



Faculty of Technology and Science
Physics

Syllabus

Course Approval

The syllabus was approved by the Faculty Board of Technology and Science on 10 May 2012 , and is valid from the Spring semester of 2013 at Karlstad University.

Course Code: TFGC01

Engineering Physics, Bachelor Degree Project, 15.0 ECTS Credits
(Examensarbete för kandidatexamen i Teknisk fysik, 15.0 Swedish credit points)

Degree Level: Bachelor

Progressive Specialisation: G2E (First cycle, has at least 60 credits in first-cycle course/s as entry requirements, contains degree proj. for B.A./B.Sc.)

Language of Instruction

Swedish or English

Prerequisites

Engineering Physics/Physics 75 ECTS cr and Mathematics 50 ECTS cr, or equivalent

Major Field of Study

TKA (Engineering Physics)

Learning Outcomes

The aim of the course is to provide a specialized conclusion to the Bachelor-level degree programme in engineering physics, in which students independently carry out an investigative science project in a chosen area.

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

- give an account of the scientific basis of engineering physics, especially of the theories, methods and applications in a chosen subarea and of some current research and development issues,
- independently identify, formulate and solve problems and carry out tasks in a project within given time limits,
- give an account of and discuss information, problems and solutions scientifically, orally and in writing,
- search and collect relevant information, critically evaluate its reliability and quality and make correct references to it,
- evaluate and critically review the obtained results in relation to the scientific literature,
- make considered judgements on relevant social and ethical aspects in the chosen subarea and demonstrate insights into the role of knowledge of in society and our responsibility for how it is used.

Content and Form of Instruction

The course is carried out in the form of an individual project, supervised by university staff. The degree project gives students the opportunity to acquire specialised knowledge and skills in a particular area. Students work independently and are responsible for the process and the result. The project is chosen in consultation with the supervisor. The purpose, objective, method and time plan of the project must meet the approval of the examiner before it is begun. In case two students collaborate on a larger project, their individual problem formulations must be clearly stated at the start of the project. The students write and present individual reports.

Reading List

See separate document.

Examination

Assessment is based on the following components: problem formulation, implementation, written report and oral presentation. The report is to be written in Swedish or English. If the report is written in English, a title and summary in Swedish must be added.

Grades

One of the grades Fail (U), Pass (G), or Distinction (VG) is awarded in the examination of the course, alternatively U (Fail), 3 (Pass), 4 (Pass not without Distinction), or 5 (Pass with Distinction).

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 assessment is based on student views and experiences as reported in written course evaluations and/or group discussions. Students will be informed of the result of the evaluation and of the measures to be taken.

Course Certificate

A course certificate will be provided upon request.

Additional Information

Students who enrolled before 1 July 2007 will complete their studies in accordance with the requirements of the earlier admission. Upon completion students may request degree and course certificates to be issued under the current ordinance if they meet its requirements.

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

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