



Course Name:

Construction Project Management System of Iran

Course Number: New	Credit: 3 (2 Theoretical, 1 Practical)
Program: Undergraduate	Course Type: Technical optional
Prerequisite: -	Co-requisite: -

Course Description (Objectives):

The main objective of the course is to teach students skills required in engineering offices of construction projects, including quantity surveying and cost estimation based on new technologies.

Another objective of the course is to familiarize students with different parts of the construction project management system of Iran, including labor law, the construction engineering system, and the technical and executive system of Iran.

Course Content (outline):

- Quantity surveying and cost estimation of construction projects based on the Management and Planning Organization's cost index
 - Introducing the quantity surveying and estimation process throughout the life cycle of a project
 - Introducing the principles of quantity surveying, estimation summary, and project financial estimate tables
 - Introducing different software used for estimating projects
 - Project estimation in practice using commonly used project estimation software
- Quantity surveying of construction projects using building information modeling (BIM)
 - Introduction to Building Information Modeling (BIM)
 - Introduction to BIM modeling software (Revit)
 - Quantity takeoff using BIM modeling software (Revit)
- Labor law and its impact on the construction owners-employees relation
- Construction engineering system and its stance in the construction projects of Iran
 - Introducing the organizational structure of the construction engineering system and its link with Municipalities, and the Ministry of Roads, Housing and Urban Development
 - Reviewing various topics raised in the national building regulations concerning the management of construction



- projects
 - The life cycle and construction process of buildings and the main entities involved in projects in the construction engineering system
 - The supervision structure of the construction engineering system
- Technical and executive system of Iran and its main elements in the public construction projects
 - Introducing the organizational structure of the country's technical and executive system
 - Introducing the set of rules and regulations governing the technical and executive system
 - Introduction to the life cycle and the process of carrying out construction projects under the technical and executive system
 - Introducing the rating structure of consulting engineers and contractors
 - Introduction of identical contracts used in the technical and executive system of the country
 - Introducing the tendering process
 - Introducing types of cost index, price analysis, and concepts related to price lists

References:

- Labor law, Parliament of Islamic Republic of Iran
- Cost index of building construction (1400), Management and Planning Organization of Iran
- General condition of construction contracts, Management and Planning Organization of Iran
- Publication Number 55, General specification of building construction, Management and Planning Organization of Iran
- Quantity surveying, estimation, and cost analysis “New revision”; Nasrollah Haghghi, Science and Industry University, Edition 21, 1394.
- Baldwin, Mark. The BIM-Manager: A Practical Guide for BIM Project Management. Beuth Verlag GmbH, 2019.
- CSI. OmniClass® A Strategy for Classifying the Built Environment. The Construction Specifications Institute, Inc. (CSI). Introduction and User’s Guide, Introduction Edition: 2.1, 2019-02- 22 Release, 2019.
- Hardin, Brad, and Dave McCool. BIM and construction management: proven tools, methods, and workflows. John Wiley & Sons, 2015.
- Lu, Weisheng, Chi Cheung Lai, and Tung Tse. BIM and Big Data for Construction Cost Management. Routledge, 2018.
- Pittard, Steve, and Peter Sell, eds. BIM and quantity surveying. Routledge, 2017.
- Project Management Institute. A Guide to the Project Management Body of Knowledge (PMBOK Guide). 6th ed., Project Management Institute, 2016.
- Project Management Institute. Construction Extension to the PMBOK® Guide. 6th ed., Project Management Institute, 2016.