

## **COURSE Syllabus**

# **Building Information Modelling**

**General Information and Course Details:**

Course title	Building Information Modelling
Course number	04037212
Credit hours (theory)	3
Contact hours (practical)	0
Prerequisites/co requisites	Subjected to the section instructions
Program title	Project Management
Program code	03
Awarding institution	Isra University
Faculty	Engineering
Department	Master Program
Level of course	Master
Year of study and semester (s)	First semester 2020
Final Qualification	Master
Other department(s) involved in teaching the course	None
Language of Instruction	English
Date of production/revision	20/10/2020

**Course Coordinator:**

Office No.: 4309  
Office Hours : Online  
Email: mohammad.albtoosh@iu.edu.jo

**Course Description:**

Students must be familiar with the Fundamental Project Management Skills such as but not limited to (Project Management Software, Project Management Methodologies and Frameworks).

**Text Book: Author(s), Title, Publisher, Edition, Year, Book website.**

*BUILDING INFORMATION MODELING FRAMEWORK ,SYSTEMATIC APPROACH AND STRATEGIES FOR BIM ADOPTION IN THE JORDANIAN CONSTRUCTION INDUSTRY*

Handbook for the Introduction of Building Information Modelling by the European Public Sector, -European collaboration of public sector organizations ,2017

**References: Author(s), Title, Publisher, Edition, Year, Book website.**

MOHAMMAD (AL-DIABAT AL-BTOUSH)

BIM Handbook, A Guide to Building Information

Modeling for Owners, Managers, Designers, Engineers, and Contractors, Chuck Eastman, Paul Teicholz, Rafael Sacks, Kathleen Liston, 2008

**Course Educational Objectives (CEO): Maximum six brief educational goals.**

1.	Introducing BIM as a new approach to design, construction, and facility management
2.	Providing in depth understanding of BIM technologies, the business and organizational issues associated with its implementation, and the profound impacts that effective use of BIM can provide to all members of a project team.
3.	This course explains how designing, constructing, and operating buildings with BIM differs from pursuing the same activities in the traditional way using drawings, whether paper or electronic.
4.	Understand the capability of BIM in changing the way buildings look, the way they function, and the ways in which they are built.

**Intending Learning Outcomes (ILO's): Please write no more than 8 learning outcomes**

1.	Intending Learning Outcomes (ILO's)	Relationship to CEO	Contribution in Program SOs
2.	building information modelling aspects	1,2	1,2,3
3.	implementation strategies and adoption challenges	2,4	1,7

**Topic Outline and Schedule:**

Topic	Weeks	Achieved ILOs	Evaluation Methods	Reference
BIM Handbook Introduction	1	1	Homework + quiz+ exam	Ch 1
BIM Tools and Parametric Modelling	2	1,2	Homework + quiz+ exam	Ch 2
Interoperability	3	1,2,3	Homework + quiz+ exam	Ch 3
BIM for Owners and Facility Managers	4	3	Homework + quiz+ exam	Ch 4
BIM for Architects and Engineers	6,7	4	Homework + quiz+ exam	Ch 4
BIM for the Construction Industry	7	2,3,4	Homework + quiz+ exam	Ch 4
BIM for Subcontractors and Fabricators	8,9	4,5,6	Homework + quiz+ exam	Ch 4
The Future: Building with BIM	9	4	Homework + quiz+ exam	Ch 5

**Teaching Methods and Assignments:**

Development of ILOs is promoted through the following teaching and learning methods:  
Lectures

**Evaluation Methods and Course Requirements:**

Opportunities to demonstrate achievement of the ILOs are provided through the following assessment methods and requirements:

Homework hand in on line

Quizzes

Written Exams

**Course Policies:**

A- Attendance policies:

15% of 48 lecturing hours

B- Absences from exams and handing misassignments time:

Exam can retake based on approval of excuse from dean

Not handing assignment on time will result in zero mark

C- Health and safety procedures : NA

D- Honesty policy regarding cheating, plagiarism, misbehaviour:

Cheating, plagiarism, misbehaviour may result in zero grade

E- Grading policy:

- All homework are posted on line
- All quizzes and exams are provided with solution for perfect score

F- Available university services that support achievement in the course: Labs, Software, Java and C#

**Required equipment:**

**Labs, no**

**Software : no**

**Hardware: no**

**Assessment Plan for the Course Learning Outcome (just select):**

- First Written Exam.
- Second Written Exam.
- Final Written Exam.
- Quizzes.
- Homework.
- Integrative Projects.
- Case Study.
- Written Reports.

- Participation in Lecture.
- Practice in the Lab.
- Illustrative Presentations.
- Oral Exams.
- Others (identify):

### Program Student Outcome (SOs):

**Student Outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the knowledge, skills, and behaviours that students acquire as they progress through the program. A graduate of the computer science () program will demonstrate**

1	An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2	An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3	An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
4	An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
5	An ability to develop and conduct appropriate experimentation, analyse and interpret data, and use engineering judgment to draw conclusions
6	Understand why regular maintenance is important for trouble free operation
7	An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

### Responsible Persons and their Signatures:

<b>Course Coordinator</b>	<b>Dr. Eng. Muhammad A. Al-Btoush</b>	<b>Completed Date</b>	/ /
		<b>Signature</b>	
<b>Received by (Department Head)</b>	<b>Dr. Ibrahim Varoqa</b>	<b>Received Date</b>	/ /
		<b>Signature</b>	