



School of Planning and Architecture: Vijayawada

(An institution of National Importance under the Ministry of Human Resource
Survey No.4/4, ITI Road, Vijayawada-520008, Andhra Pradesh, India)

Department of Architecture

Course: MBEM212 - BIM Based Construction Management

Instructors: Asst.Prof. Vijesh Kumar V

Contact Periods/ week: 03 periods.(50 min each)

Time Table: Tuesday (Period 1 - 3)

Attendance: Min 75%

Class: 2nd Yr MBEM & MSA III Sem A.Y. 2024-25

Internal Assessment: 50

External Theory Exam: 50

Total Marks: 100

Credits: 3

Min. Passing Marks: 40% each in Internal & External Assessment, 40% in Aggregate

Objective: To equip students with BIM based construction management background.

Out Line of the Course: BIM fundamentals and concepts; Review of BIM softwares and technology; Studio exercises by using BIM tools.

LECTURE PLAN

WEEK	DATE	TOPIC OF CLASS LECTURE & DISCUSSION	TOPIC OF STUDIO WORK & ASSIGNMENTS / REMARKS
1	23-Jul-24	Fundamentals and practical use of information technologies in the construction industry;	Introduction of Technical paper writing on theme IT in Construction
2	30-Jul-24	basic concepts of building information modelling (BIM);	Review of Paper on Industry 5.0
3	06-Aug-24	Application of BIM	Installation and Getting along with Revit Interface
4	13-Aug-24	Review of software and technology available for BIM	Introduction to Autodesk Revit followed by exercises in Computer Lab
5	20-Aug-24	Review of software and technology available for BIM, practical use of BIM including design and clash detection	Autodesk Revit Exercises in Computer Lab
6	27-Aug-24	Impact of BIM on construction management functions;	Autodesk Revit Exercises in Computer Lab
7	03-Sep-24	Construction scheduling and sequencing using BIM;	Introduction to Navisworks followed by exercises in Computer Lab
8	10-Sep-24		

9	17-Sep-24	Mid Semester Examination	
10	24-Sep-24	cost estimating using BIM;	Cost estimation using Revit followed by exercises in Computer Lab
11	01-Oct-24	cost estimating using BIM;	Cost estimation using Navisworks followed by exercises in Computer Lab
12	08-Oct-24	Facility management with BIM;	FM using Revit followed by exercises in Computer Lab
13	15-Oct-24	integrated approach to navigate BIM as a multi-disciplinary design, analysis, construction, and facility management technology;	Assignment on preparation of a BIM working methodology
14	22-Oct-24	Studio Exercises Discussion	Project: Create a BIM model and to use it in scheduling, sequencing, cost estimating, management, clash detection and simulation of a construction project. (First year studio project can be explored.) using Computer Lab
15	29-Oct-24		
16	05-Nov-24		
17	12-Nov-24	Studio Exercises Discussion	Submission and review of Final Project

S. No.	Stages of Evaluation	Weightage
1	First stage: Assessment –1	15
2	Second stage: Mid-semester Examination	20
3	Third stage: Assessment –3	15
	Total	50

Reference Books:

1. Eastman, C.; Teicholz, P.; Sacks, R.; Liston, K. (2011) BIM Handbook: A Guide to Building Information Modeling for Owners, Managers, Designers, Engineers and Contractors. New York: Wiley. 626 pp.
2. Hardin, B., & McCool, D. (2015). BIM and construction management: proven tools, methods, and workflows. John Wiley & Sons.
3. Krygiel, E., & Nies, B. (2008). Green BIM: successful sustainable design with building information modeling. John Wiley & Sons.
4. Issa, R. R., & Olbina, S. (Eds.). (2015, May). Building Information Modeling: Applications and Practices. American Society of Civil Engineers.
5. Teicholz, P. (Ed.). (2013). BIM for facility managers. John Wiley & Sons.
6. Kymmell, W. (2007). Building Information Modeling: Planning and Managing Construction Projects with 4D CAD and Simulations (McGraw-Hill Construction Series). McGraw Hill Professional.

Course Instructors:

Asst. Prof. Vijesh Kumar V

Head of Department/Coordinator: