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Department of Building Engineering	
Special Topics in Building Engineering (68570)	
Total Credits	**3**
major elective	
Prerequisites	-

Course Contents

Students are introduced to the theoretic and practical aspects of modern BIM approaches to information handling during all stages of the lifecycle of a building. The theoretic introduction including a brief review of the history of CAD (geometric, structuring of drawings, exchange formats etc.) is concluded with an overview of contemporary developments in research and development in ICT in AEC/FM. This includes an introduction to BIM database/server vs. drawing file based approach; also IFC as a recognized standard for BIM in AEC/FM industry. The second part of this class consists of a practical hands-on introduction to building information modeling using Autodesk -AutoCAD Architectural and Autodesk -AutoCAD MEP. An assignment to model a small residential building is used as basis for this part

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	1. Ability to understand BIM and how BIM affects design processes, how it affects construction, and how it allows collaboration with engineering consultants, and others.	J	20 %
2	2.Demonstrate the ability to use BIM server as a toll to manage and facilitate collaboration among different actors involved in construction industry	C	20 %
3	3. Analyze and extract information about building and designs exchanged using IFC standard.	B	20 %
4	4. Perform modelling using BIM editors (e.g. Autodesk AutoCAD Architectural and Autodesk AutoCAD MEP)	K	40 %

Textbook and/ or Refrences

- Underwood J. Iskidag U., Building Information Modeling and Construction Informatics Concepts and Technologies, 2010

Assessment Criteria	Percent (%)
Mid. Term Exam	15 %
Projects	30 %
Laboratory Work	35 %
Final Exam	20 %

Course Plan

Week	Topic
1-2	Current situation in construction practices
3-4	BIM server
5-7	IFC
8-12	Autodesk- AutoCAD Architectural
13-15	Autodesk AutoCAD MEP
16	FINAL EXAM