

# 机械设计（甲）I 课程介绍

## 一、中文简介：

机械设计（甲）I 是高等学校机械类专业必修的技术基础课程，课程的主要内容可以概括为三个方面：1）机构的结构分析（自由度计算与机构的组成原理）、运动分析（位置、速度与加速度）和力分析（反力、效率与自锁）；2）常用机构的工作原理、特征参数和几何设计；3）机器动力学初步（机械的平衡与机械速度波动调节）。

## 二、英文简介：

Mechanical Design (A)I is a compulsory basic technology curriculum for mechanical major in colleges and universities. The main contents of the course includes: 1) Structural analysis (calculation of DOF and composition principle of mechanism), kinematic analysis (position, velocity and acceleration) and force analysis (resistant force, efficiency and self-locking); 2) The working principle, characteristic parameters and geometrical design of frequently used mechanism; 3) Introduction to machine dynamics (balance of machine and velocity undulation adjustment).