



Faculty of Technology and Science
Construction Engineering

Syllabus

Course Approval

The syllabus was approved by the Faculty Board of Technology and Science on 12 March 2014, and is valid from the Autumn semester of 2014 at Karlstad University.

Course Code: BYGA94

Technical Evaluation of Property, 12.0 ECTS Credits

(Teknisk besiktning och värdering av fastigheter, 12.0 Swedish credit points)

Degree Level: Bachelor

Progressive Specialisation: G1F (First cycle, has less than 60 credits in first-cycle course/s as entry requirements)

Language of Instruction

Swedish

Prerequisites

Upper secondary school level English B, Mathematics C, and Civics S (field-specific eligibility 4) plus plus Elementary Building Technology BYGA93, 12 ECTS cr, or Building Physics BYGA11, 7.5 ECTS cr, OR Mathematics 3b or 3c, Civics 1b or 1a1+1a2 (field-specific eligibility A4) plus Elementary Building Technology BYGA93, 12 ECTS cr, or Building Physics BYGA11, 7.5 ECTS cr.

Major Field of Study

BYA (Building Technology)

Learning Outcomes

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

- identify the factors that affect and constitute the indoor climate of homes in terms of quality of air and thermal climate,
- describe and assess heating, ventilation, and drainage systems in different homes in terms of function and affect on the indoor climate,
- estimate roughly the effect and energy consumption of homes for assessing the energy performance of different buildings,
- describe the most common risk constructions in family homes, building physics causing risks and the measures to be taken to prevent future problems in such constructions,
- analyse and assess different building constructions using heat and humidity measurement/calculation methods,
- apply an examination method on a property with a view to
 - performing an inspection of transfer
 - investigating the causes of humidity damages
 - draw up an energy declaration
- perform LCC estimations/analyses for investing in new technical systems/installations to assess total costs.

Content and Form of Instruction

The course is divided into three modules:

The first module treats ventilation and heating systems that can maintain the thermal climate of a property and produce good air quality. Also the water and drainage systems is treated. The principles and different technical solutions for each technical subsystem are treated along with advantages and disadvantages, design, and control systems and their functions. Common risk constructions related to small houses are included.

The second module focuses on analyses and calculations: LCC analyses, estimation of energy and effect needs and humidity analysis of the climate shell. Transfer and energy inspections are also treated.

The third module is in the form of a project where students describe and assess technically all systems in a property, perform transfer and energy inspection and energy-efficient measures based on LCC analysis.

Instruction is in the form of lectures, classes and project supervision.

Reading List

See separate document.

Examination

Assessment is based on a written exam and active participation in the project presented in writing and orally.

Grades

One of the grades Fail (U), Pass (G), or Distinction (VG) 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 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.

The course requires students to participate in group work beyond scheduled hours.