



# Course Specification

— (Bachelor)

Course Title: **Building Technology**

Course Code: **ARCH 470**

Program: **Architecture**

Department: **Architecture**

College: **Architecture and Planning**

Institution: **Qassim University**

## 1. Course Identification

### Course general Description:

This course aims to be an extended development of the construction building subjects as a means to further investigate new building materials and techniques. Emphasis will be on the old and contemporary building techniques such as Reinforced concrete, Insulated Precast System, Autoclaved Aerated Concrete, Tunnel Form, Concrete Modular, Light Gauge Steel, Insulating Concrete Form, 3D Printing, Cladding Materials and Nanotechnology.

### Course Main Objective(s):

In this course, the students will be able to:

1. Understand the history of building technologies.
2. Have a deep understanding of the different contemporary building techniques.
3. Be able to search and analyze the precedent architectural examples for different building techniques.
4. Be able to recognize the type of building materials and techniques from the existing cases.
5. Be able to carry out oral presentations with groups.

## 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	Recognize and understand the old and contemporary building materials and building techniques.	K-1
<b>2.0</b>	<b>Skills</b>	
2.1	Apply the gained fundamental knowledge to utilize problem solving and critical thinking, furthermore analyzing the precedent architectural examples.	S-1
<b>3.0</b>	<b>Values, autonomy, and responsibility</b>	
3.1	Collaborate and work in teams to build the leadership skills and organize the oral presentation among the full team	V-2

## 3. Students Assessment Activities

No	Assessment Activities *
1.	Introduction to Building Technology
2.	Reinforced concrete
3.	Insulated precast system
4.	Autoclaved aerated concrete
5.	Mid Term Exam
6.	Tunnel formwork



No	Assessment Activities *
7.	Concrete modular
8.	Light gauge steel
9.	Insulating concrete form
10.	Printing
11.	Cladding
12.	Nanotechnology

#### 4. Learning Resources and Facilities

<b>Essential References</b>	Smith, R. E. (2010). Prefab architecture: A guide to modular design and construction. John Wiley & Sons. Download <a href="#">here</a>
<b>Supportive References</b>	Lawson, M., Ogden, R., & Goodier, C. I. (2014). Design in modular construction (Vol. 476, p. 280). Boca Raton, FL: CRC Press. Download <a href="#">here</a>
<b>Electronic Materials</b>	<a href="https://app.edgebuildings.com/">https://app.edgebuildings.com/</a>
<b>Other Learning Materials</b>	Illustrated lectures and a scientific material prepared according to the PowerPoint program.

