LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Husbyggnadsteknik för brandingenjörer
Building Technology for Fire Protection Engineers

VBFA06, 5 credits, G1 (First Cycle)

Valid for: 2023/24
Faculty: Faculty of Engineering, LTH
Decided by: PLED V
Date of Decision: 2023-03-21

General Information

Compulsory for: BR1
Language of instruction: The course will be given in Swedish

Aim

The course aim is to give knowledge in the fields of building technology, building physics, interpretation and design of technical drawings for buildings, as well as building services.

Learning outcomes

Knowledge and understanding
For a passing grade the student must

- interpret drawings for building design
- describe different building components
- explain reasons for the design of different building components
- describe simple building physical processes
- describe building services equipment for dwellings
- identify and describe the impact of moisture on different building components

Competences and skills
For a passing grade the student must

- be able to use technical terms both oral and written
- design ordinary building components and joints between building components

- be able to connect building physics to construction technology, and explain how building physics constitutes a basis for the design of the building envelope and its details
- assess the impact of different component designs with regard to moisture and heat related issues
- discuss different designs with actors in the building industry

Contents

1. The course begins with a review of basic building technology and terminology, and thus different building parts and how these are joined to form an entire building.
2. Then, the construction process and various related documents are reviewed, which includes technical drawings. This, through lectures and exercises in drawing interpretation and exercises on structural details.
3. Simultaneously, the building physics, and thus heat and moisture issues in buildings, are dealt with in connection to the building technology. Building physics is treated from both a theoretical perspective (qualitatively) and a computational perspective (quantitatively). This, through lectures, the course material, and arithmetic exercises.
4. Additional lectures deal with historical building technology, as well as with building services.
5. In the course participants conduct a project assignment in groups. The project assignment requires application of previous course content, but with a focus on technical drawings.

Examination details

Grading scale: TH - (U,3,4,5) - (Fail, Three, Four, Five)
Assessment: The student is examined through a written exam, a compulsory project assignment, and attendance in some compulsory lectures and exercises. The written exam consists of a theory part and a calculation part.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts
Code: 0122. **Name:** Building Technology.
Credits: 4. **Grading scale:** TH. **Assessment:** Written examination with a theory part and a arithmetic part. Both parts must be approved at the same occasion. **Contents:** Theory and calculation tasks based on course litterature and notes from lectures in building technology and building physics.
Code: 0222. **Name:** Projektuppgift.
Credits: 1. **Grading scale:** UG. **Assessment:** For an approved project assigment, submissions must be complete and related course parts completed. **Contents:** Group assignment regarding detailed structural drawings for a detached house.

Admission

The number of participants is limited to: No
The course overlaps following course/s: VBFA05

Reading list

- Sandin, K: Praktisk byggnadsfysik. Studentlitteratur, 2010, ISBN: 9789144059914.
- Sandin, K: Praktisk byggnadsfysik: övningsbok. Studentlitteratur, 2010, ISBN: 9789144059891.
- Drawings and additional documents.
- Bengt Strandberg, Fredrik Lavén: Bygga hus, Illustrerad bygglära. Studentlitteratur, 2021, ISBN: 978-91-44-15112-0.

Contact and other information

Course coordinator: Akram Abdul Hamid, akram.abdul_hamid@byggtek.lth.se
Course homepage: http://www.byfy.lth.se/utbildning/
Further information: The learning process is based on teaching media for university studies and drawings from industry. After completing the course the student shall have developed skill to further studies with a certain amount of independence.