

**California State University Channel Islands  
New Course Proposal**

Program Area: Computer Science

**1. Catalog Description of the Course.**

**IT 429 COMPUTER NETWORKS FOR IT (3)**

Three hours of lecture per week

Prerequisites: IT 362

Basic software design and analysis considerations in networking computers into coherent, cooperating systems capable of processing computational tasks in a distributed manner. Network topology, routing procedures, message multiplexing and process scheduling techniques.

**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: BSIT required course.

Learning Objectives:

Students who successfully complete this course will:

1. Be able to analyze a computer network and its components
2. Be able to define and explain typical network protocol layers.
3. Be able to explain the components of a "packet" in the http protocol.
4. Be able to design and implement a peer-to-peer configuration.
5. Be able to analyze network security issues.
6. Be able to explain the functions of a hub, switch, and router.
7. Be able to describe basic data encryption techniques.

**4. Is this a General Education Course?**

No.

**5. Course Content in Outline Form.**

Topics:

1. Network Architectures
2. Network Hardware Devices.
3. Data Communication Protocols
4. Network Analysis Tools.

**6. Cross-listed Courses.**

None.

**7. References.**

<u>Title</u>	<u>Author</u>	<u>Publisher</u>	<u>Year</u>	<u>ISBN</u>
1. Network security: private communication in a public world (2nd ed)	Kaufman, Perlman and Speciner	Prentice-Hall	2002	0130460192
2. Computer Networks (4th ed)	Tanenbaum	Prentice-Hall	2002	0130661023
3. Computer Networking: A Top-Down Approach Featuring the Internet	Kurose, Ross	Addison Wesley	2003	ISBN 0-201-97699-4
4. Network Management	Subramanian, Mani	Addison-Wesley	2000	0201357429

**8. Faculty Qualified to Teach This Course.**

Qualified Faculty: Smith, Wolfe

**9. Frequency.**

Projected semesters to be offered: Fall, Spring

**10. New Resources Required.**

- a. New Equipment needs: Use of existing computer lab.
- b. New Library needs: none
- c. New Space/Facilities needs: none

**11. Program Modifications.**

None.

**12. Proposer of Course.**

Proposer: Smith, Wolfe Date: 7/13/2004