MEMORANDUM
Department of Computer Sciences
College of Engineering
Florida Institute of Technology

To: Ed Kalajian, Associate Dean, College of Engineering
From: William Shoaff, Department Head, Computer Sciences
Re: Computer Science (7071) & Software Engineering (7075) Curriculum Changes
Date: March 19, 2010
Encl: Current versus Proposed Schedule of Courses
Prerequisite Chart for Proposed Curriculum
Add New Class Forms: CSE 1500, 2120, 2500, 3120
Change Requirement Forms: CSE 2010, CSE 2050, CSE 3411, 4001, 4415
Syllabus: CSE 1500, 2120, 3120

The Department of Computer Sciences requests approval for changes to the Bachelor of Science in Computer Science and Software Engineering curricula. The attached schedule compares the existing program requirements to those being proposed. In summary the changes include the following:

1. Expand the Science requirements allowing students to select a two-semester series in Physics (PHY 1001/2091, 2002/2092), Biology (BIO 1010, BIO 1020), or Chemistry (CHM 1101, CHM 1102).

2. Include another Mathematics or Science elective to maintain the ABET required minimum of 32 hour of Mathematics and Science.


4. Propose a new mathematics/computer science elective: CSE 2500 Combinatorics and Graph Theory. The Mathematics Department will renumber MTH 3051 Combinatorics and Graph Theory to MTH 2500 Combinatorics and Graph Theory, cross-listing these courses.


6. Change two technical electives to technical or business electives.

Assessment, Evaluation, and Continual Improvement

Students in the Bachelor of Science in Computer Science Program been polled by email and meetings have been held with smaller groups to obtain feedback on the proposed curriculum changes.
Science Courses: Overwhelmingly, students support expanding the Science options because of the flexibility it offers. For the same reason, the faculty support this change. This change will improve the program by allowing students to choose which fields of science to study. In addition, the proposed science requirements will allow students to pursue a minor in biology, chemistry, or physics should they choose to do so.

New Math/Science Elective: One consequence of relaxing the science requirements is that the minimum total credits in Mathematics and Science falls 31, which is below the ABET requirement of 32 credits. Therefore a 3 credit elective in Mathematics or Science is being added to the Spring semester of the Junior year. Students selecting the Physics option will have earned 2 of 3 credits and can select a 1 credit course to fulfill their science requirements.

Systems Courses: The impetus to change the computer systems curriculum comes from assessment and evaluation of existing systems courses: CSE 3101 and CSE 4001. This is typified by the comment in an assessment report.

“Although an understanding of binary number systems and computer organization is important for success this course, the prerequisite courses do not appear to provide sufficient background in those areas and they must be covered in more detail in this course, possibly reducing time for more advanced topics.”

The proposed curriculum provides a cleaner progression through system concepts. In order, students will learn fundamentals of programming, computer organization and machine (binary/hex) representations of data and instructions, programming in a high-level systems languages (C), architectural abstractions and assembly programming to the architecture, and finally, how the resources of the machine are controlled through an operating system.

New Discrete Math Courses: Several discrete mathematics topics that are useful in computer science and software engineering are not covered in CSE 1500. An additional, elective course covering topics in combinatorics and graph theory is proposed. This course will be cross-listed with MTH 2500 Combinatorics and Graph Theory.
This course is available for student registration only after the approval process has been completed.

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>C S E</th>
<th>COURSE NO.</th>
<th>1 5 0 0</th>
<th>CREDIT HOURS</th>
<th>3</th>
<th>TERM TO BE ADDED TO THE FILE</th>
<th>Fall 2010</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(e.g., CSE)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(e.g., 1301)</td>
<td></td>
</tr>
<tr>
<td>CLASS HOURS</td>
<td>3</td>
<td>LECTURE HOURS</td>
<td>3</td>
<td>LAB HOURS</td>
<td>0</td>
<td>CONTACT HOURS (CEU ONLY)</td>
<td></td>
</tr>
<tr>
<td>DEPARTMENT</td>
<td>Computer Sciences</td>
<td>SCHEDULE TYPE</td>
<td>Lecture</td>
<td>(e.g., Computer Sciences)</td>
<td>(e.g., Lecture, Lab or Special Topics/Project)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>☐</td>
<td>COLLEGE OF AERONAUTICS - 23</td>
<td>☐</td>
<td>COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS - 25</td>
<td>☐</td>
<td>COLLEGE OF SCIENCE - 26</td>
<td>☐</td>
<td>EXTENDED STUDIES DIVISION / NATHAN M. BISK COLLEGE OF BUSINESS - 90</td>
</tr>
<tr>
<td>☒</td>
<td>COLLEGE OF ENGINEERING - 1</td>
<td>☒</td>
<td>COLLEGE OF SCIENCE - 26</td>
<td>☒</td>
<td>EXTENDED STUDIES DIVISION / NATHAN M. BISK COLLEGE OF BUSINESS - 90</td>
<td>☒</td>
<td>COLLEGE OF SCIENCE - 26</td>
</tr>
<tr>
<td>COMPUTER TITLE</td>
<td>Restricted to 25 characters, including spaces</td>
<td>Applied Discrete Math</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CATALOG TITLE</td>
<td>Applied Discrete Mathematics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CATALOG DESCRIPTION OF COURSE | Restricted to 350 characters, including spaces

Topics include positional and modular number systems, relations and their graphs, discrete functions, set theory, propositional and predicate logic, sequences, summations, mathematical induction and proofs by contradiction.

In addition, please attach a course syllabus and/or more detailed description.

GRADES TO BE ISSUED

| ☒ | A, B, C, D, F | ☐ | A, B, C, D, F, CEU | ☐ | CEU | ☐ | S, U | ☐ | P, F | ☐ | Other |

ADDITIONAL RESTRICTION

(REquirement: Passing score on the Calculus Readiness Test, or prerequisite course.)

(e.g., Major, Class Level, Department Head Approval)

If this course replaces a course currently offered in BANNER, please indicate old course information and the date/term the course may be removed from the system.

SUBJECT Alpha Prefix (e.g., CSE) | C S E | COURSE NO. (e.g., 1301) | 1 4 0 0 |

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

<table>
<thead>
<tr>
<th>Will Mage</th>
<th>3/23/2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair, Graduate Council</td>
<td>Date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>☒</th>
<th>3/23/2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair, Undergraduate Curriculum Committee</td>
<td>Date</td>
</tr>
</tbody>
</table>

CATALOG DIRECTOR

These changes/additions have been made for the University Catalog/policy management system and entered into the BANNER term named above.

Catalog Director | Date

REGISTRAR'S USE ONLY

SCACRISE | SCADETL | SCAPREO

SCARIES | Operator Init. | Date

Florida Institute of Technology  Office of the Registrar

150 West University Boulevard, Melbourne, FL 32901-6975  (321) 674-8114  Fax (321) 674-7827

RGR.006.409
Florida Institute of Technology

ADDING A NEW COURSE TO THE CURRICULUM

This course is available for student registration only after the approval process has been completed.

SUBJECT CSE COURSE NO. 2120 CREDIT HOURS 3 TERM TO BE ADDED TO THE FILE Fall 2011

Alpha Prefix (e.g., CSE) Number Choice (e.g., 1301) (e.g., Fall 2008)

CLASS HOURS 3 LECTURE HOURS 3 LAB HOURS 0 CONTACT HOURS (CEU ONLY) 0

DEPARTMENT Computer Sciences SCHEDULE TYPE Lecture

(e.g., Computer Sciences) (e.g., Lecture, Lab or Special Project)

□ COLLEGE OF AERONAUTICS-23 □ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS-25
□ COLLEGE OF BUSINESS-24 □ COLLEGE OF SCIENCE-26
☑ COLLEGE OF ENGINEERING-01 □ UNIVERSITY COLLEGE EXTENDED STUDIES-27

COMPUTER TITLE Restricted to 25 characters, including spaces Comp Org Machine Prog

CATALOG TITLE Computer Organization and Machine Programming

CATALOG DESCRIPTION OF COURSE Limited to 350 characters, including spaces

Introduces digital logic, computer arithmetic, instruction sets and the basic components of computer architecture. Covers arithmetic/logic, control, memory and input/output units. Explores the relationship between computer architecture and machine language programming. Students will write programs in Intel assembly language.

In addition, you may attach a course syllabus and/or more detailed description.

RESTRICTIONS
☑ Prerequisite CSE 1001
□ Corequisite Course Number

□ Prerequisite Course Number
□ Corequisite Course Number
□ Prerequisite Course Number
□ Corequisite Course Number

GRADES TO BE ISSUED
☑ A, B, C, D, F
□ A, B, C, D, F, CEU
□ CEU
□ S, U
□ P, F
□ Other

ADDITIONAL RESTRICTION

(e.g., Major, Class Level, Department Head Approval)

if this course replaces a course currently offered in BANNER, please indicate old course information

SUBJECT Alpha Prefix (e.g., CSE) COURSE NO. (e.g., 1301) 3102

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

[Signatures and dates]

Originator 3/27/10

Chair, Graduate Council Date

Department Head/Program Chair 3/29/10

Chair, Undergraduate Curriculum Committee Date

Dean of Associate Dean 3-25-10

Catalyst Director Date

REGISTRAR'S USE ONLY

SCARCSE SCADTL SCAPIREQ SCABASE SCARRIES Operator Init Date

These changes/additions have been made for the University/Extended Studies Catalog and entered into the BANNER term named above.

Catalog Director Date

Florida Institute of Technology • Office of the Registrar

150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-8114 • Fax (321) 674-7827

RG-271-5001
CSE 2120 Computer Organization and Machine Programming

2011-2012 Catalog Data: Introduces digital logic, computer arithmetic, instruction sets and the basic components of computer architecture. Covers arithmetic/logic, control, memory and input/output units. Explores the relationship between computer architecture and machine language programming. Students will write programs in Intel assembly language.

Required

Prerequisites by Topic: Fundamentals of Computer Programming

Textbooks: Course Topics:


Course Learning Outcomes: The student will be able to

1. Explain the organization of a typical computer system, including
   (a) Storage of data and instructions
   (b) Access and exchange data in memory and registers
   (c) Interfaces with input-output devices
   (d) Binary and hexadecimal number systems and integer arithmetic

2. Understand digital logic and sequential circuits

3. Minimize logic expressions

4. Use program debugging techniques

5. Understand control flow and memory access via pointers

6. Program basic building blocks of a computer system in machine and assembly languages and demonstrate low-level concepts related to computer programming

Topics Covered and Associated Time:

1. Basic concepts of computer organization (3 meetings)
2. Binary number system, data representation and integer arithmetic (3 meetings)
3. Overview of digital logic, including gates, registers, multiplexors and sequential circuits (6 meetings)
4. Memory organization, memory addressing modes, pointers and local variables (6 meetings)
5. Introduction to assembly language programming, control flow, program logic, function calls (9 meetings)
6. Working with strings, structures, arrays and the runtime stack in assembly language (6 meetings)
7. Input-Output organization and interfacing (6 meetings)

**Class/Lab/Recitation Schedule:** Three 50-minute lectures per week.
**Contribution of Course to Meeting the Professional Component:** 3 semester hours of core computer science and software engineering.

**Relationship of Course to Program Outcomes:** The course develops the student’s ability to

- appropriately apply knowledge of mathematics, science, computing, and engineering to complex systems
- identify computing and engineering problems, design and conduct experiments, analyze and interpret data, and identify and define the requirements appropriate to solving these problems
- to use the techniques, skills, and modern tools necessary for computing and engineering practice

**Grading:**

- Two progress tests (20% and 20% respectively)
- Cumulative final exam (25%)
- Written and programming assignments (30%)
- Quizzes and in-class participation (5%)

**Prepared By:** William Allen, Ph.D., Associate Professor, (March 19, 2010)
Florida Institute of Technology

ADDING A NEW COURSE TO THE CURRICULUM

This course is available for student registration only after the approval process has been completed.

SUBJECT C S E  COURSE NO. 2500 CREDIT HOURS 3 TERM TO BE ADDED TO THE FILE Fall 2010
(Course, Major, Department)

CLASS HOURS 3 LECTURE HOURS 3 LAB HOURS 0 CONTACT HOURS (CEU ONLY) 3

DEPARTMENT Computer Sciences SCHEDULE TYPE Lecture

☐ COLLEGE OF AERONAUTICS - 23 ☐ COLLEGE OF PSYCHOLOGY AND LIBERAL ARTS - 25
☐ NATHAN M. BISK COLLEGE OF BUSINESS - 24 ☐ COLLEGE OF SCIENCE - 26
☒ COLLEGE OF ENGINEERING - 1 ☐ EXTENDED STUDIES DIVISION / NATHAN M. BISK COLLEGE OF BUSINESS - 90

COMPUTER TITLE Restricted to 25 characters, including spaces Combin & Graph Theory

CATALOG TITLE Combinatorics and Graph Theory

CATALOG DESCRIPTION OF COURSE Restricted to 350 characters, including spaces

Elementary and advanced counting techniques including permutations, combinations, multisets, inclusion-exclusion, generating functions, recurrence relations and topics in graph theory including graphs, trees, binary tree, graph traversals and network flow.

In addition, please attach a course syllabus and/or more detailed description.

GRADES TO BE ISSUED
☒ A, B, C, D, F
☐ A, B, C, D, F, CEU
☒ CEU
☐ S, U
☐ P, F
☐ Other

ADDITIONAL RESTRICTION (CSE 1500 or MTH 1500) and (CSE 1001 or CSE 1502 or CSE 1503)

(e.g., Major, Class Level, Department Head Approval)

if this course replaces a course currently offered in BANNER, please indicate old course information and the date/term the course may be removed from the system.

SUBJECT Alpha Prefix (e.g., CSE)  COURSE NO. (e.g., 1301)

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

Originator 3/23/2010

Chair, Graduate Council Date

Department Head/Program Chair OR

Dean or Associate Dean Date

Chair, Undergraduate Curriculum Committee Date

CATALOG DIRECTOR

These changes/additions have been made for the University Catalog/policy management system and entered into the BANNER term named above.

Catalog Director Date

REGISTRAR'S USE ONLY

SCACRESC SCACREDT SCACREQ

SCARRES Operator Init Date

Florida Institute of Technology • Office of the Registrar

150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-8114 • Fax (321) 674-7827
CSE 2500 Combinatorics and Graph Theory

2011-2012 Catalog Data: CSE 2500 Combinatorics and Graph Theory (3 credits). Elementary and advanced counting techniques including permutations, combinations, multisets, inclusion-exclusion, generating functions, recurrence relations and topics in graph theory including graphs, trees, binary tree, graph traversals and network flow.

Elective

Prerequisites by Topic: Elementary discrete mathematics and computer programming


Course Learning Outcomes: The student will be able to

1. Prove simple propositions combinatorics and graph theory
2. Use counting techniques and compute discrete probabilities
3. Use graphs and trees to model problems
4. Compute solutions to recurrence equations

Topics Covered and Associated Time:

1. Combinatorics (6 meetings)
2. Discrete Calculus (9 meetings)
3. Discrete Probability (6 meetings)
4. Graph Theory (9 meetings)
5. Proofs (6 meetings)

Class/Lab/Recitation Schedule: Three 50-minute meetings per week for 15 weeks.

Contribution of Course to Meeting the ABET Professional Component: 3 semester hours of college level mathematics.

Relationship of Course to ABET Student Outcomes: The course develops the student’s ability to appropriately apply knowledge of mathematics, science, computing, and engineering to complex systems.

Grading: Four term examinations and a comprehensive final examination, each with a 20% weight. Letter grades assigned on the standard 10-point scale.

Prepared By: William Shoaff, Ph.D., Associate Professor and Department Head, (March 19, 2010)
**Florida Institute of Technology**

**Adding a New Course to the Curriculum**

This course is available for student registration only after the approval process has been completed.

**Subject:** CSE  
**Course No.:** 3120  
**Credit Hours:** 3  
**Term to be Added to the File:** Fall 2011  
**Class Hours:** 3  
**Lecture Hours:** 3  
**Lab Hours:** 0  
**Contact Hours:** (CEU only)

**Department:** Computer Sciences  
**Schedule Type:** Lecture

- COLLEGE OF AERONAUTICS-23
- COLLEGE OF BUSINESS-24
- COLLEGE OF SCIENCE-26
- COLLEGE OF ENGINEERING-01
- UNIVERSITY COLLEGE EXTENDED STUDIES-27

**Computer Title:** Restricted to 25 characters, including spaces  
Comp Arch and Assembly

**Catalog Title:** Computer Architecture and Assembly Programming

**Catalog Description of Course:** Limited to 350 characters, including spaces

Introduces advanced computer architecture concepts. Includes microcode, execution pipelines, cache management, vector processors, parallel architectures and RISC processors. Explores the interfacing of assembly language programs with the operating system and high-level languages. Students will interface assembly with C and the Win32 API.

In addition, you may attach a course syllabus and/or more detailed description.

### Restrictions
- **Prerequisite:** CSE 2120
- **Corequisite:**
- **Course Number:**

### Grades to be Issued
- **A, B, C, D, F**
- **A, B, C, D, F, CEU**
- **CEU**
- **S, U**
- **P, F**
- **Other**

### Additional Restrictions

- (e.g., Major, Class Level, Department Head Approval)

If this course replaces a course currently offered in Banner, please indicate old course information.

**Subject:** CSE  
**Course No.:** 3101

---

**Approvals:** Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

<table>
<thead>
<tr>
<th>Originator</th>
<th>3/11/2014</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair, Graduate Council</td>
<td></td>
<td>Date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Department Head/Program Chair</th>
<th>3/23/2014</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair, Undergraduate Curriculum Committee</td>
<td>S-25-10</td>
<td>Date</td>
</tr>
</tbody>
</table>

**Catalog Director**

These changes/additions have been made for the University/Extended Studies Catalog and entered into the Banner term named above.

### Registrar's Use Only

<table>
<thead>
<tr>
<th>SCACRSE</th>
<th>SCADERL</th>
<th>SCAPREQ</th>
<th>SCABASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCARRS</td>
<td>Operator Init</td>
<td>Date</td>
<td></td>
</tr>
</tbody>
</table>

**Distribution:**

Original—Registrar  
Copy—Academic Unit

Florida Institute of Technology • Office of the Registrar  
150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-8114 • Fax (321) 674-7827  
RG-271-506
CSE 3120 Computer Architecture and Assembly Programming

2011-2012 Catalog Data: (3 credits) Introduces advanced computer architecture concepts. Includes microcode, execution pipelines, cache management, vector processors, parallel architectures and RISC processors. Explores the interfacing of assembly language programs with the operating system and high-level languages. Students will interface assembly with C and the Win32 API. Prerequisites: CSE 2050 and CSE 2120

Required for Computer Science; Elective for Software Engineering

Prerequisites by Topic: Computer organization and programming in a systems-level language.


Course Learning Outcomes: The student will be able to

1. Relate architectural concepts to program design and performance, such as cache memory, microprogramming, instruction pipelines, multiprocessing and embedded systems
2. Implement macros, stack frames, modular programming, dynamic memory allocation and recursion in assembly language
3. Use programming techniques for graphics, user interfaces and file I/O
4. Reverse engineering, in-line assembly and advanced debugging techniques
5. Explain the application of course topics to fields, such as security, operating system design and databases

Topics Covered and Associated Time:

1. Architecture concepts related to program design and performance, such as cache memory, microprogramming, instruction pipelines, multiprocessing and embedded systems (9 meetings)
2. Assembly language implementations of macros, stack frames, modular programming, dynamic memory allocation and recursion (9 meetings)
3. Programming techniques for graphics, user interfaces and file I/O (9 meetings)
4. Reverse engineering, in-line assembly and advanced debugging techniques (9 meetings)
5. An overview of application areas, such as security, operating system design and databases (6 meetings)

Class/Lab/Recitation Schedule: Three 50-minute lectures per week,

Contribution of Course to Meeting the Professional Component: 3 semester hours of advanced computer science.

Relationship of Course to Program Outcomes: The course develops the student’s ability to
appropriately apply knowledge of mathematics, science, computing, and engineering to complex systems

identify computing and engineering problems, design and conduct experiments, analyze and interpret data, and identify and define the requirements appropriate to solving these problems

to use the techniques, skills, and modern tools necessary for computing and engineering practice

Grading:

Two progress tests (20% and 20% respectively)

Cumulative final exam (25%)

Written and programming assignments (30%)

Quizzes and in-class participation (5%)

Prepared By: William Allen Ph.D., Associate Professor, (March 19, 2010)
Florida Institute of Technology

CHANGING RESTRICTIONS OR CREDITS IN A COURSE

The addition or removal of any restriction or change in credit hours in a course requires that this form, accompanied by any supporting documentation, be completed and approved as indicated below.

COLLEGE: Engineering
DEPARTMENT: Computer Sciences

REQUEST IS FOR CHANGE IN COURSE

Prefix Number Course Title
CS 2010 Algorithms and Data Structures

TO BE INCLUDED IN 20 1 1 20 1 2 CATALOG AND EFFECTIVE IN THE BANNER SYSTEM FOR FALL 2010 TERM

IS REQUEST FOR A CHANGE IN CREDITS FOR COURSE LISTED ABOVE? Yes ☐ No ☐ If yes, current credits requested credits

IS REQUEST TO CHANGE RESTRICTIONS FOR COURSE LISTED ABOVE? ☐ Yes ☒ No ☐ If yes, please check all that apply:
- Add ☒ Remove ☐ Prerequisite ☐ Corequisite
  - Prefix Number
  - CS 4000
  - MTH 2051
  - Other Restrictions ☐ Yes ☐ No

Prerequisite: MTH 1600

APPROVALS:
Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

1) ___________________________ 3/21/2010 4)
   Originator Date Chair, Graduate Council Date

2) ___________________________ 3/23/2010 OR
   Department Head/Program Chair Date

3) ___________________________ 3/25/10
   Dean or Associate Dean Date Chair, Undergraduate Curriculum Committee Date

CATALOG DIRECTOR'S USE ONLY

SCACISE ___________________________ SCADETIL ___________________________ SCAPREQ ___________________________
SCABASE ___________________________ SCARES ___________________________ Operator Initials ___________________________ Date ___________________________

DISTRIBUTION
Original – Registrar
Copy – Academic Unit

Florida Institute of Technology • Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-8114 • Fax (321) 674-7827
RGR-056-1009
CHANGING RESTRICTIONS
OR CREDITS IN A COURSE

The addition or removal of any restriction or change in credit hours in a course requires that this form, accompanied by any supporting documentation, be completed and approved as indicated below.

COLLEGE: Engineering
DEPARTMENT: Computer Sciences

REQUEST IS FOR CHANGE IN COURSE: Programming in a Second Language
Prefix: CSE 2050
Course Title: Programming in a Second Language

TO BE INCLUDED IN 20 1 /12 CATALOG AND EFFECTIVE IN THE BANNER SYSTEM FOR Fall 2010 TERM

IS REQUEST FOR A CHANGE IN CREDITS FOR COURSE LISTED ABOVE? ☐ Yes ☑ No If yes, current credits ________ requested credits ________

IS REQUEST TO CHANGE RESTRICTIONS FOR COURSE LISTED ABOVE? ☑ Yes ☐ No If yes, please check all that apply:
☐ Add ☐ Remove ☑ Prerequisite ☐ Corequisite Prefix CSE 1002 Number ☑ and ☐ or
☐ Add ☐ Remove ☑ Prerequisite ☐ Corequisite Prefix CSE 2120 Number ☐ and ☐ or
☐ Add ☐ Remove ☐ Other Restrictions ☐ Yes ☐ No If yes, please list below:

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

1) __________________________ 3/1/2010
Originator Date
2) __________________________ 3/28/2011
Department Head/Program Chair Date
3) __________________________ 3-25-10
Dean of Associate Dean Date

Chair, Graduate Council
Date
OR
Chair, Undergraduate Curriculum Committee
Date

CATALOG DIRECTOR'S USE ONLY

SCACRSE __________________________ SCADETL __________________________ SCAPRED __________________________
SCABASE __________________________ SCARRIES __________________________ Operator Initials __________________________ Date __________________________

DISTRIBUTION
Original – Registrar
Copy – Academic Unit

Florida Institute of Technology • Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-8114 • Fax (321) 674-7827
R01-096-1009
The addition or removal of any restriction or change in credit hours in a course requires that this form, accompanied by any supporting documentation, be completed and approved as indicated below.

COLLEGE: Engineering
DEPARTMENT: Computer Sciences

REQUEST IS FOR CHANGE IN COURSE ____________ Software Testing 1
Prefix Number

TO BE INCLUDED IN 20_1_1/CATALOG AND EFFECTIVE IN THE BANNER SYSTEM FOR Fall 2010 TERM

IS REQUEST FOR A CHANGE IN CREDITS FOR COURSE LISTED ABOVE? □ Yes □ No If yes, current credits ____________ requested credits ____________

IS REQUEST TO CHANGE RESTRICTIONS FOR COURSE LISTED ABOVE? □ Yes □ No If yes, please check all that apply:
- Add □ Remove □ Prerequisite □ Corequisite □ C S E 1 4 0 0 and □ or
- Add □ Remove □ Prerequisite □ Corequisite □ C S E 1 5 0 0 □ and □ or
- Add □ Remove □ Prerequisite □ Corequisite □ and □ or
- Add □ Remove □ Other Restrictions □ Yes □ No If yes, please list below:

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

1) ___________________________ 2) ___________________________
Originator Date

3) ___________________________ 4) ___________________________
Department Head/Program Chair Date

Chair, Graduate Council Date

OR

Chair, Undergraduate Curriculum Committee Date

CATALOG DIRECTOR'S USE ONLY

SCACRSE ____________________________ SCADETL ____________________________ SCAPREQ ____________________________

SCABASE ____________________________ SCARRRES ____________________________ Operator Initials ____________________________ Date ____________________________

DISTRIBUTION
Original – Registrar
Copy – Academic Unit

Florida Institute of Technology  •  Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975  •  (321) 674-8114  •  Fax (321) 674-7827

RGR-056-1099
COLLEGE: Engineering  
DEPARTMENT: Computer Sciences

REQUEST IS FOR CHANGE IN COURSE C S E 4 0 0 1 Operating System Concepts

TO BE INCLUDED IN 20  1 1 / 20  1 2 CATALOG AND EFFECTIVE IN THE BANNER SYSTEM FOR Fall 2010 TERM

IS REQUEST FOR A CHANGE IN CREDITS FOR COURSE LISTED ABOVE? ☐ Yes ☑ No  If yes, current credits ______ requested credits ______

IS REQUEST TO CHANGE RESTRICTIONS FOR COURSE LISTED ABOVE? ☑ Yes  ☐ No  If yes, please check all that apply:

☐ Add  ☑ Remove  ☑ Prerequisite  ☐ Corequisite  ☑ Prefix  S E 3 1 0 1 and ☐ or

☐ Add  ☐ Remove  ☐ Prerequisite  ☐ Corequisite  ☐ Prefix  S E 3 1 0 1 Number and ☐ or

☐ Add  ☐ Remove  ☐ Prerequisite  ☐ Corequisite  ☐ Prefix  S E 3 1 0 1 Number and ☐ or

☐ Add  ☐ Remove  ☐ Other Restrictions  ☐ Yes  ☐ No  If yes, please list below:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

1) [Signature]  3/23/2010
Originator  Date  4) [Signature]  Date
Chair, Graduate Council

2) [Signature]  3/23/2011
Department Head/Program Chair  Date
OR

3) [Signature]  3-25-10
Dean or Associate Dean  Date  5) [Signature]  Date
Chair, Undergraduate Curriculum Committee

CATALOG DIRECTOR’S USE ONLY

SCORSE  SCADETL  SCAPREQ  SCABASE  SCARES  Operator Initials  Date

DISTRIBUTION
Original – Registrar
Copy – Academic Unit

Florida Institute of Technology • Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-8114 • Fax (321) 674-7287

RGR-086-1009
Florida Institute of Technology

CHANGING RESTRICTIONS
OR CREDITS IN A COURSE

The addition or removal of any restriction or change in credit hours in a course requires that this form, accompanied by any supporting documentation, be completed and approved as indicated below.

COLLEGE  Engineering  DEPARTMENT  Computer Sciences

REQUEST IS FOR CHANGE IN COURSE  C S E  4 1 5 Software Testing 2

Prefix  Number  Course Title

TO BE INCLUDED IN 20  1 1 /20  1 2 CATALOG AND EFFECTIVE IN THE BANNER SYSTEM FOR Fall 2010 TERM

IS REQUEST FOR A CHANGE IN CREDITS FOR COURSE LISTED ABOVE?  ☐ Yes  ☒ No  if yes, current credits   requested credits

IS REQUEST TO CHANGE RESTRICTIONS FOR COURSE LISTED ABOVE?  ☐ Yes  ☐ No  if yes, please check all that apply:

☐ Add  ☐ Remove  ☒ Prerequisite  ☐ Corequisite  C S E  3 1 0 1  ☐ and  ☐ or

Prefix  Number

☐ Add  ☐ Remove  ☒ Prerequisite  ☐ Corequisite  C S E  2 1 2 0  ☐ and  ☐ or

Prefix  Number

☐ Add  ☐ Remove  ☒ Prerequisite  ☐ Corequisite  C S E  3 4 1 1  ☐ and  ☐ or

Prefix  Number

☐ Add  ☐ Remove  ☐ Other Restrictions  ☐ Yes  ☐ No  if yes, please list below:

__________________________

__________________________

__________________________

APPROVALS: Upon completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee for approval below and forward to Catalog Director.

1)  Scott Tully  2/24/11  Originator  Date  Chair, Graduate Council  Date

2)  Willy Ross  3/29/11  Department Head/Program Chair  Date

3)  3-25-10  Dean of Associate Dean  Date  Chair, Undergraduate Curriculum Committee  Date

CATALOG DIRECTOR’S USE ONLY

SCACRISE  SCADETL  SCAPREQ

SCABASE  SCARRES  Operator Initials  Date

DISTRIBUTION
Original – Registrar  Copy – Academic Unit

Florida Institute of Technology • Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-8114 • Fax (321) 674-7827

RGE-056-1009
The addition or removal of any graduation requirement in a major or minor requires that this form, accompanied by supporting documentation, be completed and approved as indicated below. Incomplete or incorrect forms will not be processed.

**COLLEGE** Engineering  
**DEPARTMENT** Computer Sciences  

**DEGREE LEVEL** Bachelor of Science  
**PROGRAM TITLE** Computer Science  

**TO BE INITIATED WITH CATALOG YEAR** 2011/2012  
**CHANGE REQUESTED FOR** X major program □ minor program  
**NAMED TERM FOR EFFECTIVE DATE** Fall Semester Main Campus  
**Major/Minor Code**  
**EFFECTIVE DATE FOR CHANGE** August 10, 2010  
Month/Day/Year (Required)

**BRIEF DESCRIPTION OF REQUESTED CHANGES** Attach a more detailed description and any supporting documentation:

Replace PHY 1001, 2091, 2002, 2092 by sequence of science courses with lab: Biology, Chemistry, or Physics.


Replace Senior year Fall and Spring Technical Elective with Technical or Business Elective.


Add Restricted Elective (Math or Science)

**Approvals:** On completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee, for approval below and forward to the Office of the Registrar.

**Will Snell**  
Originate Date 4/16/2010  
Chair, Graduate Council Date  

**Will Snell**  
Department Head/Major Program Chair Date 4/16/2010  
Chair, Undergraduate Curriculum Committee Date

**Registrar’s Use Only**

- University Catalog  
  - Yes □ No  
  - Update completed _Date_ Initials
- Extended Studies Division Catalog  
  - Yes □ No  
  - Update completed _Date_ Initials
- University Alliance Catalog  
  - Yes □ No  
  - Update completed _Date_ Initials
- CAPP / Degree Evaluation  
  - Yes □ No  
  - Update completed _Date_ Initials
- Catalog / Policy Mgmt. System  
  - Yes □ No  
  - Update completed _Date_ Initials
Florida Institute of Technology

CHANGING GRADUATION REQUIREMENTS IN A MAJOR/MINOR

The addition or removal of any graduation requirement in a major or minor requires that this form, accompanied by supporting documentation, be completed and approved as indicated below. Incomplete or incorrect forms will not be processed.

COLLEGE: Engineering
DEPARTMENT: Computer Sciences

DEGREE LEVEL: Bachelor of Science
PROGRAM TITLE: Software Engineering

TO BE INITIATED WITH CATALOG YEAR: 2011/2012
CHANGE REQUESTED FOR: ☒ major program ☐ minor program

EFFECTIVE DATE FOR CHANGE: August 1/2010
NAMED TERM FOR EFFECTIVE DATE: Fall Semester - Main Campus

Term MUST be named, i.e. UA-Fall 2, Fall Semester - Main Campus

BRIEF DESCRIPTION OF REQUESTED CHANGES: Attach a more detailed description and any supporting documentation

Replace PHY 1001, 2091, 2002, 2092 by sequence of science courses with lab: Biology, Chemistry, or Physics.
Eliminate CSE 3101 Machine and Assembly Language
Add CSE 2120 Computer Organization and Machine Programming
Replace two Free Electives with Restricted Elective (Math or Science)
Renew CSE 1400 to CSE 1500

Approvals: On completion of appropriate department approvals, submit form to Chair, Graduate Council, or Chair, Undergraduate Curriculum Committee, for approval below and forward to the Office of the Registrar

Will Signs
4/6/2010
Origantor
Date

Chair, Graduate Council
Date

Will Signs
4/6/2010
Department Head / Major Program Chair
Date

Chair, Undergraduate Curriculum Committee
Date

Will Signs
4/6/2010
Dean / Associate Dean
Date

REGISTRAR'S USE ONLY

University Catalog
Academic Year
☐ Yes ☐ No
Update completed Date
Initials

Extended Studies Division Catalog
Academic Year
☐ Yes ☐ No
Update completed Date
Initials

University Alliance Catalog
Academic Year
☐ Yes ☐ No
Update completed Date
Initials

CAPP / Degree Evaluation
Academic Year
☐ Yes ☐ No
Update completed Date
Initials

Catalog / Policy Mgmt. System
Academic Year
☐ Yes ☐ No
Update completed Date
Initials

DISTRIBUTION
Original - Registrar
Copy - Academic Unit

Florida Institute of Technology • Office of the Registrar
150 West University Boulevard, Melbourne, FL 32901-6975 • (321) 674-7399 • Fax (321) 674-7827

REG-063-1109
# Curriculum Revision Proposal

**Bachelor of Science in Computer Science**

**Department of Computer Sciences**

March 18, 2010

Courses in red are eliminated from the current curriculum. Courses in blue are added to the proposed curriculum.

<table>
<thead>
<tr>
<th>Current Computer Science Curriculum</th>
<th>Proposed Computer Science Curriculum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman Year</strong></td>
<td><strong>Freshman Year</strong></td>
</tr>
<tr>
<td><strong>Fall (16 credits)</strong></td>
<td><strong>Fall (15 credits)</strong></td>
</tr>
<tr>
<td>ASC 1000 University Experience (1)</td>
<td>ASC 1000 University Experience (1)</td>
</tr>
<tr>
<td>COM 1101 Composition and Rhetoric (3)</td>
<td>COM 1101 Composition and Rhetoric (3)</td>
</tr>
<tr>
<td>CSE 1001 Fund. of Software Develop. 1 (4)</td>
<td>CSE 1001 Fund. of Software Develop. 1 (4)</td>
</tr>
<tr>
<td>CSE 1101 Computing Disciplines and Careers (1)</td>
<td>CSE 1101 Computing Disciplines and Careers (1)</td>
</tr>
<tr>
<td>CSE 1400 Applied Discrete Mathematics (3)</td>
<td>CSE 1500 Applied Discrete Mathematics (3)</td>
</tr>
<tr>
<td>EGE 1551 Digital Logic (4)</td>
<td>Social Science Elective (3)</td>
</tr>
<tr>
<td><strong>Spring (17 credits)</strong></td>
<td><strong>Spring (17 credits)</strong></td>
</tr>
<tr>
<td>COM 1102 Writing about Literature (3)</td>
<td>COM 1102 Writing about Literature (3)</td>
</tr>
<tr>
<td>CSE 1002 Fund. of Software Develop. 2 (4)</td>
<td>CSE 1002 Fund. of Software Develop. 2 (4)</td>
</tr>
<tr>
<td>HUM 2510 Logic (3)</td>
<td>CSE 2120 Computer Organization (3)</td>
</tr>
<tr>
<td>MTH 1001 Calculus 1 (4)</td>
<td>MTH 1001 Calculus 1 (4)</td>
</tr>
<tr>
<td>Restricted Elective (Science) (3)</td>
<td>Restricted Elective (Science) (3)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th><strong>Sophomore Year</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall (17 credits)</strong></td>
<td><strong>Fall (16 credits)</strong></td>
</tr>
<tr>
<td>COM 2012 Research Sources and Systems (1)</td>
<td>COM 2012 Research Sources and Systems (1)</td>
</tr>
<tr>
<td>COM 2223 Scientific and Technical Comm. (3)</td>
<td>COM 2223 Scientific and Technical Comm. (3)</td>
</tr>
<tr>
<td>CSE 2010 Algorithms and Data Structures (4)</td>
<td>CSE 2010 Algorithms and Data Structures (4)</td>
</tr>
<tr>
<td>MTH 1002 Calculus 2 (4)</td>
<td>MTH 1002 Calculus 2 (4)</td>
</tr>
<tr>
<td>PHY 1001 Physics 1 (4)</td>
<td>Restricted Elective (Science with Lab (first in series) (4)</td>
</tr>
<tr>
<td>PHY 2091 Physics Lab 1 (1)</td>
<td></td>
</tr>
<tr>
<td><strong>Spring (17 credits)</strong></td>
<td><strong>Spring (16 credits)</strong></td>
</tr>
<tr>
<td>CSE 2050 Programming in a Second Language (3)</td>
<td>CSE 2050 Programming in a Second Language (3)</td>
</tr>
<tr>
<td>CSE 2400 Applied Statistics (3)</td>
<td>CSE 2410 Introduction to Software Engineering (3)</td>
</tr>
<tr>
<td>CSE 2410 Introduction to Software Engineering (3)</td>
<td>HUM 2051 Civilization 1 (3)</td>
</tr>
<tr>
<td>HUM 2051 Civilization 1 (3)</td>
<td>HUM 2510 Logic (3)</td>
</tr>
<tr>
<td>PHY 2092 Physics 2 (4)</td>
<td>Restricted Elective (Science with Lab (second in series) (4)</td>
</tr>
<tr>
<td>PHY 2092 Physics Lab (4)</td>
<td></td>
</tr>
</tbody>
</table>
Current Computer Science Curriculum

Junior Year

Fall (15 credits)
- CSE 3030 Legal, ... Issues in Computing (3)
- CSE-3104 Machine and Assembly Language (3)
- CSE 4250 Programming Language Concepts (3)
- HUM 2052 Civilization 2 (3)
- Restricted Elective (Math) (3)

Spring (18 credits)
- CSE 4001 Operating Systems Concepts (3)
- CSE 4083 Formal Languagesa (3)
- ECE-4551 Computer Architecture (3)
- Liberal Arts Elective (3)
- Restricted Elective (Science) (3)
- Free Elective (3)

Senior Year

Fall (15 credits)
- CSE 4081 Analysis of Algorithmsa (3)
- CSE 4101 Computer Science Projects 1 (3)
- Restricted Elective (CSE) (3)
- Social Science Elective (3)
- Technical Elective (or CWE-2001) (3)

Spring (15 credits)
- CSE 4102 Computer Science Projects 2 (3)
- Humanities Elective (3)
- Restricted Elective (CSE) (3)
- Restricted Elective (CSE) (3)
- Technical Elective (3)

Total Credits 130

Computer Science Credits 59
Math & Science Credits 33
General Education Credits 38

aOne of CSE 4081 or CSE 4083 must be taken. A CSE Elective can replace one.

Proposed Computer Science Curriculum

Junior Year

Fall (15 credits)
- CSE 2400 Applied Statistics (3)
- CSE 3030 Legal, ... Issues in Computing (3)
- CSE 3120 Computer Architecture (3)
- CSE 4250 Programming Language Concepts (3)
- HUM 2052 Civilization 2 (3)

Spring (18 credits)
- CSE 4001 Operating Systems Concepts (3)
- CSE 4083 Formal Languagesa (3)
- Liberal Arts Elective (3)
- Restricted Elective (Math) (3)
- Restricted Elective (Science) (3)
- Free Elective (3)

Senior Year

Fall (15 credits)
- CSE 4081 Analysis of Algorithmsa (3)
- CSE 4101 Computer Science Projects 1 (3)
- Restricted Elective (CSE) (3)
- Restricted Elective (Math or Science) (3)
- Technical or Business 3XXX Elective (3)

Spring (15 credits)
- CSE 4102 Computer Science Projects 2 (3)
- Humanities Elective (3)
- Restricted Elective (CSE) (3)
- Restricted Elective (CSE) (3)
- Technical or Business 3XXX Elective (3)

Total Credits 127

Computer Science Credits 55
Math & Science Credits 34
General Education Credits 38

aOne of CSE 4081 or CSE 4083 must be taken. A CSE Elective can replace one.
Prerequisite Chart
Bachelor of Science in Computer Science

Department of Computer Sciences
Florida Institute of Technology
February 16, 2010
Curriculum Revision Proposal
Bachelor of Science in Software Engineering

Department of Computer Sciences
March 18, 2010

Courses in red are eliminated from the current curriculum. Courses in blue are added to the proposed curriculum.

Current Software Engineering Curriculum

Freshman Year

Fall (16 credits)
- ASC 1000 University Experience (1)
- COM 1101 Composition and Rhetoric (3)
- CSE 1001 Fund. of Software Develop. 1 (4)
- CSE 1101 Computing Disciplines and Careers (1)
- CSE 1400 Applied Discrete Mathematics (3)
- MTH 1001 Calculus 1 (4)

Spring (17 credits)
- COM 1102 Writing about Literature (3)
- CSE 1002 Fund. of Software Develop. 2 (4)
- HUM 2510 Logic (3)
- MTH 1002 Calculus 2 (4)
- PSY 1411 Introduction to Psychology (3)

Sophomore Year

Fall (15 credits)
- COM 2223 Scientific and Technical Comm. (3)
- CSE 2010 Algorithms and Data Structures (4)
- CSE 3411 Software Testing 1 (3)
- PHY-1001-Physics-I-(4)-
- PHY-2094-Physics-Lab-I-(4)-

Spring (17 credits)
- CSE 2050 Programming in a Second Language (3)
- CSE 2400 Applied Statistics (3)
- CSE 2410 Introduction to Software Engineering (3)
- PHY-2002-Physics-2-(4)
- PHY-2092-Physics-Lab-(1)
- Restricted Elective (Science) (3)

Proposed Software Engineering Curriculum

Freshman Year

Fall (15 credits)
- ASC 1000 University Experience (1)
- COM 1101 Composition and Rhetoric (3)
- CSE 1001 Fund. of Software Develop. 1 (4)
- CSE 1101 Computing Disciplines and Careers (1)
- CSE 1500 Applied Discrete Mathematics (3)
- PSY 1411 Introduction to Psychology (3)

Spring (17 credits)
- COM 1102 Writing about Literature (3)
- CSE 1002 Fund. of Software Develop. 2 (4)
- CSE 2120 Computer Organization (3)
- MTH 1001 Calculus 1 (4)
- Restricted Elective (Science) (3)

Sophomore Year

Fall (16 credits)
- COM 2012 Research Sources and Systems (1)
- COM 2223 Scientific and Technical Comm. (3)
- CSE 2010 Algorithms and Data Structures (4)
- MTH 1002 Calculus 2 (4)
- Restricted Elective (Science with Lab (first in series)) (4)

Spring (16 credits)
- CSE 2050 Programming in a Second Language (3)
- CSE 2410 Introduction to Software Engineering (3)
- HUM 2051 Civilization 1 (3)
- HUM 2510 Logic (3)
- Restricted Elective (Science with Lab (second in series)) (4)
Current Software Engineering Curriculum

Junior Year

Fall (16 credits)
- COM 2012 Research Sources and Systems (1)
- CSE 3403 Machine and Assembly Language (3)
- CSE 4415 Software Testing 2 (3)
- CSE 4621 Software Metrics and Models (3)
- HUM 2051 Civilization 1 (3)
- Restricted Elective (Science) (3)

Spring (18 credits)
- AHF 3101 Intro. to Human Factors (3)
- CSE 3030 Legal, ... Issues in Computing (3)
- CSE 3421 Software Design Methods (3)
- CSE 4611 Requirements Engineering (3)
- HUM 2052 Civilization 2 (3)
- Free-Elective (3)

Senior Year

Fall (15 credits)
- CSE 4001 Operating Systems Concepts (3)
- CSE 4201 Software Development Projects 1 (3)
- Free Elective (3)
- Restricted Elective (CSE) (3)
- Social Science Elective (3)

Spring (15 credits)
- CSE 4083 Formal Languages (3)
- CSE 4202 Software Development Projects 2 (3)
- Free-Elective (3)
- Humanities Elective (3)
- Restricted Elective (CSE) (3)

Total Credits 129
Software Engineering Credits 58
Math & Science Credits 30
General Education Credits 41

Proposed Software Engineering Curriculum

Junior Year

Fall (15 credits)
- CSE 2400 Applied Statistics (3)
- CSE 3030 Legal, ... Issues in Computing (3)
- CSE 3411 Software Testing 1 (3)
- CSE 4621 Software Design Methods (3)
- HUM 2052 Civilization 2 (3)

Spring (18 credits)
- AHF 3101 Intro. to Human Factors (3)
- CSE 4001 Operating Systems Concepts (3)
- CSE 4415 Software Testing 2 (3)
- CSE 4611 Requirements Engineering (3)
- CSE 4621 Software Metrics and Models (3)
- Restricted Elective (Math) (3)

Senior Year

Fall (15 credits)
- CSE 4201 Software Engineering Projects 1 (3)
- Free Elective (3)
- Restricted Elective (CSE) (3)
- Restricted Elective (Math or Science) (3)
- Social Science Elective (3)

Spring (15 credits)
- CSE 4083 Formal Languages (3)
- CSE 4202 Software Engineering Projects 2 (3)
- Humanities Elective (3)
- Restricted Elective (CSE) (3)
- Restricted Elective (Math or Science) (3)

Total Credits 127
Software Engineering Credits 58
Math & Science Credits 34
General Education Credits 35
Prerequisite Chart
Bachelor of Science in Software Engineering

Department of Computer Sciences
Florida Institute of Technology

March 24, 2010