



Academic Affairs - Course Proposal

Form A

CALIFORNIA STATE UNIVERSITY, SACRAMENTO

Academic Unit: Computer Science		Department Chair: Du Zhang	
Type of Course Proposal: New <input checked="" type="checkbox"/> Change <input type="checkbox"/> Deletion <input type="checkbox"/>		Date: April 14, 2006	
Does this course fulfill a requirement for single-subject or multiple subject credential students? Yes ___ No <input checked="" type="checkbox"/>		For Catalog Copy: Yes <input checked="" type="checkbox"/> No ___	CCE: Yes ___ No <input checked="" type="checkbox"/>
<i>Conversion of CSC 196N to permanent course</i>		Semester Effective: Fall <input checked="" type="checkbox"/> Spring ___ 2006 ___	
Prefix & No. CSC 196N	Title: Computer Systems Attacks and Countermeasures	Units: 3	

Change to:

Prefix & No. CSC 154	Title: Computer Systems Attacks and Countermeasures	Units: 3
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JUSTIFICATION:

With the rise in identity theft, corporate espionage, and cyberterrorism, the security industry has grown into billions of dollars in business and commerce. Military, federal, state and local governments and both large and small companies are interested in it. Computer Science plays an integral part of this growing area and it is important that the computer science student understands security issues in networks and computing devices. Specifically, this course is about how hackers attack systems and what countermeasures are used to mitigate those attacks. Also, this is one of the courses used to meet the Information Assurance (IA) curriculum based on CNSS security standards, a prerequisite for designation as a Center of Academic Excellence in IA. In order to meet those requirements, this course should be converted to a permanent course.

NEW COURSE DESCRIPTION: (Not to exceed 80 words, and language should conform to catalog copy.)

See <http://www.csus.edu/acaf/univmanual/crspsl.htm> - Guidelines for Catalog Course Description

Introduction to network and computer security with a focus on how intruders gain access to systems, how they escalate privileges, and what steps can be taken to secure a system against such attacks. Topics include: Perimeter defenses, intrusion detection systems, social engineering, distributed denial of service attacks, buffer overflows, race conditions, trojans and viruses.

Note:	
Prerequisite: CSC/CPE 138	
Corequisite:	
CAN (California Articulation Number):	
Graded: Letter <input checked="" type="checkbox"/> Credit/No Credit ___	Instructor Approval? Yes ___ No <input checked="" type="checkbox"/>
Course Classification: 04	Title for SIS+ (not more than 25 characters) COMPSYS ATTCK+COUNTERMSUR
Cross Listed? Yes ___ No <input checked="" type="checkbox"/>	If yes, with what course:
How Many Times Can This Course be Taken for Credit? Once	

FOR NEW COURSE PROPOSALS OR SUBSTANTIVE CHANGES ONLY:

Description of the Expected Learning Outcomes: Describe outcomes using the following format: "Students will be able to: 1), 2), etc." See the example at <http://www.csus.edu/acaf/example.htm>

Students will gain a thorough understanding of:

1. The fundamental steps that a hacker performs
2. Major software security design flaws such as buffer overflow and race conditions.
3. Common tools hackers use in conducting attacks and how they work.
4. Best practices for defending against attacks.

Students will gain a basic understanding of:

1. Host and network intrusion detection systems.
2. Tools and methods of protecting computers and networks against hacker attacks.
3. Major types of malicious code such as trojans, viruses, and worms.
4. Legal and ethical practices in security.

Students will also gain exposure to acceptable methods of security incident investigation.

**Attach a list of the required/recommended course readings and activities [Note: it is understood that these are updated and modified as needed by the instructor(s).] This attachment should be forwarded only to your Dean's office, not Academic Affairs.

Assessment Strategies: A description of the assessment strategies (e.g., portfolios, examinations, performances, pre- and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above:

Laboratory projects, exams, paper, and oral presentation.

For whom is this course being developed?

Majors in the Dept X Majors of other Depts ___ Minors in the Dept ___ General Education ___ Other ___

Is this course required in a degree program (major, minor, graduate degree, certificate)? Yes ___ No X

If yes, identify program(s):

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer facilities, faculty, etc.)? Yes ___ No X

If yes, attach a description of resources needed and verify that resources are available.

Indicate which department or programs will be affected by the proposed course (if any). _____

The Department Chair's signature below indicates that affected programs have been sent a copy of this proposal form.

Approvals: If proposed change, new course or deletion is approved, sign and date below. If not approved, forward without signing to the next reviewing authority, and attach an explanatory memorandum to the original copy.

Signatures:

Date

Department Chair:	
College Dean or Associate Dean:	
CPSP (for school personnel courses ONLY)	
Associate Vice President and Dean for Academic Programs	

Distribution: Academic Affairs (original), Department Chair and College Dean. Dean's office to send original after approval to Jerri McAtee, at zip 6016. An electronic copy must also be sent to mcateeij@csus.edu.