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Department of Civil Engineering	
Structural Analysis II (61317)	
Total Credits	**2**
major compulsory	
Prerequisites	P1 : Structural Analysis I (61315) P2 : Numerical Analysis I (21321) OR Numerical Analysis for Engineers (64203) OR Numerical Methods for Engineers (65303) OR Engineering Numerical Analysis (64251)

Course Contents

Review of Basic Principles of Mechanics: equilibrium equations, static &kinematic determinacy. Stiffness Method: development of matrix stiffness method &applications to trusses, beams &frames, (2-Dimensional &3- Dimensional)

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	Knowledge of the Stiffness method based on matrix algebra	A	30 %
2	Ability to use the slope deflection method in the analyses of continuous beams and frames	E	20 %
3	Ability to use the moment distribution method in the analysis of continuous beams and frames	E	25 %
4	Energy methods: virtual work and Castigliano's methods and their use in statitically indeterminate structures	E	15 %
5	Force method: method of consistent deformations	E	10 %

Textbook and/ or Refrences

1. Aslam Kassimali, Structural Analysis, Fourth Edition, 2011. 2. Structural Analysis, 7th Edition in SI Units, R. C. Hibbeler, Prentice Hall, 2009. 3. Fundamentals of Structural Analysis, By H. H. West, Wiley,1993 4. Intermediate Structural Analysis, By C. K. Wang, McGraw Hill, 1983. 5. Structural Engineering, Volume 2: Indeterminate Structures, R.N.White, P.Gergely, R.G. Sexsmith, Wiley, 1975. 6. Computer Assisted Structural Analysis and Modeling, M.Hoit, Prentice Hall, 1995 7. Matrix Structural Analysis, L.P.Felton, R.B.Nelson Wiley, 1997

Assessment Criteria	Percent (%)
First Exam	20 %
Second Exam	20 %
Quizzes	10 %
Final Exam	50 %

Course Plan

Week	Topic