AGENDA University Curriculum Committee September 18 2007

The UCC will meet on Tuesday, September 18, 2007, from 1:30 to 2:30 p.m. in 226 Tigert Hall. The agenda for this meeting is as follows:

- **1.** Approval of minutes of May 1, 2007 meeting. (pages 1-2)
- **2.** Update from Faculty Senate.
- **3.** Proposed change to degree requirements for the Bachelor's degree in Material Science Engineering. (pages 3-6)
- **4.** Proposed changes to Bachelor of Science degree in Computer Science offered through College of Engineering. (pages 7-43)
- 5. Proposed increase in credits for degree in Nuclear Engineering from 126 to 129. (pages 44-46)
- 6. Proposal to establish a School of Business. (pages 47-49)
- 7. Proposed name change of the undergraduate major for Information Systems and Operations Management Department (formerly the Decision and Information Sciences Department). (pages 50-51)
- 8. Proposed revision to the Bachelor of Health Science Program. (pages 52-53)
- **9.** Proposed changes to the Agricultural Education and Communication specializations. (pages 54-60)
- 10. Proposed changes to the Soil and Water Science major and minor. (pages 61-64)
- **11.** Proposed changes to Entomology and Nematology minor. (pages 65-66)
- 12. Proposed changes to International Humanitarian Assistance minor. (pages 67-69)
- 13. Items from Graduate School.
 - a. Proposal to accept substitute measures for the TOEFL exam required of international applicants. (page 70)
 - b. Proposal for a concentration in Family and Youth Development under the programs Master of Family, Youth, and Community Sciences and Master of Science with a major in Family, Youth, and Community Sciences. (page 71)

- c. Proposal for a joint degree program in Doctor of Veterinary Medicine awarded by the College of Veterinary Medicine and the Master of Public Health awarded by the College of Public Health and Health Professions. (page 72)
- d. Proposal for a L.L.M. in Environmental & Land Use Law. (page 73)
- e. Proposal for a concentration in Supply Chain Management within the Master of Science with a major in Decision and Information Sciences. (page 74)
- 14. Notice of proposed new undergraduate courses. (page 75)
- 15. Notice of proposed changes to undergraduate courses. (pages 76-77)
- 16. Notice of proposed new professional courses. (page 78)
- 17. Notice of proposed changes to professional courses. (page 79)
- 18. Notice of proposed new graduate courses. (none)

Minutes of the Meeting of the University Curriculum Committee May 1, 2007

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Sheila Dickison convened the UCC at 1:30 P.M. in 226 Tigert Hall.

Members Present: Sheila Dickison, Chair, Thomasenia Adams, Peggy Carr, Ken Gerhardt, Linda Childers Hon, Yumiko Hulvey, Barbara Korner, Albert Matheny, Karen Miles, Elaine Turner, Caroline Wiltshire. Guests: Joanne Foss, Andrew Wehle

- 1. Approval of minutes of the March 27, 2007 meeting: The minutes were approved.
- 2. Reconsideration of proposed request for credit transfer approval in the Department of Classics: The request was approved pending Lynn Frazier working with Classics to get an official agreement with CYA in writing. Dr Dickison asked that Classics consult with other departments as coursework requires.
- 3. Update on the Academic Calendar for 2011-2012: Dr. Dickison has spoken with the Academic Policy Council about the timing of spring break. They will consider the request and once a decision is reached the calendar will come back to the UCC for approval, in the fall.
- 4. Proposed revision to upper division curriculum for the Forest Resources and Conservation (FRC) major in the College of Agricultural and Life Sciences: Dr Turner spoke with others who were concerned and as a result the name of the specialization has been modified form Business Management to Forest Business Management. The revision to the curriculum was approved.
- 5. Proposed creation of the American Indian and Indigenous Studies (AIIS) Minor in the College of Liberal Arts and Sciences: Dr Hulvey reviewed the proposal for the new minor. The minor was approved.
- 6. Proposed changes to the Food and Resource Economics specializations: Dr. Turner summarized the changes. The modifications were approved.
- 7. Proposed suspension of the Economics minor offered through the College of Liberal Arts and Sciences: Approved effective Summer B 2007. Students already in the program will be allowed to complete their minor.
- 8. Proposed revision to the undergraduate French major: The revision was approved.

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- 9. Proposed changes to the Universal Tracking Criteria in the School of Architecture: The proposed changes were approved.
- **10. Notice of proposed new undergraduate courses**: A motion to accept all proposed new courses was approved.
- 11. Notice of proposed changes to undergraduate courses: Information item.
- 12. Notice of proposed new professional courses: Approved.
- 13. Notice of proposed changes to professional courses: Information item.
- 14. Notice of proposed new graduate courses: Information item.

The meeting adjourned at 2:20 P.M.



Department of Materials Science and Engineering

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February 15, 2007

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To: College of Engineering Curriculum Committee From Elliot P. Douglas Re: Changes to MSE Undergrad Requirements

The Department of Materials Science and Engineering requests a change to the requirements for the Bachelor's degree in Materials Science and Engineering. The changes are as follows:

- Remove EMA 3123, Metallurgical Engineering (3 credits) as a requirement. The content of this course is being incorporated into EMA 3050, Introduction to Inorganic Materials, which was approved as a course name change at the last COE Curriculum Committee meeting.
- Remove STA 3032, (3 credits) as a requirement.
- Add EMA 3xxx, Error Analyses and Optimization Methodologies in Materials Research (3 credits) as a requirement. This was approved as a new course at the last COE Curriculum Committee meeting.
- Remove EMA 4760, Plastics Design (3 credits) as a requirement for the polymers specialty. The content of EMA 4760 will be incorporated into the capstone design course, EMA 4714, Materials Selection and Failure Analysis.
- Require EMA 4121, Interfacial Engineering (3 credits) as a core MSE course for all students. Currently this course is a specialty course, required of all specialties except Polymers.
- Add 3 credits of technical electives to each specialty.

A flowchart showing the additions and deletions to the curriculum is attached. Overall, these changes result in no net change to the number of credits required for the degree.

Materials Science and Engineering 1st Two Years





Materials Science and Engineering Last Two Years



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Materials Science and Engineering Specialties







Computer Sciences and Engineering Building Room E301 PO Box 116120 Gainesville, FL 32611-6120 Tel: (352) 392-1200 Fax: (352) 392-1220 E-mail: info@cise.ufl.edu

March 7, 2007

MEMORANDUM

TO: Cammy R. Abernathy, Associate Dean for Academic Affairs College of Engineering

FROM: Randy Chow, Chair CISE Curriculum Committee

SUBJECT: B.S. Degree in Computer Science, College of Engineering

Per request by the Board of Governors, the total credit hours of the proposed B.S. Degree in Computer Science offered through College of Engineering has been modified from 126 to 120. This reduction of 6 credit hours is achieved by reducing 3 hours in Technical Electives (from 18 to 15) and 3 hours in Communication (from 9 to 6). The rest of the degree requirements remain unchanged as in the original proposal. The updated degree requirement sheet, a sample four-year track, and the detailed proposal are attached. Your and the Board of Governors' approval will be greatly appreciated.

Attachments:

- 1. Degree Requirement sheet
- 2. A four-year track program
- 3. The degree proposal

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GENERAL	EDUCATION	(18)**	*NU00	fùi
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Composition (ENC 3254)3	
Social and Behavioral Sciences*6-9	

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Both categories combined must total 15 hrs with no fewer than six hours taken in either category.

- .. These courses may be selected from courses that simultaneously fulfill the general education area requirement in social and behavioral science (S) and humanities (H).
- *** The mathematics, physical and biological science requirements are covered by the departmental requirements below.

DEPARTMENTAL REQUIREMENTS

Mathematics (24/25)

MAC 2311	Analytic Geometry & Calculus 1	4
MAC 2312	Analytic Geometry & Calculus 2	4
MAC 2313	Analytic Geometry & Calculus 3	4
MAP 2302	Elementary Differential Equations (Cal 2)	3
MAS 3114	Comp. Linear Algebra (Cal 2 & prog. lang.exp.)	3
OR MAS 41	05 Linear Algebra 1 (Cal 3)	4
STA 3032	Engineering Statistics (Cal 1)	3
COT 4501	Numerical Analysis (CIS 3020/23, MAS3114)	3

Physics (8)

PHY 2048	Physics w/Cal 1 (HS Physics, Cat 1; Cal 2, PHY2048L)3
PHY 2048L	Lab for PHY 2048 (PHY 2048)1
PHY 2049	Physics w/Cal 2 (PHY 2048; Cal 3, PHY 2049L)3
PHY 2049L	Lab for PHY 2049 (PHY 2049)1

Chemistry (4)

CHM 2045	General Chemistry (CHM 1025; or passing grade on
	chem. readiness exam; CHM_2045L)
CHM 2045L	Lab for CHM 2045 (CHM 2045)1

Communications (6)

ENC 3254	Professional Communications for Engineers	3
Writing or Pub	lic Speaking courses (advisor approval)	6

Interdisciplinary Electives (15) (choose one option)

Option A*: All credits must be applicable toward an official UF minor; completion of the minor is not required if the minor exceeds 15 credit hours, however, it is highly recommended. Option B : All courses must be at the 3000-level or above and in the same area (advisor approval required).

* If the chosen minor requires less than 15 credits, the remaining credits can be fulfilled with additional upper-division coursework in the area of the minor or with CS technical electives

Computer Science Major Courses (33)

CIS 3020	Adv Prgm Fund for CIS Majors (Cal 1, prgm exp.)3
OR CIS 3023	Programming for CIS Majors II (CIS 3022)
COT 3100	App. of Discrete Structures (Cal 1, CIS 3020 or CIS 3023) .3
COP 3530	Data Struct & Algorithms (CIS 3020/23, COT 3100, Cal 2)4
CDA 3101	Intro to Comp Organization (Cal 1, CIS 3020/23)
CEN 3031	Intro to Software Engineering (COP 3530)3
COP 4600	Operating Systems (COP 3530, CDA 3101)3
CEN 4500C	Comp. Network Fund. (COP 4600)4
CIS 4914	Sr. Project or CIS 4913C-IPPD 2 (4EG)3
CIS 4301	Info & DB Sys Design & Dev 1(3020/3023, 3100) 3
EEL 3701C	Digital Logic & Computer Systems (CIS 3020/23)4

Ethics (1)

EGN 4034	Professional Ethics (4EG)1
CGS 3065	Legal & Social Issues in Computing3

Technical Electives (15**)

CAP 4410	Digital Image Processing (COP 3530)
CAP 4621	Artificial Intelligence & Heuristics (COP 3530) 3
CAP 4680	Knowledge-Based Syst.: Theory & Pract. (CAP 4621)3
CAP 4730	Comp. Structures in Computer Graphics (COP 3530) 3
CAP 4800	Systems Simulation (COP 3530)
CAP 4403	Aesthetic Computing (COP 3530)
CDA 4102	Computer Architecture (CDA 3101, COP 3530) 3
CEN 4012	Software System Development (CEN 3031)
CEN 4072	Software Testing & Verification (CEN 3031)
CIS 4905	Independent Study 1-4
CIS 4912C	IPPD 1 (CDA 3101, COP 3530, consent of instr.)3
COP 4020	Programming Language Concepts (COP 3530) 3
COP 4331	Object-oriented Programming (COP 3530)3
COP 4343	UNIX System Administration (COP 4600)
COP 4620	Translators & Translator Writing Sys. (COP 3530) 3
COP 4720	Info & DB System Design & Dev. 2 (CIS4301, COP 3530, S) 3
CGS 3065	Legal & Social Issues in Computing
EIN 4354	Engineering Economy (Jr. Standing)

The following courses require advisor approval in order to fulfill technical elective requirements:

CIS 4930	Special Topics (advisor approval)
CIS 4940	Internship (advisor approval)1
CIS 4949	Co-op (advisor approval)1

"CIS 3022, CGS 3460, and CGS 3464 are considered programming language courses. At most, 3 credits of a programming language course may count towards technical elective credit. See an advisor for approval

NOTES:

- CIS 3020 is not equivalent to CIS 3023. Any student who takes CIS 3022 must then take CIS 3023. If a student takes CIS 3022/3023 sequence, then they do not have to take CIS 3020.
- ENC 3254, CIS 3020, and CIS 3023 must be completed with a C or better. Courses in parenthesis are prerequisites.
- Underlined courses are corequisites.
- An Exit Interview is required during your last semester. Please see one of the department academic advisors.
- Students' must complete all tracking courses with a C or better within two attempts (W counts as an attempt), while maintaining a 2.5 tracking GPA.
- Students pursuing a math minor may substitute MAD4401 for COT4501.
- Students who take CGS3065 as a technical elective simultaneously satisfy the ethics requirement.

CURRICULUM LEADING TO THE BACHELOR OF SCIENCE IN COMPUTER SCIENCE (CSE) COLLEGE OF ENGINEERING, UNIVERSITY OF FLORIDA STAUNE FLORE

Four-Year Track

FRESHMAN YEAR

Semester 1—Fall If you do not place out of ENC 1101, take it this semester. MAC 2311 Analytical Geometry & Calc 1 (GE-M)
Social/Benavioral Science (GE-S)
Total 14
Semester 2—Spring
MAC 2312 Analytical Geometry & Calc 2 (GE-M) 4
PHY 2048 Physics with Calc 1 (GE-P)
DUV 20481 - Dhysics Lab (CT D)
FFIT 2040L FITYSIUS Lau (GE-P)
CIS 3022 Programming for CIS Major 1 (CISE Prgm Elective) . 3
Interdisciplinary Elective
Total 14
Somestor 2-Summer
CIS 3023 Programming for CIS majors 2 (GE-M)

CIS 3023 Ph	ogramming for CIS majors 2 (GE-M)	
PHY 2049	Physics with Calc 2 (GE-P)	
PHY 2049L	Physics Lab (GE-P)	1
Social/Behavioral Science (GE-S)		
	Total	10

SOPHOMORE YEAR

Semester 4—Fall	
MAC 2313 Analytical Geometry & Calc 3 (GE-M)	4
COT 3100 Applications of Discrete Structures	3
EEL 3701C Digital Logic & Computer Systems	4
ENC 3254 Professional Comm. for Eng. (GE-C, GE-6)	<u>3</u>
Total	14 (
Semester 5—Spring	
MAP 2302 Differential Equations	3
CDA 3101 Intro to Computer Organization	3
Interdisciplinary Elective	3
Humanities (GE-H)	<u>3</u>
Total	12
Semester 6—Summer	
COP 3530 Data Structures & Algorithms	4
Interdisciplinary Elective	3
Humanities or Social/Behavioral Science (GE-H or GE-S)	<u>3</u>
Total	10

Critical Tracking Criteria: Critical tracking courses for semesters 1-4 appear in bold; these courses must be completed with a combined GPA of 2.5 or higher. For additional tracking requirements please refer to the College of Engineering section in the Undergraduate Catalog.

Students with an initial course load of 15 credits or more during the Fall and Spring semesters will be permitted to drop a course without penalty provided this is done by the end of the seventh week and the total credits remaining are 12 or more. See an advisor for the summer rule.

JUNIOR YEAR
- 2 .25
Semester 7 Fall 7
CIS 4301 Pullinfo & Database System Design and Dev. 1 3
Interdisciplinary Elective
MAS 3114 Computational Linear Algebra
OR MAS 4105 Linear Algebra 1
STA 3032 Engineering Statistics
Total 12/13
Semester 8—Spring
Communications Course
COT 4501 Numerical Analysis
Interdisciplinary Elective
Technical Elective
Total 12
Summer Semester
Pursue Internship/Co-op if desired

SENIOR YEAR

Semester 9-	-Fall		
COP 4600	Operating Systems		
CEN 3031	Intro to Software Engineering		
CGS 3065	Legal and Social Issues		
Technical Ele	ective		3
		Total	12
Semester 10	—Spring		
CEN 4500C	Computer Network Fundamenta	ls	4
CIS 4914	Sr. Project or CIS 4913C-IPPD 2	2 (4EG)	3
Technical Ele	actives		3
		Total	10

TOTAL HOURS REQUIRED FOR DEGREE

120

ACM:

For information on joining the Association for Computing Machinery, visit their web site at www.acin.clse.ufl.edu, or send e-mail to acm@cise.ufl.edu. If you would like to participate in any ongoing discussions, please subscribe to acm-discuss@cise.ufl.edu and if you are interested in receiving announcements of corporate info sessions. job/internship postings, programming competitions and upcoming speakers, please subscribe to acm-announce@cise.ufl.edu.

Honors:

In order to graduate curn laude a student must attain an upper division GPA of 3.3 or higher. A 3.5 upper division GPA is required for magna cum laude and a 3.8 for summa cum laude. In order to receive magna or summa cum laude designations a student must complete an honors project and submit a written thesis based on the research performed for that project. For more information on graduating with honors please contact Kevin Austin in CSE E405 the semester before you graduate.

CISE DEPT. WEB SITE: www.cise.ufl.edu

Please visit our web site for information about professors and course syllabi.

CISE DEPT. ADVISING WEB SITE;

www.cise.ufl.edu/students_services/

Please visit our web site for information on degree programs.

Attachment C



Florida Board of Governors 2031 hout 22 P 3: 25

Recommended Proposal Format for New Bachelor's or Master's Degree Program

<u>University of Florida</u> University Submitting Proposal

Engineering Name of College or School <u>As soon as approved</u> Proposed Implementation Date

<u>Computer and Information</u> <u>Science and Engineering</u> Name of Department(s)

<u>Computer Science</u> Academic Specialty or Field **B.S. Computer Science CIP 11.0701** Complete Name of Degree (Include Proposed CIP Code)

The submission of this proposal constitutes a commitment by the university that, if the proposal is approved, the necessary financial commitment and the criteria for establishing new programs have been met prior to the initiation of the program.

Vice President for Academic	Date	President	Date
Affairs			

Indicate the dollar amounts appearing as totals for the first and the fifth years of implementation as shown in the appropriate summary columns in DCU Table Four. Provide headcount and FTE estimates of majors for years one through five. Headcount and FTE estimates should be identical to those in DCU Table Three.

		Projected Student Enrollment	
	Total Estimated Costs	Headcount	FTE
First Year of Implementation	\$0	250	215
Second Year of Implementation		350	301

Third Year of Implementation		355	305
Fourth Year of Implementation		385	331
Fifth Year of Implementation	\$0	430	370

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Note: This outline and the questions pertaining to each section <u>must be reproduced</u> within the body of the proposal in order to ensure that all sections have been satisfactorily addressed.

INTRODUCTION

1. Program Description

Describe the degree program under consideration, including its level, emphases (including tracks or specializations), and the total number of credit hours.

The proposed program is a 120 credit **B.S. degree in Computer Science** to be offered in the College of Engineering. The main components of the program are

- Engineering pre-professional courses in mathematics and science
- A technical core of required courses covering essential areas in computing
- *Technical electives* allowing students to deepen their knowledge in chosen technical areas
- Interdisciplinary electives allowing students to gain in-depth of knowledge in any area of their choice
- Communications, general education, and humanities

Many valid, yet different, approaches to studying computer science are suitable for students with different goals. With our current degree programs (described below in section IIb), we already provide several. However, we currently do not provide a good option for those who want a very strong technical background in Computer Science but are not interested in a strong hardware emphasis. The proposed Computer Science degree in the College of Engineering fills this gap. The interdisciplinary electives allow this degree program to easily adapt to the increasingly interdisciplinary nature of computing and provide more flexibility for students.

READINESS

II. Institutional Mission and Strength

A. Is the proposed program listed in the current State University System Strategic Plan? How do the goals of the proposed program relate to the institutional mission statement as contained in the SUS Strategic Plan and the University Strategic Plan?

Computing and Information Science is a broad area that has been identified by SUS under the *Targeting Baccalaureate Degree Programs for Florida Workforce Enhancements* program.

The overarching goal of the University of Florida Strategic Plan is to "raise the University of Florida into the ranks of the nation's great universities." More specifically, the university plans to strengthen key disciplines in the core colleges. Engineering has been designated as a "core college" and within Engineering, Computer Science has been designated a key area. The new program will strengthen the undergraduate program in this key area.

B. How does the proposed program specifically relate to existing institutional strengths such as programs of emphasis, other academic programs and/or institutes; and centers?

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The current undergraduate degree offerings by the CISE department have developed over the years and are no longer optimal. Currently we offer four bachelor level programs in four differenct colleges. Theses are

BS-Computer Engineering (CEN). This is a degree offered jointly by the CISE and ECE departments in the College of Engineering and provides students with a rigorous engineering education and background in both hardware and software design. The degree offers two tracks which give students the option to specialize in either software (through CISE) or hardware (through ECE).

BS-Computer Science (CS). This degree is offered by the CISE department through the College of Liberal Arts and Sciences. This program allows students to obtain a liberal education while studying computer science. It offers students considerably more freedom than the Computer Engineering program at the expense of considerably less technical depth in computer science. This degree program is popular with students who want to double major in Computer Science and another field in CLAS such as Mathematics or Physics.

BS-Computer and Information Sciences (CIS). This degree is offered by the CISE department through the College of Business. Students receive a business-oriented education and develop skills necessary to develop software in a business environment. This program allows less depth in computing than either Computer Engineering or Computer Science degrees, while providing significant background in business and economics.

BS-Digital Arts and Sciences (DAS). This unique degree is offered by the CISE department as a joint program in the College of Engineering and the College of Fine Arts. DAS is a limited access program that provides students with a solid core education in computer science along with the flexibility to complement their program with art, music, theatre, ctc. Many of the students in this program aspire to carcers such as animation, video game design, or computer music.

Justification for another program Many valid, yet different, approaches to studying computer science are suitable for students with different goals. With our current degree programs, we already provide several. However, we currently do not provide a good option for those who want a very strong technical background in Computer Science but are not interested in hardware. Such students must either choose the CLAS Computer Science degree, be subjected to all the CLAS requirements such as foreign language proficiency and sacrifice considerable technical depth; or choose the Computer Engineering degree and take hardware and engineering core courses that are not of interest to the students or valued by their future employers. The lack of flexibility for students in the Computer Engineering program eliminates the opportunity for any sort of interdisciplinary focus in that program.

We propose to introduce a new degree in Computer Science offered by the College of

Engineering (EG-CS) as a first step in better meeting the needs of our students and strengthening our programs.

The new degree will

- Offer an interdisciplinary Computer Science degree with a strong, engineering oriented technical basis. Adding EG-CS to our programs will help bring our program in line of that with other leading universities, virtually all of which offer several computer science related degrees, and about half of whom offer Computer Science degrees through both an engineering and a liberal arts college.
- The new program will facilitate the development of interdisciplinary studies in Computer Science. An example of such an interdisciplinary program is Digital Arts and Sciences, a joint effort between the Colleges of Engineering and Fine Arts. This program was established as a new degree program, but this approach will be impractical to continue. In contrast, the EG-CS will offer a framework for new interdisciplinary programs that could be developed simply by defining and offering appropriate courses as technical and interdisciplinary electives.
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- Compared with the current Computer Engineering degree (CEN), the proposed EG-CS degree will offer much more flexibility for the students. Instead of the electrical engineering courses required in the CEN program, EG-CS students will choose interdisciplinary electives that allow them the opportunity to acquire some depth of knowledge in virtually any field the university has to offer. This flexibility will be increasingly important in the future, as computers become important tools in an ever-increasing number of fields.
- Compared with the current Computer Science degree offered in the College of Liberal Arts and Sciences (CLAS-CS), the proposed EG-CS degree will require a significantly stronger technical background (54 computer science credits including software, hardware, and technical electives vs. 35 for the CLAS degree.) In addition, the EG-CS students will acquire essentially the same mathematics and science background as other engineering students.
- The EG-CS program is a first step towards streamlining and differentiating the various degree offerings of the CISE department. This will help to make the management of these curricula more efficient and clarify the choices for the students.

An important feature of the new degree program are the interdisciplinary electives which provide the opportunity for students to obtain some depth in virtually any area the university has to offer. We encourage students to choose a minor, but if a formal minor is not available in their area, they may create their own, subject to advisor approval.

From the point of view of the CISE department, the proposed CS program will provide an important framework for the future. The science behind computing has become so deep and information technology so pervasive that they are relevant to virtually every subject in the university. The enabling aspects of Computer Science for the Arts was recognized and let to the Digital Arts and Sciences program as a joint program between the Colleges of Engineering and Fine Arts. However, it is simply not feasible to continue to create new degree programs in every area where an interdisciplinary degree program combining computer science and another area would be desirable. Instead of creating new degree programs, we will be able to define new interdisciplinary programs as specializations of the new Computer Science degree by introducing new courses and specifying appropriate technical and interdisciplinary electives for the specialization.

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C. Describe the planning process leading up to submission of this proposal. Include a chronology of activities, listing the university personnel directly involved and any external individuals who participated in planning. Provide a timetable of events for the implementation of the proposed program.

Chronology of activities.

- o Fall 2002
 - Program suggested by Dean of Engineering Pramod Khargonekar to fill a gap in our curriculum and bring our offerings in line with peer institutions.
 - CISE Curriculum Committee devised draft program
 - Draft program was reviewed by the CISE Industrial Advisory Board and CISE faculty
 - Feedback from IAB and faculty incorporated into the program
 - Program approved by CISE faculty
- o Spring 2003
 - Program revised in view of feedback by College of Engineering Curriculum Committee
- o Spring 2004
 - Preproposal approved at university level
- o Fall 2004
 - College, University, and State level approvals (anticipated)
- o Spring 2005
 - Initiate program (anticipated)

University personnel and external constituencies directly involved in planning.

CISE curriculum committee

CISE faculty CISE Industrial Advisory Board COE curriculum committee

Timetable

The program requires no new courses for implementation and can be initiated as soon as all $\frac{1}{2}$ approvals are received. We expect the program to be implemented starting spring or fall 2005.

III. Program Quality - Reviews and Accreditation

If there have been program reviews, accreditation visits, or internal reviews in the discipline pertinent to the proposed program, or related disciplines, provide all the recommendations and summarize the institution's progress in implementing the recommendations.

The BS Computer Engineering program is accredited by ABET—the previous visit occurred in October, 2000. Since the proposed Computer Science program will share courses, faculty and facilities with the Computer Engineering program, the ABET recommendations are relevant to the new program.

There were three concerns raised by ABET during the October 2000 visit relevant to the computer engineering program, one college-wide (faculty salaries) and two for the program itself (number of faculty, and space). The following paragraphs are excerpted from the CISE 2004 Annual ABET Status Report for the Computer Engineering Program.

The ABET statement reported the following college-wide concern: Criterion 7: Institutional Support and Financial Resources. Institutional support and financial resources must be adequate to attract and retain well-qualified faculty. During the last accreditation visit at the University of Florida, it was cited that faculty salaries continue to be below national averages and professional norms. Although it is recognized that several initiatives have been enacted to correct the salary problem, it never the less still appears that faculty salaries continue to be below national averages and professional norms, especially in comparison to the University of Florida's peer institutions. The EAC recommends that measures be taken to assure that financial resources are directed to maintaining the quality and continuity of faculty in the engineering program. The CISE department chair, Sartaj Sahni, and Dean Pramod Khargonckar implemented a plan to improve the salaries of high-performance low-paid faculty. In January, 2003, 13 faculty received raises in this program. While this remains a serious concern that has not yet been resolved, the current economic climate has helped us recruit top quality faculty, and perhaps to retain more of the faculty we currently have. No further actions have taken place. Low raises, salary compression, and salary inversion remain significant issues.

The ABET statement reported the following: Criterion 5: Faculty. The faculty in CISE, supporting 776 computer engineering majors and 1660 majors total, are delivering course content in a high quality manner. The number of faculty is, however, insufficient to generate a satisfactory level of interpersonal contact with students. Students acknowledge that faculty members respond to email, but several students expressed concern that less assertive students never have the chance to get to know any faculty members to the point where they can provide proper advisement. We are addressing this problem by continuing to hire new faculty and staff. We now have three academic advisors in CISE. This year, we sought to fill three new tenure-track faculty positions. All three of them were filled, and from our top four candidates. We also had the rare opportunity to hire a cross-disciplinary candidate, which we were able to do. With the four faculty hired in 2002, the five hired in 2003, and the departure of five tenure-track faculty members over the past two years, this gives us a net gain of eight tenure-track faculty in CISE to at least 36 tenured or tenure-track faculty (including appointments shared with ECE). We have an additional 7 non-tenure track faculty (visiting faculty and lecturers), 3 with PhD's.

The ABET statement reported the following: Criterion 7: Institutional Support and Financial Resources. Both CISE and ECE need additional space for labs, offices, and TA areas. The problem is especially acute in CISE where there are nearly 2000 students and yet the department has the lowest square footage per faculty in the college and the highest ratio of student credit hours per faculty member. CISE has converted valuable lab space to TA offices, and there are many cases where TAs have to share desks or do not have offices at all. Considering the heavy reliance on TA support for computing labs, it is critical to have space to support areas for student-TA interaction. Limited space was made available to the program in the form of three rooms in Weil Hall two years ago. Although this space is not highly desirable, due to its distance from the rest of the department and to its physical condition, we provided it with 14 workstations and house 22 graduate students there. This helped in the short term, but with incoming faculty, we have still had to convert additional lab space into TA and RA offices, which negatively impacts our research. This situation has gotten worse over the last year, necessitating housing RAs in laboratory space. In the medium term, some commitments have been made to increase our space. The University has built an addition onto the J. Wayne Reitz Union, into which the

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Campus Book Store has moved. Now that that move is complete, CIRCA, which occupies most of the 2nd floor and some of the 5th floor of the CSE building, is slated to move into the space the book store left. Once that move is done, the CISE Department is supposed to obtain the space that CIRCA leaves behind.

IV. Curriculum

A. For all programs, provide, a sequenced course of study and list the expected specific learning outcomes and the total number of credit hours for the degree. Degree programs in the science and technology disciplines must discuss how industry-driven competencies were identified and incorporated into the curriculum, as required in FS 1001.02 (6). Also indicate the number of credit hours for the required core courses, other courses, thesis hours and the total hours for the degree.

The proposed degree has been approved by the CISE industrial advisory board to ensure that the expectations of our graduate's employers will be met by the curriculum.

The curriculum organized by topic and a sample 4 year track for the degree are given at the end of the document.

B. Describe the admission standards and graduation requirements for the program.

Admission standards are the same as other programs in the College of Engineering. Graduation requirements include successful completion of the curriculum, plus satisfaction of department and college requirements.

The College of Engineering requires a grade point average of 2.0 for all courses completed in the college as well as an overall cumulative grade point average of 2.0 in all work attempted at the university. A minimum grade of C is required in all calculus and physics course work based on a maximum of two attempts, including withdrawals. The College of Engineering has established tracking criteria for all programs. Students must fulfill the performance criteria for their programs' tracking courses. Students who are off-track will be placed on probation. Students who fail to meet the conditions of their probation may not be allowed to continue in the College of Engineering. A grade of C or better (based on a maximum of two attempts including withdrawals) is required for each tracking course. Additional requirements imposed by the Computer Science program are a minimum grade of C or higher is required in ENC 2210 and CIS 3020 and 3023. In addition, CISE requires all Computer Science students to maintain a cumulative, upper-division and department grade point average of 2.0 or higher.

All grade point averages are based on a 4.0 scale computed on the last of the maximum two attempts (including withdrawals) allowed for each course.

1. List the accreditation agencies and learned societies that would be concerned with the proposed program. Will the university seek accreditation for the program? If not, why? Provide a brief timeline for seeking accreditation, if appropriate.

Currently, the BS in Computer Engineering program at the University of Florida is accredited by the Engineering Accreditation Commission of ABET (Accreditation Board for Engineering and Technology). A different division of ABET, the Computing Accreditation Commission (CAC),

is responsible for accreditation of Computer Science programs. Accreditation of Computer Science programs, however, is much less well established than that of traditional engineering programs and many prominent programs are not accredited. (In 2003, of 30 leading Computer Science programs, only 7 were accredited.)

The proposed degree program meets the curricular requirements for CAC accreditation if we choose to pursue it. One obstacle to accreditation would be the average class size of upper division courses, which, at the University of Florida, tend to be significantly larger than the recommended 30 students. Unfortunately, because the Computer Science and Computer Engineering programs are accredited by different divisions of ABET, with different histories, and the formal aspects of meeting the requirements are different enough that the faculty workload in pursuing both would be significant. At the current time, given the small number of accredited computer science programs, we do not feel that the benefit to be derived from accreditation in addition to the accreditation of our Computer Engineering Program (which shares courses, faculty, and facilities) would be worth the cost in faculty time. This decision could be revisited at any time.

B. Provide a one or two sentence description of each required or elective course.

CAP 4410 Digital Image Process.

S 2001 Ma Credits: 3; Prereg: COP 3530 and MAC 2312, MAC 3512, or MAC 3473. Survey of techniques used to replicate the human vision process in computer systems. Forics include image formation, image algebra, filtering, range extraction, edge and boundary detection, region growing, and model based vision. U FLORE

CAP 4621 Artificial Intelligence and Heuristics.

Credits: 3; Prereq: COP 3530.

Introduction to artificial intelligence concepts. Heuristic search, clause form logic, knowledge representation, reasoning and inference, overview of computer vision, planning, natural language, Lisp and Prolog.

CAP 4680 Knowledge-Based System: Theory and Practice.

Credits: 3; Prereq: CAP 4621.

Concepts, theory and various applications for knowledge-based (expert) systems, reasoning schemes, knowledge representation, knowledge-based system tools, building knowledge bases, knowledge acquisition, reasoning under certainty and inexact reasoning.

CAP 4730 Computational Structures in Computer Graphics.

Credits: 3; Prereq: COP 3530.

A study of the major topics in computer graphics; display and output technology; two and three dimensional manipulations; space curves and surfaces; hidden surface removal and shading models.

CAP 4800 Systems Simulation.

Credits: 3; Prereq: COP 3530.

Simulation methodology and practice. Covers basic concepts in modeling and analysis for both continuous and discrete systems. Combined simulation methods including integrated qualitative/quantitative system modeling. Will use in-house simulation software.

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CDA 3101 Introduction to Computer Organization.

Credits: 3; Prereq: CIS 3020 and MAC 2233, MAC 2311 or MAC 3472.

Organization of computing systems. Logical basis of computer structure. Machine representation of instructions and data, flow of control, and basic machine instructions. Assembly language programming.

CDA 4102 Computer Architecture.

Credits: 3; Prereq: CDA 3101, COP 3530.

Introduction to computer architecture and system organization including virtual memory supports cache, pipeline, vector processing, multiprocessor and RISC architecture.

CEN 3031 Introduction to Software Engineering.

Credits: 3; Prereq: COP 3530.

Topics include software planning, specifications, coding, testing and maintenance. Students gain experience in the team approach to large system development.

CEN 4012 Software System Development.

Credits: 3; Prereq: CEN 3031.

Applications of software engineering methodologies and tools in software development and maintenance. Students gain hands-on experience via software engineering group projects, including decision making, communication and presentation.

CEN 4500C Computer Network Fundamentals.

Credits: 4; Prereq: COP 3530, CDA 3101 and COP 4600.

This course covers problems in design and analysis of computer networks. While some effort focuses on low level protocols, most of the course is devoted to higher level protocols at the medium access, network and transport layers. Students should be familiar with graph theory and basic probability.

CGS 3065 Legal and Social Issues in Computing.

Credits: 3; Prereq: Previous experience in Unix environment.

This course explores the history, the myth, the ethics, the law and the risks of computer-based technology in modern society. Emphasis will be placed on critical analysis of hypotheticals and case studies. Published material will be supplemented with on-line Internet references.

CGS 3090 Ethics on the Electronic Frontier.

Credits 1; Prereq: Previous expertise in UNIX environment. Experience with World Wide Web and Hyper-Text Markup Language.

By applying basic ethical principles, this course examines legal and ethical controversies emerging from the new technology-based, information age.

CGS 3460 Computer Programming Using C.

Credits: 3; Prereq: MAC 1147 or equivalent.

Problems related to a variety of disciplines are solved. An introduction to the basic concepts of software and hardware is provided. (M)

CGS 3464 Computer Programming Using C++.

Credits: 3; Prereq: CIS 3020.

This course provides an in-depth treatment of the C++ programming language and an introduction to Windows programming using Visual C++.

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CHM 2045 General Chemistry.

Credits: 3; Prereq: MAC 1147 or its equivalent. Coreq: CHM 2045L. The first semester of the CHM 2045-2045L-2046-2046L sequence. Stoichiometry, atomic and molecular structure, the states of matter, reaction rates and equilibria, acids and bases.

CHM 2054L General Chemistry Lab.

Credits: 1; Prereq: CHM 2040 with a grade of C or better, or the current minimum SAT Chemistry score required for CHM 2045; Coreq: CHM 2041 or 2045 or 2050. Laboratory experiments designed to accompany CHM 2041 and 2045 and 2050

CIS 3020 Advanced Programming Fundamentals.

Credits: 3; Prereq: MAC 2233, MAC 2311 or MAC 3472.

A fast-paced introduction to computer science for students with prior programming experience. Major concepts of computer science and the process of computer programming including objectoriented programming, procedural and data abstraction, and program modularity.

CIS 3022 Programming Fundamentals for CISE Majors I

Credits: 3; Prereq: MAC 2233, MAC 2311 or MAC 3472.

The first course of a two-semester introductory sequence for students without prior programming experience. Major concepts of computer science and the process of computer programming including object-oriented programming, procedural and data abstraction, and program modularity.

CIS 3023 Programming Fundamentals for CISE Majors II

Credits: 3; Prereq:

The second course of a two-semester introductory sequence for students without prior programming experience. Major concepts of computer science and the process of computer programming including object-oriented programming, procedural and data abstraction, and program modularity.

CIS 4301 Information System Design and Development.

Credits: 3; Prereq: COP 3530.

Directed work project in utilization of information resources, particularly database management software. Topics in analysis and design of application systems through all phases of system development.

CIS 4905 Individual Study in CISE.

Credits: 1 to 4; May be repeated with change of content up to a maximum of 12 credits. Problems in different areas of computer science.

CIS 4912C Integrated Product and Process Design I.

Credits 3: Prereq: COT3100, CDA3101, COP3530, and consent of instructor.

The first part of a two-course sequence where teams of engineering and business students partner with industry sponsors to design and build authentic products and processes. Working closely with an industry liaison engineer and a faculty coach, students gain practical experience in teamwork and communication, problem solving and engineering design, and develop leadership, management and people skills. Weekly workshop activities adapt lecture topics to individual projects. Students learn firsthand how to develop products and processes that meet customer requirements on time and within budget.

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CIS 4913C Integrated Product and Process Design II.

Credits: 3; Prereq: CIS4912C. The second part of the CIS 4912-4913 sequence.

CIS 4914 Senior Project.

Credits: 3; Prereq: Senior CISE standing, approved project proposal. Involves completing a significant CISE-related project. Student must coordinate with the instructor and a project adviser, prepare a detailed technical report and deliver an oral presentation.

CIS 4930 Special Topics in CISE.

Credits: 1 to 4. Topics vary. Particular computer languages such as JCL, ADA, etc., and current topics of interest in area of computer and information sciences.

CIS 4940 Practical Work.

Credits: 1 to 4. One term practical software engineering work under industrial supervision as set forth in the College of Engineering regulations.

CIS 4949 Co-Op Work in CISE.

Credits: 1.

Practical engineering work under industrial supervision, as set forth in the College of Engineering Regulations.

COP 2121 Introduction to COBOL for CISE Majors.

Credits: 3; Prereg: MAC 2233, MAC 2311 or MAC 3472.

Techniques for business information systems programming in COBOL utilizing comprehensive facilities of the COBOL language. Business applications and examples of their solutions will be employed throughout. Topics include advanced table handling as well as sequential, random, and indexed file organizations and manipulation techniques in COBOL.

COP 3013 Survey of Programming Languages.

Credits: I to 3; Prereq: Familiarity with computers and some programming language. An introduction to a specific programming language, which may vary according to section. Course may be repeated for different languages.

COP 3530 Data Structures and Algorithm.

Credits: 4; Prereq: CIS 3020, with a grade of C or better, COT 3100 and MAC 2234, MAC 2312, MAC 3512 or MAC 3473.

Algorithm development using pseudo languages, basic program structures, program design techniques, storage and manipulation of basic data structures like arrays, stacks, queues, sorting and searching and string processing. Linked linear lists. Trees and multilinked structures.

COP 3610 Survey of Operating Systems.

Credits: 1; Prereq: Familiarity with computers. An introduction to a specific operating system interface, which may vary according to section. Course may be repeated for credit for different systems.

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COP 4020 Programming Language Concepts.

Credits: 3; Prereq: COP3530.

An introduction to programming language principles, including language constructs, design goals, run-time structures, implementation techniques, and exposure to a wide variety of programming paradigms.

COP 4331 Object-oriented Programming.

Credits: 3; Prereq: COP3530.

This course discusses fundamental conceptual models for programming languages and illustrates these with specific programming languages and application problems. Specific topics include class and object models and inheritance among classes and objects and static and dynamic systems and implementations.

COP 4343 UNIX System Administration.

Credits: 3; Prereq: COP 4600.

A study of the underlying concepts and techniques employed in the installation, administration, and tuning of UNIX operating systems. Topics covered include operating system installation, simple network configuration, file backup and restore, account administration, device management, scheduling, file systems, network management, and basic system and network security.

COP 4600 Operating Systems.

Credits: 3; Prereq: COP 3530, CDA 3101, knowledge of C or Cåå recommended. The design and implementation of various components of a modern operating system including I/O programming, interrupt handling, process and resource management, computer networks and distributed systems.

COP 4620 Translators and Translator Writing Systems.

Credits: 3; Prereq: COP 3530.

Translation of languages, scanning and parsing techniques. Translator writing systems. The implementation of a compiler.

COP 4720 Database Management Systems.

Credits: 3; Prereq: COP 3530.

Provides a conceptual understanding of database management systems in terms of the hierarchical, network and relational data models and their corresponding languages. Data modeling and analysis, database design and administration. Review of file structures and a discussion of database implementation techniques. Knowledge of at least two programming languages essential.

COT 3100 Applications of Discrete Structures.

Credits: 3; Prereq: MAC 2233, MAC 2311 or MAC 3472; Coreq: CIS3020. Covers the mathematics of discrete events, i.e., events that involve distinct elements, finite structures of distinct elements, or finite sampled versions of continuous phenomena (such as movement).

COT 4501 Numerical Analysis: A Computational Approach.

Credits: 3; Prereq: CIS 3020 and MAS 3114. Numerical integration, nonlinear equations, linear and nonlinear systems of equations, differential equations and interpolation.

EEL 3701C Digital Logic and Computer Systems

Credits: 4; Coreq: CGS 2425 or CIS3020 or CIS3023

An overview of logic design, algorithms, computer organization, and assembly language programming and computer engineering technology. Laboratory.

EGM 3311 Introduction to Engineering Analysis.

Credits: 3; Prereq: MAC 2313

Solution methods for first and second order ordinary differential equations. Applications to radioactive decay, mass spring systems and electric circuits. Treatment of the Bessel and Legendre equations. Laplace transform methods applied to constant coefficient equations. Solution of simultaneous first order equations.

EGN 4034 Professional Ethics

Credits: 1; Junior standing

Provides students with an interactive study of ethical, theory and the development of professionalism. Students review case studies of ethical conflicts in engineering practice. Course covers engineering codes of ethics and requires students to resolve theoretical situations through application of ethical codes.

EIN4354 Engineering Economy

Credits: 3; Prereq: upper division classification in engineering Basic principles and applications of economic decision-making between alternatives encountered in engineering systems projects. The analysis will include methodologies of economics and finance in addition to engineering fundamentals.

ENC 2210 Technical Writing.

Credits: 3 Prereq: ENC 1101 or test score equivalency.

A survey of the forms and methods of communication used in business, industry and government, including nonformal and formal reports, letters, resumes and proposals.

MAC 2311 Analytic Geometry and Calculus 1.

Credits: 4 Prereq: Passing score on placement test.

Introduction to analytic geometry; limits; continuity; differentiation of algebraic and trigonometric functions, differentials; introduction to integration and the fundamental theorem of calculus (M) (Credit will be given for at most one of MAC 2311 and MAC 3472.)

MAC 2312 Analytic Geometry and Calculus 2.

Credits: 4 Prereq: MAC 2311 or MAC 3472. Techniques of integration; applications of integration; differentiation and integration of inverse trigonometric, exponential and logarithmic functions; sequences and series. (Credit will be given for at most one of MAC 2312, MAC 3512, and MAC 3473.)

MAC 2313 Analytic Geometry and Calculus 3.

Credits: 4 Prereq: MAC 2312 or MAC 3512 or MAC 3473. Solid analytic geometry; vectors; partial derivatives; multiple integrals. (Credit will be given for at most one of MAC 2313 and MAC 3474.)

MAD 4401 Introduction to Numerical Analysis

Credits: 3: Prereq: experience with a scientific programming language, and a grade of C or better in MAS 4105 or in MAS 3114

Numerical integration, nonlinear equations, linear and non-linear systems of equations, differential equations, and interpolation.

MAP 2302 Elementary Differential Equations.

Credits: 3 Prereq: MAC 2312 or MAC 3512 or MAC 3473.

First order differential equations, theory of linear differential equations, solution of linear equations with constant coefficients, the Laplace transform, solution of equation by the Laplace transform.

MAS 3114 Computational Linear Algebra.

Credits: 3 Prereq: MAC 2312 (or MAC 3512 or MAC 3473) and a scientific programming language. Linear equations, matrices and determinants. Vector spaces and linear transformations. Inner products and eigenvalues. This course emphasizes computational aspects of linear algebra.

PHY 2049 Physics with Calculus 1.

Credits: 3; Prereq: High-school physics or PHY 2020 or equivalent, and MAC 2311; Coreq: MAC 2312.

The first of a two-semester sequence of physics for scientists and engineers. The course covers Newtonian mechanics and includes motion, vectors, Newton's laws, work and conservation of energy, systems of particles, collisions, equilibrium, oscillations and waves. One hour per week is devoted to problem solving and discussion.

PHY 2048L Laboratory for PHY 2048.

Credits: 1 Coreq: PHY 2048 or equivalent. Laboratory experiments for students in PHY 2048.

PHY 2049 Physics with Calculus 2.

Credits: 3 Prereq: PHY 2048 and MAC 2312; Coreq: MAC 2313.

The second of a two-semester sequence of physics for scientists and engineers. Content includes Coulomb's law, electric fields and potentials, capacitance, currents and circuits, Ampere's law, Faraday's law, inductance, Maxwell's equations, electromagnetic waves, ray optics, interference and diffraction. One hour per week is devoted to problem solving and discussion.

PHY 2049L Laboratory for PHY 2049.

Credits: 1 Coreq: PHY 2049 or equivalent. Laboratory experiments for students in PHY 2049.

STA 3032 Engineering Statistics

Credits: 3; Prereq: MAC 2311

A survey of the basic concepts in probability and statistics with engineering applications. Topics include probability, discrete and continuous random variables, estimation, hypothesis testing, and linear and multiple regression

STA 4321 Mathematical Statistics 1

Credits: 3; Prereq: MAC 2313 or equivalent

Introduction to the theory of probability, counting rules, conditional probability, independence, additive and multiplicative laws, Bayes Rule. Discrete and continuous random variables, their distributions, moments, moment generating functions. Multivariate probability distributions, independence, covariance. Distributions of functions of random variables

All ASME (American Society of Mechanical Engineers) journals (15 titles) including: Journal of Computing and Information Science Wiley journals in print and online: Journal of Visualization and Computer Animation International Journal of Intelligent Systems Software: Practive and Experience selected Springer journals in print and online: Algorithmica **Applied Signal Processing** Computing Computing and Visualization in Science Discrete and Computational Geometry Machine Vision and Applications Neural Computing and Applications Pattern Analysis and Applications Soft Computing Visual Computer selected Elsevier journals -- some in print, all online back to 1995: Knowledge-Based Systems Computer-Aided Geometric Design Computers in Human Behavior **Design Studies** Fuzzy Sets and Systems Artificial Intelligence Computers and Graphics Image and Vision Computing Neurocomputing Pattern Recognition Letters Signal Processing Signal Processing: Image Communication Speech Communication Computational Geometry Information Processing Letters Mathematical and Computer Modelling Mathematics and Computers in Simulation Future Generation Computer Systems other publishers: AlAA Magazine Advances in Computers International Journal of Parallel Programming Journal of Object-Oriented Programming **Real-Time Systems** SIAM Journal on Computing

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C. Describe briefly the anticipated delivery system for the proposed program as it may relate to resources e.g., traditional delivery on main campus; traditional delivery at branches or centers; or nontraditional instruction such as instructional technology (distance learning), self-paced instruction, and external degrees. Include an assessment of the potential for delivery of the proposed program through collaboration with other universities, both public and private. Cite specific queries made of other institutions with respect to the feasibility of shared courses utilizing distance learning technologies, and joint-use facilities for research or internships.

This program will use traditional delivery on the main campus and we do not anticipate collaboration with other universities in offering this program.

V. Assessment of Current and Anticipated Faculty

- A. Use DCU Table One to provide information about each existing faculty member who is expected to participate in the proposed program by the fifth year. Append to the table the number of master's theses directed, number of doctoral dissertations directed, and the number and type of professional publications for each faculty member.
- B. Also, use DCU Table One to indicate whether additional faculty will be needed to initiate the program, their faculty code (i.e., A, B, C, D, or E as detailed in the lower portion of Table One), their areas of specialization, their proposed ranks, and when they would be hired. Provide in narrative the rationale for this plan; if there is no need for additional faculty, explain.

There is no need for new faculty specifically for this program as it will share courses with existing programs. While increasing the number of faculty in order to strengthen our research program and reduce the student/faculty ratio, is always desirable, no specific plans are in place to do so and it is unnecessary for the viability of this program.

C. Use DCU Table One to estimate each existing and additional faculty member's workload (in percent person-years) that would be devoted to the proposed program by the fifth year of implementation, assuming that the program is approved. (Note: this total will carry over to DCU Table Four's fifth year summary of faculty positions.)

VI. Assessment of Current and Anticipated Resources

- A. In narrative form, assess current facilities and resources available for the proposed program in the following categories:
 - 1. Library volumes (Provide the total number of volumes available in this discipline and related fields.)

The list below describes the book holdings of the Marston Science Library print books that will directly support the Computer Science program

Following are the approximate number of print titles within specified call number ranges. Some of these titles include several volumes of conference proceedings, continuing series, etc. 800 titles: Q295-Q387 Cybernetics and Artificial Intelligence 7000 titles: QA75-QA99 Computer Science 300 titles: QA267-QA268 Automata and theoretical computer science 475 titles: QA402-QA405 Control Theory 420 titles: T342-T385 Engineering and Computer Graphics 200 titles: TA174-TA175 Engineering- and Computer-aided Design 200 titles: TA340-TA345 Models, Simulation, Computer-Aided Engineering 875 titles: TA1500-TA1800 Photonics, Optics, Lasers, Computer Vision 750 titles: TK7800-TK7999 Computer Engineering approximately 14,220 print titles

In addition to the above, the Libraries license online books through 2 major services: NetLibrary and Books24x7. NetLibrary: approx. 2800 titles in computer/engineering applications Books24x7 approx 3600 titles in computer/IT applications

Total print + online books = (14,220 + 2800 + 3600) = 20,620

2. Serials (Provide the total number available in this discipline and related fields, and list those major journals which are available at your institution.)

The University of Florida Libraries subscribe to more than 5000 print and over 30,000 electronic serials.

IEE/IEE:

* IEEE (Institute of Electrical & Electronics Engineers) Electronic Library (IEL) -- online full text of more than 120 journals and more than 600 conference proceedings from IEEE and IEE from 1988+ (total collection of over 1,000,000 articles in over 12,000 publications)

* All IEEE (ASPP) journals in print (approx 130 titles)

* Selected IEEE conferences (POP) from 1985+ in print (approx 130/year) including titles such as:

Proceedings, IEEE Virtual Reality

IEEE Conference on Visualization

* All IEE (Institution of Electrical Engineers) journals in print (13 titles)

including: IEE proceedings. E, Computers and digital techniques.

ACM:

* All ACM (Association for Computing Machinery) journals in print and selected conference proceedings (approx 30 titles)

* ACM Digital Library and Computing Reviews online

for a minimum of approximately 250 research journal titles in directly-relevant areas plus proceedings from over 800 conferences.

3. Describe classroom, teaching laboratory, research laboratory, office, and any other type of space, which is necessary and currently available for the proposed program

This program will not need additional space beyond that currently available for existing degree programs offered by CISE. While space shortage was identified in the latest ABET accreditation report for the Computer Engineering program, as described above, steps have been taken to alleviate the problem in the future.

4. Equipment, focusing primarily on instructional and research requirements

The Computer and Information Science and Engineering department has the following departmental computing resources to support teaching and research:

- 2 Network Appliance filers, each with 1 TB of raw disk space provide the bulk of the disk storage.
- Approximately 35 servers providing services including web, email, database (oracle and postgres), Kerberos authentication, DNS, NIS, DHCP, backups, samba, NFS, dialup, and security related services.
- 6 publicly available CPU servers. They range from 2GB to 8GB of memory, and 300 MHz to 1 GHz ultra sparc processors.
- Approximately 120 suns (Solaris), 175 PCs running windows variants (Windows 2000 and Windows XP primarily), and 55 PCs running linux (Mandrake) serving as lab machines and desktops for students, TAs, RAs, and faculty members. Of these, 24 suns, 52 windows PCs, and 45 linux PCs are in public labs that are available for general student use, computer lab use for classes, etc.
- The networking in the department consists of a Cisco Catalyst 6513 which provides routing and switch capabilities to more than 600 machines and 80 networks in the department. The entire network consists of fiber optics to the entire department except for the machine room which is connected to the Cisco with Gb rated UTP. All networks run at 100 Mb except for the servers which use high bandwidth which run at 1 Gb.
- The network connection to the world is a 100 Mb fiber connection to the University of Florida core network.
- A wireless network that covers the entire CSE building is in place for faculty and students who have wireless notebooks and other devices.
- o Additional equipment belonging to individual research groups.
- 5. Fellowships, scholarships, and graduate assistantships (List the number and amount allocated to the academic unit in question for the past year.)

Undergraduate scholarships: 20 (\$1000)

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Graduate fellowships: 4 (\$17,000 stipend + tuition) Graduate assistantships: 30 (\$16,000 stipend + tuition)

- 6. Internship sites if appropriate
 - Lockheed Martin Microsoft Harris Raytheon Intel Gleim Publications IBM US Biomedical Info Systems Velara Regeneration Technologies U.S. Air Force Motorola Federal Government Cox Cable
- B. Describe additional facilities and resources required for the initiation of the proposed program (e.g., library volumes, serials, space, assistantships, specialized equipment, other expenses, OPS time, etc.). If a new capital expenditure for instructional or research space is required, indicate where this item appears on the university's capital outlay priority list. The provision of new resources will need to be reflected in the budget table (DCU Table Four), and the source of funding indicated. DCU Table Four only includes I&R costs. If non-I&R costs, such as indirect costs affecting libraries and student services, are expected to increase as a result of the program, describe and estimate those expenses in norrative form. It is expected that high enrollment programs in particular would necessitate increased costs in non-I&R activities.

No additional resources are required.

ACCOUNTABILITY

VII. Assessment of Need and Demand

A. What national, state, or local data support the need for more people to be prepared in this program at this level? (This may include national, state, or local plans or reports that support the need for this program; demand for the proposed program which has emanated from a perceived need by agencies or industries in your service area; and summaries of prospective student inquiries.) Indicate potential employment options for graduates for the program. If similar programs (either private of public) exist in the state, provide data that support the need for an additional program. <u>Summarize the outcome of communication with such programs</u>.

The College of Engineering currently lacks a BS in Computer Science. Students currently

choose from a BS in Computer Engineering, a BS in Computer Science through the College of Liberal Arts and Sciences, and a BS in Computer and Information Science through the College of Business. Although graduates of our existing degree programs are highly regarded by those employers who are familiar with them, feedback from the CISE Industrial Advisory Board tells us that offering a standard BS in Computer Science through the College of Engineering may make it easier for some companies to effectively recruit at UF.

The CISE Department's Student Services Center receives frequent inquiries from students who would like to pursue a Computer Science program through the College of Engineering. The inquiries are typically centered on the student's desire to become a software engineer without being required to complete Electrical Engineering courses. These students want to engineer new software, and they do not want a job in which they need to have knowledge of the hardware aspects taught in the Electrical Engineering courses. Other inquiries stem from prospective students who in researching Computer Science degrees at other institutions found most of those degrees were from Engineering colleges, and they question why our Computer Science program is a Liberal Arts degree.

B. Use the appropriate DCU Table Three (A for Baccalaureate, B for Graduate) to indicate the number of students (headcount and FTE) you expect to major in the proposed program during each of the first five years of implementation, categorizing them according to their primary sources. In the narrative following Table Three, the rationale for enrollment projections should be provided and the estimated headcount to FTE ratio explained. If, initially, students within the institution are expected to change majors to enroll in the proposed program, describe the shifts from disciplines, which will likely occur.

We expect that, initially, one-third of our Computer Engineering majors will change to this new major to be able to replace hardware courses with courses in a different area. We also expect a much smaller shift from the current Liberal Arts Computer Science major.

C. For all programs, indicate what steps will be taken to achieve a diverse student body in this program. <u>Please create a place for signature at the end of section (VII)(C) and have your university's Equal</u> <u>Opportunity officer read, sign, and date this section of the proposal.</u>

It is a goal of the CISE department and the entire College of Engineering to increase diversity in all of our programs. The new degree program will benefit from these efforts. Because of the interdisciplinary component of the proposed program, it has the potential to attract a more diverse student body, particularly women, than the existing Computer Engineering program.

VIII. Budget

A. Assuming no special appropriation for initiation of the program, how would resources within the institution be shifted to support the new program?

This degree program can be implemented using currently existing courses. Future fine-tuning of

the program may include a new communications course specialized for the students in this program (which would also be appropriate, although not currently required, in the other computing degrees.) In addition, we anticipate that, in the future, new minors and technical elective courses will be introduced to facilitate interdisciplinary study in emerging areas. These would take advantage of the flexibility of our program and provide additional options for students, but are not required to implement the program initially or maintain its viability.

We expect most of the students in this program to be students who otherwise would take the alternate degree programs in the department. Students choosing this program instead of Computer Engineering would reduce the number of students in the ECE courses required in that program, and instead take courses in a variety of other areas. Students choosing this program instead of CLAS-CS would not need a foreign language. Enrollment will increase in upper division CISE courses.

- B. Use DCU Table Four to display dollar estimates of both current and new resources for the proposed program for the first and the fifth years of the program. In narrative form, identify the source of both current and any new resources to be devoted to the proposed program. If other programs will be negatively impacted by a reallocation of resources for the proposed program, identify the program and provide a justification.
- C. Describe what steps have been taken to obtain information regarding resources available outside the institution (businesses, industrial organizations, governmental entities, etc.). Delineate the external resources that appear to be available to support the proposed program.

The CISE department offers several degree programs and solicits support from industry to support our teaching and research efforts. Any such support would tend to benefit all of our programs

D. For graduate level programs, specifically address the potential negative impacts that implementation of the proposed program will have on related undergraduate programs (i.e., shift in faculty effort, reallocation of instructional resources, reduced enrollment rates, greater use of adjunct faculty and teaching assistants) and explain what steps will be taken to mitigate any such impacts. Also discuss the potential positive impacts that the proposed program might have on related undergraduate programs (i.e., increased undergraduate research opportunities, improved quality of instruction associated with cutting edge research, improved labs and library resources).

Not applicable

E. Describe any other projected impacts on related programs, such as required courses in other departments.

Students choosing this program instead of Computer Engineering would reduce the number of students in the ECE courses required in that program, and instead take courses in a variety of other areas. Students choosing this program instead of CLAS-CS would not need a foreign

language.

IX. Productivity

Provide evidence that the academic unit(s) associated with this new degree have been productive in teaching, research, and service. Such evidence may include trends over time for average course load, FTE productivity, student headcounts in major or service courses, degrees granted, external funding attracted; as well as qualitative indicators of excellence.

The CISE department as of fall 2004 comprises 36 tenure track, 11 non-tenure track, and 2 visiting faculty. The faculty have been the recipients of many honors and awards including four IEEE Fellows, ACM, AAAS, SPIE, and SCS fellows, two Members of the European Academy of Sciences, IEEE Taylor Booth Award, IEEE Wallace McDowell Award, ACM Karl Karlstrom Award, many keynotes and best paper/poster awards, two NSF CAREER Awards in 2004, and two Fulbright scholars.

The department has the largest undergraduate enrollment of any department in the College of Engineering. The chart on the next page shows significant and sustained research expenditures.



UNIVERSITY OF FLORIDA
X. Access – Bachelor's Degrees Only

A. If the total number of credit hours to earn a degree exceeds 120, provide a justification for an exception to the policy of a 120 maximum.

The program will be 126 credits for a BS degree. This will allow students to obtain both sufficient depth and breadth in their education. This is also the same number of credits as our computer engineering degree.

B. List any program prerequisites, and provide assurance that they are the same as the standardized prerequisites for other such degree programs within the SUS. If they are not, provide a rationale for a request for exception to the policy of standardized prerequisites. NOTE: Typically, all lower division course requirements required for admission into the major will be considered prerequisites. The curriculum can require lower division courses that are not prerequisites for admission into the major, as long as those courses are built into the curriculum for the upper level 60 credit hours.

All prerequisites to the program are standardized prerequisites for other such degree programs within the SUS.

MAC 2311	Analytic Geometry & Calculus 1
MAC 2312	Analytic Geometry & Calculus 2
MAC 2313	Analytic Geometry & Calculus 3
MAP 2302	Elementary Differential Equations
PHY 2048	Physics w/Cal 1
PHY 2048L	Lab for PHY 2048
PHY 2049	Physics w/Cal 2
PHY 2049L	Lab for PHY 2049
CHM 2045	General Chemistry
CHM 2045L	Lab for CHM 2045

C. If the university intends to seek formal Limited Access status for the proposed program provide a rationale that includes an analysis of diversity issues with respect to such a designation. Explain how the university will ensure that community college transfer students are not disadvantaged by the limited access status. *NOTE: The policy and criteria for limited access are identified in Rule 6C-6.001 (11) (e) and (f).*

Limited access status is not being sought for this program

D. Provide evidence that community college articulation has been addressed and ensured, especially with those community colleges that are direct feeder schools.

The prerequisites to transfer from a community college are the same as that for the rest of the College.

E. If the proposed program is an AS to BS capstone, ensure that it adheres to the guidelines approved by the ACC for such programs, as set forth in Rule 6A-10.024. List the prerequisites if any, including the specific AS degrees which may transfer into the program.

The proposed program is not an AS to BS capstone.

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DCU TABLE ONE FACULTY PARTICIPATION IN PROPOSED DEGREE PROGRAM BY FIFTH YEAR

All faculty will potentially participate in the new degree program from its initiation.

Given workload is the faculty time assigned to teaching responsibilities overall as it is not reasonable to attempt to allocate faculty time between our degree programs.

				(For Existin Only	g Faculty 7)	Initial Date	5 th Year
Faculty CODE	Faculty Name or "New Hire"	Academic Discipline/Specialty	Rank	Contract Status (Tenure status or equivalent)	Highes t Degre e Held	for Partici pation in Propo sed Progr am	Workload in Proposed Program (Portion of Person- year)
	Banerjee, Arunava	Intelligent Systems & Computer Vision	Asst. Professor	Tenure Track	PhD		58
	Bermudez, Manuel	Computer Systems	Assoc. Professor	Tenured	PhD		50
	Chen, Shigang	ang Computer Systems Asst. Profess		Tenure Track	PhD		55
	Chen, Su-Shing	Database and Information Systems	Professor	Tenure Track	PhD		55
	Chow, Randy	Computer Systems	Professor	Tenured	PhD		75.5
	Cubert, Robert	Software Engineering, object- oriented methods, algorithms	Sr. Lecturer	Non Tenure	PhD		100
	Dankel, Douglas	Intelligent Systems & Computer Vision	Asst. Professor	Tenured	PhD		50
	Davis, Timothy	High-Performance Computing/Applied Algorithms	Assoc. Professor	Tenured	PhD		65
	De Simone, Rory Internet, animat and graphics.		Lecturer	Non Tenure	M.S.		100
	Dobbins, Peter	Digital medica, object-oriented programming, artificial intelligence	Lecturer	Non Tenure	M.S.		100
	Dobra, Alin	Computer Systems	Asst.	Tenure	PhD		58

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		Professor	Track		
Fishwick, Paul	Computer Graphics, Modeling, & Art	Professor	Tenured	PhD	47
Fu, LiMin	Intelligent Systems & Computer Vision	Professor	Tenured	PhD	15
Gader, Paul	Intelligent Systems & Computer Vision	Professor	Tenured	PhD	52.5
Hammer, Joachim	Database and Information Systems	Assoc. Professor	Tenured	PhD	65
Haskins, Gerald	Computer-related legal issues, software systems design	Sr. Lecturer	Non Tenure	J.D.	100
Haskins, Lola	Undergraduate Advisement for CIS students in LAS	Lecturer	Non Tenure	B.S.	100
Helal, Abdelsalam	Database and Information Systems	Professor	Tenured	PhD	33
Ho, Jeffrey New Hire	Intelligent Systems & Computer Vision	Asst. Professor	Tenure Track	PhD	50
Jermaine, Christopher	Database and Information Systems	Asst. Professor	Tenure Track	PhD	50
 Kahvechi, Tamer New Hire	Database and Information Systems	Asst. Professor	Tenu re Track	PhD	50
Liu, Jonathan	Computer Systems	Assoc. Professor	Tenured	PhD	50
Lok. Benjamin	Computer Graphics, Modeling, & Art	Asst. Professor	Tenure Track	PhD	57
Mishra, Prabhat New Hire	Computer Systems	Asst. Professor	Tenure Track	PhD	50
Newman, Richard	Computer Systems	Asst. Professor	Tenured	PhD	77
Peir, Jih-Kwon	Computer Systems	Assoc. Professor	Tenured	PhD	37.5
Peters, Jorg	Computer Graphics, Modeling, & Art	Assoc. Professor	Tenured	PhD	 37
Rangarajan, Anand	Intelligent Systems & Computer Vision	Assoc. Professor	Tenured	PhD	70
Ranka, Sanjay	High-Performance Computing/Applied Algorithms	Professor	Tenured	PhD	57
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Ritter, Gerhard	Intelligent Systems & Computer Vision	Professor	Tenured	PhD	
Sahni, Sartaj	High-Performance Computing/Applied Algorithms	Distinguished Professor & Chair	Tenured	PhD	25
Sanders, Beverly	Computer Systems	Assoc. Professor	Tenured	PhD	50
Schmalz, Mark	Computer Vision, Optics, Image Processing, Cryptography	Sr. Scientist	Non Tenure	PhD	58
Schneider, Markus	Database and Information Systems	Asst. Professor	Tenure Track	PhD	 50
Sitharam, Meera	High-Performance Computing/Applied Algorithms	Assoc. Professor	Tenured	PhD	55
Small, Dave	Object-oriented design, computer graphics, artificial intelligence, and web technologies	Lecturer	Non Tenure	M.S.	100
Su, Stanley	Database and Information Systems	Distinguishe d Professor	Tenured	PhD	46
Thebaut, Stephen	High-Performance Computing/Applied Algorithms	Asst. Professor & Assoc. Chair	Tenured	PhD	37
Ungor, Alper New Hire	High-Performance Computing/Applied Algorithms	Asst. Professor	Tenure Track	PhD	50
 Vemuri, Baba	Intelligent Systems & Computer Vision	Professor	Tenured	PhD	30
Wilson, Joseph	Intelligent Systems & Computer Vision	Asst. Professor	Tenured	PhD	 51
Xia, Ye	Computer Systems	Asst. Professor	Tenure Track	PhD	 58
Yavuz-Kahvechi, Tuba New Hire	Computer Systems	Lecturer	Non Tenure	PhD	100

Faculty CODE	Corresponding Faculty Position Category in TABLE 3 for the Fifth Year	Proposed Source of Funding for Faculty	TOTAL 5 th Year Workload by Budget Classification
A	Current General Revenue	Existing Faculty – Regular Line	
В	Current General Revenue	New Faculty – To be Hired on Existing Vacant Line	
С	New General Revenue	New Faculty – To be Hired on a New Line	
D	Contracts and Grants	Existing Faculty – Funded on Contracts and Grants	
E	Contracts and Grants	New Faculty – To Be Hired on Contracts and Grants	
		Overall Total for 5 th Year	

Revised 8/8/03

DCU TABLE THREE-A NUMBER OF ANTICIPATED MAJORS FROM POTENTIAL SOURCES*

BACCALAUREATE DEGREE PROGRAM

ACADEMIC VEAR	YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5	
Source of Students (Non-Duplicated Count in Any Given Year)*	нс	FTE	нс	FTE	нс	FTE	нс	FT E	НС	FTE
Upper-level students who are transferring from other majors within the university***	200		45		50		50		50	
Students who initially entered the university as FTIC students and who are progressing from the lower to the upper level**	40		40		75		75		75	
Florida community college transfers to the upper level**	5		10		35		35		45	
Transfers to the upper level from other Florida colleges and universities**	3		3		3		3		3	
Transfers from out of state colleges and universities**	2		2		2		2		2	
Other (Explain)** Carryover enrollment minus degrees granted			250-0		350- 160		355- 135		385- 130	
TOTAL	250	215	350	301	355	305	385	331	430	370

* List projected yearly cumulative ENROLLMENTS instead of admissions.

Revised 8/8/03

** Do not include individuals counted in any PRIOR category in a given COLUMN.

*** If numbers appear in this category, they should go DOWN in later years.

Not applicable

DCU TABLE THREE-B NUMBER OF ANTICIPATED MAJORS FROM POTENTIAL SOURCES*

GRADUATE DEGREE PROGRAM

Δ Γ Δ DEMIC VEAR	YEAR 1		YEAR 2		YEAR 3		YEA	AR 4	YEAR 5	
ACADEMIC TEAN										
Source of Students (Non-Duplicated Count in Any Given Year)*	нс	FTE	нс	FTE	нс	FTE	нс	FTE	нс	FTE
Individuals drawn from agencies/industries in your service area (e.g., older returning students)**										
Students who transfer from other graduate programs within the university***										
Individuals who have recently graduated from preceding degree programs at this university**										
Individuals who graduated from preceding degree programs at other Florida public universities										
Individuals who graduated from preceding degree programs at non- public Florida institutions**										
Additional in-state residents**										
Additional out-of-state residents**										
Additional foreign residents**										
Other (Explain)**										
TOTAL										

* List projected yearly cumulative ENROLLMENTS instead of admissions.

Revised 8/8/03

** Do not include individuals counted in any PRIOR category in a given COLUMN.

*** If numbers appear in this category, they should go DOWN in later years.

DCU TABLE FOUR COSTS FOR PROPOSED PROGRAM

This program will incur no additional costs over existing programs

NETRUCTION		FIRST	YEAR			FIFTH	YEAR	
INSTRUCTION & RESEARCH	General I	Revenue	Contracts	C	General	Revenue	Contracts	C
RESEARCH	Current	New	& Grants	Summary	Current	New	& Grants	Summary
								
POSITIONS (Person-years)								
Faculty					*	*	*	*
A & P								
USPS								
TOTAL								
				· · · · · · · · ·	* Cells should re	elate directly to t	aculty numbers i	n Table 2
SALARY RATE								
Faculty								
A & P								
USPS								
TOTAL								
1								
I & R EXPENSES								
Salaries and Benefits								
Other Personnel Services		·					·	
Expenses								
Operating Capital Outlay								
Electronic Data Processing								
Library Resources								
Special Categories								
TOTAL I & R								

Revised 8/8/03



College of Engineering Associate Dean for Academic Affairs 312 Weil Hall P.O. Box 116550 Gainesville, Florida 32611-6550 Tel: (352) 392-0943 Fax: (352) 392-9673 www.eng.ufl.edu

May 23, 2007

MEMORANDUM

TO: Sheila K. Dickison, Associate Provost

Cammy R. Abernathy FROM: Associate Dean for Academic Affairs

RE: BS Degree in Nuclear Engineering increase credits from 126 to 129

Please find the attached request to add EGM 2511 – Engineering Statics to the BSNE Curriculum. This is a result of the ABET Self-Assessment Study and is an addition that was committed to under the recent ABET visit. The BSNE degree is increased from 126 to 129 credits.

CRA:jn

Attachments

Increase from 126 credits to 129 credits for BS Degree in Nuclear Engineering

The increase from 126 credits to 129 credits for the BS Degree in Nuclear Engineering is due to the addition of EGM 2511, Engineering Statics, as a required course.

A critical component of ABET accreditation is continuous program assessment and evaluation with input from constituents. Over the past two years, input from the NRE External Advisory Board (EAB), the NRE faculty and NRE students has identified Engineering Statics as a course that needed to be added into the curriculum. The EAB, faculty and students identified a lack of adequate preparation for the rigorous quantitative problem solving skills necessary for upper division engineering classes as a significant problem. NE students will take EGM 2511 in the Spring, Sophomore year to help provide this needed preparation for upper division engineering classes. Additionally, the EGM 2511 provides material needed for the EIT (Engineer-In-Training) and PE (Principles and Practice for Professional Nuclear Engineering Licensure) Exams.

The College of Engineering underwent an ABET accreditation visit this October 22-24. Prior to the visit, the ABET Program Evaluator for Nuclear Engineering identified the lack of a mechanics (statics or dynamics) in the curriculum as an item of concern. This was removed as an item of concern when he learned that NRE had already planned to add EGM 2511 to the curriculum.

The increased credit requirement for the BSNE is not out of line with the total credit requirement in other Engineering programs at UF. For example, the Aerospace and Mechanical Engineering Programs require 128 credits, Agricultural Engineering is at 128 credits, Chemical Engineering is at 134 credits, Civil Engineering requires 131 credits and Environmental Engineering requires 128 credits.

Curriculum for the BSNE degree Nuclear & Radiological Engineering Department University of Florida – Fall 2007

Semester	1	2	3	4	5	6	Credit	
	Year 1							
Fall	Calculus 1	General Education	General Education	General Chemistry	Fundamentals of		15	
	MAC 23111	Composition	Humanities	CHM 2045& 2045L	NRE (Seminar)			
	(4)	(3)	(3)	(4)	ENU 4934 (1)			
Spring	Calculus 2	Technical Writing	General Education	Phy. Calc. 1			14	
	MAC 2312	ENC 2210	Social Science	PHY 2048 & 2048L				
	(4)	(3)	(3)	(4)			1	
			Year 2					
Fall	Calculus 3	General Education	General Education	Phy. Calc. 2			14	
	MAC 2313	Humanities	Social Science	PHY 2049 & 2049L				
	(4)	(3)	(3)	(4)				
Spring	Differential Eqtns.	General Education	Computer Programming	Biological Sciences	Engineering Statics		14	
	MAP 2302	Humanities	CGS 2425		EGM 2511			
	(3)	(3)	(2)	(3)	(3)			
			Year 3					
Fall	Adv. Engr. Analysis	Thermodynamics 1	Professional Ethics	Rad. Interaction 1	Electrical Engr.	Electrical Lab	15	
	ENU 4001	EML 3100	EGN 4034	ENU 4605	EEL 3003	EEL 3303L		
	(4)	(3)	(1)	(3)	(3)	(1)		
Spring	Reactor Systems	Reactor Anal. & Computat. 1	Heat Transfer 1	Rad. Interaction 2	Reactor Thermal		15	
	ENU 4144 (3)	-Statics	EML 4140	ENU 4606	Hydraulics 1			
		ENU 4103 (3)	(3)	(3)	ENU 4133 (3)			
Summer	Engineering Statistics	Materials					6	
	STA 3032	EMA 3010						
	(3)	(3)						
			Year 4					
Fall	Radiation Shielding	Reactor Anal. & Computat. 2	Reactor Thermal	Rad. Detection	Elements of NRE		14	
	ENU 4630	-Dynamics	Hydraulics 2	ENU 4612 C	Design ENU 4191			
	(3)	ENU 4104 (3)	ENU 4134 (3)	(4)	(1)			
Spring	Risk Analysis	Rad. Protection	NRE Design	NRE Lab	Tech. Elective		14	
1 0	ENU 4145	ENU 4641	ENU 4192	ENU 4505L	(3)			
	(3)	(2)	(3)	(3)				
Summer	Tech. Elective	Tech. Elective	Tech. Elective				8	
	(3)	(3)	(2)					
		Total nu	mber of credits for BSN	E degree = 129				



Warrington College of Business Administration Graduate Programs in Business Undergraduate Programs in Business Fisher School of Accounting 100 Bryan Hall PO Box 117150 Gainesville, FL 32611-7150 352-392-2397 x1210 352-392-2086 Fax www.cba.ufl.edu

May 22, 2007

Memorandum

To:	University Curriculum Committee
	% Diana Hull
F	
From:	John Kraft
	[johnkraft@cbaul.edu]
Re:	Proposal to establish a School of Business

The Dean and faculty of the Warrington College of Business Administration (WCBA) propose the establishment of a School of Business. The School of Business would be the third school within the Warrington College, joining the *Hough Graduate School of Business* and the *Fisher School of Accounting*.

Thank you for consideration of this proposal.

JK:sh

Attachments

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Proposal to Establish a School of Business within the Warrington College of Business Administration

The Dean and faculty of the Warrington College of Business Administration (WCBA) propose the establishment of a School of Business. The School of Business would be the third school within the Warrington College, joining the *Hough Graduate School of Business* and the *Fisher School of Accounting*. The following academic programs would be managed through the School of Business:

- Bachelor of Science in Business Administration (1,000 graduates annually)
- Bachelor of Arts in Business Administration (250 graduates annually)
- Minor in Business (500 completed annually)
- Minor in Entrepreneurship (150 completed annually)
- Minor in Real Estate (50 completed annually)

The School of Business will have no administrative or financial implications for the College.

Schools at the University of Florida

Having a school as a distinct academic unit is an established practice at the University of Florida. Examples include:

- Fisher School of Accounting
- School of Architecture
- School of Art and Art History
- M.E. Rinker Sr. School of Building Construction
- School of Music
- School of Natural Resources and Environment
- School of Teaching and Learning
- School of Theatre and Dance

Other Institutions with a School of Business

Two institutions with outstanding reputations have a school for undergraduate business programs: the *McIntire School of Commerce* at the University of Virginia and the *Calloway School of Business and Accountancy* at Wake Forest University. This type of emphasis on undergraduate business and accounting education has helped each of these institutions develop an outstanding national reputation. In the 2006 BusinessWeek rankings of undergraduate business programs (www.businessweek.com/bschools), *McIntire* and *Calloway* were ranked second and twenty-fourth respectively. *McIntire* and *Calloway* were ranked similarly in *U.S. News and World Report*, fifth and twenty-fifth respectively. Establishing a School of Business at

the University of Florida would send a strong message to peer institutions, the business community, and UF undergraduates that business education is highly valued.

Administrative Structure

If the School of Business is approved, the organizational structure of the Warrington College of Business Administration would be as follows:

- Warrington College of Business Administration (a Dean and a Senior Associate Dean)
- Hough Graduate School of Business (an Associate Dean/Director)
- Fisher School of Accounting (an Associate Dean/Director)
- School of Business (an Assistant Dean/Director)

Oversight of the Curricula for Degree Programs and Minors

Administrative and faculty oversight for the undergraduate degrees and minors mentioned earlier would remain the same. Currently, the college's Undergraduate Committee is charged with reviewing and updating curricula for undergraduate degree programs and minors. Any changes approved by the Undergraduate Committee are subsequently brought before the WCBA faculty. Items approved by the WCBA faculty are then brought before the University Curriculum Committee (e.g., approval/disapproval, information item).

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Warrington College of Business Administration

Graduate Programs in Business Undergraduate Programs in Business Fisher School of Accounting 100 Bryan Hall PO Box 117150 Gainesville, FL 32611-7150 352-392-2397 x1210 352-392-2086 Fax

June 29, 2007

Memorandum

TO: University Curriculum Committee FROM: J. Kraft [johnkraft@cba.ufl.edu]

SUBJECT: Curriculum Issues

The Warrington College of Business Administration requests that the following proposal be presented at the next meeting for approval.

Name change of the undergraduate <u>major</u> for our Information Systems and Operations Management Department (formerly the Decision and Information Sciences Department)

Old degree and major title: Bachelor of Science in Business Administration with a major in Decision and Information Sciences

<u>New degree and major title:</u> Bachelor of Science in Business Administration with a major in Information Systems

JK:sh

Attachment



The Foundation for The Gator Nation An Equal Opportunity Institution Warrington College of Business Administration Department of Information Systems and Operations Management 351 Stuzin Hall PO Box 117169 Gainesville, FL 32611-7169 352-392-9600 352-392-5438 Fax

June 27, 2007

To: Undergraduate Curriculum Committee University of Florida

From: Asoo J. Vakharia, Chair Department of Information Systems & Operations Management Re: Name Change for Undergraduate Major

In April 2007, the Board of Trustees at UF approved the following name change for our department:

Old: Department of Decision and Information Sciences (DIS)

New: Department of Information Systems and Operations Management (ISOM).

Currently, we have an undergraduate degree in Business with a major in DIS (the Bachelor of Science in Business Administration with a major in Decision & Information Sciences - the BSBA-DIS). Given the department name change approved in April 2007, and also the fact that our undergraduate curriculum focuses primarily on educating students in Information Systems, we would like to request the following change in name for the undergraduate major:

Old: BSBA with a major in DIS

New: BSBA with a major in Information Systems (IS).

Please let me know if you have any questions. Thank you.

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College of Public Health and Health Professions Office of the Dean 101 S. Newell Drive PO Box 100185 Gainesville, FL 2611-0185 352-273-6379 352-273-6199 Fax www.phhp.ufl.edu

July 23, 2007

MEMORANDUM

TO: Chair University of Florida Curriculum Committee 140 Tigert

FROM:	Stephanie L. Hanson, Ph.D., ABPP	8 21
	Executive Associate Dean	

RE: Revisions to the Bachelor of Health Science Program

The College of Public Health and Health Professions Bachelor of Health Science faculty is requesting the following changes to the Bachelor of Health Science Program:

- 1. In order to eliminate confusion and create a consistent College culture regarding prerequisite coursework, we would like to establish uniform core prerequisite coursework across our tracks and minors. Currently the majority of our tracks and minors require biology (BSC 2007), psychology (PSY 2012), physiology (APK 2105), statistics (STA 2023), and advanced psychology (CLP 3144; DEP 3053; or health psychology). However, there are exceptions to this (e.g. public health), and the Bachelor of Health Science faculty has recommended that the requirements become consistent. The requested core prerequisites for all tracks and minors are: general college biology (BSC 2007 or higher), general psychology (PSY 2012), physiology (APK 2105C), statistics (STA 2023), and advanced psychology (CLP 3144; DEP 3053; or health psychology). This recommended change was by unanimous vote of the faculty.
- 2. The Bachelor of Health Science faculty has voted to modify the minor in disability science. We request that the disability science minor change from FS credits to 17 credits to allow students to receive more intensive coursework in either anatomical and physiological processes or in neurological processes. Currently, students choose either *Musculoskeletal Anatomy* lecture and lab or the *Nervous System and Disorders* lecture and lab for a total of five credits as part of the disability science minor. We would like to change this and require students to select *Musculoskeletal Anatomy* lecture and lab plus *Kinesiology* or select *Nervous System and Disorders* lecture and lab plus *Introduction to Neuropsychology*. Therefore, students would take OTH 4412 plus OTH 4412L (*Anatomy* lecture and lab) plus OTH 3413C (*Applied Kinesiology*) or they would take OTH 4418 plus OTH 4418L (*Nervous System and Disorders*

BHS Program Revisions Request July 23, 2007 Page 2

lecture and lab) plus CLP 4420 (*Introduction to Neuropsychology*). In addition, students will be given minor credit for HSC 3502 (*Survey of Diseases and Disability*), which is a prerequisite for HSC 4558, and recently changed to a 3-credit course. While we recognize these changes remove elective options for students, we believe these changes provide more focused and detailed coursework in the area of disability science. The current minor requirements and the requested changes are shown below.

Curre	nt Requirement	Requested Changes			
Course Number	Course Title	Course Number	Course Title		
OTH 3416	Pathophysiology (3)	OTH 3416	Pathophysiology (3)		
HSC 4558	Disability Management (3) (Prerequisite APK 2105C Applied Human Physiology with Lab)	HSC 4558	Disability Management (3)		
OTH 4412 + 4412L	Musculoskeletal Anatomy Lecture and Lab (5)	OTH 4412 + 4412L	Musculoskeletal Anatomy Lecture and Lab (5)		
			AND		
		OTH 3413C	Applied Kinesiology (3)		
	OR		OR		
OTH 4418 + 4418L	Nervous System and Disorders and Lab (5)	OTH 4418 + 4418L	Nervous System and Disorders and Lab (5)		
			AND		
		CLP 4420	Introduction to Neuropsychology (3)		
	Electives (4)	HSC 3502	Survey of Diseases and Disability (3)		
TOTAL	15	TOTAL	17		

REQUIRED COURSES FOR DISABILITY SCIENCE MINOR



R. Elaine Turner, Associate Dean

MEMORANDUM

- TO: Daniel Wubah, Chair University Curriculum Committee
- FROM: R. Elaine Turner, Associate Dean College of Agricultural and Life Sciences RE Munu
- **DATE:** 11 September 2007
- **SUBJECT:** Proposed Changes to the Agricultural Education and Communication specializations

At the May 30 CALS Curriculum Committee, changes to the specializations offered for the major in Agricultural Education and Communication were approved. These revisions involve:

- Establishing the same tracking courses for all three specializations:
 - o BSC 2007
 - o BSC2009L
 - o MAC1140
 - o AEE3030C or SPC 2600
- Rearranging semester by semester plans
- Specifically identifying statistics as an option for a General Education Math course to encourage students to take a statistics course

The modifications are shown in the attached documents.

cc: CALS Curriculum Committee Chair James Fant

Communication & Leadership Development Course of Study (2006-2007)

FIRST YEAR			
Fall SemesterCourseHrsComposition (GE-S)	Spring Semester Course Hrs MAC 1147 Precalculus:College Alg. & Trig. (GE-M)4-5 [or MAC 1140 and 1114 (5)] BSC 2008 Biological Science II (GE-B)3 AEE 3030C AEE 3030C Effective Oral Communication3 Humanities (GE-H)3 Elective3 Total Hours 16-17		
SECON	D YEAR		
Fall Semester <u>Course</u> <u>Hrs</u> AEE 3033C Res & Bus. Writing in Ag & Life Sciences 3 (GR-E+)	Spring Semester Course <u>Hrs</u> MMC 2100 Writing for Mass Comm (GR-E+)3 3 CHM 1083 Consumer Chemistry (GE-P)3 3 AEE 3073 Intercultural Communication3 3 American History OR Political Science Elective (GE-S)3 3 Elective		
THIRD	THIRD VEAR		
Fall Semester <u>Course</u> <u>Hrs</u> AEE 3070C Digital Media Production in Agricultural 3 & Life Sciences. 3 AEE 3414 Leadership Development. 3 AEE 4031 Communication Process in Agriculture & 3 Natural Resources. 3 Approved Elective**. 3 Approved Elective**. 3 <i>Total Hours 15</i>	Spring Semester Course Hrs AEE 3075 Working with People: Interpersonal Lead. Skills3 AEE 4035 Advanced Agricultural Communication Writing (GR-E+)		
	Summer Semester Course Hrs AEE 4948/4943 Ag Communication or Leadership		
FOURTH YEAR			
Fall Semester Course Hrs AEE 4052 Campaign Strategies 3 AEB 3133 Principles of Agribusiness Mgt 3 AEB 4126 Ag and Natural Resource Ethics or FYC 4114 3 Ethics/FYCS or similar ethics course 3 Approved Elective** 3 Approved Elective** 3 Total Hours 15	Spring Semester Course Hrs AEE 4434 Communication and Leadership in Groups and Teams		
	Degree rrogram nours: 120		

Students desiring to enter this option must meet the departmental and College of Agricultural and Life Sciences pre-professional requirements and have a minimum overall GPA of 2.5. Students are also required to complete *MMC 2100: Writing for Mass Communications* with a grade of C or better. Approved Electives- See adviser for suggested electives consistent with the student's interests and goals. Critical tracking courses appear in bold.

Communication & Leadership Development Course of Study (2007-2008) PROPOSED

FIRST YEAR		
Fall Semester Course Hrs Composition (GE-C)	Spring Semester Course Hrs MAC 1140 Precalculus Algebra (GE-M)	
SECON	D YEAR	
Fall Semester <u>Hrs</u> AEE 3033C Research/Bus. Writing in Ag/Life Sci. (GR-E+)3 Humanities (GE-H)	Spring Semester Course Hrs MMC 2100 Writing for Mass Comm (GR-E+)	
THIRD	YEAR	
Fall Semester Course Hrs AEE 3070C Digital Media Production in Ag/Life Sciences3 AEE 3414 Leadership Development	Spring Semester Course Hrs AEE 3413 Working with People: Interpersonal Lead. Skills3 AEE 4035 Advanced Ag Comm Writing (GR-E+)3 AEE 4036 Advanced Ag Comm Production	
	Summer Semester Course Hrs AEE 4948/4943 Ag Comm or Leadership Internship4	
FOURTH YEAR		
Fall Semester Course Hrs AEE 4052 Campaign Strategies	Spring Semester Course Hrs AEE 4434 Comm/Leadership in Groups and Teams	

Students desiring to enter this option must meet the departmental and College of Agricultural and Life Sciences pre-professional requirements and have a minimum overall GPA of 2.5. Students are also required to complete *MMC 2100: Writing for Mass Communications* with a grade of C or better. Approved Electives: See adviser for suggested electives consistent with the student's interests and goals. Critical tracking courses appear in **bold**.

Agricultural Education Course of Study (2006-2007)

FIRST YEAR		
Fall Semester Course <u>Hrs</u> AEB 3103 Principles of Food and Resource Economics (4) [or ECO 2013 or ECO 2023 (3)]	Spring Semester Spring Semester MAC 1147 Precalulus: College Algebra & Trig. (4) or 4 [MAC 1140/1104/1105 (3) and 1114 (2)] (GE-M) 3 AEE 3030C 1 PHI 2010 1 PHI 2010 3 Fine Arts Elective 3 Science Elective (GE-B/P/E) 4 Total Hours 16-1	
SECOND VEAR		
Fall Semester Course Hrs EDF 3110 Human Gr. & Dev. [or equiv.] 3 RED 3312 Classroom Reading (Su/Fall only) 3 American History Elective (GE-H) 3 Literature (GE-H,I) 3 Mathematics (GE-M) 3 Total Hours 15	Spring SemesterCourseHrsChemistry (GE-P)	
THIRD	YEAR	
Fall Semester Course Hrs AEE 3323 Dev. & Phil. of Ag Ed (Fall only) 3 AEB 3133 Prin. of Ag Business Mgmt. 3 ANS 3006C Intro. to Animal Science (Su/Fall only) 4 TSL 4320 ESOL Strat. for Cont. Area Tch. (F/Su only) 3 Horticulture or Plant Science Elective 3 Total Hours 16 3	Spring SemesterCourseHrsAEE 4202Curric. Dev. in Ag Ed (Sp. only)	
FOURTH YEAR		
Fall Semester Course Hrs AEE 3200 Instructional Tech. in Ag Ed (Fall only)	Spring Semester Course Hrs AEE 4224 Special Methods in Teaching ANR (Sp. only)	

• Total Math required: 9 credit hours

• Total Ag & NR courses required: <u>30 credit hours</u> in at least <u>4 areas</u>

- Students desiring to enter the Teaching Option must have a minimum overall GPA of 2.5 and have passed the *General Education* component of the FCTE.
- Critical tracking courses appear in bold.

Degree Program Hours: 120

Agricultural Education Course of Study (2007-2008) PROPOSED

FIRST	YEAR
Fall Semester Course Hrs Composition (GE-C) 3 AEB 2014 Economic Issues, Food and You (3) 3 [or ECO 2013(3) or ECO 2023 (3) or AEB 3103 (4)] 3-4 BSC 2007 Biological Sciences (GE-B) 3 BSC 2009L Biological Sciences Lab (GE-B) 1 EDF 3110 Human Growth & Development 1 [or EDF 3210 Educational Psychology] (GE-S) 3 Elective 2-1 Total Hours 15	Spring Semester Course Hrs MAC 1140 Precalculus Algebra (GE-M)
SECON	D YEAR
Fall Semester Course Hrs EDG 2701 Teaching Diverse Populations (GE-S, D)	Spring Semester Course Hrs CHM 1083 Consumer Chemistry (or higher) (GE-P)
Total Hours 15	YEAR .
Total Hours 13 THIRD Fall Semester Course Hrs AEE 3323 Dev. & Phil. of Ag Ed (Fall only) 3 AEE 4504 Program Planning in Ag Ed (Sp. only) 3 AEB 3133 Prin. of Ag Business Mgmt. 3 ANS 3006C Intro. to Animal Science (Su/Fall only) 4 TSL 4320 ESOL Strat. for Cont. Area Tch. (F/Su only) 3 Total Hours 16 16	Spring Semester Course Hrs AEE 4202 Curric. Dev. in Ag Ed (Sp. only) 3 SOS 3022 Intro. to Soils in the Environment. 3 SOS 3022L Intro. to Soils in the Environment Lab 1 ENY 3005 Intro to Entomology (GE-B) and 2 ENY 3005L Intro to Entomology Lab (GE-B) 1 [or PMA 3010 – Fund. of Pest Mgmt.(3)] [or ENY 3030C – Insect Field Biology(3)] Horticulture or Plant Science Elective 3 Elective – Ag or Natural Resources 3 Total Hours 16
Total Hours 13 THIRD Fall Semester Course <u>Hrs</u> AEE 3323 Dev. & Phil. of Ag Ed (Fall only)	Spring Semester Course Hrs AEE 4202 Curric. Dev. in Ag Ed (Sp. only) 3 SOS 3022 Intro. to Soils in the Environment. 3 SOS 3022L Intro. to Soils in the Environment Lab 1 ENY 3005 Intro to Entomology (GE-B) and. 2 ENY 3005L Intro to Entomology Lab (GE-B) 1 [or PMA 3010 – Fund. of Pest Mgmt.(3)] [or ENY 3030C – Insect Field Biology(3)] Horticulture or Plant Science Elective 3 Elective – Ag or Natural Resources 3 Total Hours 16

- Total Ag & NR courses required: <u>30 credit hours</u> in at least <u>4 areas</u>
- Students desiring to enter the Teaching Option must have a minimum overall GPA of 2.5 and have passed the *General Education* component of the FTCE.
- Critical tracking courses appear in bold.

Degree Program Hours: 120

Extension Education Course of Study (2006-2007)

FIRST YEAR			
Fall Semester Course Hrs Composition (GE-C)	Spring Semester Course Hrs MAC 1147 Precalculus: College Alg. & Trig. (GE-M) [or MAC 1140 and 1114 (5)]4-5 BSC 2008 Biological Science II (GE-B)3 AEE 3030C Effective Oral Communication		
SECON	D YEAR		
Fall Semester Course Hrs AEE 3033C Res & Bus Writing in Ag & Life Sciences (GR-E+)	Spring Semester <u>Course</u> <u>Hrs</u> SYG 2000 Principles of Sociology (GE-S)		
THIRD	YEAR		
Fall Semester Course Hrs AEE 3313 Dev/Role of Ext. Ed. .3 AEE 3414 Leadership Development. .3 AEE 4031 Communication Process in Ag. .3 AEB 4424 Human Resource Management. .3 Approved elective**. .3 Total Hours 15	Spring Semester Course Hrs AEE 4506 Nonformal Teaching Methods and Dev. Strat3 AEB 4123 Agricultural Law		
	Summer Semester Course Hrs AEE 4944 Cooperative Extension Internship4		
FOURTH YEAR			
Fall Semester Course Hrs AEE 3070C Digital Media Production in Ag & Life Sciences3 AEE 4052 Campaign Strategies	Spring Semester Course Hrs AEE 4500 Program Dev. and Evaluation		

Degree Program Hours: 120

Students desiring to enter this option must meet the departmental and College of Agricultural and Life Sciences pre-professional requirements and have a minimum overall GPA of 2.5. Approved Electives: See adviser for suggested electives consistent with the student's interests and goals. Critical tracking courses appear in bold.

Extension Education Course of Study (2007-2008) PROPOSED

FIRST YEAR		
Fall Semester Course Hrs Composition (GE-C)	Spring Semester Course Hrs MAC 1140 Precalculus Algebra (GE-M)	
SECOND YEAR		
Fall Semester Course Hrs AEE 3033C Research/Bus. Writing in Ag/Life Sci. (GR-E+)3 Humanities (GE-H)	Spring Semester Course Hrs SYG 2000 Principles of Sociology (GE-S)	
THIRD	YEAR	
Fall Semester Course Hrs AEE 3313 Dev/Role of Extension Education	Spring Semester Course Hrs AEE 4506 Nonformal Teaching Methods & Dev. Strategies3 AEB 4123 Agricultural & Natural Resources Law3 AEB 4126 Ag & Natural Resources Ethics (3) [or FYC 4114 Ethical Issues in FYCS (3)]3 Approved elective**	
	Summer Semester Course Hrs AEE 4944 Cooperative Extension Internship4	
FOURT	H YEAR	
Fall Semester Course Hrs AEE 3070C Digital Media Production in Ag/Life Sciences3 AEE 4052 Campaign Strategies3 AEE 4052 Campaign Strategies3 AEB 4224 US Food/Ag Policy (3) [or AEB 4274 NR & Environmental Policy (3) or AEB 4284 Human Resource Policy (3)]	Spring Semester Course Hrs AEE 3413 Working with People: Interpersonal Lead. Skills3 AEE 4434 Comm/Leadership in Groups and Teams3 AEE 4500 Program Development & Evaluation3 Approved elective**	

Degree Program Hours: 120

Students desiring to enter this option must meet the departmental and College of Agricultural and Life Sciences pre-professional requirements and have a minimum overall GPA of 2.5. Approved Electives: See adviser for suggested electives consistent with the student's interests and goals. Critical tracking courses appear in bold.



R. Elaine Turner, Associate Dean

MEMORANDUM

- TO: Daniel Wubah, Chair University Curriculum Committee
- FROM: R. Elaine Turner, Associate Dean College of Agricultural and Life Sciences REMMIN
- **DATE:** 11 September 2007

SUBJECT: Proposed Changes to the Soil and Water Science major and minor

At the May 30 CALS Curriculum Committee, changes to the major and minor offered in Soil and Water Science were approved. These revisions involve:

- Expanding the list of approved electives for the major
- Expanding the list of approved electives for the minor

The modifications are shown in the attached documents.

cc: CALS Curriculum Committee Chair James Fant Soil and Water Science

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Suggested semester-by-semester plan

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Semester 1 .	Credits
BSC 2010 and 2010L Integrated Principles of Biology 1 (3) and Laboratory (1) (GE-B)	4
CHM 2045 and 2045L General Chemistry 1 (3) and Laboratory (1) (GE-P)	4
Composition (GE-C, WR)	3
Electives	4
Total	. 15
Semester 2	Credits
CHM 2046 and 2046L General Chemistry 2 (3) and Laboratory (1) (GE-P)	4
MCB 2000 and 2000L Microbiology (3) and Laboratory (1)	4
Humanities (GE-H)	3
Social and Behavioral Sciences (GE-S)	3
Elective	2
Total	16
Semester 3	Credits
MAC 2311 Analytic Geometry and Calculus 1 (GE-M)	4
Humanities (GE-H) or Social and Behavioral Sciences (GE-S)	3
ECO 2023 Principles of Microeconomics (3) (GE-S) or AEB 3103 Principles of Ecod and Resource Economics (4) (GE-S)	3-4
AFE 3033C Research and Business Writing in Apricultural and Life Sciences	
Total	15-16
Comoster A	Credite
	creats
Phy 2004 and 2004L Applied Physics 1 (3) and Laboratory (1) (62-P)	4
SUS 3022 and 3022L Introduction to Solls in the Environment (3) and Laboratory (1) (GE-P)	4
	14
Semester 5	Credits
CHM 3120 and 3120L Introduction to Analytical Chemistry (3) and Laboratory (1)	4
SOS 4451 Soil and Water Chemistry	3
SOS 4231C Soil, Water and Land Use	3
Approved electives (see list)	5
Total	15
Semester 6	Credits
SOS 4715C Environmental Pedology	4

	· · · · · · · · · · · · · · · · · · ·
AEE 3030C Effective Oral Communication (or equivalent)	3
Approved electives (see list)	6
Total	13
Summer	Credits
SOS 4905 Individual Work <u>QRor</u> SOS 4941 Full-time Practical Work Experience in Soil and Water, Science Approved electives (see list)	<u>1-</u> 3 <u>1-3</u>
Total	3
Semester 7	Credits
SOS 4602C Soil Physics (GE-P)	3
SOS 4303C Soil Microbial Ecology	3
Approved electives (see list)	10
Total	16
Semester 8	Credits
SOS 4244 Wetlands	3
Approved electives (see list)	10-11
Total	13-14

Approved Electives: must include at least two of these courses

ALS 3133 Agricultural and Environmental Quality	3
SQS 2007 The World of Water	3
SOS 2008 Humans, Soils, and Environmental Impact	3
SOS 3023L Soil Judging	2
SOS 4116 Environmental Nutrient Management	3
SOS 4223 Environmental Biochemistry	3
SOS 4233 Soil and Water Conservation	3
SOS 4245 Water Resource Sustainability	3
SOS 4307 Ecology of Waterborne Pathogens	3
SOS 4720C GIS in Soil and Water Science	3
SOS 4905 Individual Work	
SOS 4909 Honors Project	
SOS 4932 Special Topics in Soll and Water Science	

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Electives are chosen with the student's adviser. There are four specific areas of specialization: soil, water and land use, environmental soil and water management, physical sciences and biological sciences. The student is encouraged to take electives from a range of course groupings that include biology, building construction, chemistry, earth science, environmental science, hydrology, mathematics, physics, policy, production systems, programming and statistics.

Areas of specialization in the soil and water science major are not restricted to the four areas above; other specializations can be developed.

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Minors

Soil and Water Science

Hours: 15 credits, all completed with grades of C or better

This minor must include SOS 3022, Introduction to Soils, in the Environment and the lab SOS 3022L.

Additional SOS-designated courses in the minor must be approved in writing at least two semesters before graduation by the academic adviser and the undergraduate coordinator in soil and water science. <u>Electives</u> include:

ALS 3133	Agricultural and Environmental Quality	3
SOS 2007	The World of Water	3
SOS 2008	Humans, Soils, and Environmental Impact	3
SOS 3023L	Soil Judging	<u>· 2</u>
<u>SOS 4116</u>	Environmental Nutrient Management	3
<u>505 4223</u>	Environmental Biogeochemistry	3
SOS 4233	Soil and Water Conservation	3
<u>SOS 4244</u>	Wetlands	3
SOS 4245	Water Resource Sustainability	3
SOS 4303C	Soil Microbial Ecology	3
SOS 4307	Ecology of Waterborne Pathogens	3
<u>SOS 4451</u>	Soil and Water Chemistry	3
SOS 4905	Individual Work	<u>1-3</u>
<u>SOS 4932</u>	Special Topics in Soil and Water Science	<u>1-3</u>

Fifteen credit hours are needed in soils courses for you to be certified as a soil scientist and/or work for the federal government as a soil scientist. Some courses offered in Soil and Water Sciences will not be accepted for certification or to work for the federal government. Please see the Undergraduate Coordinator for more information.



R. Elaine Turner, Associate Dean

MEMORANDUM

- TO: Daniel Wubah, Chair University Curriculum Committee
- FROM: R. Elaine Turner, Associate Dean College of Agricultural and Life Sciences

REJune

- DATE: 11 September, 2007
- SUBJECT: Proposed Changes to Entomology and Nematology Minor

At the May 30 CALS Curriculum Committee, changes to the Entomology and Nematology minor were approved. These changes rearranged the 15 required credit hours slightly to better reflect core course content needed and broaden the selection of electives. Modifications are shown in the attached document.

cc: CALS Curriculum Committee Chair James Fant

Entomology and Nematology

Hours: 15 credits, all completed with grades of C or better

Students in other departments can earn this minor

 A minimum nine credits of 3000-/4000-level course work (exclusive of practical problems). 66

- No more than three credits of practical problems courses.
- Additional credits in entomology must be approved by the department.
- Students who specialize in nematology must complete NEM 3002, NEM 5705 or acceptable practical problem.

Courses

ENY 3005 and 3005L Principles of Entomology and Laboratory	
ENY 3225C-Principles of Urban-Pest-Management	
ENY 4161 Insect Classification	3
ENY 4660 and 4660L Medical and Veterinary Entomology and Laboratory OR ENY 3222C Biology and Identification of Urban Pests <u>OR</u> ENY 3225C Principles of Urban Pest Management	
ENY or NEM electives/special problems courses	3 -6



R. Elaine Turner, Associate Dean

MEMORANDUM

- TO: Daniel Wubah, Chair University Curriculum Committee
- **FROM:** R. Elaine Turner, Associate Dean College of Agricultural and Life Sciences

REAMA

DATE: 11 September, 2007

SUBJECT: Proposed Changes to International Humanitarian Assistance Minor

At the May 30 CALS Curriculum Committee, changes to the International Humanitarian Assistance minor were approved. When the minor was originally proposed and approved some of the courses listed were not available on a regular basis or were only open to specific majors. Also, since the original approval, there have been faculty changes in the Food and Resource Economics Department, the academic home for the minor, which also altered course availability.

So, the following changes were proposed by the Food and Resource Economics Department and approved by the CALS Curriculum Committee:

- Changing the name of the minor to International Development and Humanitarian Assistance to more accurately reflect the course mix and subject matter.
- Restructuring of the required and elective courses.

These modifications are shown in the attached document.

cc: CALS Curriculum Committee Chair James Fant

International Development and Humanitarian Assistance

Hours: 15 credits, all completed with grades of B or better

This interdisciplinary Minor, in conjunction with students' successful completion of their degree program, is designed to provide UF students with foundational skills and knowledge necessary to productively contribute in nonprofit organizations, private businesses, and public sector organizations involved with international development and humanitarian assistance. Students will take core courses in international development policy and working with nonprofit organizations as well as elective courses in agriculture, ecology, conservation, economic policy and relations, and contemporary international issues and foreign policy.

The interdisciplinary minor in international humanitarian assistance. in conjunction with the successful completion of the degree program, provides UF students with foundational skills and knowledge necessary to contribute productively in nonprofit organizations, private businesses and the public sector.

Students-will-take core courses-in-international assistance and in public-policy, with emphasis-in economic policy and relations, foreign policy, contemporary-international issues and experiential learning.

The minor is open to all students at the University of Florida. The Department of Food and Resource Economics will provide advising. A cumulative GPA of at least 2.75 is necessary for admission to the minor. Students must also make a B or higher in AEB 4282, International Humanitarian Assistance, or <u>AEB 4283 International Development Policy</u> to continue in the minor. <u>Students must complete 15 hours of coursework</u>.

Required Courses: take 9-6 credits

AEB 4282 International Humanitarian Assistance	2
Or AEB 4283 International Development Policy	
FYC 4409 Working with Nonprofit Organizations in Community Settings	3

Select one

AEB 4283 International Development Policy	3
AHM-3930 U.S. Foreign-Relations	Э
PUR-4404C-International-Public Relations	з

Electives: (9 hours required – one course from each category)

take 6-eredits

Policy and Development Economic Perspectives:	
AEB 4242 International Trade Policy in Agriculture	3
AFS 4905 African Economic DevelopmentAEB-4343 International Agribusiness Marketing	4
ANT 4266 Economic Anthropology	3

ECO 4934 Public Utilities Economics: International Infrastructure	3
EC\$ 3403 Economic Development of Latin America	<u>4</u>
GEO 3502 Economic GeographyURP 3001 Cities of the World	3
	1

Contemporary Issues Contemporary International Issues and Foreign Policy:

AFS 4935 Children in Developing Countries	3
CPO 4034 Politics in Developing Nations	3
GEO 3430 Population Geography	<u>3</u>
GEO 3370 Conservation of Resources	3
GEO 4938 Management of Protected Areas in Africa and the Americas	1-4
HSC 4624 Trends in International Health	3
LAH 3300 Contemporary Problems in Latin America	3
SYO 4530 Social Inequality	<u>3</u>
WOH 4254 Nations and Nationalism	3
WST-3415-Transnational Feminism	3
WST 3930 Gender and Development	1-4

Humanitarian Assistance Internship	
ALS-4941 Internship (prior-approval)	1-4
Agriculture, Ecology and Conservation:	
AEB 3671 Comparative World Agriculture	3
AGR 3001 Environment. Food and Society	3
ALS 5932 Ethnoecology	3
EES 3000 Environmental Science and Humanity	3
FOR 4854 Agroforestry	3
INR 4350 International Environmental Relations	3
PUP 3204 Politics and Ecology	3
SYD 4510 Environment and Society	3



Research and Graduate Programs The Graduate School

164 Grinter Hall PO Box 115500 Gainesville, FL 32611-5500 352-392-4646 Fax 352-392-8729

April 24, 2007

MEMORANDUM

TO:	Barbara Earp, Coordinator Academic Services	
	English Language Institute	

Megan Forbes, Lecturer English Language Institute

- FROM: Kenneth J. Gerhardt, Interim Dean Graduate School
- RE: Proposal to accept substitute measures for the TOEFL exam required of international applicants

Your proposal to accept substitute measures for the TOEFL exam required of international applicants was approved by the Graduate Council with an effective date of Fall 2007. It will be forwarded to the University Curriculum Committee as an information item.

KG/ld

cc: ^VDiana Hull, Associate University Registrar, Office of the University Registrar Gann Enholm, Coordinator, Academic Support Services

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Research and Graduate Programs The Graduate School 164 Grinter Hall PO Box 115500 Gainesville, FL 32611-5500 352-392-4646 Fax 352-392-8729 71

April 24, 2007

MEMORANDUM

TO: Mickie Swisher, Associate Professor Family, Youth, and Community Sciences

32 Kenneth J. Gerhardt, Interim Dean FROM: Graduate School

RE: Proposal for a concentration in Family and Youth Development under the programs Master of Family, Youth, and Community Sciences and Master of Science with a major in Family, Youth, and Community Sciences

Your proposal for a concentration in Family and Youth Development under the programs Master of Family, Youth, and Community Sciences and Master of Science with a major in Family, Youth, and Community Sciences was approved by the Graduate Council with an effective date of Fall 2007. It will be forwarded to the University Curriculum Committee as an information item.

KG/ld

cc: VDiana Hull, Associate University Registrar, Office of the University Registrar Gann Enholm, Coordinator, Academic Support Services

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Research and Graduate Programs The Graduate School

May 2, 2007

MEMORANDUM

TO: Dr. Mary Peoples-Sheps Associate Dean for Academic Affairs College of Public Health and Health Professions

> Dr. Charles Courtney Associate Dean College of Veterinary Medicine

FROM: Dr. Kenneth J. Gerhardt Associate Dean of the Graduate School

RE: Proposal for a joint degree program in Doctor of Veterinary Medicine awarded by the College of Veterinary Medicine and the Master of Public Health awarded by the College of Public Health and Health Professions

The proposal for a joint degree program in Doctor of Veterinary Medicine awarded by the College of Veterinary Medicine and the Master of Public Health awarded by the College of Public Health and Health Professions has been administratively approved by the Graduate School, effective Summer 2007. The proposal will be forwarded to the University Curriculum Committee as an information item.

cc: J Diana Hull, Associate University Registrar, Office of the University Registrar Gann Enholm, Coordinator, Academic Support Services Program file



Research and Graduate Programs The Graduate School RECEIVED REGISTRAR M-6 UNIVERSITY OF FLORIDA

2007 MAY 23 A 8 23

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May 18, 2007

MEMORANDUM

- TO:Alyson FlournoyUF Research Foundation Professor & DirectorLevin College of Law Environmental and Land Use Law Program
- FROM: Henry T. Frierson, Associate Vice President and Dean **7**. **7**. Graduate School
- RE: Proposal for a LL.M. in Environmental & Land Use Law

Your proposal for a LL.M. in Environmental & Land Use Law was approved by the Graduate Council with a starting date of Fall 2007 pending approval from the Faculty Senate and Board of Trustees. It will be sent to the University Curriculum Committee as an information item and to the Faculty Senate for action.

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HF/ld

cc: VDiana Hull, Associate University Registrar, Office of the University Registrar Amelia Hugus, Faculty Senate Secretary Gann Enholm, Coordinator, Academic Support Services



Research and Graduate Programs The Graduate School



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164 Grinter Hall PO Box 115500 Gainesville, FL 32611-5500 352-392-4646 Fax 352-392-8729

May 18, 2007

MEMORANDUM

- TO: Asoo Vakharia, Professor and Chair Decision and Information Sciences
- FROM: Henry T. Frierson, Associate Vice President and Dean APP

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RE: Proposal for a concentration in Supply Chain Management within the Master of Science with a major in Decision and Information Sciences

Your proposal for a concentration in Supply Chain Management within the Master of Science with a major in Decision and Information Sciences was approved by the Graduate Council with an effective date of Fall 2007. It will be forwarded to the University Curriculum Committee as an information item.

HF/ld

cc: VDiana Hull, Associate University Registrar, Office of the University Registrar Gann Enholm, Coordinator, Academic Support Services

Proposed New Undergraduate Courses

UCC 9/18/07

Course Number	Title	Credit	Eff. Date
AEB 4285	State and local government policy in rural areas		Spring 2008
AOM 4909	Honors project	1 to 6	Spring 2008
EGN 4935	Special Topics in Engineering	1 to 4	Spring 2008
FNR 4XXX	Models of forest water resources	1	Fall 2008
FOR 3XXX	Introduction to forest resources and conservation	3	Fall 2008
FOR 3XXX	Society and natural resources	3	Fall 2008
FOR 3622	Fire ecology and management laboratory	1	Spring 2008
FOR 4XXX	Spatial models and decision analysis	3	Spring 2008
FOR 4XXX	Urban forestry applications		Fall 2008
	Seminar in contemporary issues in forest resources and		
FOR 4XXX	conservation	1	Fall 2008
FYC 4425	Risk management in nonprofit organizations	3	Spring 2008
FYC 4660	Familiy policy	3	Spring 2008
GEO 3XXX	The Human Footprint on the Landscape		Spring 2008
LIT 1302	Advertising & Culture	3	Spring 2008
MUL 3351	Classical Literature	3	Spring 2008
PUR 4XXX	Principles of Fund Raising	3	Spring 2008

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Proposed Undergraduate Course Changes

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9/18/07

Course:	Title:	Туре:	Change From:	Change To:	Eff. Date	
	Introduction to Clinical		PSY2012.	PSY2012, CLP3144,		
CI P 4134	Child/Pediatric Psychology	Prerequisites	CI P3144	STA2023 or STA2122	Fall 2007	
021 1104	Introduction to Clinical	Tioroquionoo	PSY2012.	PSY2012, CLP3144.		
CLP 4302	Psychology	Prerequisites	CLP3144	STA2023 or STA2122	Fall 2007	
CBW 3110	Image Writing Eletion	Title Change	Fiction	Eiction Writing	Fall 2007	
		The Onlange	Advanced	, lettori tiritang	1 0.1 2001	
1	Advanced Seminar Fiction		Seminar Fiction	Sen Advanced Fiction	(
CBW 4905	Writing	Title Change	Writing	Work	Fall 2007	
		The ondige	Advanced			
	Advanced Seminar Poetry		Seminar Poetry	Sen Advanced Poetry	Spring	
CBW 4906	Writing	Title Change	Writing	Work	2008	
01111 4000		Amount of			Spring	
ENR 4343	Forest water resource	Credit	02 credits	03 credits	2008	
	i olest water resource		Eiro in Natural			
FOR	Fire in Natural Resource		Pocourco	Fire Feeleny and	Spring	
32140	Management	Title Change	Management	Menagement	2008	
52140		The Change	Management	wanagement	2000	
	Forest resources	Amount of			Spring	
FOR 3434	information systems	Credit	02 credits	03 credits	2008	
			International		Spring	
FOR 4060	International Forestry	Title Change	Foresty	Global Forestry	2008	
	Quantitative forest	Amount of			Spring	
FOR 4621	management	Credit	03 credits	04 credits	2008	
<u>_</u>			Ouantitative			
			forest	Forest economics and	Spring	
-		Title Change	management	management	2008	
		The Change		management	2000	
			FOR 31620 OR		Cariaa	
		Duran avialtar	FOR 4541, OR	FOR 3162C OR ECU	Spring	
		Amount of	EQUIVALENT.	2023, OR EQUIVALENT.	2008	
FOR 4624	Forest health management	Crodit	04 crodite	02 crodits	Isping	
10114024	Forest nearth management				Carlos	
LISC 3502	Dischility	Braraguiaitaa	None	Majors/Minors only or	Spring	
100 0002		Frerequisites		permission of dept,	2000	
	Health Care Leadership		HSA3111, HSC2502		Spring	
HSC 4184	Skille and Styles	Broroquisitos		Majore only	2008	
1100 4104		rielequisites			2000	
	Critical Thinking in Health		HSC3502		Spring	
HSC 4608	Care	Proroquisitos	LISC3561	Majore only	2008	
100 4000		Amount of	1303001		Spring	
JPT 3300	Samurai Mar Toloo	Crodit	04 crodite	02 orodite	2008	
					Spring	
OTH 3201	Dovelopment 2	Proroquisitos	Nono	Mojore only	2008	
0110201	The Nervous System and	rierequisites		Inajors only	Spring	
	Disordore	Proroquisitos	None	Majors only	2008	
0117410	Lab in Nonyous System and	Frerequisites		Majors only and Cores:	Spring	
	Disordere	Prorequisitos	None	OTUAN19		
<u>1011 44 10L</u>	Disoluers	Fierequisites			2000	

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			STA3024 and		
			Coreqs:	Majors/Minors only and	
			HSA3111,	Coreqs: HSA3111,	Spring
PHC 4101	Public Health Concepts	Prerequisites	HSC3502	HSC3502	2008
	Public Relations Visual		PUR 4100, PUR		Spring
PUR 4103	Community	Prerequisites	3801, SR.	PUR 3801, JOU 3101	2008
			PUR 3000, 4100,	PUR 3000, 4100, 3801,	Spring
PUR 4800	Public Relations Campaigns	Prerequisites	3801, SR.	41C3, SR.	2008
	Rehabilitation Services				Spring
RCS 4800	Practicum	Prerequisites	Majors only	RCS 4415, Majors only	2008
			Intensive		
	Intensive Aural/Read		Aural/Read	Intensive Communication	Spring
SPN 2240	Comprehension	Title Change	Comprehension	Skills	2008
					Spring
		Lab Code	None	Combined	2008
		Course			
		number			Spring
SUR 2101	Geomatics	change	SUR 2101	SUR 3101	2008

Proposed New Professional Courses

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	Professional New Course: Sept. 18, 2007		
Course Number	Current Title	Credit	Eff. Date
LAW 6364	Advanced Trial Practice	1	Fall 2007
PHA 5229	Shaping your pharmacy future	2	Fall 2007
PHA 5666	Clinical Practice Assesments I	3	Fall 2007
PHA 5667	Clinical Practice Assesments II	3	Fall 2008
PHA 5668	Clinical Practice Assesments III	3	Fall 2009

Proposed Professional Course Changes

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		Change			
Course:	Title:	Type:	Change From:	Change To:	Eff. Date
LAW 6465	Conservation Clinic	S/U	None	S/U only	Fall 2007
1 4141 7000			Tavation (Taxation of property	
LAW 7602	Income Taxation I	I nie Change	Income Taxation I	transactions	Fail 2007
	Elective				
	Topics/Chapman	Amount of			
MEL 7960	Education Center	Credit	2 & 4	1 to 4	Fall 2008
	Elective	Amount of			
MEL 7941	Topics/Biochemistry	Credit	2 & 4	1 to 4	Fall 2008
		[Introduction to	Introduction to Pharmacists,	
	Introduction to		Pharmacy Health	Pharmaceuticals, and the	
PHA 5727	Pharmacy Health Care	Title Change	Care	Health Care System	Fall 2007