

# APPLICATION OF COMPUTER SCIENCE TO BUILDING STRUCTURES

## Course outline

- ❖ The course consists of 15h of lecture and 15h of training
- ❖ During the lectures various aspects of the BIM will be discussed and its impact on the AEC (Architecture, Engineering and Construction) industry
- ❖ During the training part the following software tools will be discussed:
  1. Autodesk Revit Architecture and Structure
  2. Autodesk Robot Structural Analysis (some aspects of)

## Course objectives

- Be familiar with the current technologies in BIM
- Be familiar with IT aspects of BIM
- Understand increased visualization of 2D information into a 3D image
- Understand of construction coordination (documentation and technology)
- Get to know BIM software

## Grading

The final grade will be derived from

1. The test regarding the material discussed during lectures
2. The assignment work (presentation of main points of an article or a book chapter)
3. The laboratory assignment

## Lectures outline

- Introduction To BIM
- BIM Tools
- BIM Workflow
- BIM Implementation: New Tools and Processes
- Building Information Management. Interoperability And Information Exchange
- BIM And Integrated Project Delivery (IPD). BIM As Lean Business Practice.
- BIM Organizing The Development Of A Building Information Model. Model Progression Specification and Classification Systems
- Interoperability And Information Exchange
- The Current Stage Of The BIM Technology And BIM Future