MECH 567. STRUCTURAL DYNAMICS OF TURBOMACHINES.

Credits: 3

Offered by: Mechanical Engineering (Faculty of Engineering)

This course is not offered this catalogue year.

Description

Fundamentals of turbomachines from the standpoint of structural dynamics and vibration analysis, with preference given to aerospace applications involving aircraft and helicopter engines. Topics include: introduction to the finite element method, aircraft/helicopter engines architecture and main components, general equations of motion in rotordynamics, advanced modal analysis, Campbell diagrams and critical rotational velocity, mistuning and cyclic symmetry, fluid-structure coupling, flutter analysis, high-cycle fatigue.

- (3-0-6)
- Prerequisite(s): MECH 321 and MECH 412 or MECH 419