EGR 253: Advanced Statics

This course is to be taken concurrently with EGR 251 and covers advanced rigid body analysis techniques utilizing calculus. Students apply the engineering concepts of force vectors, moments and static equilibrium to solve engineering design problems for common engineering structures. Prerequisite(s): MTH 215; Pre or co-requisite: EGR 251 and PHY 212. Two Lab Hours per week.

Course Student Learning Outcomes

1. Analyze structures and mechanisms using calculus-based methodologies with static equilibrium concepts to determine external reactions. 2. Analyze structures and mechanisms using calculus-based methodologies with static equilibrium concepts to determine internal forces. 3. Analyze structures and mechanisms using calculus-based methodologies with moments and rotational equilibrium concepts 4. Analyze structures and mechanisms using calculus-based methodologies with static and dynamic friction concepts.

Credits: 1
Program: Engineering