



Mechanics of Materials I:

Fundamentals of Stress & Strain and Axial Loading

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Module 2 Learning Outcomes

- Calculate the internal forces due to external loads applied to a real world engineering structure
- Classify Axial Centric Loading

Mechanics of Materials

ENGINEERING
STRUCTURE

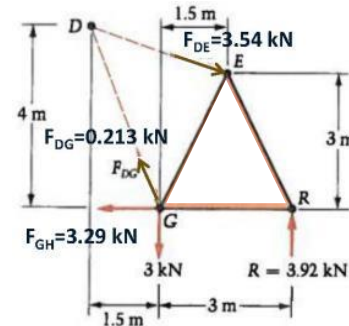
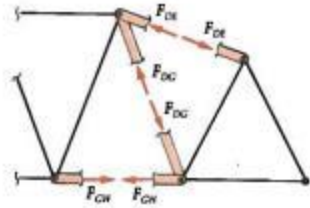
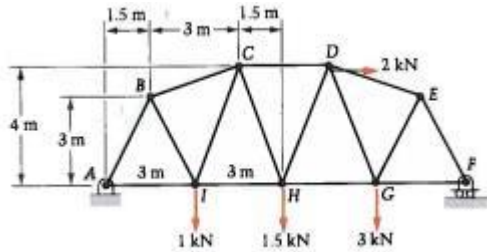
EXTERNAL
LOADS

INTERNAL
FORCES AND
MOMENTS

STRESSES

STRAINS

STRUCTURAL
PERFORMANCE



Axial Centric Loading

Axial Loading – Loading parallel to longitudinal axis of the member

Centric Loading – Line of action of resultant force passes through the centroid of section

