Faculty of Engineering & Technology

Computer Aided Structural Analysis

Information :

Course Code :	SCM 517	**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 modeling of different structures simple programs for structural analysis ready-made programs for structural analysis applications

Description :

Selection of suitable models for analysis of different structures, Preparation of simple programs for analysis of structural elements, Training on using ready-made programs for analysis of structures, Applications

Course outcomes :

a.Knowledge and Understanding: :	
1 -	Describe the main concept of modeling of different structures
2 -	Explain the principals of simple programs for structural analysis
3 -	List the main items of ready-made programs for structural analysis
b.Intellectual Skills: :	
1 -	Assess issues of modeling of different structures
2 -	Analyze the system of simple programs for structural analysis
3 -	Assess issues of ready-made programs for structural analysis
4 -	Solve problems regarding applications
c.Professional and Practical Skills: :	
1 -	Demonstrate presentation regarding simple programs for structural analysis
2 -	Prepare technical reports for ready-made programs for structural analysis
3 -	Proceed test steps of the applications
d.General and Transferable Skills: :	
1 -	Demonstrate efficiently

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
modeling of different structures	12	9	3
simple programs for structural analysis	12	9	3

Course Topic And Contents :

Topic	No. of hours	Lecture	Tutorial / Practical
ready-made programs for structural analysis	16	12	4
applicationS	16	12	4
Revision	4	3	1

Teaching And Learning Methodologies :

Interactive Lec.
Discussion
Problem Solving
Lab Exper
Report / Present

Course Assessment :

Methods of assessment	Relative weight %	Week No	Assess What
Final exam	40.00		
Lab Exper	10.00		
Mid- Exam I, II	30.00		
Quizzes / Assig	10.00		
Report / Present	10.00		

Course Notes :

Lecture Notes on Moodle

Recommended books :

Beer, F. P., Russell, J.Jr., DeWolf, J.T. Mechanics of Materials, 4th edition, McGraw Hill, NY, ISBN-13: 9780073107950.
Gere, J.M., Timoshenko, S. Mechanics of Materials, 4th ed., PWS, Boston, 1997.
Penham, P.P., Crawford, R.J., Armstrong, C.G. Mechanics of Engineering Materials, 2nd edition, Longman 1997.