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Department of Civil Engineering	
Design of Reinforced Concrete Structures II (61412)	
Total Credits	**2**
major compulsory	
Prerequisites	P1 : Design of Reinforced Concrete Structures I (61390) P2 : Structural Analysis II (61317) OR Structural Analysis II (61316)

Course Contents

Analysis and Design of a structure as one unit. Slab systems, long columns, torsion and deflection.

	Intended Learning Outcomes (ILO's)	Student Outcomes (SO's)	Contribution
1	1- Design of one way slabs	C	20 %
2	2- design reinforced concrete elements for combined shear and torsion	C	30 %
3	3- Determine deflections of beams due to dead and live loads. Compute long term deflections and compare with deflection allowable values	A	25 %
4	4- design long reinforced concrete columns for axial force and bending moment	C	25 %

Textbook and/ or Refrences

Textbook: Arthur H. Nilson, David Darwin and Charles W. Dolan: Design of concrete structures, fourteenth edition in SI units, 2010 References: 1. James K. Wight and James G. MacGregor: Reinforced Concrete Mechanics and Design, Fifth edition, Prentice Hall, 2008 2. Edward G. Nawy: Reinforced Concrete a Fundamental Approach, Sixth edition, Prentice Hall, 2009 3. ACI Committee 318: Building Code Requirements for Structural Concrete (ACI 318-08) and Commentary (ACI 318R-08). American Concrete Institute, Farmington, MI, 2008

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

Course Plan

Week	Topic
1 &2	Design of one way slabs (review)
3, 4 &5	Design for torsion
6, 7, 8, 9 &10	Design of two way slabs
11 &12	serviceability
13, 14 &15	Slender columns