

*In the name of Allah, Most Gracious, Most Merciful.*  
**KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS**  
**Electrical Engineering Department**  
**EE571 Digital Communications I**

Dr. Samir Alghadhban, Office 59-0076, Tel: 2244, Email: [samir@kfupm.edu.sa](mailto:samir@kfupm.edu.sa)  
O.H.: Sunday, Tuesday and Thursday. 2:00 PM - 3:30 PM

**Text Books:**

- 1- Proakis . Digital Communications, Fifth Edition 2008
- 2- Haykin. *Communication Systems*, 4th edition, John Wiley & Sons, 2001.
- 3- Tranter. *Principles of Communication Systems Simulation with Wireless Application*. Prentice Hall 2004

Dates	W	Topics	Chapter	Assignments	Exams/Projects
Aug. 31 – Sep 04	1	Probability and Random Processes	P Ch. 2 H Ch. 1		
Sep. 07 – 11	2	Probability and Random Processes	P Ch. 2 H Ch. 1		
Sep. 14 – 18	3	Generation of Random Numbers	T Ch. 7	Sunday: A1 – Ch2	
Sep. 21 – 25	4	Matched Filter and Error Rate due to Noise	H Ch. 4.2 and 4.3		Sunday: Exam 1 on P Ch.2 and H Ch.1
<b>Eid Break</b>					
Oct. 12–16	5	Signal Space Analysis	H Ch. 5	Saturday: A2 – Sim. of RV	
Oct. 19–23	6	Signal Space Analysis	H Ch. 5		Sunday: Project Proposal
Oct. 26–30	7	Passband Digital Transmission: Performance Analysis	P Ch. 3 and Ch. 4	Sunday: A3 – H Ch. 5	
Nov. 02 – 06	8	Passband Digital Transmission: Performance Analysis	P Ch. 3 and Ch.4		Sunday: Exam 2 on Haykin Ch. 4 and Ch. 5
Nov. 09 – 13	9	Passband Digital Transmission: Spectral Analysis	P Ch. 3 and Ch.4	Sunday: A4 Sim of DM	
Nov. 16 – 20	10	Introduction to Information Theory	P Ch. 6.2 and Ch. 6.5		
Nov. 23 – 27	11	Introduction to Information Theory	P Ch. 6.2 and Ch. 6.5	Sunday: A5 – P Ch.3 and Ch.4	
Nov. 30 – Dec. 4	12	Block Codes	P Ch. 7		Sunday: Project Progress presentation
Dec 07 – 11	13	Block Codes	P. Ch. 7		Sunday: Exam 3 on P Ch3 and Ch.4
Dec. 14 – 18	14	Convolutional Codes	P Ch. 8	Sunday: A6 – Information theory and Coded Systems	
Dec. 21 – 25	15	Convolutional Codes	P Ch. 8		Sunday: Project reports/ Presentations
<b>EE 571 Final Examination Thursday 1 Jan. at 7:00PM</b>					

**Grade Distribution:**

<b>Major Exams</b>	40%	(Exam1 10 %, Exam2 15%, Exam3 15%)
<b>Class Work</b>	30%	(Project 10 %, Assignments 20 %)
<b>Final Exam</b>	30%	(Comprehensive)

**Projects/ Assignments:** Will be explained in separate documents

**Important Points to Remember**

1. **Homework:** Late Submission are not accepted. Homework is to be solved completely by students.
2. **Blackboard:** All course related material, assignments, announcements, and communications will be posted through Blackboard. Students are advised to check the site on regular bases for information.
3. **Information:** Students are responsible about all information discussed in the class and/or shown on Blackboard.
4. **Attendance:** According to the university regulations, any student that exceeds 20% of the scheduled class meeting without an official excuse will receive a grade of DN in the course.
5. **Official excuses:** All official excuses must be submitted to the instructor no later than one week of the date of the official excuse. The instructor will not accept a late excuse.
6. **Exams and Quizzes:** All students must attend the scheduled exams and quizzes on time. **No Make Up Exams will be provided.**