



Faculty of Health, Science and Technology
Computer Science

Syllabus

Methods in Computer Science

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| Course Code: | DVAD12 |
| Course Title: | Methods in Computer Science <i>Datavetenskapliga metoder</i> |
| Credits: | 7.5 |
| Degree Level: | Master's level |
| Progressive Specialisation: | 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 2018-02-01, and is valid from the Autumn semester 2018 at Karlstad University.

Prerequisites

Computer Science 60 ECTS cr, and Upper Secondary level English B/6, or equivalent

Learning Outcomes

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

- explain procedures and methods in computer science,
- apply one or several research methods in a project,
- plan research activities in a project,
- conduct evaluations for the purpose of analysing research results,
- identify relevant literature, journals, conferences and research groups,
- collect and classify information and carry out a literature study,
- structure a research article in conformity with disciplinary standards,
- critically review their own results and the results of others,
- understand the principles of ethics and copyright.

Content

The course provides an introduction to research methods (qualitative, quantitative, experimental, etc.) used in computer science. Research questions, hypotheses, and different data collection methods (observations, interviews, replicability etc.) and analytical methods are studied, along with how to review results of research methods, argumentation and presentation techniques of results, and the structure of research documents (conference papers, journal articles and dissertations). Ethical issues related to different research methods (plagiarism, copyright, patent, questioners, etc.) are discussed.

Instruction is in the form of lectures, seminars, presentations and group discussions.

Reading List

See separate document.

Examination

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

Grades

One of the grades Distinction (VG), Pass (G), or Fail (U) is awarded in the examination of the course, Engineering students are awarded one of the grades Pass with Distinction (5), Pass with Some Distinction (4), Pass (3) or Fail (U).

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.