



Faculty of Health, Science and Technology  
Computer Science

# Syllabus

## Introduction to Cloud Computing

<b>Course Code:</b>	DVAD51
<b>Course Title:</b>	Introduction to Cloud Computing <i>Introduktion till Cloud Computing</i>
<b>Credits:</b>	1.5
<b>Degree Level:</b>	Master's level
<b>Progressive Specialisation:</b>	Second cycle, has only first-cycle course/s as entry requirements (A1N)

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

### Course Approval

The syllabus was approved by the Faculty of Health, Science and Technology 2024-09-11, and is valid from the Spring semester 2025 at Karlstad University.

### Prerequisites

30 ECTS credits in Computer Science or three years of work experience in the IT sector, and upper secondary level English 6 or B, plus or equivalent

### Learning Outcomes

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

1. name and describe essential techniques for implementing platforms and solutions for Cloud Computing,
2. interpret and analyse scientific literature on Cloud Computing,
3. create and use small-scale Cloud-based solutions, and identify advantages and disadvantages of different technological platforms, such as OpenStack or VMware systems,
4. assess and explain the possibilities and limitations of Cloud-based alternatives compared to other types of IT systems, and
5. communicate knowledge about relevant scientific literature, orally and in writing.

**Content**

The course introduces different service models, techniques, and platforms for Cloud Computing, such as public versus private clouds, and IaaS, PaaS, and SaaS service models. Relevant terminology and frameworks for the implementation of cloud services are presented, and relevant public and private cloud offerings are discussed. Key concepts related to cloud use are examined, such as virtual machine management and virtual network configuration, based on laboratory experiments and self-evaluations online.

**Reading List**

See separate document.

**Examination**

Assessment is based on individual hand-in assignments and an oral exam.

If students have a decision from Karlstad University entitling them to Targeted Study Support due to a documented disability, the examiner has the right to give such students an adapted examination or to examine them in a different manner.

**Grades**

One of the grades 5 (Pass with Distinction), 4 (Some Distinction), 3 (Pass) or U (Fail) 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.