



Course syllabus

Dator- och telekommunikation Computer and Telecommunication

EITG01, 7,5 credits, G2 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED C/D

Date of Decision: 2023-04-18

General Information

Compulsory for: IDA2, IEA3

Language of instruction: The course will be given in Swedish

Aim

The aim of the course is to give basic knowledge about the presently available data telecommunications systems and an overview over systems under development.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- be able to describe carrier systems with different modulation methods and how these are utilized within data and telecommunications
- be able to describe the structure of mobile telephone systems
- be able to describe different routing protocols and their properties.
- be able to describe the most important protocols in data and telecommunications systems
- be able to calculate performance both analytically and with simulation

Competences and skills

For a passing grade the student must

- be able to configure data and telecommunications systems
- be able to configure routing in a computer network
- be able to document and orally present a solution to a given datacommunications or telecommunications problem

Judgement and approach

For a passing grade the student must

- Show knowledge of the possibilities and limitations of computer- and telecommunication
- Be able to cooperate in a group

Contents

- Modulation methods
- Protocols
- Multiplexing
- Circuit and packet switching techniques
- Point-to-point access
- Mobile telephone networks and satellite networks
- Virtual circuit switching networks
- Routing
- Performance aspects

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)

Assessment: The final grade of the course is based on the result of the written exam. Passed laboratory exercises and approved assignments are also required.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0117. **Name:** Computer and Telecommunication.

Credits: 5. **Grading scale:** TH. **Assessment:** Written examination

Code: 0217. **Name:** Laborations and Home Assignment.

Credits: 2,5. **Grading scale:** UG. **Assessment:** Passed laborations and passed home assignment

Admission

Assumed prior knowledge: EITA60/ETS302 Computer Communication.

The number of participants is limited to: No

The course overlaps following course/s: EITF45, ETS610, ETS630, ETS601, ETSF15, EITA55

Reading list

- James F. Kurose, Keith W. Ross: Computer Networking: A Top-down Approach. Pearson Education Limited, 2012, ISBN: 9780273768968.

Contact and other information

Course coordinator: Johan M Karlsson, johan_m.karlsson@eit.lth.se

Course homepage: <http://www.eit.lth.se/kurs/eitg01>