

**Sunday 10-12 AM & Wednesday: 10-12 AM (Rs. 103 & 204)**

**Topics**

1. Types of structures and loads (up to 7 Esf.).....Exercise (50 p.)
  - Classification
  - Statically determinate and indeterminate structures
  - Stable and unstable structures
2. Analysis of statically determinate structures (up to 17 Far.).....Exercise (50 p.)
  - Analysis of statically determinate trusses
  - Analysis of statically determinate beams
  - Analysis of statically determinate frames
3. Deflections (up to 21 Ord.).....Exercise (50 p.)
  - Double integration method
  - Moment-area method
  - Conjugate beam method
  - Energy methods
  - Method of virtual work
  - Castigliano's theorem

**Midterm (300 points)... 7 Kho. 1399, 10-12 AM**

4. Influence lines for statically determinate structures (up to 31 Ord.).....Exercise (50 p.)
5. Analysis of statically indeterminate structures (up to 21 Kho).....Exercise (50 p.)
  - Force method
  - Displacement method
  - Superposition principle

**Final (450 points)... 14 Tir 1399, 8-10 AM**

Total Grade =1000 points

Total sessions = 28 sessions

Total hours =56 hours

**References:**

1. R.C. Hibbeler, Structural analysis, 9<sup>th</sup> Ed.
2. Yuan-Yu Hsieh, Elementary theory of structures, 2<sup>nd</sup> Ed.