

**Course name:** BUILDING INFORMATION MODELLING (BIM)

**Course code:** DEG 320

**Course hours:** Credit hours 3, Contact hours 4

**Course Pre-requisites:** None

**Course Description**

This course focuses on the skills and information needed to effectively use an existing Building Information Model (BIM) for executing building construction project. In this course the students will gain knowledge on the implementation of BIM concepts throughout the lifecycle of a building, from planning and design, to construction and operations.

**Course Main Objective**

In this course, the students will be to:

- Define BIM;
- Describe workflow in using BIM in the building lifecycle;
- Perform model-based cost estimating;
- Perform 4D simulations;
- Apply BIM to reduce error and change orders in capital projects;
- Evaluate and communicate ideas related to the use of BIM in the building life cycle.

**Course Learning Outcomes**

After the completion of this course, the students will be able to;

- Recognize workflow in using BIM in the building lifecycle.
- Apply model-based cost estimating for buildings' construction Projects.
- Apply BIM to reduce error and change orders in capital projects.
- Perform 4D simulations for buildings.
- Evaluate and communicate ideas related to the use of BIM in the building life cycle.

**Course evaluation**

- Quizzes, practical assignments
- Weekly/biweekly reviews
- Midterm examination
- Attendance
- Final examination

**Course recommended books**

- Eastman, C.; Teicholz, P.; Sacks, R.; Liston, K. (2011) BIM Handbook: A Guide to Building Information
- Modeling for Owners, Managers, Designers, Engineers and Contractors. New York: Wiley.

**Course References**

- Autodesk Revit 2018 help files.