

**\*DEADLINES:**

REGULAR COURSE PROPOSALS: OCTOBER 23, 1998 FOR FALL, 1999 AND FEBRUARY 19, 1999 FOR SPRING, 2000  
 SHORT-TERM COURSE PROPOSALS: DECEMBER 11, 1998 FOR FALL, 1999 AND MARCH 26, 1998 FOR SPRING 2000

PROPOSAL TITLE: Computer Literacy  
 SPONSOR/S: A. Kalia  
 DEPARTMENT: Computer Science

0706.510

CHECK ALL THAT APPLY:  
 UNDERGRADUATE       GRADUATE

COLLEGE: LS  
 If LAS:       History/Humanities  
                   Math/Sciences  
                   Social/Behavioral Sciences

\* \* \* \* \*

TYPE OF PROPOSAL (Check ALL that Apply)

<input type="checkbox"/> General Education	<input checked="" type="checkbox"/> New Course (NOT Gen. Ed.)
<input type="checkbox"/> New Course in _____ Bank	<input type="checkbox"/> Name Change (Dept., School, Major)
<input type="checkbox"/> Existing course, Add To _____ Bank	<input type="checkbox"/> Changes in Degree Requirements
<input type="checkbox"/> Multicultural/Global Designation	<input type="checkbox"/> Changes Involve Gen. Ed. requirements
<input type="checkbox"/> Writing Intensive Designation	<input type="checkbox"/> Minor Changes to Existing Courses
<input type="checkbox"/> New Minor/Concentration/Specialization	<input type="checkbox"/> Course is NOT General Education
<input type="checkbox"/> New Major/Degree Program	<input type="checkbox"/> Course IS General Education
<input type="checkbox"/> Short Term Course Proposal	

DEPARTMENT (SIGNATURE INDICATES APPROVAL) [Signature]

DEPT. CURRICULUM CHAIR / DATE \_\_\_\_\_ DEPT. CHAIRPERSON / DATE \_\_\_\_\_

COLLEGE CURRICULUM COMMITTEE  
 DATE OF OPEN HEARING (if necessary) 2-25-99

APPROVED  
 NOT APPROVED

COMMENTS:

SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

ACADEMIC DEAN (& GRADUATE DEAN, for New Graduate Programs Only)

APPROVED  
 NOT APPROVED

COMMENTS:

SIGNATURE (Academic Dean) \_\_\_\_\_ DATE \_\_\_\_\_  
 SIGNATURE (Graduate Dean) \_\_\_\_\_ DATE \_\_\_\_\_

UNIVERSITY CURRICULUM COMMITTEE

2/25/99 (college level only)

APPROVED

NOT APPROVED

COMMENTS:

[Signature]  
SIGNATURE

6/30/99  
DATE

changes rec'd

SENATE

Date announced at Senate 3-2-99

Voted upon at Senate:

Approved

Not Approved

Date:

EXECUTIVE VICE PRESIDENT/PROVOST

APPROVED

NOT APPROVED If no, reasons are as follows:

STUDENT CREDIT HOURS 3 FACULTY LOAD HOURS 3 EQUALIZED CREDIT HOURS \_\_\_\_\_

OFFICIAL COPY & APPROVAL SHEET FILED (DATE): \_\_\_\_\_

DATE/SIGNATURE EXECUTIVE VICE PRESIDENT/PROVOST

[Signature] 7/21/99

REGISTRAR

DATE APPROVED COURSE DESCRIPTION RECEIVED \_\_\_\_\_

HEGIS TAXONOMY & COURSE NUMBER ASSIGNED 076.510

DATE/SIGNATURE OF REGISTRAR

Robert A. Kubat 7/26/99

NOTIFICATION FORWARD:

SENATE CURRICULUM COMMITTEE CHAIRPERSON

DEPARTMENT CHAIRPERSONS

ACADEMIC DEAN(S)

REGISTRAR

SPONSOR(S)

T.M.  
8/16/99

DEPARTMENT

(SIGNATURE INDICATES APPROVAL)

*Nancy Jean Williams* 10-23-98 *Don C. Strm* 10/23/98

DEPT. CURRICULUM CHAIR / DATE DEPT. CHAIRPERSON / DATE

COLLEGE CURRICULUM COMMITTEE

DATE OF OPEN HEARING (if necessary) \_\_\_\_\_

----- APPROVED

----- NOT APPROVED

Comments:

\_\_\_\_\_  
SIGNATURE DATE

ACADEMIC DEAN (& GRADUATE DEAN, for New Graduate Programs Only)

----- APPROVED

----- NOT APPROVED

Comments:

\_\_\_\_\_  
SIGNATURE (Academic Dean) DATE

\_\_\_\_\_  
SIGNATURE (Graduate Dean) DATE

**Rowan University**  
**Department of Computer Science**

**Course Proposal**

**Computer Networks**      6764.516

1. Details

- |                                   |   |
|-----------------------------------|---|
| a. Course Title:                  | Computer Networks   |
| b. Sponsor:                       | Andrea Lobo, Computer Science Department  |
| c. Credit Hours:                  | 3   |
| d. Course Level:                  | Graduate  |
| e. Curricular effect:             | Restricted elective for Computer Science majors   |
| f. Prerequisites:                 | Design and Analysis of Algorithms (0707.340) and Introduction to Probability and Statistics I (1702.360), or permission from the instructor |
| g. Suggested time, Implementation | One section every two years, or more often as demand dictates   |
| h. Resources:                     | Faculty, equipment, and library resources are adequate  |

2. Rationale

Computer networks are present in most aspects of human life. Networks allow us to make telephone calls, withdraw cash from an automated bank teller, share documents with colleagues down the hall or across the world, browse the web, and much more. Students in this course study how computer networks work and why they have been designed as we know them. The course covers descriptive material on network architectures and protocols, as well as network performance evaluation. The course studies important examples of several types of networks: Local, metropolitan and wide area networks; telephone, cellular and wireless networks; and the Internet.

This course proposal is consistent with the Computer Science Department's goal to offer restricted electives for our majors, and courses of interest to graduate computer science professionals in the region.

3. Essence of the course

a. Objectives in relation to student outcomes

Students will be able to:

- Explain the importance of reference models and protocol stacks;
- Describe the details of several important protocols and evaluate their performance;
- Understand design tradeoffs in network systems and their implementations.

b. Topic outline

Need for computer networks  
Protocol stack and reference models  
Functionalities required in computer networks  
Fundamentals of network performance evaluation  
Quality of Service  
Data Link Layer  
Network Layer  
Transport Layer  
Local area networks  
Metropolitan area networks  
Wide area networks  
Telephone networks  
Cellular networks  
Wireless networks  
The internet  
Network security  
Protocol implementation

c. Evaluation and grading procedure of students

Students will be evaluated based on one of more in-term examinations, one or more projects, and a final examination.

d. Course evaluation

This course will be evaluated by the Department's curriculum committee.

e. Text

Tanenbaum, Andrew, Computer Networks, 3<sup>rd</sup> Ed., PrenticeHall, 1996.

4. Results of consultation

I have consulted with the Computer Science Department and John Schmalzel, Chair of Electrical Engineering.

5. Catalog Description

0706.5##

3 s.h.

Computer Networks

(Prerequisites: 0707.340 and 1702.360, or permission from the instructor)

Students in this course study how computer networks work and why they have been designed as we know them. The course covers descriptive material on network architectures and protocols, as well as network performance evaluation and protocol implementation. The course topics include important examples of local, metropolitan and wide area networks; telephone, cellular and wireless networks; the Internet; network security; and design tradeoffs in network systems and their implementations.