

DEPARTMENT OF CIVIL ENGINEERING
ITER, SoA University
Reinforced Concrete Design (CVL4121)
Minor Assignment 8
Deadline - 7 April 2017 9PM

Question 1

Redesign flexural and shear reinforcement for beam given in [Minor Assignment 5](#) if a twisting moment of 200kN-m is applied in addition to previous design moment. *Refer clause 41 and Example 7.4 for guidance. Follow the steps given in previous assignments.*

Question 2

Design compression reinforcement for a column of dimensions $5m \times 600mm \times 600mm$ subjected to 1500kN load. Both ends of column are equivalent to pin joints. *Refer clause 39 and Example 13.3/13.4 for guidance. Exposure condition will be same as Question 1. Follow under given steps for help.*

1. Calculate design load from imposed load.
2. Find ratio of effective length to cross section dimensions and check if its long or short column. Effective length can be found from Annex E.
3. Check for minimum eccentricities to check if column is axially loaded from Clause 25 and 26.
4. Calculate area of steel required from formula given in Clause 39.
5. Provide Area of reinforcement from above and ties according to Clause 26.
6. Draw and detail your solution.

[**Submission Link**](#)