Course Name**: Building Information Modeling**

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Objectives:

The first objective of this course is to familiarize students with Building Information Modeling (BIM) and its applications in construction management. Students are also introduced to the prerequisites, such as Management Information Systems (MIS), database concepts, and open BIM. The second objective is to introduce software applications for the development of BIM and their use in construction management (e.g., BIM dimensions such as 4D and 5D, clash detection). In addition, BIM APIs and scripts and their role in facilitating model development, as well as planning and control of construction projects are presented. The third objective is to familiarize students with BIM management concepts, including BIM Execution Plan (BEP).

Course Calendar:

Week	Syllabus
1	Introduction to BIM and its importance
2	Developing BIM using Autodesk Revit software
3	Developing BIM using Autodesk Revit software, BIM for construction management
4	Dynamo scripts to facilitate and optimize modeling (Dynamo)
5	Introduction to Autodesk Navisworks and Information structure in BIM
6	Clash detection and information extraction in Navisworks
7	Creating 4D and 5D models
8	Related research topics on “BIM in construction management”
9	Related research topics on “BIM in construction management”
10	IFC and open BIM
11	Application Programming Interface (API) and script writing in BIM
12	Application Programming Interface (API) and script writing in BIM
13	Databases
14	Databases
15	Management of BIM projects and creating BIM execution plan
16	Project presentations