



Course Specification

— (Bachelor)

Course Title: **Computer Aided Drafting (2)**

Course Code: **DEG 111**

Program: **Architecture**

Department: **Architecture**

College: **Architecture and Planning**

Institution: **Qassim University**

Course Identification

Course general Description:

This course is intended to develop student's knowledge and skills to model, visualize and document architectural projects, using Object-based BIM environment. Students are trained to employ a suitable industrial grade BIM tool, to produce innovative architectural designs, covering a wide range of possible scenarios. The course is considered an introduction to practical BIM and parametric design, using practical approach and lab exercises to develop hands-on experience.

Course Main Objective(s):

1. Develop students' understanding of computerized projects' practice workflow and process.
2. Focusing on object-based information modeling and handling architectural drawings as visual reports based on model views.
3. Develop students' skills to produce professional models presenting innovative architectural designs.
4. Introduce hands-on experience to Produce projects' full set of architectural documentation.

Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of CLOs aligned with program
1.0	Knowledge and understanding	
1.1	Recognize object-based modeling software user interface, objects, and modelling tools.	K1
1.2	Outline BIM process, workflow and deliverables	K1
1.3		
2.0	Skills	
2.1	Model architectural elements in BIM object-based environment controlling 2D and 3D model views.	S4
2.2	Present full architectural Project including annotation, documentation, and visualization.	S4
3.0	Values, autonomy, and responsibility	

D. Students Assessment Activities

No	Assessment Activities *
1.	Register in Autodesk educations community and install Revit
2.	Assignment (1) Skeleton: Create multi-story concrete skeleton
3.	Assignment (2) Walls: Create exterior walls with various in base, top and types on the previous skeleton
4.	Assignment (3) Architectural components: Create a simple project including: grid lines, skeleton, walls, staircase, doors and windows, ceiling, and roof.
5.	Mid-term Exam (small project)
6.	Assignment (4) Curtain walls: Create a multi-story commercial building model with curtain wall façade and interior finishes connections.



No	Assessment Activities *
7.	Assignment (5) View management: Create a simple project, present three types of plans, sections callouts, and annotations (use title blocks).
8.	Assignment (6) Site and rendering: design site components and create exterior and interior high quality rendering.
9.	Final Project (Create full project based on ARCH103)
10.	Total

References and Learning Resources

Essential References	Lance Kirby, Eddy Krygiel, Marcus Kim. (2017). Mastering Autodesk Revit 2018. A Wiley Brand
Supportive References	A series of Autodesk Revit - Tutorial for Beginners [COMPLETE] (online videos) Autodesk Revit 2021 help files
Electronic Materials	None
Other Learning Materials	None

