



Faculty of Health, Science and Technology  
Computer Science

# Syllabus

## Computer Networking I

<b>Course Code:</b>	DVGB02
<b>Course Title:</b>	Computer Networking I <i>Datakommunikation I</i>
<b>Credits:</b>	7.5
<b>Degree Level:</b>	Undergraduate level
<b>Progressive Specialisation:</b>	First cycle, has less than 60 credits in first-cycle course/s as entry requirements (G1F)

**Major Field of Study:**  
DVA (Computer Science)

### Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2018-09-14, and is valid from the Spring semester 2019 at Karlstad University.

### Prerequisites

Computer engineering students: Programming Techniques 7.5 ECTS credits and Software Development 7.5 ECTS credits, or equivalent.

Non-programme students: Computer Science 30 ECTS credits, including Software Development 7.5 ECTS, or equivalent.

### Learning Outcomes

Upon completion of the course, students should be able to:

- give an account of the structure of modern computer networks and the services for which various applications are offered,
- describe the functionality of the different TCP/IP stack layers and how the layers interact,
- explain how the most important protocol of the TCP/IP stack works and is used,
- write simple client/server applications, and
- give a written account of an application in computer networking.

### Content

The course mainly includes:

- the structure of the Internet, various components and services
- the function of different network applications (the web and http, FTP, e-mail, DNS)
- socket programming
- functionality and protocol in the different TCP/IP stack layers
- permanent and wireless local networks

Instruction is in the form of lectures, literature studies with reading instruction, study material, and hand-in assignments. There are also exercises and laboratory sessions.

**Reading List**

See separate document.

**Examination**

Assessment is based on laboratory work, hand-in assignments and a written exam.

**Grades**

One of the grades 5 (Pass with Distinction), 4 (Pass with Some Distinction), 3 (Pass), or Fail (U) is awarded in the examination of the course.

**Quality Assurance**

Follow-up relating to learning conditions and goal-fulfilment takes place both during and upon completion of the course in order to ensure continuous improvement. Course evaluation is partly based on student views and experiences obtained in accordance with current regulations and partly on other data and documentation. Students will be informed of the result of the evaluation and of any measures to be taken.

**Course Certificate**

A course certificate will be provided upon request.

**Additional information**

The local regulations for studies at the Bachelor and Master levels at Karlstad University stipulate the obligations and rights of students and staff.