

Syllabus and Course Outline

Al-Khawrizmi College of Engineering

Department of Automated Manufacturing Engineering AME

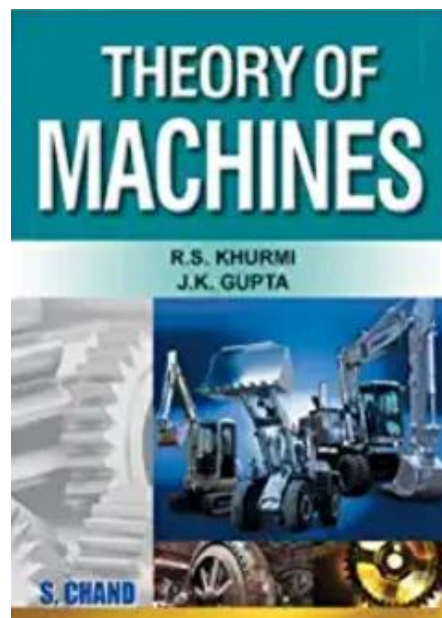
Theory of Machines

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Text Book: R.S. Khurmi & J.K. Gupta, Theory of Machines, Eurasia Publishing House [PVT.] LTD. RAM NAGAR, New Delhi-110 055



Reference Books:

- John J. Uicker, Gordon R. Pennock, Joseph E. Shigley, Theory of Machines and Mechanisms R.S. Khurmi, J.K. Gupta, Theory of Machines
- Thomas Bevan, The Theory of Machines
- The Theory of Machines by Robert Ferrier McKay Engineering Drawing and Design, Jensen ect., McGraw-Hill Science, 7th Edition, 2007
- Mechanical Design of Machine Elements and Machines, Collins ect., Wiley, 2 Edition, 2009

Course Description

The course provides students with instruction in the fundamentals of theory of machines. Theory of Machines and Mechanisms provides the foundation of studying the displacements, velocities, accelerations, and forces of static and dynamic that required for the proper design of mechanical linkages, cams, and geared systems.

Course Objectives

Students combine theory, graphical and analytical skills to understand the Engineering Design. Upon successful completion of the course, the student will be able:

- To develop the ability of analyze and understand the dynamic (position, velocity, acceleration, force and torque) characteristics of mechanisms such as linkages and cams.
- To develop the ability of systematically design and optimize mechanisms to perform a specified task.
- To increase the ability of students to effectively present written, oral, and graphical solutions to design problems.
- To increase the ability of students to work cooperatively on teams in the development of mechanism designs.