University of Texas at El Paso
Electrical and Computer Engineering
Introduction Communication Networks
EE3354, Fall 2015

INSTRUCTOR:	Virgilio Gonzalez
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OFFICE HOURS:	T: 12 –2 PM, W: 9-11 AM, or by appointment
TEXTS:	William Stallings, "*Data and Computer Communications"*, **10th** Edition, Prentice Hall

Course Outcomes

1. Analyze Analog Transmission Links (I)
2. Analyze Digital Transmission Links (I)
3. Understand Fundamentals of Low Level Protocols (C)
4. Design Basic Communication Networks (C)
5. Use computer simulation tools for the analysis of communication systems (C)

Content Material

Item #	Topic	Chapter Reading
1	Data Communications Overview	1 , *
2	Layering Protocol Model	2
3	Physical Layer, Physical Media	4
4	Properties of Signals, Analog & Digital	3
5	Signal Encoding, Analog Modulation	5 , *
6	Digital Baseband Transmission	5 , *
7	Fiber Optic Link Analysis	4, 5 , *
8	Digital Modulation	5 , *
9	Coding, Error Detection and Correction	6
10	Data Link, Point to Point	7
11	Multiplexing	8
12	Switched and Cellular Networks	9, 10
13	FR & ATM	9
14	Local Area Networks (Contention based)	11 , 12
15	Wireless LAN and WAN	13, 18
16	IP and Routing (Network Layer)	14
17	Transport layer and upper applications	15 , *
18	Selected Topics along major chapters	*

* Correspond to supplementary material

GENERAL COURSE POLICIES

- Samples of student work will be collected for quality assurance purposes. Please notify the professor, in writing, if there is any confidentiality requirement.
- The Professor will be available only during the assigned office hours or by appointment; however there will be frequent response to posted questions in BlackBoard.
- Most homework, Special Problems and other assignments will be solved online with **BlackBoard**.
- A BlackBoard (https://my.utep.edu/myhome.aspx) account is required. They normally already exist. If you don't know your account and password, please check with the Help Desk in extension 4357 (or 747-5257 off campus)
- Each piece of written work must have **name,** student **ID, TEAM** number (if applicable) at the **upper right corner** of the first page; and the **name** in all remaining pages.
- All printed work must be stapled, with good presentation. Final results must be emphasized (example red underline or highlighted box)
- Online work must have in the first text line the name of the student and the team number (when applicable).
- No late work will be accepted but special circumstances will be considered if reported on time
- Due dates for Lab assignments, homework and exams will be notified with at least one week in advance.
- An **individual quiz** might be applied online the due date for each homework, or in class.
- Detailed instructions for the **Labs** and other policies will be **provided later** in separate handouts and in **BlackBoard**

GRADING

ITEM	Points / Ea
Exams 1, 2, 3 & 4	200
Team class discussions/problems	5
Homework Quiz	10-20
Reports or special assignments	30-60
PowerPoint presentations	40-60
Points given by instructor on student participation	0-20

- Each element will accumulate points
- Some elements are individual and others depend on team performance
- **Show always all the procedure** to arrive to the solutions. End results without the right procedure are considered conceptual errors.
- In exams each problem has its own weight and will be indicated at the beginning of the problem, points are given by problem section (e.g. sections *a* and *b* of same problem have their own points).
- The grade of an exam answer will be 100% if correct and justified. 50% for non-conceptual procedural errors and 0% if no answer. There is a tolerance of ±20% based on the relevance of the errors. In some cases, to earn partial credit, the student will need to identify the reason for the errors, justify the correct answer and return test back for second grading.
- Labs and special problems have the grades Satisfactory (100%), Attempted (50%) or Unsatisfactory (0%) for the points available. Online quizzes are either "all or nothing" points.
- Letter scale will be **A:** 90%-100%; **B:** 80%-89.9%; **C:** 70%-79.9%; **D:** 60%-69.9%; **F:** below 60% of the reference grade.

Academic Honesty

- It is expected that the students will conduct with integrity in all course areas. Do not attempt to engage in a dishonest activity such as copying, plagiarism, falsifying information, etc. The professor will take measures to prevent such instances and will bring a case to the university authorities.

- Information about University wide policies could be found in the Dean of Students Web page at http://studentaffairs.utep.edu/Default.aspx?alias=studentaffairs.utep.edu/dos

TEAM Policies

- Some assignments will be reported in **teams of 2 or 3 students**. However there is always an individual evaluation for each activity. **Teams could be self selected.**
- PowerPoint presentation will be in **groups of 3 students.**
- All members ***must contribute*** for each assignment and need to show their own part in the team's report.

EE4171 Lab Policies

- You will be required to design and implement several lab assignments over the course of the semester, students must be enrolled in EE4171 for this reason. Labs will be solved mainly using several simulation tools including LabView, MATLAB or OPNET. Most are available on the PC lab, on the engineering desktop, or on COMLAB (E306). The reports could be edited anywhere
- Each student needs a composition notebook to represent an engineering notebook.
    - Reserve about four pages for the index (include item #, title, date and page.
    - Each page must be numbered in the upper outside corner
    - Each lab assignment has three sections, Pre-lab, Measurements, and conclusions
    - (30%) The Pre-Lab includes all computations, designs and research needed before executing the lab.
    - (40%) The measurements and observations include data collected and notes on how things happened. You might need to cut and paste (literally) printouts with some screenshots or other plots.
    - (30%) Conclusions: this section includes your comments on what you learned, including what went wrong and how it was solved. Also include what you think might be future work or applications of the subject.
- Additional requirements may be stated in the assignments.

GRADING

ITEM	Points / Ea
PreLab	30
Measurements and observations	40
Conclusions	30