



# ID1212 Network Programming

## 7.5 credits

### Nätverksprogrammering

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

### Establishment

Course syllabus for ID1212 valid from Spring 2019

### Grading scale

A, B, C, D, E, FX, F

### Education cycle

First cycle

### Main field of study

Technology

### Specific prerequisites

- ID1018 Programming I, or equivalent knowledge
- IV1350 Object Oriented Design, or equivalent knowledge
- ID1354 Internet Applications, or equivalent knowledge

### Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

## Intended learning outcomes

The aim of the course is to introduce tools and technologies for network programming at such a level that the participants on completion of the course can

- use appropriate tools, API:s and frameworks to develop distributed applications
- develop multi-threaded clients and servers
- use appropriate design and architecture for clients and servers
- develop distributed applications using different communication paradigms, such as blockin and non-blocking sockets, object-oriented middleware (RMI), and an application server communicating over HTTP.

## Course contents

Basic concepts for network applications, such as

- Graphical user interface for clients.
- Multi-threaded programs.
- Distributed applications with sockets.
- Distributed applications with object-oriented and message-oriented middleware.
- Web applications and application servers.
- Mobile applications, using for example Android SDK.
- API:s, frameworks and tools for the above-mentioned communication paradigms.

## Course literature

The course is not based on reading from any particular book. Some recommended books are shown below.

- Elliotte Rusty Harold. Java Network Programming, 4th Edition. O'Reilly & Ass., Inc. October 2013.
- Jan Graba. An Introduction to Network Programming with Java, 3rd Edition. Springer, 2013.

## Examination

- INL1 - Assignments, 4.5 credits, grading scale: P, F
- TEN1 - Examination, 3.0 credits, grading scale: A, B, C, D, E, FX, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

## **Ethical approach**

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.