

Course Code	Course Name	Year/Semester	Theory	Practice	Credits	ECTS
ARC 4455	INTRODUCTION TO BUILDING INFORMATION MODELLING	2019-2020/FALL	3	0	3	3

Level of Course: Undergraduate

Course Type: Area Elective Course

Language of the English

Course:

Course time: Wednesday, 13.30- 16.30

Course

Classroom: ARC STD IV

Office Hours: Wednesday 10.00-12.00

Mode of Delivery: Lecture, Presentation, Mid-term, Portfolio Submission

Prerequisites and

Co-requisites:

Course

Coordinator: Lecturer Ramazan SARI

Name of

Lecturer(s):

Course Teaching

Assistant:

Course Objectives: The objective this course is providing a basic knowledge and understanding of history of BIM, principles, advantages, disadvantages, handicaps, current view and future of BIM implementation together with mentioning trends in other countries.

Course Description: Architecture, Engineering and Construction (AEC) industry experiences Building Information Modelling (BIM) transition in all over the world. Rich content, multi-disciplinary approach and multi-dimensional side of BIM not only causes paradigm shift but also requires multi-participant act. Starting from individual level, BIM adoption affects all level of AEC industry in a country. The course gives a generalized information regarding history, current trends and future directions about BIM to the students.

Learning Outcomes:

- Be aware of term and terminology related with BIM
- Gaining experience on basic BIM modelling
- Understanding the difference on traditional working method and BIM
- Differentiate the BIM concept and tools for BIM.
- Acquiring knowledge of advantages and disadvantages of BIM

Language: English

Recommended

Text Books:

- 1- Sacks, R., Eastman, C., Lee, C., & Teicholz, P., (2018) BIM Handbook, 3rd edition, Wiley publishing, New Jersey.
- 2- Smith, D., K., Tardif, M., (2009), BIM a strategic implementation guide for architects, engineers, constructors and real estate asset managers.
- 3- All academic sources having “gov.” and “edu.” extensions can be used as source for the lecture.

Planned Learning Activities and Teaching Method: In the first five weeks, the instructor gives theoretical informations about BIM and in following weeks, the students will make research, prepare a presentation about a specific topic and in final week submit a portfolio.

Presentation Topics:

- Level of Detail and Level of Development
- BIM Protocols
- BIM Execution Plan
- BIM Contracts
- Augmented Reality and Virtual Reality applications in BIM
- BIM Maturity Assessment
- New Professions coming with BIM
- Interoperability
- Industry Foundation Classes (IFC)
- Life-Cycle Assessment with BIM
- Sustainability with BIM
- Project Phases with BIM
- Maintenance and Operation (Facility Management) with BIM
- Architectural Education with BIM

In all presentations, pay attention to the following format:

- Introduce your specific topic, do not start and introduce BIM
- Mention history and evolution of your topic
- Give reference to professionals or academicians
- Do not use random and informal references
- Mention application areas
- Make an implementation of your specific topic with exercises
- Applicability, advantages, disadvantages and clear content of the topic must be presented.

Academic integrity & plagiarism: Academic integrity is the pursuit of scholarly activity based on the values of: honesty, trust, fairness, respect and responsibility. Practicing academic integrity means never plagiarizing or cheating, never misrepresenting yourself, never falsifying information, never deceiving or compromising the work of others. Basically this means, either intentionally or unintentionally, using the words or ideas of someone else without giving credit, it's strictly forbidden.

Key Works: Attend the class regularly, research the topic comprehensively, prepare a presentation and submit a portfolio

Specific Rules:

1. Be punctual. Punctuality is a sign of respect toward yourself and the others.
2. Show respect for all the people and property around you.
3. Be responsible for your actions and meet all expectations.
4. Follow directions the first time they are given.
5. Students should use the Internet at school for academic purposes only.
6. It is forbidden to record classes with any type of device.

Communication: Students are encouraged to visit the professor during their Office Hours. If you cannot make it to announced office hours, please make individual arrangements via e-mail. However, do not expect the professor and the research assistant to respond at length via e-mail to questions of content, definition of terms, grading questions etc. If you have a question that requires a substantive response, please set up an appointment to speak with one of us.

**Course Contents*:
(Weekly Lecture
Plan)**



Date	Week	Chapter Topic
18.09.19	1	Introduction to Course: An overview of course outline
25.09.19	2	Development of BIM and trends in the world
02.10.19	3	History of information management and BIM adoption trends in the world
09.10.19	4	Pros ,Cons and Handicaps of BIM and BIM Capability Stages
16.10.19	5	Project Delivery Methods
23.10.19	6	Mid-term
30.10.19	7	Presentations
06.11.19	8	Presentations
13.11.19	9	Presentations
20.11.19	10	Presentations
27.11.19	11	Presentations
04.12.19	12	Presentations
11.12.19	13	Presentations
18.12.19	14	Presentations
Final Week	15	Portfolio Submission

* PLEASE NOTE: Details of the syllabus and course schedule are subject to minor changes that will be announced in class.

Grading: Midterm and final exam responses will be evaluated for accuracy, thoughtfulness and clarity. Assignments will be evaluated for content, quality of ideas and clarity of presentation (including all necessary materials). **If total assessment grade is lower than D, student need to repeat the course.**

Assessment Methods and Criteria :	METHODS	EFFECTS ON GRADING
		Mid-term
	Presentation	%30
	Porfolio Submission	%40

ECTS Workload Table :	ACTIVITIES	NUMBER	HOUR	WORKLOAD
		Course Teaching Hours	12	3
	Research on the topic	4	3	12
	Presentation	3	5	12
	Portfolio Preparation	1	9	15
	Total workload/25			75/25
	ECTS			3

GRADING AND EVALUATION

The students' progress will be evaluated throughout the semester. Students' grades lower than CC will be considered as failed.

Grade Scale:

90 - 100	AA	4,00
85 - 89	BA	3,50
80 - 84	BB	3,00
75 - 79	CB	2,50
65 - 74	CC	2,00
55 - 64	DC	1,50
50 - 54	DD	1,00
45 - 49	FD	0,50
0 - 44	FF	0,00

Course outline and evaluation criteria can be changed according to weekly progress by course instructor. If any change will occur, it will announce to students via e-mail.