

**Faculty of Engineering & Technology**  
**Analysis and Design of Masonry Building**

**Information :**

**Course Code :** SCM 531      **Level :** Undergraduate      **Course Hours :** 3.00- Hours

**Department :** Department of Structural Engineering & Construction Management

**Area Of Study :**

Upon successful completion of this course, the student should be able to:  
 - Understand the basic concepts and main principles  
 - Calculate the values of the essential terms  
 Regarding elements of masonry reinforced and unreinforced masonry single and multistory buildings  
 advanced construction methods

**Description :**

Specification and design methods, Materials, Advanced construction methods, Calculation and analysis of forces acting on members, Analysis and design of un-reinforced and reinforced masonry, Columns and walls, Masonry building systems, Arch action, One and multi-story buildings.

**Course outcomes :**

**a. Knowledge and Understanding: :**

1 -	List the main items of elements of masonry
2 -	Define the main terms of reinforced and unreinforced masonry
3 -	List the main items of advanced construction methods

**b. Intellectual Skills: :**

1 -	Design the elements of elements of masonry
2 -	Analyze the system of single and multistory buildings

**c. Professional and Practical Skills: :**

1 -	Apply Code provisions regarding reinforced and unreinforced masonry
2 -	Apply Code provisions regarding single and multistory buildings
3 -	Prepare technical reports for advanced construction methods

**d. General and Transferable Skills: :**

1 -	Search for information and self-learning discipline
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**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
elements of masonry	8	6	2
reinforced and unreinforced masonry	16	12	4

**Course Topic And Contents :**

Topic	No. of hours	Lecture	Tutorial / Practical
single and multistory buildings	16	12	4
advanced construction methods	16	12	4
Revision	4	6	1

**Teaching And Learning Methodologies :**

Interactive Lec.  
Discussion  
Problem Solving  
Report / Present.

**Course Assessment :**

Methods of assessment	Relative weight %	Week No	Assess What
1st Mid-term exam	15.00		
2nd Mid-term exam	15.00		
Final exam	40.00		
Quizzes / Assig.	15.00		
Report / Present.	15.00		

**Course Notes :**

Handout notes on MOODLE

**Recommended books :**

"Design of Masonry Structures", A.W. Hendry, B.P. Sinha, S.R. Davies, Spon Press, 1997