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

**SUBJECT** CSE  
**DEPARTMENT** Computer Science  
**COURSE NO.** 4272  
**CREDIT HOURS** 3  
**TERM TO BE ADDED TO THE FILE** Fall 2010 (e.g., Fall 2006)  
**CLASS HOURS** 45  
**LECTURE HOURS**  
**LAB HOURS**  
**CONTACT HOURS (CEU ONLY)**  
**SCHEDULE TYPE** Lecture (A)  
**COURSE TITLE** Restricted to 25 characters, including spaces Comp and Info Security  
**CATALOG TITLE** Computer and Information Security  
**CATALOG DESCRIPTION OF COURSE** Limited to 350 characters, including spaces

Introduces the fundamentals of computer security. Includes vulnerability analysis, threat modeling and risk assessment, and techniques for asset protection. Discusses economic, legal, and ethical issues in computer security. Focuses on a system-wide view of security and discusses trends in current literature.

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

**RESTRICTIONS**  
- Prerequisite CSE 2010 or Course Number  
- Corequisite Course Number  
- Prerequisite ECE 2552 or Course Number  
- Corequisite Course Number  
- Prerequisite Course Number  
- Corequisite Course Number  

**GRADES TO BE ISSUED**  
- A, B, C, D, F  
- A, B, C, D, E, 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)

**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**  
**Date** 4-6-09  
**Chair, Graduate Council**  
**Date**

**Department Head/Program Chair**  
**Date** 4-9-09  
**OR**

**Dean or Associate Dean**  
**Date** 9-1-09  
**Chair, Undergraduate Curriculum Committee**  
**Date**

**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**

SCACOURSE _______ SCADETL _______ SCAPREQ _______ SCABASE _______  
SCARRES _______ Operator Init _______ Date _______

**Catalog Director**  
**Date**

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

RG-211-5016
To: Dr. William Shoaff, Department Head, Computer Sciences
From: Dr. William H. Allen
Date: April 14, 2009
Subject: Addition of CSE 4272

The field of computer security has grown in the past decade and both students and employers are interested in security education. The Computer Sciences Department offers several graduate-level courses in computer security but does not currently offer an undergraduate course in this area.

To address this need, we propose the creation of a new undergraduate course, CSE 4272 Computer and Information Security, which provides broad coverage of security concepts, as well as related social, economic and legal issues.

Catalog Description for CSE 4272

Introduces the fundamentals of computer security. Includes vulnerability analysis, threat modeling and risk assessment, and techniques for asset protection. Discusses economic, legal and ethical issues in computer security. Focuses on a system-wide view of security and discusses trends in current literature.
CSE 4272 Computer and Information Security

Tentative Syllabus

Catalog Description:


Prerequisites:

- CSE 2010 or ECE 2552

Textbook:


Topics:

- Attacks, Vulnerabilities and Defenses
- Program Protection
- Protection of Operating Systems
- Network Security
- Database Security
- Elementary Cryptography
- Threat Modeling and Risk Assessment
- The Economics of Cybersecurity
- Legal, Ethical and Privacy Issues

Evaluation based on:

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

Assignments:

Assignments for this course will vary by chapter and topic to reflect the ever-changing nature of computer and information security. For example, when we discuss cryptography, students may be given an assignment to implement a simple cryptographic algorithm or may read a paper on a recent advance in cryptography. For topics such as network or database security, students may be asked to analyze a recent system compromise to determine appropriate preventative measures or may write a program to evaluate the security of an existing system. In other cases, students will be asked to find and review research papers on a specific topic. As a final project, students will perform a security review for a selected case study.