

California State University Channel Islands
New Course Proposal
Program Areas: Math and Computer Science

1. Catalog Description of the Course.

COMP 524 SECURITY (3)

Three hours lecture in the lab per week.

Prerequisite: Admission to the Computer Science or Mathematics Graduate Program

A survey of security issues and techniques for stand-alone and networked computer systems including databases. Techniques such as auditing, risk analysis, cost-benefit analysis. Security standards. Application in various fields.

2. Mode of Instruction.

	<u>Units</u>	<u>Hours per Unit</u>	<u>Benchmark Enrollment</u>
Lecture 3	1	24	
Seminar 0	0	0	
Laboratory	0	0	0
Activity 0	0	0	

3. Justification and Learning Objectives.

Justification: This course is an elective for graduate students in MS in Mathematics and MS in Computer Science programs. Computer system security is an increasingly important topic. Amount of on-line data doubles every three years. Much of is, such as biomedical, may be highly sensitive. Graduates of an MS program must be current in this area.

Learning Objectives:

1. Be able to identify the security weaknesses in a network design.
2. Be able to interpret a security standard in the context of a particular system
3. Be able to design appropriate security protocols for a particular system
4. Be able to design appropriate security protocols in different application fields.

4. Is this a General Education Course?

No.

5. Course Content in Outline Form.

Topics:

1. Physical and Logical Security
2. Security policies, cryptography and authentication
3. Security and the World Wide Web
4. Security of biomedical data
5. Developing secure systems
6. Security standards
7. Security and safety

6. References.

	Title	Author	Publisher	Year	ISBN
1.	The handbook of applied cryptography	Alfred J. Menezes, Paul C. van Oorschot and Scott A. Vanstone	CRC Press	1996	0849385237
2.	Security Engineering: A guide to building dependable distributed systems				
	Wiley	2001	0471389226		Ross J. Anderson

7. Faculty Qualified to Teach This Course.

Qualified Faculty: CS Faculty

8. Frequency.

Projected semesters to be offered: Fall, Spring, Summer

9. New Resources Required.

a. New Equipment needs: use of existing computer lab

b. New Library needs: none

c. New Space/Facilities needs: none

10. Consultation.

Attach consultation sheet from all program areas, Library, and others (if necessary).

11. Program Modification.

If this new course will alter any degree, credential, certificate, or minor in your program, attach a program modification.

12. Proposer of Course.

P.Smith , AJ Bieszczad Oct 31, 2003

Proposer of Course

Date