UNIVERSITY OF GOTHENBURG

COMPUTER SCIENCE AND ENGINEERING

DIT665 Seminars in Computer Systems and Network, 7.5 higher education credits

Seminariekurs i datorsystem och nätverk, 7,5 högskolepoäng

Second Cycle

Confirmation

This course syllabus was confirmed by Department of Computer Science and Engineering on 2013-11-11 to be valid from 2014-09-01.

Field of education: Science 100%
Department: Computer Science and Engineering

Position in the educational system

The course is a part of the Computer Science Master's Programme and a single subject course at the University of Gothenburg.

The course can be part of the following programme: 1) Computer Science, Master's Programme (N2COS)

Main field of studies	*Specialization*
Computer Science	A1F, Second cycle, has second-cycle course/s as entry requirements

Entry requirements

To be eligible for the course students should have successfully completed two years of studies within Computer Science or equivalent. The courses DIT420 Computer communication, DIT663 Computer Networks, DIT400 Operating Systems, DIT240 Distributed Systems or equivalent are required.

English B level or English proficiency equivalent to IELTS 6.5 no part under 5.5 or TOEFL 575 p, TWE score 4.5 is also required.

Learning outcomes

After the course completion, you are expected to be able to:

1. Knowledge and understanding

- solve problems in the studied area of research including system design issues, networking and advanced programming techniques.

- identify and evaluate critical issues and existing technological limitations in the state-of-the art in computer systems and networks.

2. Skills and abilities

- identify the most relevant papers in the professional literature and review them.

3. Judgment and approach

- analyze the performances of studied solutions using numerical analysis and formal proofs.

- grasp the impact that different solutions can have to an application or a system.

- critically analyze problems and find new solutions for modern networks and computer systems.

Course content

This course examines current state-of-the-art, research-related topics in the fields of data communication, computer networks, distributed systems, computer security, real-time systems computer architecture and computer system engineering. Covering a broad range of topics and based on mainly scientific papers, it is intended for students planning to carry out a research project in any of these areas or anyone interested in the contemporary research problems of this field.

The course includes at least four of the following main topics:

- Computer and network security
- Distributed computer systems

- Real-time computer systems
- Computer system architectures
- Hot topics in computer Systems and Networks

For each of the main topics, there will be introduction lectures that will explore the literature review tasks. You will work on literature survey tasks, write reports and deliver oral presentations. You will also peer review the presentations and reports. Based on the peer review comments, a revised and extended version of the report is expected.

Form of teaching

Language of instruction: English

Assessment

The course is examined by written review assignment (1.5 hec). The student must present the assignment orally, including a peer review of other students written assignment and their oral presentation (1.5 hec). The course is also examined by a revised and extended written report (4.5 hec).

All the work will be carried out in pairs. The extended written report version is the bases for the final course grade.

A student who has failed two examinations on the same material has the right to request a change of examiner. Such a request must be submitted to the Department in writing and shall be granted unless there are particular reasons not to do so.

In cases where a course has been discontinued or has undergone major changes, students must be guaranteed at least three examination opportunities (including the regular opportunity) based on the previous content of the course for a period of at least one year.

Grades

The grading scale comprises: Fail (U), Pass (G), Pass with Distinction (VG).
In order to get the grade Pass for the full course the student must Pass the written assignment, the presentation part and get the grade Pass on the extended written report.

In order to get the grade Pass with Distinction for the whole course, the student must get the grade Pass with Distinction on the extended written report and pass both the assignment part and the presentation part.

Course evaluation

The course is evaluated through meetings both during and after the course between teachers and student representatives. Further, an anonymous questionnaire is used to ensure written information. The outcome of the evaluations serves to improve the course by indicating which parts could be added, improved, changed or removed.

Additional information

The course is a joint course together with Chalmers.