LUNDS UNIVERSITET
Lunds Tekniska Högskola

Course syllabus

Arkitekturteknik 3: Byggnadsteknik & byggnadsfysik
Building Technology and Building Physics

VBMA10, 3 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

Main field: Architecture.
Compulsory for: A2
Language of instruction: The course will be given in Swedish

Aim

The aim of the course is to give knowledge about the requirements of the building envelope and the design of building elements

Learning outcomes

Knowledge and understanding
For a passing grade the student must

- be able to describe all parts of the building envelope and their functions
- be alble to describe the structure of different building parts and why they have this structure
- be able to analyse and calculate elementary heat and mioisture processes

Competences and skills
For a passing grade the student must

be able to describe how all building parts may be joined together in order to create an energy efficient building with a good indoor climate

Judgement and approach

For a passing grade the student must

be able to use the technological possibilities in order to create a sustainable building

Contents

- The building envelope and performance requirements
- Heat and moisture transport in building parts
- Energy efficiency and thermal transmittance
- The design of roofs, outer walls, windows, doors
- Fire safety

Examination details

Grading scale: UG - (U,G) - (Fail, Pass)
Assessment: A written examinations with a theoretical and a calculation part. Both parts must be passed at the same occasion. To pass the course the students also must complete and pass a project.

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.

Admission

Assumed prior knowledge: VBKA05 Architectural Design VBMA05 Building Materials
The number of participants is limited to: No

Reading list

- Sandin, Kenneth: Praktisk husbyggnadsteknik. Studentlitteratur, 2019, ISBN: 9789144131580.
- Sandin, Kenneth: Praktisk Byggnadsfysik. Studentlitteratur, 2010, ISBN: 9789144059914.
- Sandin, Kenneth: Praktisk Byggnadsfysik, Övningsbok. Studentlitteratur, 2010, ISBN: 9789144059891.

Contact and other information

Course coordinator: Hans Bagge, hans.bagge@byggtek.lth.se
Course homepage: http://www.byfy.lth.se