Introduction Document _ Project Management Professional Course

Course: Contracts based on BIM _ BIM-C _Master of Qualification and specialization in Building Information Modeling Management - Prof. Mohamed Shaaban - Dr. Sonia Ahmed

Number of sessions: 10 sessions

Chapter III

Course summary: Course summary: The rapid developments in the construction industry in design and implementation necessitate the development of construction contracts. Perhaps the emergence of the BIM building information modeling system is one of the major challenges facing engineering contracts, as the contracting stage is considered one of the basic stages in the project life cycle, and the success of the project depends to a large degree on the formulation of a contract Appropriate for the way it is designed and implemented. Since the BIM system is spreading globally, especially in large and international projects, which has created major challenges for academic and professional institutions, both national and international, related to engineering contracts to modify national and international contracts to suit the nature of projects that use the BIM system in design/planning, study, implementation, and even stage contracts. Operating and Maintenance. So far, there are no integrated or mature contracts that clearly take into account these requirements, but there are "advices" issued by these academic and professional institutions in particular that must be taken into account and included in contracts during the implementation of projects within the BIM environment.

In this course, we will learn about the most important contractual requirements and challenges facing project contracts within the BIM environment, including FIDIC international contracts, with examples or case studies for project contracts within the BIM environment. You will also learn about the mechanism for implementing the BIM implementation plan, which is considered one of the important contractual documents in BIM projects, and you will be able to review and understand all documents and procedures used when implementing them. At the end of the course, you will be able to develop an appropriate plan for a project to be implemented within the BIM environment.

Material Code: BIM-C

The classes: THIRD SESSION

Article chapters**12:**

chapter number	Chapter title	Brief explanation
1	Challenges and legal requirements for project contracts within the BIM environment	- Definition of the most important challenges and requirements that must be introduced to the current/traditional contracting systems in order to keep pace with the BIM environment.
2	Legal requirements for contracts according to the applicable BIM level	- Definition of the most important different legal requirements for contracts according to the applicable BIM level
3	Traditional contracts (DBB contract design implementation) in BIM environment	- Definition of the mechanism of applying traditional contracts in the BIM environment.
4	Design and implementation contract (DB) in a BIM environment	- Definition of the mechanism of application of design and implementation contracts in the BIM environment.
5	Construction management contract in BIM environment	- Definition of the mechanism of application of construction management contracts in the BIM environment.
6	International contracts (FIDIC contracts) in the BIM environment	- Introducing the most important amendments and recommendations by the FIDIC to apply them to international contracts - FIDIC contracts for projects in the BIM environment.
7	Other international contracts in the	- Chartered Institute of Building's Complex Projects Contract 2013 (CPC 2013) Introducing the most important amendments and

	BIM environment	recommendations by CIOB to apply them to complex project contracts in the BIM environment.
8	BIM implementation plan	- Introducing the basic steps for developing a BIM implementation plan - Explain the most important procedures and steps and the concept of LOD
9	contract documents	- EIR_RFI_ PRE BEP_ POST BEP Responsibilities Matrix etc
10	case studies	- Presenting successful experiences of project contracts in the BIM environment

Outcomes:

Learning Outcomes	Learning Outcomes	Homework (project)	Synchronous sessions	Exam
LO1	The necessary knowledge, concepts and terminology related to project contracts.	√	√	√
LO2	Ability to understand the legal requirements of contracts	√	√	√
LO3	Ability to understand international amendments and recommendations in the field of contracts.	√	√	√
LO4	The ability to follow up on the project implementation plan in the BIM environment	√	√	√
LO5	Understand the mechanism of applying construction contracts in the BIM environment	√	√	√
LO6	Understand the appropriate contracts for the BIM environment	√	√	√
LO7	The ability to accurately and clearly present the documents contained within the BIM implementation plan	√	√	√

Evaluation Criteria**:**

Learning Outcomes	Evaluation Criteria To achieve the results, the student must demonstrate the capabilities in**:**
LO1	1- Re-read the most important terms and concepts that the professor addressed in the lecture. 2- It raises inquiry questions about the meaning of each term/concept and how it relates to reality.
LO2	1- Reviews project requirements and objectives, writes down requirements and objectives, and defines responsibilities for the participating parties.
LO3	1- Determining the contractual amendments and the appropriate conditions for his project
L04	1- Learn how to plan and prepare to develop a BIM implementation plan for the project. 2- A case study of a project carried out by students in groups.
LO5	1- Defines the most important requirements and follows up the implementation plan step by step.
LO**6**	1- Learn about the different delivery methods for projects. 2- A separate discussion on the different types of contracts and the criteria for selecting the contract for the project.
LO**7**	1. Learn about resource management. 2. The student presents case studies of the organizational structures of real companies with commentary on them.
LO8	1. Learn about risk management. 2. Preparing a plan to implement the BIM for a project of the student's choice.

Virtual meetings: The virtual meetings continue concurrently with the simultaneous sessions and listen to all the requirements of the students.

Instructions**:**

Generating Evidence: The student individually prepares a brief report in which he demonstrates his ability to understand the previous outcomes, and this is before he takes the exam.

REFERENCES

All books and documents mentioned in the document will be uploaded to the course's LMS page.