Marwadi University
Marwadi Chandarana Group

Master of Technology

Construction Project Management

Construction Risk Management

01CP0303

Objective of the Course:

- To classify the different Construction risks
- To interpret the various Construction risks associated with the real estate projects.
- To understand the techniques of risk reduction in Project.

Credit Earned: 03

Student's learning outcomes:

After successful completion of the course, it is expected that students will be able to,

1. Identify and quantify the risk with construction project.
2. Analyze risk reduction measures for potential risks in real estate projects.
3. Analyze the various techniques of risk assessment in projects.
4. Illustrate techniques for mitigation of risks in construction projects.

Teaching and Examination Scheme

Teaching Scheme (Hours)			Credits	Theory Marks			Tutorial/ Practical Marks		Total Marks
Theory	Tutorial	Practical		ESE (E)	IA (M)	CSE (I)	Viva (V)	Term Work (TW)	
03	00	00	03	50	30	20	25	25	150

Detailed Syllabus

Sr No.	Title of the unit	Number of hours
1	**Risk Management in Construction**	**08**
	Introduction to the concept, Definition and terms, Risk Management vs Project Management, Types of Risks – Technical, Construction, Health and Safety, Environmental. Commercial, External.	
2	**Risk Identification and Analysis**	**10**
	Risk Classification and identification of events, Cost, Benefits or analysis and management, Risk analysis standards and decision making strategies, Risks related to natural disasters and manmade disasters. Life cycle assessment of the projects, Investment cycle of projects.	
3	**Risk Assessment Process**	**12**
	Determination of Net Present Value for Risk assessment, Sensitivity	

	analysis, Uncertainty, cost factors and benefit factors, adjusted discount rate method, use of risk assessment tables, details of RAMP process, utility of grading of construction entities for reliable risk assessment, Entrepreneurial risks, pure risks, Contract review and legal conflicts, Internal Audits and Control Systems.	
4	**Risk Mitigation process**	**12**
	By elimination, reducing, transferring, avoiding, and absorbing the risks. mitigation of unqualified and residual risk, Coverage of risk through CIDC's and Actuarial Society of India programs : through risk premium such as Bidding Indemnity Policy, Delay in meeting obligation by client policy, Settlement of claims policy, Loss of profit policy, Transit Insurance policy and Loss of performance of construction equipment policy	
	Total	**42**

Suggested Theory Distribution

The suggested theory distribution as per Bloom's taxonomy is as per follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery and evaluation					
Remember	Understand	Apply	Analyze	Evaluate	Create
15%	15%	20%	20%	20%	10%

Instructional Method and Pedagogy:

1. Use of Learning Management system like canvas
2. Demonstration through presentations on power point and videos and lectures
3. Brainstorming and group discussion sessions
4. Collaborative learning

Recommended Study Material

Text Books:

1. Complete guide to business risk management, Gower Publishing Ltd., Kit Sadgrove .
2. Project planning analysis selection implementation and review, Tata McGraw Hill, Prasanna Chandra.

Reference Books:

1. Fundamentals of risk measurements, Tata McGraw Hill, Christopher Marrison.
2. Process Systems Risk Management , Tata McGraw Hill , Ian Cameron, Raghu Raman
3. Web Link - https://www.udemy.com/course/construction-risk-management/
4. Web Link - https://www.coursera.org/specializations/risk-management