

Course Programme

Digital Communications (ETT051), 7.5 hp, 29/8 – 24/10 2016

The homepage of this course: <http://www.eit.lth.se/kurs/ett051>

Introductory lecture: Tuesday, 30 August (calendar week 35), 08.15 – 10.00 in room MA:5.

Laboratory lesson: LAB (4 hours) starts Monday 3 October (calendar week 40=study week 6).

Application to the laboratory lesson is made on the homepage of this course where you book one available time-slot. Applications to the lab can be made from Monday 19 September (maybe even earlier, **check Messages!!**).

Messages will be distributed on the homepage of this course. **Check messages at least twice a week!!**

Written Examination: 1:st opportunity: Monday 24 October 2016, 14.00-19.00, room MA 10:E-I

2:nd opportunity: Thursday 22 December 2016, 08.00 – 13.00, room MA 9:A

3:rd opportunity: Monday 14 August 2017, 14.00 – 19.00, room E:2311

Course Literature:

- “Introduction to Digital Communications”, compendium August 2006.
- Instructions for the laboratory lesson.

The compendium can be bought at KFS book store, located at LTH Studiecentrum.

The instructions 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 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.

Lectures

The lectures are given in English and there are two lectures each week.

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

Tuesdays: 08.15 – 10.00 in room MA:5 (**except** in study week 6: then in MA:6)

Thursdays: 10.15 – 12.00 in room MA:7

Problem solving (exercise) classes

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

Each student belong to one of two exercise groups (denoted A and B below). Each group has two exercises each week :

Group A (C3, D, E, F, **in Swedish**): Two exercises each week:

Wednesdays 10.15 – 12.00 in room E:3316

Thursdays 13.15 – 15.00 in room E:2311

Group B (MWIR1, Erasmus, **in English**): Two exercises each week:

Tuesdays 10.15 – 12.00 in room E:3316

Fridays 08.15 – 10.00 in room E:3336

Preliminary Course Outline for the course Digital Communications (ETT051), 2016.

| Calendar Week | Contents |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 35 | <p><u>Lecture 1 (30/8):</u> Chapter 1, 2.1 – 2.4.1 (pages 1 – 32). <u>Lecture 2 (1/9):</u> 2.4 – 2.4.3.1 (pages 31 – 42), 2.4.4 – 2.4.7.1 (pages 43 – 55). <u>Exercise 1:</u> Problems 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8. <u>Exercise 2:</u> Problems 2.11, 2.12, 2.13, 2.14a, 2.28, 2.15.</p> |
| 36 | <p><u>Lecture 1(6/9):</u> 2.5 -2.5.1.1 (pages 61-69), 2.5.2 (pages 70 -72), 2.5.2.2 – 2.5.4.2 (pages 77 – 88). <u>Lecture 2 (8/9):</u> 2.5.5 – 2.5.8 (pages 88 – 102). <u>Exercise 1:</u> 2.18, 2.16, 2.17a, 2.19a, Example 2.17 on page 64. <u>Exercise 2:</u> 2.21a,b, 2.22, 2.23, 2.25, 2.29.</p> |
| 37 | <p><u>Lecture 1 (13/9):</u> 3 – 3.2 (pages 117 – 136), 3.3 – 3.3.1 (pages 139-147), 3.3.2 (pages 147-152). <u>Lecture 2 (15/9):</u> 3.4.3 (pages 167-170), 3.5.3-3.5.3.1 (pages 174-184), 4.1 – 4.3 (pages 227-244). <u>Exercise 1:</u> 2.26, 2.27 (only 2,3,4,7), 2.30, Example 3.1 on page 121, 3.1, 3.2, 3.3. <u>Exercise 2:</u> 3.5, 3.6, Example 3.7 on page 135, 3.9, 3.10b, 3.19, 3.7, 3.22.</p> |
| 38 | <p><u>Lecture 1 (20/9):</u> 4.3.1 – 4.4.1.3 (pages 244 – 272). <u>Lecture 2 (22/9):</u> 4.5-4.6 (pages 272-293), 5.1-5.1.1 (pages 329-331), 5.2 – 5.2.1 (pages 360-366). <u>Exercise 1:</u> 3.11c, Example 3.19 on page 168, 3.23, 4.1, 4.2, 4.6. <u>Exercise 2:</u> 4.7, 4.8, 4.27, 4.10, 4.17c, 4.20, 4.29, Example 4.12 on page 260, 4.32.</p> |
| 39 | <p><u>Lecture 1 (27/9):</u> Figure 5.17 on page 369, 5.4.3 (pages 395 – 396), 5.4.5 (pages 400 – 403), 6 – 6.1 (pages 435 – 446). <u>Lecture 2 (29/9):</u> 6.2 – 6.2.2 (pages 446 – 453), 6.2.4 (pages 455 – 459). <u>Exercise 1:</u> 4.19, 4.21, Example 4.19 on page 279, 4.13, 4.12, Example 4.4 on page 242, 4.18. <u>Exercise 2:</u> 4.22, 4.28, 4.30b, Example 4.22 on page 285, 4.35, 4.36.</p> |
| 40 | <p>Observe that the LAB starts in this week! <u>Lecture 1 (4/10):</u> 7.1 – 7.1.3 (pages 471 – 476), 8.1 (pages 501 – 505). <u>Lecture 2 (6/10):</u> Summary of this course. <u>Exercise 1:</u> 6.1a, 6.1c, 6.2, 6.3a, 6.4, 6.7a, 6.9a, 6.8. <u>Exercise 2:</u> 6.10, 6.5, 6.6, 6.11b.</p> |
| 41 | <p><u>Exercise 1:</u> 7.5, 7.7, 8.1, 8.2, 2.32a,b, 8.4. <u>Exercise 2:</u> Time for questions.</p> |
| 43 | <p>Written Examination on Monday 24 October 2016, 14.00-19.00, room MA 10:E-I</p> |

(You are allowed to use the compendium during the written examination.)