Course Programme

Digital Communications, Advanced Course (ETTN01), 7.5 hp, 151102 – 151222

First lecture: Monday 2 November (week 45), 15.15 – 17.00 in E:2311.

Project starts in Week 45.

Laboratory lesson: LAB (4 hours) starts on Tuesday 8 December 2015 (Week 50 = Study week 6).

Application to the laboratory lesson is made on the homepage of this course where you book one available time-slot. Applications can be made one week before the lab starts, or maybe earlier, check Messages!

Messages will be distributed on the homepage of this course, http://www.eit.lth.se/kurs/ettn01 . Check messages at least twice per week!

Written Examination:

1:st opportunity: Tuesday 12 January 2016, 08.00 – 13.00, Vic:1B

2:nd opportunity: Tuesday 10 May 2016, 14.00 – 19.00, E:2311

3:rd opportunity: Thursday 25 August 2016, 08.00 – 13.00, E:2311

Course Literature: -   "Introduction to Digital Communications", compendium August 2006.

-    Lecture notes on OFDM

-    Manual for the laboratory lesson.

The lecture notes on OFDM, and the manual for the laboratory lesson will be available on the homepage of this course, (they are not available yet).

You are allowed to use the compendium and the lecture notes on OFDM during the written examination.

This course is defined by the pages and problems given in the course outline given below in this course program, and by the laboratory lesson.

Teacher: Göran Lindell, Room E:2360, email: Goran.Lindell@eit.lth.se

Lectures: Monday 15.15 – 17.00 in E:2311
Wednesdays 13.15 – 15.00 in E:3139

Exercise class : Tuesdays 13.15 – 15.00 in E:2517 (In study week 7 the room is E:4115)
Thursdays 10.15 – 12.00 in E:2311

Time plan for the project and lab:

Study week 1: Study period starts. Try to find a project partner as soon as possible. **Send me an email this week containing names and email to the two persons in the project group!**

Study week 2: Lecture Monday 9 November: **Project info & start-up procedure**.

Study weeks 3+4+5: **Project work**.

Study week 5: **Deadline for the project report** (pdf-format, Email) Thursday 3 December 2015, 17.00.

Study week 6: LAB starts.

Study weeks 6+7: **Project presentations and opponents**.

Study week 7: Last study week with planned course activities.

Preliminary Course Outline for the course Digital Communications, Advanced Course (ETTN01), 2015:

Week	Contents
45	Lecture (2/11): Introduction. 5.1 – 5.1.2 (pages 329-341).
	Exercise (3/11): Problems 5.1, 5.11, Example 5.2 on page 334, 5.6i, 5.9.
	Lecture (4/11): 5.1.2 – 5.1.7 (pages 336 – 360).
	Exercise (5/11): 5.15a, 5.19, 5.16b, Example 5.4 on page 343, 5.13a, 5.14.
46	Lecture (9/11): Project info and start-up procedure , 5.2 (pages 360 – 377).
	Exercise (10/11): 5.20, 5.18a, 5.21, 5.23, Example 5.20 on page 373, 5.30.
	Lecture (11/11): 5.4.1 (pages 380 – 392), Example 5.34, Figure 5.26 on page 393, 5.4.4 – 5.4.6 (pages 396 – 405).
	Exercise (12/11): Example 5.23 on page 384, 4.34i), 5.34, 5.33.
47	Lecture (16/11): 3.4.1 (pages 161 – 163), Problem 5.34, 3.4.3 (pages 167-170).
	Exercise (17/11): 3.16, Example 5.4 on page 343. 5.34 ((5.133) – (5.138)).
	Lecture (18/11): 8.1 – 8.2.1(pages 501– 512). OFDM introduction.
	Exercise (19/11): 8.1, 8.4, 8.6a,b,c,e, 8.7a,b,c,e, 2.32a,b, 8.8a, Example 8.4 on page 512.
48	Lecture (23/11): OFDM lecture notes pages 1-45.
	Exercise (24/11): OFDM problems X1, X2, X3, X4, X5,.
	Lecture (25/11): 9.1 – 9.2 (pages 581 – 596).
	Exercise (26/11):): OFDM problems X6, X7, X8, X9, X10,
49	Lecture (30/11): 9.2 (591 – 596), Problem 5.34, 7.3(pages 480 – 486).
	Exercise (1/12): 9.2, 9.3, 9.4, 9.5.
	Lecture (2/12): 7.3.21-7.3.2 (pages 484 - 490).
	Exercise (3/12): 9.6, 9.7, 9.8, 9.10
	Deadline for project report this week on Thursday 3 December, 17.00!
50	**Lab starts this week!**
	Lecture (7/12): Summary of the course.
	Exercise (8/12): 7.7, 7.9, 7.10a.
	Lecture (9/12): Project presentations
	Exercise (10/12): Problem solving/Question time
51	Lecture (14/12): Project presentations
	Exercise (15/12): Problem solving/Question time
	Lecture (16/12): Project presentations
	Exercise (17/12): Problem solving/Question time
	Friday 18 December 2015: Study week 7 ends.
2	Written examination Tuesday 12 January 2016, 08.00 – 13.00, Vic:1B