer)

Full-time students, weight = 1

Part-time students, weight = 0.5

The requested amount is **$75.00** for each full-time student per semester and **$37.50** for each part time student per semester.

Appendix 1: The CS Virtual Lab

This laboratory will contain equipment and software to be used by the CS graduate program. Equipment and software will be available to all CS graduate students for instructional purposes only, and remotely as virtual work stations using password accounts.

Description of hardware: Five (5) Silicon Mechanics servers, 48 cores (4-12 core processors), 128GB of memory, 32TB HD (16 times 2TB), Nvidia Tesla C2070 cGPU

Description of software: Graphics libraries, Computer architectural simulations, SimpleScalar simulator, GNU compiler suite, MapReduce, Perl, Python, PyMOL, MatLab, Maple, Linux, Apache, MySQL, PHP, VMware, C++, Java, C#, PhoneGap, Android emulator, OPNET Modeler + wireless suite + IT GURU, 3DNV, ns3, ArgoUML, Visio.

Appendix 2: Laboratory and Equipment

208 HEC – Interactive Systems and User Experience Laboratory

This laboratory contains equipment for developing innovative techniques, tools, and applications that improve overall experience between human and machines. Lab and equipment is available to all CS graduate students, under supervision.

Re: revision to the Graduate Equipment Fee Request Form

gary.leavens@gmail.com on behalf of Gary T. Leavens [leavens@eecs.ucf.edu]
Sent: Wednesday, October 26, 2011 10:31 AM
To: Hassan Foroosh

Hi Hassan,

I do approve of the fees that you attached. Do you need me to print and sign something?

On Tuesday, October 25, 2011, Hassan Foroosh <foroosh@eecs.ucf.edu> wrote:
> Hi Gary,
> Attached is an updated version.
> Please send me an email confirming that you approve both this and the one you emailed me.
> Thanks
> Hassan
>
> _____
> Dr. Hassan Foroosh
> Associate Professor, Dept. of EECS
> Director of Graduate Program, Computer Science Division
> Affiliated Faculty of Institute for Simulation and Training (IST)
> Director, Computational Imaging Laboratory http://cil.cs.ucf.edu
> University of Central Florida
> phone: (407) 823-5299
> fax: (407) 823-5419
> foroosh@cs.ucf.edu
> _____
> _____
> From: gary.leavens@gmail.com [gary.leavens@gmail.com] on behalf of Gary T. Leavens [leavens@eecs.ucf.edu]
> Sent: Wednesday, October 26, 2011 2:11 AM
> To: Hassan Foroosh
> Subject: Re: revision to the Graduate Equipment Fee Request Form
>
> HI Hassan,
>
> I'm attaching what I think is the right form. Maybe we should split the difference and make it $75 instead of the maximum. That way we'll draw down the fun dna only have to increase it by $25 if needed later.
>
> On Wed, Oct 26, 2011 at 1:37 AM, Hassan Foroosh <foroosh@eecs.ucf.edu<mailto:foroosh@eecs.ucf.edu>> wrote:
> Hi Gary,
> Sorry for late reply. I did not have internet connection for a while. In case you have a soft copy of the sheet that you had attached to the Graduate Equipment Fee Request form, please email it to me.
>
> I am going to include your attachment (the equipment in HEC 208) exactly as is, and add to add an estimate of the equipment for the CS Virtual Lab, which will have a 5-year life time, with estimated cost of $150K (including maintenance).

University of Central Florida

Graduate Equipment Fee Request Form

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Request routing: 1) Department Chair to College Dean's Office; 2) Dean's Office; 3) Graduate Council Curriculum Committee; 4) Provost's office; 5) University Board of Trustees — information only.

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Use one form for each program request:

Date Submitted: September 1, 2011 **College:** Engr. and Computer Science

Department: Electrical Engr. and Computer Science **Submitted by:** Gary Leavens

Degree program: M.S. Digital Forensics

Equipment Fees:

Fall graduate student enrollment: _____ **Full-time** _____ **Part-time** _____

Fee amount per semester: _____ **Full-time** $0 **Part-time** $0

Provide Justification for the Request:

Request to remove fee entirely

Provide detailed cost information about the expenses for which the fee is to be assessed.

Equipment	Cost	Lifetime
Total of Costs:		

Equipment replacement/upgrade cost/year: _____

Maintenance Plans	Cost	Lifetime
Total of Costs:		

Maintenance plans and maintenance cost/year: _____

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: _____

Any special conditions or exemptions must be identified:

Payment Details

Account Number to Deposit Fees: N/A

Item Type: N/A

Contact Person: N/A

Phone Number: N/A

Approval Signatures

Department Chair Gary J. Cramm **Date** 8/29/11

College Academic Standards _____ **Date** _____

College Dean _____ **Date** _____

Graduate Council _____ **Date** _____

Academic Affairs _____ **Date** _____

University of Central Florida

Graduate Equipment Fee Request Form

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This form is to be used for requests to add, change, or delete equipment fee requests for a program. All requests for the next catalog must be submitted by October 29 for the November agenda deadline of the Graduate Council Committee (Dean Patricia Bishop).

Request routing: 1) Department Chair to College Dean's Office; 2) Dean's Office; 3) Graduate Council Curriculum Committee; 4) Provost's office; 5) University Board of Trustees — information only.

Under the rules of the Board of Trustees for the University of Central Florida, equipment fees may be assessed for the use and replacement of equipment. Fees take effect in the fall semester of each year. Departments must maintain detailed accounting of all expenditures and report them to the Dean of the Graduate College on July 1 of each year.

Use one form for each program request:

Date Submitted: October 14, 2011 **College:** Engineering and Computer Science

Department: Industrial Engineering **Submitted by:** Dr. Ahmad Elshennawy

Degree program: Industrial Engineering MS, MSIE, PHD

Equipment Fees:

Fall graduate student enrollment: 252 - Annual: 304 FT + 3678 PT **Full-time** 122 **Part-time** 130

Fee amount per semester: **Full-time** $58.00 **Part-time** $29.00

Provide Justification for the Request:

Please see attached!

Provide detailed cost information about the expenses for which the fee is to be assessed.

Equipment	Cost	Lifetime
Please see attached!		
Total of Costs:		

Equipment replacement/upgrade cost/year:

Maintenance Plans	Cost	Lifetime
Please see attached!		
Total of Costs:		

Maintenance plans and maintenance cost/year: _____

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: $28,306

Any special conditions or exemptions must be identified:

Payment Details

Account Number to Deposit Fees: 16240802

Item Type: _____

Contact Person: _____

Phone Number: _____

Approval Signatures

Department Chair Ahmed Elshaarawy **Date** 10/27/2011

College Academic Standards _____ **Date** _____

College Dean _____ **Date** _____

Graduate Council _____ **Date** _____

Academic Affairs _____ **Date** _____

Industrial Engineering and Management Systems
2011 Graduate Equipment Fee Request

QUANITY	TYPE OF EQUIPMENT	Replacement Cost per item	Total Replacement Cost	Estimated Life Span Years	Annual Cost	Percentage Grad/ Undergrad	Annual Cost for Graduate
Advanced Syustems Engineering Laboratory: Engineering 2 - 310							
18	Computers	$1,800.00	$32,400.00	3	$10,800.00	50/50	$5,400.00
1	Projector	$1,500.00	$1,500.00	3	$500.00	50/50	$250.00
Ergonomics laboratory: Engineering 2 - 314							
7	Computers	$1,800.00	$12,600.00	3	$4,200.00	33/67	$1,386.00
1	Projector	$1,500.00	$1,500.00	3	$500.00	33/67	$165.00
1	Excersie Bike	$800.00	$800.00	5	$160.00	33/67	$52.80
1	Treadmill	$800.00	$800.00	5	$160.00	33/67	$52.80
2	Digital scales	$800.00	$1,600.00	5	$320.00	33/67	$105.60
1	Polar heart rate monitor	$500.00	$500.00	5	$100.00	33/67	$33.00
1	EMG Analysis System	$8,000.00	$8,000.00	5	$1,600.00	33/67	$528.00
1	Anthropometric/Strength Measuring System	$9,950.00	$9,950.00	5	$1,990.00	33/67	$656.70
1	Strength Testing Equipment	$1,500.00	$1,500.00	5	$300.00	33/67	$99.00
1	Printer	$1,000.00	$1,000.00	3	$333.33	33/67	$110.00
1	Software (Motion Caption)	$7,100.00	$7,100.00	3	$2,366.67	33/67	$781.00
1	Simens Techomatix	$2,400.00	$2,400.00	3	$800.00	33/67	$264.00
1	Misc. Test Equipment	$1,500.00	$1,500.00	3	$500.00	33/67	$165.00
Center for Advanced Simulation and Optimization: Engineering 2 - 323							
17	Computers	$1,800.00	$30,600.00	3	$10,200.00	100/0	$10,200.00
2	Projector	$1,500.00	$3,000.00	3	$1,000.00	100/0	$1,000.00

Industrial Engineering and Management Systems
2011 Graduate Equipment Fee Request

1	Printer	$1,000.00	$1,000.00	3	$333.33	100/0	$333.33
Synthetic Environment Teaching laboratory: Engineering 2 - 326							
15	Computers	$3,748.00	$56,220.00	3	$18,740.00	25/0	$4,685.00
30	Monitors	$200.00	$6,000.00	3	$2,000.00	25/0	$500.00
2	3D-Projector	$1,500.00	$3,000.00	3	$1,000.00	25/0	$250.00
15	Headsets	$36.00	$540.00	3	$180.00	25/0	$45.00
15	Joy Sticks	$45.00	$675.00	3	$225.00	25/0	$56.25
1	Software Robotel	$12,335.00	$12,335.00	10	$1,233.50	25/0	$308.38
1	Software Maintenance	$1,100.00	$1,100.00	1	$1,100.00	25/0	$275.00
1	65" Touch Screen TV	$7,135.00	$7,135.00	5	$1,427.00	25/0	$356.75
1	Misc. Software	$1,000.00	$1,000.00	1	$1,000.00	25/0	$250.00

TOTAL		$28,308.61

University of Central Florida

Graduate Equipment Fee Request Form

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Request routing: 1) Department Chair to College Dean's Office; 2) Dean's Office; 3) Graduate Council Curriculum Committee; 4) Provost's office; 5) University Board of Trustees — information only.

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Use one form for each program request:

Date Submitted: 8/29/2011 **College:** CECS

Department: MMAE **Submitted by:** Kevin Coffey

Degree program: Materials Science and Engineering - MS

Equipment Fees:

Fall graduate student enrollment: 20 **Full-time** _____ **Part-time** _____

Fee amount per semester: $0.00 **Full-time** $0.00 **Part-time** $0.00

Provide Justification for the Request:

No fee is justified for this program. The program does not have lab courses. Department expenditures are not used to provide or maintain equipment for the Materials Science and Engineering masters degree program.

Provide detailed cost information about the expenses for which the fee is to be assessed.

Equipment	Cost	Lifetime
None	$0.00	
Total of Costs:	$0.00	

Equipment replacement/upgrade cost/year: Not Applicable

Maintenance Plans	Cost	Lifetime
Not Applicable		
Total of Costs:	$0.00	

Maintenance plans and maintenance cost/year: $0.00

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: $0.00

Any special conditions or exemptions must be identified:

None.

Payment Details

Account Number to Deposit Fees: Not Applicable

Item Type:

Contact Person:

Phone Number:

Approval Signatures

Department Chair _____ **Date** 08/29/11

College Academic Standards _____ **Date** _____

College Dean _____ **Date** _____

Graduate Council _____ **Date** _____

Academic Affairs _____ **Date** _____

University of Central Florida

Graduate Equipment Fee Request Form

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This form is to be used for requests to add, change, or delete equipment fee requests for a program. All requests for the next catalog must be submitted by October 29 for the November agenda deadline of the Graduate Council Committee (Dean Patricia Bishop).

Request routing: 1) Department Chair to College Dean's Office; 2) Dean's Office; 3) Graduate Council Curriculum Committee; 4) Provost's office; 5) University Board of Trustees -- information only.

Under the rules of the Board of Trustees for the University of Central Florida, equipment fees may be assessed for the use and replacement of equipment. Fees take effect in the fall semester of each year. Departments must maintain detailed accounting of all expenditures and report them to the Dean of the Graduate College on July 1 of each year.

Use one form for each program request:

Date Submitted: 8/29/2011 **College:** CECS

Department: MMAE **Submitted by:** Kevin Coffey

Degree program: Materials Science and Engineering - PhD

Equipment Fees:

Fall graduate student enrollment: 41 **Full-time** _____ **Part-time** _____

Fee amount per semester: $0.00 **Full-time** $0.00 **Part-time** $0.00

Provide Justification for the Request:

No fee is justified for this program. The program does not have lab courses. Department expenditures are not used to provide or maintain equipment for the Materials Science and Engineering doctoral degree program.

Provide detailed cost information about the expenses for which the fee is to be assessed.

Equipment	Cost	Lifetime
None	$0.00	
Total of Costs:	$0.00	

Equipment replacement/upgrade cost/year: Not Applicable

Maintenance Plans	Cost	Lifetime
Not Applicable		
Total of Costs:	$0.00	

Maintenance plans and maintenance cost/year: $0.00

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: $0.00

Any special conditions or exemptions must be identified:

None.

Payment Details

Account Number to Deposit Fees: Not Applicable

Item Type: _____

Contact Person: _____

Phone Number: _____

Approval Signatures

Department Chair _____ **Date** 05/29/2014

College Academic Standards _____ **Date** _____

College Dean _____ **Date** _____

Graduate Council _____ **Date** _____

Academic Affairs _____ **Date** _____

University of Central Florida

Graduate Equipment Fee Request Form

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This form is to be used for requests to add, change, or delete equipment fee requests for a program. All requests for the next catalog must be submitted by October 29 for the November agenda deadline of the Graduate Council Committee (Dean Patricia Bishop).

Request routing: 1) Department Chair to College Dean's Office; 2) Dean's Office; 3) Graduate Council Curriculum Committee; 4) Provost's office; 5) University Board of Trustees — information only.

Under the rules of the Board of Trustees for the University of Central Florida, equipment fees may be assessed for the use and replacement of equipment. Fees take effect in the fall semester of each year. Departments must maintain detailed accounting of all expenditures and report them to the Dean of the Graduate College on July 1 of each year.

Use one form for each program request:

Date Submitted: _____ **College:** CECS

Department: MMAE **Submitted by:** Suhada Jayasuriya

Degree program: Mechanical, Materials and Aerospace Engineering

Equipment Fees:

Fall graduate student enrollment: ~~120~~ 8 ~~178~~ 198 **Full-time** ~~89~~ 127 **Part-time** 71

Fee amount per semester: $90 **Full-time** $90 **Part-time** $45

Provide Justification for the Request:

Acquisition of equipment to be used in the Mechincal and Aerospace M.S. and Mechanical Ph.D. programs in Mechanical, Materials and Aerospace Engineering Department. The instructional facilities and resources to be acquired are common to these graduate programs. The total cost is divided by the total number of students enrolled in the programs in Fall of 2011 to arrive at a per-student fee. The full time-student has a weight of 100% while the part-time student has a weight of 50%.

Provide detailed cost information about the expenses for which the fee is to be assessed.

Equipment	Cost	Lifetime
Aerothermal lab:Hot wire/film,Phase Doppler Particle Analyzer (PDPA)/Laser Doppler Velocimetry (LDV), Image processing, Design of a heat exchanger for solar heat	$71,000	3 years
Mechatronics/controls lab Altera OE2-70 boards (3 sets), Parallax Sensor Kit (5 sets),HS-55 Micro Servo Motor (12 sets) ,Arduino Uno (3 sets), Arduino and Labview bundle (5 sets)Arduino and Labview bundle (5	$2,151	3 years
Experimental mechanics lab: Strain gage digital recorders/ data acquisition, Pre-gaged test models, Acoustic emission sensors	$3,250	3 year
MMAE Computer lab: 45 workstations @ 2.5K each - half cost to grad. Program	$56,250	1 year
Total of Costs:	$132,651	

Equipment replacement/upgrade cost/year: $44,217

Maintenance Plans	Cost	Lifetime
Aerothermal Lab: water tunnel, hot wire/film, PIV	$4,000	1 year
Mechatronics and controls lab: simulink, controls, statics, robust control, realtime workshop	$5,764	1 year
Experimental Mechanics lab: Strain gages (uniaxial, rosette, fracture, residual stress), Photoelastic model materials, Rapidprototying for photoelastic models, Aluminum test specimensstrain gage bonding kits, Hole	$2,900	1 year
Computational Fluids and Solids courses: Fluent, Patran/Nastran, ABAQUS, Pointwise	$8,600	1 year
MMAE Computer Lab (304) : CAD/CAM and ProE labs & MATHCAD	$10,500	1 year
Total of Costs:	$31,764	

Maintenance plans and maintenance cost/year: $31,764

Total cost for equipment replacement, upgrade, maintenance, and maintenance contracts per year: $75,981

Any special conditions or exemptions must be identified:

Payment Details

Account Number to Deposit Fees: _____

Item Type: _____

Contact Person: _____

Phone Number: _____

Approval Signatures

Department Chair _____ **Date** 10.17.2011

College Academic Standards _____ **Date** _____

College Dean _____ **Date** _____

Graduate Council _____ **Date** _____

Academic Affairs _____ **Date** _____

University of Central Florida

Materials and Supplies Fee Request Form

☑ Course Addition ☐ Course Revision

Forward to your college office

This form is to be used for requests to add, increase, or delete materials and supplies fees. All requests for the next catalog must be submitted by October 29 for the November agenda deadlines of the Undergraduate Course Review Committee (Dr. Elliot Vittes) and the Graduate Council (Dean Patricia Bishop).

Request Routing: 1) Department Chair to College Dean's Office; 2) Dean's Office approved and enters data in online Course Action data base; 3) Graduate or Undergraduate committees review and Graduate or Undergraduate Dean submits to Provost; 4) Provost approves or disapproves request.

Materials and supplies fees must be used for expendable or consumable items that are above and beyond the normal materials and supplies used in classroom instruction (lab, clinical, studio supplies) and cannot be used for personnel services or equipment purchase/rental. Maximum amount is $70.00.

- Materials and supplies that are specialized and not readily available or materials and supplies that would save students money by bulk purchasing are legitimate uses of these fees.
- All materials and supplies fees must be spent on only the items listed on the table below. All materials and supplies fees for graduate courses must be approved by the Graduate Council; any previous materials and supplies fees being levied but not approved by the Graduate Council should be brought forward to document how the fees are being used.
- All materials and supplies fees should be reviewed periodically.

Date Submitted: October 15, 2010 **College:** COHPA

Department: Communication Sciences & Disorders

Course Prefix & Number: SPA-~~XXXX (Pending)~~ 6569 **Course Title:** Management of Upper Airway & Aerodigestive Disorders

Fees: Management of Upper Airway + Aerodigestive Disorders

One course per form. Round fee to the nearest half dollar.

Current Fee Per Student: $0 **Requested Fee Per Student:** ~~$54.00~~ 42.00

Estimated Annual Enrollment: 105 **Revenue from Enrollment:** $5,670

Provide Justification for the Request:

Please see attached Materials & Supply Fee Worksheet.

Provide detailed cost information (per student) about the expenses for which the fee is to be assessed.

No. of Units	Description	Estimated Cost
	Please see attached Materials & Supply Fee Worksheet.	
		42.00
	Total Cost of Items Per Student:	~~$54.00~~

Payment Details

Account Number to Deposit Fees: 18700801

Item Type:

Contact Person: Dan McDermott

Phone Number: 407-823-4792

Approval Signatures

Department Chair Lynda L. Lyon for Dr. Thomas Sullivan **Date** Oct 15, 20

College Academic Standards [signature] **Date** 3/3/11

College Dean [signature] **Date** 3/3/11

Graduate Council **Date**

Academic Affairs **Date**

Materials & Supply Fee Worksheet

Course: SPA XXXX Management of Upper Airway and Aerodigestive Disorders **Current Fee: 0.00**

Item	Qty	Price	Total	Vendor	Price/Student (#35)
Nosey Cup - small	1	11.5	11.5	Ali Med Supply	0.328571429
Nosey Cup - Large	1	16.75	16.75	Ali Med Supply	0.478571429
Glossectomy spoon	1	181	181	Ali Med Supply	5.171428571
Maroon Spoons	1	12.5	12.5	Ali Med Supply	0.357142857
Simply Thick - Starter Kit - Nectar	1	9.95	9.95	Simply Thick	0.284285714
Simply Thick - Starter Kit - Honey	1	9.95	9.95	Simply Thick	0.284285714
Zip-N-Squeeze Bags 10 pack (5 liquid, 5 pureed)	1	21.5	21.5	Dinner Through A Straw	0.614285714
Provale Cup 5cc	1	45.5	45.5	Ali Med Supply	1.3
Provale Cup 10cc	1	45.5	45.5	Ali Med Supply	1.3
HME - Normal	1	83	83	Atos Medical	2.371428571
HME - Hi Flow	1	83	83	Atos Medical	2.371428571
FlexiDerm Oval Adhesive	1	65	65	Atos Medical	1.857142857
FlexiDerm Round Adhesive	1	65	65	Atos Medical	1.857142857
OptiDerm Oval Adhesive	1	131	131	Atos Medical	3.742857143
OptiDerm Round Adhesive	1	131	131	Atos Medical	3.742857143
Regular Oval Adhesive	1	62	62	Atos Medical	1.771428571
Regular Round Adhesive	1	62	62	Atos Medical	1.771428571
XtraBase Adhesive	1	110	110	Atos Medical	3.142857143
HME Cartridge	1	74.7	74.7	InHealth Technologies	2.134285714
TruSeal Adhesive (round, oval & standard)	3	86.1	258.3	InHealth Technologies	7.38
Total Costs	1479.15				
Total Fee Per Student	42.26142857				

Materials & supplies fees must be used for expendable or consumable items that are above and beyond the normal materials and supplies used in classroom instruction (lab, clinical, studio supplies) and cannot be used for personnel services or equipment purchase/rental. The maximum amount is $70.00 per student.

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Action Request Form

This form is to be used to revise, add, suspend, or inactivate degree programs, tracks, or certificate programs. A new form must be used for each program, track, or certificate.

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

College/Unit(s) Submitting Proposal: **College of Engineering and Computer Science**

Proposed Effective Term/Year: **Summer 2012**

Unit(s) Housing Program: **Industrial Engineering and Management Systems**

Name of program, track, and/or certificate: **Industrial Engineering MS Engineering Management Track**

Description of program (this description will show up in the graduate catalog copy):

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

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

N/A

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

N/A

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

Dr. Ahmad Elshennawy, ahmad.elshennawy@ucf.edu, 312 Engineering 2, 407– 823-2204

Please check one: This action affects a: ☐ Program x Track ☐ Certificate

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

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

☐ **Addition.** Please proceed to Part A.

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

---

x **Inactivation**

☐ **Temporary Suspension of Admissions. Give Length of Suspension:**

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

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

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

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Signature Page

RECOMMENDATIONS

☐ Yes ☐ No	**Department Chair:**	**Date:**
☐ Yes ☐ No	**College Curriculum Committee Chair:**	**Date:**
☐ Yes ☐ No	**College Dean or Unit Head:**	**Date:**
☐ Yes ☐ No	**Chair or GSC:**	**Date:**
☐ Yes ☐ No	**Dean, College of Graduate Studies:**	**Date:**

APPROVAL

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

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

Department(s); College; Registrar; Associate Registrar; Institutional Research; Academic Services; Faculty Senate;

University Analysis and Planning Support; College of Graduate Studies

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

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

Brief Statement of Program Change and rationale: (Please indicate the change, the rationale for the change, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. Remember to attach the catalog copy showing changes, using Track Changes in Word.)

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate?

☐ Yes ☐ No

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

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

Name Change

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

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

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

When is the name change effective? Please note: A name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

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

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

old CIP:

new CIP:

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

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

Part A - Continued

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

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

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

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

	Year 1	Year 2	Year 3
Headcount			
SCHs			

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

Part A - Continued

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

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

Checklist of items to be provided:

☐ **Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)**

☐ **Attach all appropriate course action requests that will be necessary to implement the changes. (required)**

☐ **Emails showing consultation with other units. (if applicable)**

☐ **If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.**

☐ **If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.**

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
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Part B – For inactivations or suspensions of programs, tracks, or certificates

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

If yes, number of current students:

Please specify the intended time period of inactivation or suspension:

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

All current students who are currently under this track will move to the new **Engineering Management MSEM** degree.

Enter the terms and courses that will be taught for each term throughout the last semester.

Summer 2012	Fall 2012	Spring 2013	Summer 2013	Fall 2013
ESI 5219	ESI 5219	EIN 6336	ESI 5219	ESI 5219
EIN 5108	EIN 6258	ESI 5219	EIN 5108	EIN 6528
ESI 6224	EIN 6339	EIN 5117		EIN 6339
ESI 6357	EIN 5140	ESI 6225		EIN 5140
	ESI 5236	EIN 6XXX (Innovation in Engineering Design)		ESI 5236
	ESI 6358			ESI 6215

Checklist of items to be provided:

☐ **Attach all appropriate course action requests that will be necessary to implement the changes. (required)**

☐ **Emails showing consultation with other units. (if applicable)**

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Action Request Form

This form is to be used to revise, add, suspend, or inactivate degree programs, tracks, or certificate programs. A new form must be used for each program, track, or certificate.

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

College/Unit(s) Submitting Proposal: **College of Engineering and Computer Science**

Proposed Effective Term/Year: **Summer 2012**

Unit(s) Housing Program: **Industrial Engineering and Management Systems**

Name of program, track, and/or certificate: **Industrial Engineering MS Professional Engineering Management Track**

Description of program (this description will show up in the graduate catalog copy):

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

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

N/A

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

N/A

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

Dr. Ahmad Elshennawy, ahmad.elshennawy@ucf.edu, 312 Engineering 2, 407– 823-2204

Please check one: This action affects a: ☐ Program x Track ☐ Certificate

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

☐ **Addition.** Please proceed to Part A.

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

---

x **Inactivation**

☐ **Temporary Suspension of Admissions. Give Length of Suspension:**

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

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

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

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Signature Page

RECOMMENDATIONS

☐ Yes ☐ No	**Department Chair:**	**Date:**
☐ Yes ☐ No	**College Curriculum Committee Chair:**	**Date:**
☐ Yes ☐ No	**College Dean or Unit Head:**	**Date:**
☐ Yes ☐ No	**Chair or GSC:**	**Date:**
☐ Yes ☐ No	**Dean, College of Graduate Studies:**	**Date:**

APPROVAL

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

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

Department(s); College; Registrar; Associate Registrar; Institutional Research; Academic Services; Faculty Senate;

University Analysis and Planning Support; College of Graduate Studies

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UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

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

Brief Statement of Program Change and rationale: (Please indicate the change, the rationale for the change, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. Remember to attach the catalog copy showing changes, using Track Changes in Word.)

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate?

☐ Yes ☐ No

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

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

Name Change

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

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

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

When is the name change effective? Please note: A name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

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

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

old CIP:

new CIP:

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

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

Part A - Continued

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

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

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

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

	Year 1	Year 2	Year 3
Headcount			
SCHs			

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

Part A - Continued

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

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

Checklist of items to be provided:

☐ **Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)**

☐ **Attach all appropriate course action requests that will be necessary to implement the changes. (required)**

☐ **Emails showing consultation with other units. (if applicable)**

☐ **If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.**

☐ **If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.**

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

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

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

If yes, number of current students:

Please specify the intended time period of inactivation or suspension:

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

All current students who are currently under this track will move to the new **Engineering Management MSEM** degree.

Enter the terms and courses that will be taught for each term throughout the last semester.

Summer 2012	Fall 2012	Spring 2013	Summer 2013	Fall 2013
ESI 5219	ESI 5219	EIN 6336	ESI 5219	ESI 5219
EIN 5108	EIN 6258	ESI 5219	EIN 5108	EIN 6528
ESI 6224	EIN 6339	EIN 5117		EIN 6339
ESI 6357	EIN 5140	ESI 6225		EIN 5140
	ESI 5236	EIN 6XXX (Innovation in Engineering Design)		ESI 5236
	ESI 6358			ESI 6215

Checklist of items to be provided:

☐ **Attach all appropriate course action requests that will be necessary to implement the changes. (required)**

☐ **Emails showing consultation with other units. (if applicable)**

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Action Request Form

This form is to be used to revise, add, suspend, or inactivate degree programs, tracks, or certificate programs. A new form must be used for each program, track, or certificate.

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College/Unit(s) Submitting Proposal: **College of Engineering and Computer Science**

Proposed Effective Term/Year: **Summer 2012**

Unit(s) Housing Program: **Industrial Engineering and Management Systems**

Name of program, track, and/or certificate: **Industrial Engineering MS Engineering Management Track**

Description of program (this description will show up in the graduate catalog copy):

ENGINEERING MANAGEMENT MSEM, PROFESSIONAL SCIENCE MASTER'S

PROGRAM DESCRIPTION

The Master of Science in Engineering Management (MSEM) degree in Industrial Engineering focuses on effective decision-making in engineering and technological organizations. This degree is designated a Professional Science Master's (PSM) degree.

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

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

N/A

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

N/A

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

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

Dr. Ahmad Elshennawy, ahmade@mail.ucf.edu, 312 Engineering 2, 407– 823-2204

Please check one: This action affects a: x Program Track ☐ Certificate

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

☐ **Addition.** Please proceed to Part A.

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

☐ **Inactivation**

☐ **Temporary Suspension of Admissions. Give Length of Suspension:**

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

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

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

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Signature Page

RECOMMENDATIONS

☐ Yes ☐ No	**Department Chair:**	**Date:**
☐ Yes ☐ No	**College Curriculum Committee Chair:**	**Date:**
☐ Yes ☐ No	**College Dean or Unit Head:**	**Date:**
☐ Yes ☐ No	**Chair or GSC:**	**Date:**
☐ Yes ☐ No	**Dean, College of Graduate Studies:**	**Date:**

APPROVAL

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

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

Department(s); College; Registrar; Associate Registrar; Institutional Research; Academic Services; Faculty Senate;

University Analysis and Planning Support; College of Graduate Studies

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Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

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

Brief Statement of Program Change and rationale: (Please indicate the change, the rationale for the change, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. Remember to attach the catalog copy showing changes, using Track Changes in Word.)

Request is to change required course EIN 6459 Concurrent Engineering for EIN 6XXX Innovation in Engineering Design. The Innovation in Engineering Design course is a better course for this new program.

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate?

☐ Yes x No

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

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

Name Change

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

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

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

When is the name change effective? Please note: A name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

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

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

old CIP:

new CIP:

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

Part A - Continued

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

paragraph of their credentials.)

Waldemar Karwowski, Ph.D., Professor and Chair, Texas Tech: IE, Human System Integration, Ergonomics/Human Engineering
Ahmad K. Elshennawy, Ph.D., Professor & Associate Chair, Penn State: IE, Quality and Reliability, Production Systems
Christopher Geiger, Ph.D., Assistant Professor, Purdue University: Production Systems, IE, Simulation, OR
Robert L. Hoekstra, Ph.D., Associate Professor, Cincinnati: Manufacturing Engineering, Engineering Management
Timothy G. Kotnour, Ph.D., Associate Professor, Virginia Tech: Engineering Management, IE
Gene C.H. Lee, Ph.D., P.E., Associate Professor, Texas Tech: Human Engineering/Ergonomics, IE, Safety Engineering/Management
Pamela R. McCauley-Bush, Ph.D., Associate Professor, University of Oklahoma: Engineering/Ergonomics, IE, Biomechanics
Mansooreh Mollaghasemi, Ph.D., Associate Professor, University of Louisville: IE, Simulation, OR, Decision Analysis
Dima Nazzal, Ph.D., Assistant Professor, Georgia Tech: OR, Industrial Engineering, Simulation & Modeling
Michael D. Proctor, Ph.D., Associate Professor, N. Carolina State: Interactive Simulation, Training System Design
Luis Rabelo, Ph.D., Associate Professor, University of Missouri: Production/Manufacturing Systems, IE, Management
Charles H. Reilly, Ph.D., Professor, Purdue University: OR, Industrial Engineering, Statistics
Serge Sala-Diakanda, Ph.D., Visiting Assistant Professor, UCF: Systems Engineering, Statistics, Simulation
José A. Sepúlveda, Ph.D., P.E., Associate Professor, University of Pittsburgh: Simulation, IE, OR, production Systems
William Thompson, Ph.D., Associate Professor, Arizona State: Engineering management, IE, Production Systems, Quality
Kent E. Williams, Ph.D., Associate Professor, University of Connecticut: Training Systems, Statistics, Interactive Simulation

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

If there will be a change, it will definitely be a better one. There will more flexibility that allows the students to select the courses that best suit their needs.

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

N/A

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

N/A

	Year 1	Year 2	Year 3
Headcount			
SCHs			

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

Part A - Continued

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

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

Checklist of items to be provided:

x **Electronic graduate catalog copy for additions; track changes included if there are revisions. (required)**

☐ **Attach all appropriate course action requests that will be necessary to implement the changes. (required)**

☐ **Emails showing consultation with other units. (if applicable)**

☐ **If an addition, list of 1-3 students and 1-3 faculty for profiles in the graduate catalog (provide email address so Graduate Studies can contact them to write profiles and take photos). You may provide draft copy of profiles if you wish.**

☐ **If an addition, what disciplines does this program, track or certificate belong to? What other UCF graduate programs, tracks, or certificates are related to it? This information will be used to provide additional links for prospective students to search in the online graduate catalog.**

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

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

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

If yes, number of current students:

Please specify the intended time period of inactivation or suspension:

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

Sample teach out plan: Enter the terms and courses that will be taught for each term throughout the last semester.

Summer 2011	Fall 2011	Spring 2011	Summer 2012	Fall 2012

Checklist of items to be provided:

☐ **Attach all appropriate course action requests that will be necessary to implement the changes. (required)**

☐ **Emails showing consultation with other units. (if applicable)**

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

Engineering Management MSEM, Professional Science Master's

PROGRAM DESCRIPTION

The Master of Science in Engineering Management (MSEM) degree in Industrial Engineering focuses on effective decision-making in engineering and technological organizations. This degree is designated a Professional Science Master's (PSM) degree.

CURRICULUM

This program can be taken entirely through the Florida Engineering Educational Delivery System (FEEDS), which provides video-streamed versions of classes over the Internet.

The Engineering Management MSEM (PSM) degree requires an undergraduate degree in Engineering or a closely related discipline. Students with undergraduate degrees outside of industrial engineering may be required to take additional prerequisites. An approved program of study must be developed in consultation with the graduate program director. The total number of hours is 30 credit hours.

Total Credit Hours Required:

30 Credit Hours Minimum beyond the Bachelor's Degree

Required Courses—21 Credit Hours

- ESI 5219 Engineering Statistics (3 credit hours)
- EIN 5140 Project Engineering (3 credit hours)
- ESI 6551C Systems Engineering (3 credit hours)
- EIN 6357 Advanced Engineering Economics Analysis (3 credit hours)
- EIN 5108 The Environment of Technical Organizations (3 credit hours)
- EIN ~~6459 Concurrent Engineering~~6xxx Innovation in Engineering Design (3 credit hours)
- EIN 6182 Engineering Management (3 credit hours)

Thesis Option—9 Credit Hours

Thesis students must complete an independent research project and then write and successfully defend their thesis. Furthermore, an additional 3 credit hours of electives are required beyond the 21 credit hours of required courses described above. See List of Electives below.

- EIN 6971 Thesis (6 credit hours)
- Elective (3 credit hours)

Nonthesis Option—9 Credit Hours

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Nonthesis students must take 9 additional credit hours of electives beyond the 21 credit hours of required courses described above. See List of Electives below.

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Electives (9 credit hours)

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Comprehensive Examination

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Nonthesis students must successfully pass an oral comprehensive examination to fulfill degree requirements. Please see the program director for further details.

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~~Restricted~~ List of Electives~~—9 Credit Hours~~

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~~Select three courses from the following courses.~~

- EIN 5117 Management Information Systems I (3 credit hours)
- EIN 5251 Usability Engineering (3 credit hours)
- EIN 6339 Operations Engineering (3 credit hours)
- ESI 6224 Quality Management (3 credit hours)
- ESI 6358 Decision Analysis (3 credit hours)
- EIN 6528 Simulation Based Life Cycle Engineering (3 credit hours)
- EIN 5356 Cost Engineering (3 credit hours)
- EIN 6326 Technology Strategy (3 credit hours)
- EIN 6936 Seminar in Advanced Industrial Engineering (3 credit hours)
- EIN 6935 Special Topics (e.g., Technical Communication) (3 credit hours)

At least one-half of the credit hours of all courses in a master's program of study must be at the 6000 level or higher. Students on assistantships must take 9 credit hours per semester to satisfy the university's requirement for full-time status. Most students working full time take 6 credit hours per semester. At that rate, the program can be completed in 6 semesters or less. However, students with more time available can finish the program in 3 semesters.

~~Comprehensive Examination~~

~~Students must successfully pass an oral comprehensive examination to fulfill degree requirements. Please see the program director for further details.~~

Equipment Fee

Students in the Engineering Management MSEM program pay a $90 equipment fee each semester that they are enrolled. For part-time students, the equipment fee is $45 per semester.

INDEPENDENT LEARNING

The Independent Learning Requirement is met by successful completion of the research studies required in individual courses, EIN 6182 Engineering Management, and the capstone project that requires that students integrate material from all the courses in their program.

Application Requirements

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

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

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

FINANCIALS

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

Fellowships

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

Contact Info

Graduate Program

Ahmad Elshennawy, PhD

Professor

ahmade@ucf.edu
Telephone: 407-823-2204
Engineering 2, Room 312 Map

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Graduate Admissions

Admissions Counselor

gradadmissions@ucf.edu
Telephone: 407-823-2766 ext. 254

Millican Hall 230 Map
Online Application
Graduate Admissions

Mailing Address

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

Institution Codes

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

Graduate Fellowships

Sharon Preston
Telephone: 407-823-6497
LaVonda Walker
Telephone: 407-823-0127
gradfellowship@ucf.edu
www.graduate.ucf.edu

Graduate Financial Aid

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

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Program Action Request Form

This form is to be used to revise, add, suspend, or inactivate degree programs, tracks, or certificate programs. A new form must be used for each program, track, or certificate.

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

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

Proposed Effective Term/Year:2012

Unit(s) Housing Program:College

Name of program, track, and/or certificate: Education PhD – Social Science Education Track

Description of program (this description will show up in the graduate catalog copy):

The Social Science Education track in the Education PhD program is designed to prepare social science educators for successful careers in research and teaching.

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

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

Same as the PhD program

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

Same as the PhD program

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

William Russell, Russell@ucf.edu, 823-4345, COE Suite 115J, www.education.ucf.edu/ssed

Please check one: This action affects a: ☐ Program X Track ☐ Certificate

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

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

X **Addition.** Please proceed to Part A.

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

☐ **Inactivation**

☐ **Temporary Suspension of Admissions. Give Length of Suspension:**

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

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

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

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Signature Page

RECOMMENDATIONS

☐ Yes ☐ No	**Department Chair:**	**Date:**
☐ Yes ☐ No	**College Curriculum Committee Chair:**	**Date:**
☐ Yes ☐ No	**College Dean or Unit Head:**	**Date:**
☐ Yes ☐ No	**Chair or GSC:**	**Date:**
☐ Yes ☐ No	**Dean, College of Graduate Studies:**	**Date:**

APPROVAL

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

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

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

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
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UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

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

Brief Statement of Program Change and rationale: (Please indicate the change, the rationale for the change, how it affects the unit and faculty teaching in and students enrolled in the program, track or certificate. If there are changes to the credit hours of the program, required courses or other requirements, please state those changes. Remember to attach the catalog copy showing changes, using Track Changes in Word.)

Change request for the Social Science Education PhD Track:

Replace three of the current courses/electives (SSE 6387, SSE 6388, & Content elective) with the following:

1) SSE 7XXX – Critical Issues in Social Studies Teacher Education
2) Social Science Education (SSE) Electives (6 credit hours)

These changes do not affect the number of program hours.

This change is needed to better prepare PhD students for the field. The current program is written as a very specific focus which does not represent the faculty and purpose of the program. These changes will allow PhD students to focus on various areas within social science education and will prove to have a monumental impact on student recruitment.

Will students be moved from an existing program, track, or certificate into this new program, track, or certificate?

☐ Yes X No

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

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

Name Change

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

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

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

When is the name change effective? Please note: A name change will apply to the record of all students who are currently enrolled, readmitted or newly admitted into this program as of the effective date of this change.

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

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

old CIP:

new CIP:

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

Part A - Continued

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

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

No

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

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

Social Science Educators. Education doctoral students for the 7XXX to fulfill degree requirements. No change in enrollment is intended or expected.

	Year 1	Year 2	Year 3
Headcount			
SCHs			

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

Part A - Continued

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

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

Checklist of items to be provided:

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

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

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

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

If yes, number of current students:

_____

Please specify the intended time period of inactivation or suspension:

_____

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

Checklist of items to be provided:

☐ **Attach all appropriate course action requests that will be necessary to implement the changes. (required)**

☐ **Emails showing consultation with other units. (if applicable)**

UCF College of Graduate Studies – P.O. Box 160112, Orlando, FL 32816-0112
Questions? Contact Rhonda Nelson at rlnelson@mail.ucf.edu

TRACK DESCRIPTION

The Social Science Education track in the Education PhD program is designed to prepare social science educators for successful careers in research and teaching.

Read More

CURRICULUM

Total Credit Hours Required:

69 Credit Hours Minimum beyond the Master's Degree

Required Courses—39 Credit Hours

Core—24 Credit Hours

- IDS 7501 Issues and Research in Education (3 credit hours)
- IDS 7500 Seminar in Educational Research (variable credit and repeatable, 6 credit hours)
- EDF 7475 Qualitative Research in Education (3 credit hours)
- EDF 7403 Quantitative Foundations of Educational Research (3 credit hours)
- EDF 7463 Analysis of Survey, Record and Other Qualitative Data (3 credit hours)
- IDS 7502 Case Studies in Research Design (3 credit hours)
- IDS 7938 Research Cluster Seminar (3 credit hours) or approved research methods elective

Specialization—18 Credit Hours

Comment [W1]: Change from 15 to 18.

- SSE 7740 History of Social Studies Education Seminar (3 credit hours)
- SSE 7796 Research in Social Science Education Seminar (3 credit hours)
- SSE 7797 Content and Program Analysis in Social Science Education (3 credit hours)
- SSE 7XXX Critical Issues in Social Studies Teacher Education (3 credit hours)
- Social Science Education (SSE) Electives (6 credit hours; must be approved by advisor)
- SSE 6387 Teaching with Film (3 credit hours)
- SSE 6388 Digital History in the K-12 Classroom (3 credit hours)

Comment [W2]: Replaced with:
SSE 7XXX Critical Issues in Social Studies Teacher Education

Comment [W3]: Replace with:
Social Science Education (SSE) Elective (6 credit hours; courses must be approved by advisor)

Electives—3 Credit Hours

- Graduate Content Course (3 credit hours minimum; course must be approved by adviser)

Comment [W4]: Delete this section because the hours are listed in the specialization. The elective has been changed to an SSE elective

Dissertation—24 Credit Hours

- SSE 7980 Dissertation Research (24 credit hours minimum)

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

Candidacy

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

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

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

Candidacy Examinations

All PhD candidates will be required to complete two examinations.

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

Please note there may be variations in length of exam time and content based upon the respective requirements of each track.

INDEPENDENT LEARNING

The dissertation fulfills the independent learning requirement.

Application Requirements

Eligibility for admission to a doctoral program should be limited to superior students who have demonstrated intellectual ability, high achievement, and adequate preparation for advanced study and research in a chosen field.

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

- One official transcript (in a sealed envelope) from each college/university attended.
- A master's degree in a closely related field.

- Official, competitive GRE score taken within the last five years.
- Three letters of recommendation.
- Goal statement / letter of intent.
- Résumé / vita reflecting relevant experience.
- Writing sample.
- Applicants to this program are strongly encouraged to complete the necessary information requested for the ETS PPI (Personal Potential Index) report that is available during the GRE examination. All official PPI reports must be submitted directly to the UCF College of Graduate Studies (use UCF Institution Code: 5233).

Application Deadlines

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

FINANCIALS

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

Fellowships

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

University of Central Florida

Course Action Request Form

☒ Course Addition ☐ Course Revision ☐ Course Deletion

Forward to your college office

Course Information NOTE: *Course additions and course revisions must be accompanied by a course syllabus and rationale.*
Note: Departments must also submit an electronic syllabus to the college curriculum person.

College: COS Department: Physics

Department Chair: Talat Rahman Phone: 3-5785

Academic Affairs Approved Instructor: _____

	Course Prefix	Number	Title	Credit Hours Ex: 3(3,0)
Course Prefix				
New or Proposed Revision	PHY	5xxx	Physics of Fluids and Biofluids	3 (3,0)

30 Char. Abbreviation: PHY FLUIDS, BIOFUIDS

Course Description (25 word limit) (If course revision, underscore changes.):

Ideal Fluids; Basic equation of fluid flow; Viscous flow, Instability and turbulence; Thermal and mass transfers in fluids, Biofluid mechanics of blood circulation.

Will lab fees be charged? ☐ Yes ☒ No

Repeat for credit? ☐ Yes ☐ No If yes, indicate the total times this course may be used in the degree program. _____

If course is repeatable, explain what will remain the same and what will change when the course is repeated.

_____

NOTE: *For a repeatable course, indicate in the syllabus what will remain the same and what will change when the course is repeated. Also indicate who approves content before a course is repeated.*

Prerequisite(s) and/or Corequisite(s): Thermodynamics, Differential Equations, E&M Graded S/U? ☐ Yes ☒ No

Split-Level Class: ☒ Yes ☐ No

If offering a split-level class, complete this section even if it had been approved earlier for individual delivery.

List undergraduate split-level course: PHY4XXX Physics of Fluids and Biofluids

NOTE: *Both the graduate and the undergraduate split-level syllabi must be approved through the established university process for approving courses so that there are two separate and complete syllabi for each course. The graduate syllabus should clearly demonstrate more advanced subject matter, expectations, and rigor. Attach both undergraduate and graduate syllabi to this form.*

Term of Offering
When will course be offered?

☐ Odd Fall ☐ Odd Spring ☐ Odd Summer

☐ Even Fall ☒ Even Spring ☐ Even Summer ☐ Occasional

Intended Utilization of Course
The course will be used primarily as:

☐ Required Courses ☒ Elective Courses

The graduate curriculum committee has recommended the application to offer a special topic course proposed by Prof. Weili Luo.

Hasi P. Saha, chair, Grad Curriculum Commi

Justification for Course Addition or Course Revision

What is the rationale for adding/changing this course?

See the attached.

What majors require or recommend this course for graduation? not a major requriement

If not a major requirement, what will be the source of students? condensed matter physics, bioscience, engineering st

What is the estimated annual enrollment? This course is intended to be taught bi-annually instead of annually.

Possible duplications and conflicts with other departments or colleges should be discussed with appropriate parties. Please detail discussion you have had.

I have discussed last year the possibility of offering this course with Prof. Alan Kasab from Mechnical engineering who has taught Fluids in Mechnical Engineering. He said "Physics of Fluids and Biofluids" to be covered in this course is very different from Engineering course on fluids. They will never teach Landau's physics.

Justification for Course Deletion

Is this course a required course for graduation in a major or prerequisite? ☐ Yes ☒ No

If yes, have the involved major departments been informed, in writing, of proposed deletion? ☐ Yes ☐ No

If not, explain:Course Description (25 word limit) (If course revision, underscore changes.):

see the first page

Notes:

Approval Signatures

Department Chair _____ **Date** 10/14/11

College Academic Standards _____ **Date** _____

College Dean _____ **Date** _____

Graduate Council _____ **Date** _____

Graduate Dean _____ **Date** _____

UNIVERSITY OF CENTRAL FLORIDA
COLLEGE OF GRADUATE STUDIES

Split-Level Class Action Request Form

The Graduate Council Curriculum Committee discourages the establishment of split-level classes. Graduate students are entitled to more challenging content, instruction, and assessment, which are difficult to provide in classes offered to undergraduates as well. Circumstances may compel a unit to propose a split-level class. In these cases, the proposal should indicate the reasons a split-level class is necessary and what long-term measures are being taken to provide undergraduates and graduates with appropriate coursework. In addition, it is important to differentiate each of the undergraduate and graduate course elements. To provide reviewers with a clear delineation of the differences between the 4000 and 5000 courses, Summary Tables 1 and 2 should be completed.

Please submit this form along with the completed Course Action Request (CAR) form. Include both the 4000 syllabus and the 5000 syllabus. **The 5000 syllabus should bold any additions or differences.**

Provide narrative rationale for split-level class:

Although this course is designed for graduate students who are conducting or who are interested in starting research in this area, it can also provide an opportunity for best undergraduate students to learn about this new direction in physics---there will not be any other opportunity for them to get to know this topic because it is unlikely for our department to offer a similar course for undergraduate students in the near future. There have been half dozen undergraduate students worked on fluid related research but were frustrated that the department did not have any course even remotely related to this topic. All the mathematic requirements for this course are the same for senior level undergraduate physics majors so undergraduate students do not have to learn extra math in order to enroll this course. The syllabus, homework, and exam problems will be separate for graduate and undergraduate levels.

Table 1— List any **course objectives or content:**

1) that is common to both the undergraduate and graduate syllabi but have been differentiated for undergraduate and graduate students. For example, an objective for undergraduates may require identification of a concept where the graduate objective may require application;

or

2) in cases where entirely new objectives or content have been added to the existing undergraduate objectives and content, in the 5000 course column list any course elements that the graduate syllabus requires in addition to the elements of the undergraduate syllabus. For example, if there are 3 course readings in the undergraduate syllabus and a 4th reading was added for the graduate syllabus, list it in the 5000 course column and leave the 4000 course column blank.

Table 1 Differences Between 4000 and 5000 Course Objectives & Content

Course Element	4000 Course	5000 Course
Objective	Concepts, principles.	Principles, solid and systematic problem-solving skills.

Table 2—List different or additional **assessment** elements (course assignments and tests that count toward the grade). For example, if an undergraduate course assignment that requires students to read an article and write a reflection has been expanded to require graduate students to read a book and present it to the class, the two versions of this assignment would be contrasted in this table. If a third exam was added for graduate students, list it in the 5000 column.

Table 2 Differences Between 4000 and 5000 Course Assessment

Course Element	4000 Course Assessment & % of grade	5000 Course Assessment & % of grade	
Assignment 1	homework assignments 20% of grade	50% more assignments than 4000 level	15% of grade
Assignment2		paper presentations	15% of grade
Exams		more problems and greater difficulty	

Rational for this Course.

New Course for Graduate and Advanced Undergraduate Students

Physics of Fluids and Biofluids

Instructor: Weili Luo (407 823 5855 weili.luo@ucf.edu)

Although the name "condensed matter physics" has been in use for almost forty years, our curricula still mainly concentrate on solid state part of condensed matter physics, leaving the liquid state of condensed matter physics untaught. With many new emerging fields in physics such as "biophysics", "soft matter physics", "physics of colloids", "physics of complex fluids" where fluid is the essential part of the system under study, it has become apparent that it is necessary to incorporate physics of fluids into our curricula.

This course is designed as an elective for graduate students and advanced undergraduate students in physics, biophysics, biomedical sciences, biotechnology, and engineering who are interested in understanding the properties of fluids at deeper physics level such as basic physics equations governing the fluid motions, and response of fluid systems to external changes such as temperature, electric, and magnetic fields.

The main topics will include: Ideal Fluids (basic equations of fluids dynamics), Viscos Flow, Instability and Turbulence, Thermal and Mass Transfers in Fluids, and Biofluid Mechanics of Blood Circulation (Fundamentals of biofluid mechanics; Respiratory system; Blood circulation; Rheology of the blood; Flow in the heart; Flow in blood vessels). The emphasis is on physical mechanisms of fluid-related phenomena.

The Textbook will be "Fluid Mechanics—Course of Theoretical Physics. Vol. 6"—Landau and Lifshitz.

This course has not overlap with any other course in or outside physics department in UCF.

Rational for split-level "Physics of fluids and biofluids"

Although this course is designed for graduate students who are conducting or who are interested in starting research in this area, it can also provide an opportunity for best undergraduate students to learn about this new direction in physics---there will not be any other opportunity for them to get to know this topic because it is unlikely for our department to offer a similar course for undergraduate students in the near future. In the past few years, quite number of undergraduate students worked on fluid related research but were frustrated that the department did not have any course even remotely related to this topic.

All the mathematic requirements for this course are the same for senior level undergraduate physics majors so undergraduate students do not have to learn extra math in order to enroll this course.

The syllabus, homework, and exam problems will be separate for graduate and undergraduate levels.

Physics of Fluids and Biofluids
PHY 5xxx
(Bolded parts differ from corresponding 4000 level)

Instructor: Weili Luo
Phone: 407 823 5855

Textbook:

1. "Fluids Mechanics---- Course of Theoretical Physics Vol. 6." By Landau and Lifshitz (L&L)---Pergamon Press, 1987 (2nd ed.) ISBN: 0-08-033932-8

2. Prandtl's Essentials of Fluids Mechanics (FPF). by Herbert Oertel and K. Mayes. Springer-Verlag 2004. ISBN: 0-387-40437-6

Grade Policy

Homework:	*15%*
Presentation of Papers:	***15%***
Midterm I :	*20%*
Midterm II:	*20%*
Final:	*30%*

Course Objective
The objective of this course is to learn the basic concepts and fundamental principles of fluids and biofluids, **to develop solid and systematic problem solving skills, to lay the foundation for conducting research in physics of fluids**.

Part I Ideal Fluids

Week 1: Introduction; Properties of liquids ; State of stress ; Liquid pressure; Kinematics of Fluid Flow; Surface Stress (Capillarity);
Homework: Problems in FPF Chap 2, **1-6**.

Week 2 Basis Kinematics and Dynamics of Fluids
Methods for describing motion; Acceleration of flow; Topology of flow; Dynamics of inviscid Liquids; Interfaces and formation of vortices
Homework: Problems in FPF Chap 3, **2-5**; Chap 4 **1-3**.

Week 3 Basis Equation of Fluid Dynamics
The equation of continuity; Euler's equation; Hydrostatics; Bernouli's equation; The energy flux; The momentum flux; The conservation of circulation
Homework: Problems in FDF Chap 5, 1-3, 5. **L&L Chap 1, P5, P13**.

Week 4 Basis Equation of Fluid Dynamics
Potential flow; Incompressible fluids; The drag force in potential flow past a body; Gravity wave;

Homework: Problems in **L&L, P 21-25, problems 1-4, 7-8.**

Week 5 Basis Equation of Fluid Dynamics
Internal waves in an incompressible fluid; Waves in rotating fluid;
Homework: problems **in L&L P30-31, problems 1-2**; in FDF Chap 5, 6-8
Midterm I

Part II Viscous Flow

Week 6 The equation of motion of a viscous fluid; Energy dissipation in an incompressible fluid; Flow in a pipe; The law of similarity; Reynolds numbers; Flow with small Reynolds numbers;
Homework: FPF, Chap 4, P151-153, **problems 1-3**.

Week 7 The laminar wake; The viscosity of suspensions; Exact solutions of the equations of motion for a viscous fluid; Oscillatory motion in a viscous fluid; Damping of gravity waves.
Homework: FPF, Chap 4, **P153-155, problems 4-7.**

Part III Instability and Turbulence

Week 8 Instability
Fundamentals of Fluid-Mechanical Instabilities; Examples of Fluid-Mechanical Instabilities; Definition of Stability; Local Perturbations; Rayleigh–B´enard Convection; Marangoni Convection; Diffusion Convection.

Week 9 Instability and Turbulence
Hydrodynamic Instabilities; Fundamentals of Turbulent Flows; Strange attractors; Onset of Turbulence; Transition to turbulence by period doubling. Linear Stability; Nonlinear Stability; Non-normal Stability; Developed Turbulence.
Homework: L&L: Chap 3, P 98; Chap 3, P145.

Part IV Thermal and Mass Transfers in Fluids

Week 10 Thermal Conduction in Fluids
The general equation of heat transfer; Thermal conduction in an incompressible fluid; Thermal conduction in an infinite medium; Thermal conduction in a finite medium.
Homework: FPF, Problems in Chap 9; **L&L: Chap 5, P 199, P202, P 207.**

Week 11 Thermal Convection
The similarity law for heat transfer; Heat transfer in a boundary layer; Heating of a body in a moving fluid; Free Convection; Convection at a Vertical Plate; Convection at a Horizontal Cylinder ; Forced convection.
L&L: Chap 5, P 210, P 213-214, P219-220.

Week 12 Mass Transfer
The equations of fluid dynamics for a mixture of fluids; Coefficients of mass transfer and thermal diffusion; diffusion of particles suspended in fluid.
Homework: **L&L: Chap 6, P 234, P 236.**

Midterm II

Part V Biofluid Mechanics of Blood Circulation

Week 13 Fundamentals of Biofluid Mechanics: Respiratory System; Blood Circulation; Rheology of the Blood.

Week 14 Flow in the Heart
Physiology and anatomy of the heart; Structure of the heart; Flow in the heart; Cardiac valves;
Homework: Concepts and derivations for FPF Chap 13, to be assigned in class.

Week 15 Flow in Blood Vessels
Unsteady Pipe Flow; Unsteady Arterial Flow ; Arterial Branches.

Final exam.

The semester has one week of spring break.

Physics of Fluids and Biofluids
PHY 4xxx

Instructor: Weili Luo
Phone: 407 823 5855

Textbook:

1. "Fluids Mechanics---- Course of Theoretical Physics Vol. 6." By Landau and Lifshitz (L&L)---Pergamon Press, 1987 (2nd ed.) ISBN: 0-08-033932-8

2. Prandtl's Essentials of Fluids Mechanics (FPF). by Herbert Oertel and K. Mayes. Springer-Verlag 2004. ISBN: 0-387-40437-6

Grade Policy

Homework: 20%
Midterm I : 25%
Midterm II: 25%
Final: 30%

Course Objective
The objective of this course is to learn the basic concepts and fundamental principles of fluids and biofluids, get familiar with phenomena and problems in physics of fluids, to train to solve problems in this area.

Part I Ideal Fluids

Week 1: Introduction; Properties of liquids ; State of stress ; Liquid pressure; Kinematics of Fluid Flow; Surface Stress (Capillarity);
Homework: Problems in FPF Chap 2, 1-3.

Week 2 Basis Kinematics and Dynamics of Fluids
Methods for describing motion; Acceleration of flow; Topology of flow; Dynamics of inviscid Liquids; Interfaces and formation of vortices
Homework: Problems in FPF Chap 3, 2-3; Chap 4 1-2.

Week 3 Basis Equation of Fluid Dynamics
The equation of continuity; Euler's equation; Hydrostatics; Bernouli's equation; The energy flux; The momentum flux; The conservation of circulation
Homework: Problems in FDF Chap 5, 1-3, 5.

Week 4 Basis Equation of Fluid Dynamics
Potential flow; Incompressible fluids; The drag force in potential flow past a body; Gravity wave;
Homework: Problems in L&L, P 21-25, problems 1, 7.

Week 5 Basis Equation of Fluid Dynamics
Internal waves in an incompressible fluid; Waves in rotating fluid;
Homework: problems in FDF Chap 5, 6-8
Midterm I

Part II Viscous Flow

Week 6 The equation of motion of a viscous fluid; Energy dissipation in an incompressible fluid; Flow in a pipe; The law of similarity; Reynolds numbers; Flow with small Reynolds numbers;
Homework: FPF, Chap 4, P151-153, problems 1.

Week 7 The laminar wake; The viscosity of suspensions; Exact solutions of the equations of motion for a viscous fluid; Oscillatory motion in a viscous fluid; Damping of gravity waves.
Homework: FPF, Chap 4, P153-155, problems 4, 5.

Part III Instability and Turbulence

Week 8 Instability
Fundamentals of Fluid-Mechanical Instabilities; Examples of Fluid-Mechanical Instabilities; Definition of Stability; Local Perturbations; Rayleigh–B´enard Convection; Marangoni Convection; Diffusion Convection.

Week 9 Instability and Turbulence
Hydrodynamic Instabilities; Fundamentals of Turbulent Flows; Strange attractors; Onset of Turbulence; Transition to turbulence by period doubling. Linear Stability; Nonlinear Stability; Non-normal Stability; Developed Turbulence.

Part IV Thermal and Mass Transfers in Fluids

Week 10 Thermal Conduction in Fluids
The general equation of heat transfer; Thermal conduction in an incompressible fluid; Thermal conduction in an infinite medium; Thermal conduction in a finite medium.
Homework: FPF, Problems in Chap 9

Week 11 Thermal Convection
The similarity law for heat transfer; Heat transfer in a boundary layer; Heating of a body in a moving fluid; Free Convection; Convection at a Vertical Plate; Convection at a Horizontal Cylinder ; Forced convection.
L&L: Chap 5, P 210, P 213

Week 12 Mass Transfer

The equations of fluid dynamics for a mixture of fluids; Coefficients of mass transfer and thermal diffusion; diffusion of particles suspended in fluid.
Homework: L&L: Chap 6, P 234.

Midterm II

Part V Biofluid Mechanics of Blood Circulation

Week 13 Fundamentals of Biofluid Mechanics: Respiratory System; Blood Circulation; Rheology of the Blood.

Week 14 Flow in the Heart
Physiology and anatomy of the heart; Structure of the heart; Flow in the heart; Cardiac valves;
Homework: Concepts and derivations for FPF Chap 13, to be assigned in class.

Week 15 Flow in Blood Vessels
Unsteady Pipe Flow; Unsteady Arterial Flow ; Arterial Branches.

Final exam.

The semester has one week of spring break.

Graduate Council Curriculum Committee
Course Agenda for 11-16-2011

College of Arts & Humanities Course Action Additions

Tabled. Committee requested that the maximum repeatable times be dropped to 2 and change the prereq. to read graduate standing "and" C.I., or consider creating separate courses for these.
AMH 5XXX CAH-History 3(3,0)
Colloquium in US Military History: PR: Graduate standing or C.I. Readings in selected topics in United States military history. May be used in the degree program a maximum of 3 times only when course content is different. *Occasional.*
29 of 30 character abbreviation: **Colloq in US Military History_**
Rationale: This course is being offered to diversify our course offerings and add to the department's courses in graduate level United States history.
Discussion with others: No conflicts foreseen.
Effect on majors: History MA students
AGENDA NOTES: Special Topic also being proposed.

Tabled. Committee requested that the maximum repeatable times be dropped to 2 and change the prereq. to read graduate standing "and" C.I., or consider creating separate courses for these.
ASH 5XXX CAH-History 3(3,0)
Colloquium in South Asian History: PR: Graduate standing or C.I. Addresses key themes in South Asian history through selected readings. May be used in the degree program a maximum of 3 times only when course content is different. *Occasional.*
29 of 30 character abbreviation: **Colloq in South Asian History_**
Rationale: This course is being offered to diversify our course offerings and add to the department's courses in graduate level Asian history.
Discussion with others: No conflicts foreseen
Effect on majors: History MA students
AGENDA NOTES: Special Topic also being proposed.

Tabled. Committee requested that the maximum repeatable times be dropped to 2 and change the prereq. to read graduate standing "and" C.I., or consider creating separate courses for these.
EUH 5XXX CAH-History 3(3,0)
Colloquium in Medieval Europe: PR: Graduate standing or C.I. Readings in selected topics in the history of medieval Europe. May be used in the degree program a maximum of 3 times only when course content is different. *Occasional.*
30 character abbreviation: **Colloquium in Medieval Europe**
Rationale: This course is being offered to diversify our course offerings and add to the department's courses in graduate level European history.
Discussion with others: No conflicts foreseen
Effect on majors: History MA students
AGENDA NOTES: Special Topic also being proposed.

Tabled. Committee requested that the maximum repeatable times be dropped to 2 and change the prereq. to read graduate standing "and" C.I., or consider creating separate courses for these.

EUH 5XXX CAH-History 3(3,0)

European Imperialism: PR: Graduate standing or C.I. Readings in selected topics in the history of European Imperialism. May be used in the degree program a maximum of 3 times only when course content is different. *Occasional.*

30 character abbreviation: **European Imperialism**

Rationale: This course is being offered to diversify our course offerings and add to the department's courses in graduate level European and world history.

Discussion with others: No conflicts foreseen

Effect on majors: History MA students

AGENDA NOTES: Special Topic also being proposed.

College of Medicine Course Action Additions

MEL 82XX COM-Medicine 6(6,0)

Hematologic Oncology and Bone Marrow Stem Cell Transplantation: PR: Successful completion of M3 core clerkships. Provides an in-depth exposure and experience in hematologic malignancies and bone marrow hematopoietic stem cell transplantation. Patients seen will have wide range of malignancies such as leukemia, lymphoma, myeloma, Hodgkins disease and bone marrow failure syndrome such as aplastic anemia. *Fall, Spring.*

30 of 30 character abbreviation: **Hematologic Onco & Bone Marrow**

MEL 83XX COM-Medicine 6(6,0)

Acting Internship Internal Medicine, Inpatient: PR: Successful completion of M3 core clerkships. *Fall, Spring.*

26 of 30 character abbreviation: **Acting Intrn IM, Inpatient**

MEL 83XX COM-Medicine 6(6,0)

Gastroenterology Inpatient/Outpatient: PR: Successful completion of M3 core clerkships. The student will develop an understanding of the pathophysiology of gastrointestinal disease and learn an approach to the evaluation and treatment of patients with gastrointestinal disease. *Fall, Spring.*

27 of 30 character abbreviation: **Gastroenterology Inpt/Outpt**

MEL 83XX COM-Medicine 6(6,0)

Infectious Diseases-Inpatient/Outpatient: PR: Successful completion of M3 core clerkships. This course provides an in-depth exposure to the diagnosis and treatment of infectious diseases in the hospital and outpatient setting. *Fall, Spring.*

26 of 30 character abbreviation: **Infect Diseases Inpt/Outpt**

MEL 83XX COM-Medicine 6(6,0)

Nephrology Inpatient/Outpatient: PR: Successful completion of M3 core clerkships. This course provides an in-depth exposure to the diagnosis and treatment of renal disease in the hospital and outpatient setting. *Fall, Spring.*

21 of 30 character abbreviation: **Nephrology Inpt/Outpt**

MEL 83XX COM-Medicine 6(6,0)
Pulmonary Elective: PR: Successful completion of M3 core clerkships. Inpatient and outpatient management of pulmonary diseases and sleep disorders. *Fall, Spring.*
30 character abbreviation: **Pulmonary Elective**

MEL 85XX COM-Medicine 6(6,0)
Congenital Cardiology: PR: Successful completion of M3 core clerkships. In-depth exposure to pediatric cardiology including patients with congenital heart disease in the inpatient, outpatient, CVICU, and operative room settings. *Fall, Spring.*
30 character abbreviation: **Congenital Cardiology**

MEL 88XX COM-Medicine 6(6,0)
Acting Internship Colon and Rectal Surgery: PR: Successful completion of M3 core clerkships. The fourth year medical student on the colon and rectal surgery acting internship will build upon the surgical core M3 rotation and further explore the workup, diagnosis and treatment/follow-up of surgical diseases involving the colon, rectum and anus in both the inpatient and outpatient settings. *Fall, Spring.*
29 of 30 character abbreviation: **Act Intern Colon/Rectal Surge_**

MEL 88XX COM-Medicine 6(6,0)
Acting Internship in General Surgery: PR: Successful completion of M3 core clerkships. Completion of core clerkship in surgery. The fourth year medical student on the General Surgery Acting Internship will build upon the surgical core M3 rotation and further explore the workup, diagnosis and treatment/follow-up of surgical diseases in both the inpatient and outpatient setting. *Fall, Spring.*
29 of 30 character abbreviation: **Acting Intermship Gen Surgery_**

MEL 88XX COM-Medicine 6(6,0)
Acting Internship Pediatric Surgery: PR: Successful completion of M3 core clerkships. The fourth year medical student on Pediatric Surgery (AI) will build upon their surgical clerkship experience with exposure to the workup, diagnosis and treatment/follow-up of surgical diseases involving neonates, infants and children in both the inpatient and outpatient setting. *Fall, Spring.*
29 of 30 character abbreviation: **Acting Internship Ped Surgery_**

MEL 88XX COM-Medicine 6(6,0)
Pediatrics Orthopaedics Elective: PR: Successful completion of M3 core clerkships. This rotation will expose the student to a wide variety of pediatrics orthopaedic problems affecting the growing musculoskeletal system. *Fall, Spring.*
29 of 30 character abbreviation: **Pediatrics Orthopaedics Elect_**

MEL 88XX COM-Medicine 6(6,0)
Trauma and Orthopaedics Elective: PR: Successful completion of M3 core clerkships. The course is designed to present to the student the basic aspects of orthopaedic care. *Fall, Spring.*
30 of 30 character abbreviation: **Trauma & Orthopaedics Elective**

MEL 8XXX COM-Medicine 6(6,0)

Autopsy Pathology: PR: Successful completion of M3 core clerkships. Provide the student with the opportunity for in-depth study and performance of complete autopsies. *Fall, Spring.*
30 character abbreviation: **Autopsy Pathology**

MEL 8XXX COM-Medicine 6(6,0)
Clinical Pathology Methods and Interpretation: PR: Successful completion of M3 core clerkships. The course is designed to acquaint the student with all aspects of a large hospital clinical laboratory. The student will learn the capabilities of the laboratory by rotating through hematology, immunology, chemistry and microbiology. *Fall, Spring.*
30 of 30 character abbreviation: **Clinical Path Methods & Interp**

MEL 8XXX COM-Medicine 6(6,0)
Diagnostic Hematology: PR: Successful completion of M3 core clerkships. The student will be working closely with the hematopathologist, immunopathologist, clinical hematologists, senior residents and supervisors of the hematology section; he/she will both observe and participate in the usual studies performed in these areas. *Fall, Spring.*
30 character abbreviation: **Diagnostic Hematology**

MEL 8XXX COM-Medicine 6(6,0)
Pathology & Laboratory Medicine: PR: Successful completion of M3 core clerkships. Provides introduction to all areas of pathology practice with emphasis on anatomic pathology disciplines. *Fall, Spring.*
24 of 30 character abbreviation: **Pathology & Lab Medicine**

MEL 8XXX COM-Medicine 6(6,0)
Pediatric Maxillofacial & Craniofacial Surgery Elective: PR: Successful completion of M3 core clerkships. This course is designed to provide trainees with expanded clinical training in the areas of cleft, craniofacial and pediatric oral and maxillofacial surgery. *Fall, Spring.*
30 of 30 character abbreviation: **Ped Maxillofacial Craniofacial**

MEL 8XXX COM-Medicine 6(6,0)
Surgical Pathology: PR: Successful completion of M3 core clerkships. The course is designed to provide the student with the opportunity for surgical specimen preparation and interpretation. Emphasis is placed on normal gross and histologic findings, gross and microscopic pathology and clinicopathologic correlation of the patient's disease process. *Fall, Spring.*
30 character abbreviation: **Surgical Pathology**

College of Sciences Course Action Additions

PHY 5XXX COS-Physics 3(3,0) – THIS IS A SPLIT CLASS.
Physics of Fluids and Biofluids: PR: EGN3343 and MAP 2302 or C.I. Ideal Fluids; Basic equation of fluid flow; Viscous flow, Instability and turbulence; Thermal and mass transfers in fluids; Biofluid mechanics of blood circulation. *Even Spring.*
29 of 30 character abbreviation: **Physics of Fluids & Biofluids**

Rationale: Although the name "condensed matter physics" has been in use for almost forty years, our curricula still mainly concentrate on solid state part of condensed matter physics, leaving the liquid state of condensed matter physics untaught. With many new emerging fields in physics such as "biophysics", "soft matter physics", "physics of colloids", "physics of complex fluids" where fluid is the essential part of the system under study, it has become apparent that it is necessary to incorporate physics of fluids into our curricula.

Engineering & Computer Science Special Topics

EML 5937C Sect 01 ECS-Mechanical/Matrls/Aerosp 3(3,2)
ST: Applied and Computational Biofluids: PR: EML 4304C, EML 4703. Principles and foundations of applied fluid mechanics and computational methods to the human circulation. In addition to case studies, the course provides laboratory experiences in bioengineering with application to biofluid mechanics. *Occasional.*
30 of 30 character abbreviation: **ST Applied & Comput. Biofluids**
Rationale: This course is being offered as part of the deliverable of the New Florida Board of Governors Bioengineering Clustering Grant. The course expands MMAE's portflio of bioengineering classes in the biofluids area.
Discussion with others: Consulted COM and they indicated no concerns (email attached).
AGENDA NOTES: Course Addition also being proposed.

Engineering & Computer Science Course Action Additions

EML 5XXXC ECS-Mechanical/Matrls/Aerosp 3(3,2)
Applied and Computational Biofluids: PR: EML 4304C, EML 4703. Principles and foundations of applied fluid mechanics and computational methods to the human circulation. In addition to case studies, the course provides laboratory experiences in bioengineering with application to biofluid mechanics. *Odd Spring.*
24 of 30 character abbreviation: **Applied & Comp Biofluids**
Rationale: This course is being offered as part of the deliverables of the New Florida Board of Governors Bioengineering Clustering Grant. The course expands MMAE's portflio of bioengineering classes in the biofluids area.
Discussion with others: Contacted COM and they indicated no concerns (email attached).
Effect on majors: none
AGENDA NOTES: Special Topic also being proposed.

Engineering & Computer Science Course Action Deletions

CWR 6532 ECS-Civil, Envir & Const Eng 3(3,0)
Modeling of Subsurface Reactive Chemical Transport: PR: CWR 6126 or ENV 6055 or C.I. Mathematical formulations of geochemical equilibrium and kinetics, hydrological transport of chemicals, innovative numerical schemes to solve reactive chemical transport in subsurface media, design, and application of software for numerical solutions. *Occasional.*
Rationale: Department does not have plans to offer this course in the future.
Effect on majors: -----10/20/2011: This course is not used as a prerequisite.

EES 5605 ECS-Civil, Envir & Const Eng 3(3,0)
Outdoor Noise Control: PR: C.I. Community noise evaluation and control, legislative standards, instrumentation and measurement, abatement methods, and noise modeling. *Occasional.*
Rationale: Department does not have plans to offer this course in the future.
Effect on majors: -----10/20/2011: This course is not used as a prerequisite.

ENV 5071 ECS-Civil, Envir & Const Eng 3(3,0)
Environmental Analysis of Transportation Systems: PR: CWR 3201; ENV 3001. Prediction and abatement of pollution from transportation sources. Analysis techniques and environment laws. *Occasional.*
Rationale: Department does not have plans to offer this course in the future.
Effect on majors: -----10/20/2011: This course is not used as a prerequisite.

ENV 5116C ECS-Civil, Envir & Const Eng 3(2,3)
Air Pollution Monitoring: PR: C.I. Air Pollution sampling techniques, equipment, and monitor siting. Emphasis on theory and direct applications in air pollution monitoring. *Occasional.*
Rationale: Department does not have plans to offer this course in the future.
Effect on majors: -----10/20/2011: This course is not used as a prerequisite.

ENV 5334 ECS-Civil, Envir & Const Eng 3(3,0)
Characterization of Hazardous Waste Sites: PR: CWR 4101C and ENV 4341 or C.I. Practical and comprehensive methods of hazardous waste site characterization to determine site properties, contamination type, magnitude and risk, and remedial actions. *Occasional.*
Rationale: Department does not have plans to offer this course in the future.
Effect on majors: -----10/20/2011: This course is not used as a prerequisite.

College of Education Course Action Additions

PET 6XXX ED-Child, Family & Comm Sci 3(3,0)
Dietary and Nutritional Supplementation: PR: Graduate standing or C.I. An in-depth study of the efficacy of dietary and nutritional supplements used to enhance athletic performance and improve activities of daily living. *Even Spring.*
26 of 30 character abbreviation: **Dietary & Nutritional Supp**
Rationale: To increase the course offerings for Exercise Science graduate students.
Discussion with others: A course similar to this does not exist on UCF campus.
Effect on majors: Exercise Science graduate students.

PET 6XXX ED-Child, Family & Comm Sci 3(3,0)
Physiological Aspects of Sport and Training: PR: Admission to program or C.I. An in-depth study of adaptations of various physiological systems to exercise training and the effects of environmental factors on physiological systems and performance. *Even Fall.*
29 of 30 character abbreviation: **Phys Aspects Sport & Training**
Rationale: Program revisions are in progress. This course will be added to the Sport and Exercise Science program.

Effect on majors: Exercise Science graduate students.

PET 6XXX ED-Child, Family & Comm Sci 3(3,0)
Program Design in Strength and Conditioning: PR: Admission to the program or C.I. An in-depth study of various types of training, including insights on developing athletes' strength, power, anaerobic conditioning, endurance, agility, and speed. *Odd Spring.*
22 of 30 character abbreviation: **Program Design and S&C**
Rationale: To provide additional course offerings for graduate students in the program.
Effect on majors: Exercise Science graduate students.

PET 6XXX ED-Child, Family & Comm Sci 3(3,0)
Sport Nutrition: PR: Admission to the program or C.I. Study of the proper nutrition for training, the role of macro and micronutrients on the physiological processes of the body, and the importance of nutrient timing. *Even Fall.*
30 character abbreviation: **Sport Nutrition**
Rationale: To provide additional course offerings for Exercise Science graduate students.
Effect on majors: Exercise Science graduate students.

PET 7XXX ED-Child, Family & Comm Sci 3(3,0)
Exercise Endocrinology: PR: Admission to the program or C.I. An in-depth study of the neuroendocrine system and the hormonal responses to exercise. *Occasional.*
30 character abbreviation: **Exercise Endocrinology**
Rationale: To increase course offerings for Exercise Science/Physiology graduate students.
Effect on majors: Exercise Science/Physiology graduate students.

SSE 7XXX ED-Teach, Learn & Leadership 3(3,0)
Critical Issues in Social Studies Teacher Education: An examination of the relevant literature surrounding the research and practice of social studies teacher education. The course examines the major themes, ideas, perspectives, and programs. *Even Fall.*
29 of 30 character abbreviation: **Crit Iss in Soc St Teach Educ**
Discussion with others: There is no other course similar at UCF.
Effect on majors: PhD in Education--Social Science Education track and the EdD in Education.

Health & Public Affairs Course Action Additions

HIM 6XXX HPA-Health Mangt & Informatic 1(1,0)
Foundation of Health Services Administration: PR: Admission to Health Care Informatics or C.I. Provides students with an understanding of the managerial and administrative aspects in a health care environment, as it relates to health care informatics. *Spring.*
27 of 30 character abbreviation: **Found Health Services Admin**
Rationale: Provides a basic knowledge of health services administration in a health care environment for students who do not have an administrative background.
Discussion with others: N/A

HIM 6XXX HPA-Health Mangt & Informatic 1(1,0)

Medical Terminology for Informatics Professionals: PR: Admission to Heath Care Informatics or C.I. Provides students with medical terminology used or found in the medical environments and discuss the role the language of medicine plays in informatics. *Spring.*
30 of 30 character abbreviation: **Med Term for Informatics Profs**
Rationale: Provides a basic knowledge of medical terminology for students in Health Care Informatics who do not have a clinical background.
Discussion with others: The only potential overlap is within Health Management and Informatics. This has been discussed and determined that the focus of the class is much narrower and relates solely to HCI.

HIM 6XXX HPA-Health Mangt & Informatic 1(1,0)
Survey of Health Information Management: PR: Admission to Health Care Informatics or C.I. Provide students with an understanding of computer information systems utilized in a health care environment. *Fall.*
29 of 30 character abbreviation: **Survey Health Info Management**
Rationale: Provide students with a basic knowledge of health information technology utilized in a health care environment who do not have a computer or technical background.
Discussion with others: The only potential overlap is within the HIM department. This has been discussed and determined that the focus of this class is much narrower and relates solely to HCI.

HIM 6XXXC HPA-Health Mangt & Informatic 4(3,1)
Health Care Database Management: PR: HIM 5118C. To develop advanced skills necessary for the design and management of healthcare organization databases and their use in computer-based information systems. *Fall.*
25 of 30 character abbreviation: **Health Care Database Mgmt**
Rationale: This course provides students with the necessary skills for the design and management of healthcare organization databases and their use in computer-based information systems.
Discussion with others: NA
Effect on majors: Health Care Informatics

College of Sciences Course Action Revisions

CHS 5503 Topics in Forensic Science 3(3,0)
~~PR: Graduate status or C.I.~~ PR: Admission to Digital Forensics MS or Computer Forensics graduate certificate or C.I.
~~Will include the history of Forensic Science and curent issues such as Digital Evidence.~~
History and current topics in Forensic Science.

Rationale: This course is for only students that have been enrolled at UCF in the MS in Digital Forensics(MSDF) and the Graduate Certificate in Computer Forensics (GCCF) goes through UCF Continuing Education
Effect on majors: Digital Forensics MS

Engineering & Computer Science Course Action Revisions

CES 6116 Finite Element Structural Analysis 3(3,0)

PR: CES ~~4101~~ 5144 or C.I.
Concept, theory, and application of the finite element method; analysis of one-, two-, and three-dimensional structural components and systems; stability and dynamics; applications.

CES 6527 Nonlinear Structural Analysis 3(3,0)
PR: CES ~~4101 or CES~~ 5144 or C.I.
Structural nonlinear analysis theory and applications, including material and geometric nonlinearity, numerical methods and solution strategies, inelastic element formulation, and use of software packages.

CWR 5125 Groundwater Hydrology 3(3,0)
PR: CWR ~~4203C or equivalent.~~ 4633C or C.I.
Theories of groundwater movement, geological factors, analysis and design techniques, etc. Emphasis on practical considerations.

CWR 5205 Hydraulic Engineering 3(3,0)
PR: CWR ~~4101C and CWR 4203C.~~ 4633C or C.I.
Concepts of fluid mechanics and hydrodynamics applied to natural and man-made flow of intent to civil and environmental engineering.

CWR 5515 Numerical Methods in Civil and Environmental Engineering 3(3,0)
PR: CWR ~~4101C, CWR 4203C.~~ 4633C or C.I.
This course will present intermediate to advanced numerical methods theory and include code development and error assessment, while targeting civil and environmental engineering applications.

CWR 5545 Water Resources Engineering 3(3,0)
PR: CWR ~~4101C, CWR 4203C.~~ 4633C or C.I.
Systems identification and solution to complex water allocation problems, and other hydraulic engineering designs and operations using economic analysis and operations research techniques.

CWR 6102 Advanced Hydrology 3(3,0)
PR: CWR ~~4101C~~ 4633C or C.I.
Single site and regional frequency analysis; modeling hydrologic systems; lumped and distributed event models for urban and natural drainage basins; continuous simulation; real-time forecasting.

CWR 6236 River Engineering and Sediment Transport 3(3,0)
PR: CWR ~~4203C and CWR 4101C.~~ 4633C or C.I.
River morphology and regime with stabilization and modification of river courses. Sediment transport including control methods and modeling.

CWR 6535 Modeling Water Resources Systems 3(3,0)
PR: CWR ~~4101C and CWR 4203C.~~ 4633C or C.I.
Contemporary mathematical models for water quality and quantity considerations including computer-based hydraulic and hydrologic models.

TTE 5204 Traffic Engineering 3(3,0)
PR: TTE ~~4004.~~ 3810 or C.I.

Study of operator and vehicle characteristics, and design for street capacity, signals, signs, and markings.

TTE 5805 Geometric Design of Transportation Systems 3(3,0)
PR: TTE ~~4004~~ 3810 or C.I.
Study of highway geometric design in the engineering of transportation systems.

TTE 6205 Highway Capacity 3(3,0)
PR: TTE ~~4004~~ 3810 or C.I.
Highway capacity for all functional classes of highway. Traffic signalization including traffic studies, warrants, cycle length, timing, phasing and coordination.

TTE 6256 Traffic Operations 3(3,0)
PR: TTE ~~4004 and STA 3032~~ 3810 or C.I.
Fundamental theories and applications of traffic movements on streets and highways.

TTE 6270 Intelligent Transportation Systems 3(3,0)
PR: TTE ~~4004~~ 3810 or C.I.
Theories and applications of intelligent vehicle highway systems in transportation engineering.

TTE 6315 Traffic Safety Analysis 3(3,0)
PR: TTE ~~4004 and C.I.~~ 3810 or C.I.
Understanding crash research concepts, and identifying factors contributing to traffic crash occurrence.

College of Education Course Action Revisions

~~PET 6515C Measurement in Kinesiology and Physical Education~~ 3(3,0)
PET 6515 Assessment and Evaluation in Sport and Exercise Science
PR: Admission to the program of C.I.
Techniques of ~~measurement~~ assessment and evaluation of human performance and their applications to ~~physical education.~~ health, sport, and exercise science.
17 of 30 character abbreviation: **Assess & Eval SES**
Rationale: Program revisions are underway. This course will be added as a required course. The name change and the revised course description better reflect the content to be taught in the course. Additionally, the program no longer offers a Physical Education degree program.
Discussion with others: n/a
Effect on majors: Exercise Science graduate students.

PET 6690 ~~Exercise Testing and Prescription for Special Populations~~ 3(3,0)
Exercise Prescription for Special Populations
~~PR: PET 6388.~~ PR: Admission to the program or C.I.
Designed to provide the student the basic understanding of exercise testing and prescription as it pertains to special populations.
25 of 30 character abbreviation: **Exercise Prescr Spec Pops**
Rationale: The course title change better reflects the course content.
Discussion with others: n/a

Effect on majors: Exercise and Science graduate students.

Health & Public Affairs Course Action Revisions

SPA 6820 Leadership Project in School Speech-Language Pathology 3(3,0)
~~PR: Graduate standing.~~ PR: Admission to MA in Communication Sciences & Disorders or CI.
Development and completion of a clinical or research project pertaining to school-based practice.

SPA 6211C Voice Disorders 4(3,1)
~~PR: Graduate standing.~~ PR: Admission to MA in Communication Science & Disorders or CI.
Study of the etiology, evaluation, and management of voice disorders in children and adults, with laboratory demonstration and participation.

SPA 6225C Fluency Disorders 4(3,1)
~~PR: Graduate standing.~~ PR: Admission to MA in Communication Science & Disorders or CI.
Study of the theories, etiology, symptomatology and development of fluency disorders as well as assessment, differential diagnosis and management of disorders of fluency in children and adults with fluency failures.

SPA 6236 Motor Speech Disorders in Adults and Children 3(3,0)
~~PR: Graduate standing.~~ PR: SPA 6204 or CI.
Evaluation and treatment of dysarthrias, apraxias, and other motor speech disorders in adults and children associated with neurological problems, brain injury and systemic disease.
29 of 30 character abbreviation: **Motor Speech Dis Adults/Child**

SPA 6410 Aphasia and Related Disorders 3(3,0)
~~PR: Graduate standing.~~ PR: Admission to MA in Communication Science & Disorders or CI.
Evaluation and treatment of language disorders in adults with damage to the central nervous system, with an emphasis on etiology and differential diagnosis.

SPA 6417 Cognitive/Communicative Disorders 3(3,0)
PR: SPA ~~6410.~~ 6410 or CI.
Evaluation and treatment of right hemisphere dysfunctions, traumatic brain injury, and dementias, with special emphasis on memory, cognition, pragmatics and other issues affecting functional communication.
30 of 30 character abbreviation: **Cognitive Communictv Disorders**

SPA 6432 Issues in Autism 3(3,0)
~~PR: Graduate standing.~~ PR: SPA 6402 or CI.
Study of the diagnosis, assessment and intervention strategies for autism and related disorders.

SPA 6437 Communication Foundations and Assistive/Instructional Technology for Communication 3(3,0)
PR: Graduate ~~standing.~~ Status or CI.

Classroom approaches involving assistive/instructional technology used to meet communication needs of students with autism spectrum disorders and other communicative disorders.

SPA 6451 ~~Theory & Clinical Aspects Cognitive-Commun. Disorders in Traumatic Brain Injury~~ 3(3,0)
Theory and Clinical Aspects Cognitive-Comm Disorders in Traumatic Brain Injury
~~PR: Graduate standing or C.I.~~ PR: Admission to MA in Communication Science or CI.
Impact of traumatic brain injury on neurological, cognitive-communication and social performance of school-aged and post-secondary students, including identification of co-morbid conditions, recovery patterns and interviewing.
28 of 30 character abbreviation: **Theory & Clin Aspects in TBI__**

SPA 6453 Management of Cognitive-Communication Disorders in Traumatic Brain Injury 3(3,0)
PR: SPA ~~6452, graduate standing, or C.I.~~ 6452 or CI.
Management of cognitive-communication disorders in traumatic brain injury of school-aged and post-secondary students with emphasis on attention, perceptual skills, executive function, learning and social interaction.
29 of 30 character abbreviation: **Mgmt Cognitive-Com Dis in TBI_**

SPA 6474 Assessment and Management of Culturally and Linguistically Diverse Populations 3(3,0)
~~PR: SPA 4478 or SPA 5473.~~ PR: Admission to MA in Communication Science or CI.
Role of native and second languages, dialects and culture in the assessment and management of individuals from culturally and linguistically diverse backgrounds.
30 of 30 character abbreviation: **Assessmt & Mgmt of Diverse Pop**

CCJ 5015 The Nature of Crime 3(3,0)
PR: Admission to Criminal Justice ~~Master's program~~ graduate degree, graduate certificate or C.I.
This course provides an overview of major dimensions of crime in the U.S.; epidemology of crime, costs of crime, and typologies of crime and criminals.

CCJ 5456 The Administration of Justice 3(3,0)
PR: Admission to Criminal Justice ~~Master's~~ graduate degree program, graduate certficate program or C.I.
This course provides an overview of the criminal justice system and a critical analysis of formal and informal processing of offenders by criminal justice agencies.

CCJ 5934 Criminal Justice Investigative Process 1(1,0)
PR: Graduate standing or C.I.
Advanced seminar providing students with a broad view of how ~~criminal justice investigative processes operate. Focuses~~ the criminal justice investigative process operates. Focus on the roles and responsibilities of agents as investigators. May be used in the degree program a maximum of ~~4 times.~~ 3 times only when course content is different.

CCJ 6027 Criminal Justice Responses to Terrorism 3(3,0)
~~PR: Graduate standing.~~ PR: Admission to Criminal Justice graduate program or C.I.
Critically examines phenomena of domestic and international terrorism to give students a solid grounding of salient issues in developing crime control strategies to prevent terrorism and mount appropriate responses to incidents.

CCJ 6051 Community Justice 3(3,0)
~~PR: CCJ 5015.~~ PR: Admission to Criminal Justice graduate degree, graduate certificate or C.I.
~~Examines the emergence of community justice as a major perspective in the U.S. punishment system.~~
Examines concepts of community justice as they relate to an alternative form of administering criminal justice.

CCJ 6067 Perspectives on Genocide 3(3,0)
~~PR: CCJ 5456, CCJ 5015,~~ PR: Admission to Criminal Justice graduate program or C.I.
This course provides a critical examination of criminal justice perspectives on genocide.

CCJ 6106 Policy Analysis in Criminal Justice 3(3,0)
PR: Admission to Criminal Justice graduate program, graduate certificate or C.I.
This course is designed to familiarize students with the causes and consequences of public policy with an emphasis on criminal justice policy.

CCJ 6431 Leadership and Ethics in Criminal Justice 3(3,0)
~~PR: CCJ 5456 or C.J.~~ PR: Admission to Criminal Justice graduate program, graduate certificate or C.I.
Examines the leadership issues faced by decision makers in the criminal justice system.
25 of 30 character abbreviation: **Leadership & Ethics in CJ_____**

CJC 5020 Foundations of Corrections 3(3,0)
~~PR: C.I.~~ PR: Admission to Criminal Justice graduate program, graduate certificate or C.I.
Provides an overview of correctional process in U.S., including philosophical foundations and contemporary practices.

CJE 5021 Foundations of Law Enforcement 3(3,0)
~~PR: C.I.~~ PR: Admission to Criminal Justice graduate program, graduate certificate program, or C.I.
Examines police role in modern society and law enforcement policy.

CJJ 6020 The Juvenile Justice System 3(3,0)
PR: Admission to Criminal Justice graduate program, graduate certificate, or C.I.
This course will focus on the development and philosophy of the Juvenile Justice System; the measurement of delinquency, theories and correlates of delinquency and prevention.

CJL 6568 Law and Social Control 3(3,0)
PR: Admission to Criminal Justice graduate program, graduate certificate or C.I.
This course will examine the types of behavior the state has sought to control and the means employed to exert such control.

HIM 6816 ~~Practicum in Health Care Informatics~~ 3(3,0)
Health Care Informatics Capstone
PR: HIM 5118C; HIM 6119C; HIM 6122C; HIM 6123C; HIM 6464C; HIM 6117C; HIM 6124C; HIM 6935.
The practicum course addresses the process of transforming data to information, knowledge and practice in a health care setting. An operations management challenge that is amenable to IT interventions in a health care organization shall be identified.
25 of 30 character abbreviation: **Health Care Info Capstone**

HSA 6128 Health Care Services Management 3(3,0)
~~PR: Graduate status.~~ PR: Admission to the Health Services Administration graduate program or C.I.
Conceptization and development of customer service in health care organizations. The focus is on the links between theory and practical applications.

HSA 6342 Health Care Human Resources 3(3,0)
~~PR: Graduate status.~~ PR: Admission to the Health Services Administration graduate program or C.I.
Study of health care organizations, including modern management, human performances, and leadership.

HSA 6385 Health Care Quality Management 3(3,0)
~~PR: Graduate status.~~ PR: Admission to the Health Services Administration graduate program or C.I.
Mechanisms of enhancing quality of service and care.

PHC 6000 Epidemiology 3(3,0)
~~PR: Graduate status.~~ PR: Admission to the Health Services Administration graduate program or C.I.
A study of the distribution and determination of diseases and injuries in human populations.

PHC 6146 Health Planning and Policy 3(3,0)
PR: Admission to Health Services Administration graduate program or C.I.
Review of the determinants of the revolution of the health care system in the United States; analysis of public health, preventive medicine, and therapeutic medicine in terms of quality, access, and cost; methodologies and issues in comprehensive health planning; and trends in health policy development.

PHC 6420 Case Studies in Health Law 3(3,0)
PR: Admission to the Health Services Administration graduate program or C.I.
Health law including patient care, liability, malpractice, workmen's compensation, and legal responsibilities of health personnel.