

INSS 538

DATA COMMUNICATIONS SYSTEMS & NETWORKS

Syllabus

**UNIVERSITY SYSTEM OF MARYLAND
BOWIE STATE UNIVERSITY**

Term IV 2002-2003

Graduate Programs

Lecturer: Manfred Trostmann

Phone 06171 78194 or +491715496690

Mail trostmann@rz.uni-frankfurt.de

Location: Kaiserslautern-Kapaun

Monday & Wednesday Evenings

Time: 18:45 to 21:30

PREREQUISITE. All undergraduate prerequisites or permission of professor.

CREDIT. Three (3) semester hours.

PURPOSE. This course provides analysis of data communication technology and the application of data communication technology within the public and private sector enterprise.

Course Objective. This course enables students to understand:

- 1.The concepts and terminology of data communications
- 2.Network design and distributed information systems
- 3.Equipment, protocols and architectures and transmission alternatives
- 4.The communications environment, regulatory issues, and network pricing and management

Topics

- Communications Environment
- Communications Systems Components
- Networks and Control
- Common Carrier Services
- Design of Communications Networks
- Network Management and Distributed Environment
- Local Area Data Networks
- Wide Area Networks
- Future Networks

Sessions:

The course will consist of a series of sessions, as shown in the outline. Students are expected to read appropriate sections of the text and handouts before coming to class.

Course Requirements.

Examinations: There will be two examinations. These exams will be designed to help you improve your understanding of the basic concepts discussed in the course. As such, these exams will be a mix of short answers as well as essay questions.

Research Project. The class will be organized into teams for the project completion. Both team and individual grades will be awarded for the project. The purpose of the project is to give the student an opportunity to bring the information and concepts learned in the course to bear on a topic of the student's interest.

Text. DATA COMMUNICATION. By White (Thomson Learning)

Grading: Grades for this course will be based on:

Mini Cases	15%
Midterm.....	20%
Project	30%
Final	35%

and will be assigned as follows:

A	93 to 100
B	84 to <93
C	73 to <84
F	Less than 73

Session Schedule

Session	Subject	Text Reading
1	Introduction to Computer Networks and Data Communications	CH 1
2 4	Fundamentals of Data and Signals	CH
3	The Media: Conducted and Wireless	CH 3
4 4	Making Connections	CH
5	Multiplexing: Sharing a Medium	CH 5
6	Errors, Error Detection, and Error Control	CH 6
7	Local Area Networks: The Basics	CH 7

8	MIDTERM	
9	Local Area Networks: Internetworking	CH 8
10	Local Area Networks: Software and Support Systems	CH 9
11	Introduction to Wide Area Networks	CH10
12	The Internet	CH11
13	Telecommunication Systems	CH12
14	Network Security, Design and Management	CH13 and 14
15	Presentations	
16	Presentations & FINAL	