



# Course Specification

— (Bachelor)

Course Title: **Building Structure**

Course Code: **CE 261**

Program: **Architecture**

Department: **Architecture**

College: **Architecture and Planning**

Institution: **Qassim University**

## 1. Course Identification

### Course general Description:

Types of structures, supports and loads. Idealization of structures and loads. Geometric stability and determinacy. Analysis of determinate trusses, beams, plane frames and arches; reaction computation; axial force, shear force and bending moment diagrams. Internal force releases. Load-shear-moment relationship.

### Course Main Objective(s):

In this course, the students will:

- Develop an understanding of the principles of stability and equilibrium of different types of structures.
- Understand how to solve equilibrium problems involving trusses, beams, frames, and arches.
- Be able to determine internal forces in members of trusses and draw shear force and bending moment diagrams for beams and frames.
- Be able to calculate the displacements in different structures.
- Understand the concept of moving loads and influence lines

## 2. Course Learning Outcomes (CLOs)

Code	Course Learning Outcomes	Code of CLOs aligned with program
<b>1.0</b>	<b>Knowledge and understanding</b>	
1.1	Classify different types of structural system and load	K-1
1.2	Explore stability and equilibrium of different types of structures	K-1
1.3	Recommend how to calculate the reactions of different structures	K-1
1.4	Define shear force and bending moment diagrams of determinate beams, truss and frames	K-1
<b>2.0</b>	<b>Skills</b>	
<b>3.0</b>	<b>Values, autonomy, and responsibility</b>	



Code	Course Learning Outcomes	Code of CLOs aligned with program

### 3. Students Assessment Activities

No	Assessment Activities *
1.	Quizzes, Practical assignments
2.	Mid-term exam
3.	Project (structures models)
4.	Final Exam

### 4. Learning Resources and Facilities

<b>Essential References</b>	Examples in structural analysis, William M. C. Mckenzie, First edition, 2006
<b>Supportive References</b>	None
<b>Electronic Materials</b>	None
<b>Other Learning Materials</b>	None

