## 《机械设计基础》课程中英文简介

Fundamentals of Mechanical Design

课程代码：081023B **Course Code：**081023B

课程名称：机械设计基础 **Course Name：**Fundamentals of Mechanical Design

学 时：48 **Periods：**48

学 分：3 **Credits：**3

考核方式：考查 **Assessment：**Test

先修课程：微积分、工程制图、 **Preparatory Courses：**Calculus Engineering

工程力学等Drawing Engineering mechanics

《机械设计基础》主要研究机械中的常用机构和通用零件的工作原理、结构特点、基本设计理论和计算方法；课程前半部分介绍机械常用机构的工作原理、结构特点等知识，后半部分阐述常用连接、机械传动和轴系零部件的设计和计算。通过本课程的学习，可以使学生全面了解机械设计的基本知识，熟悉进行机械设计的基本步骤，掌握常用机构的工作原理、设计理论和计算方法，加强学生的逻辑思维能力和学生的空间想象能力、提高理论联系实际的能力，并能将所学理论知识与他们的生活、工作、学习中用到的各种事物联系起来。本课程也为学生继续学习和以后的工作打下必要的基础。

"Fundamentals of Mechanical Design" is a subject researching the work principle, structure characteristic, design theories and computational methods of fundamental mechanism and staple parts.The main contents in the first half of the course are the principle of work, characteristic of structure about fundamental mechanism; and the other half introduces how to design and compute the parts of connection and transmission, Axis class components etc. On the completion of this course, students will be able to:1) understand systematically the essential knowledge of Mechanical Design; 2) know well the main steps of Mechanical Design; 3)grasp the work principle, design theories and computational methods of mechanism; 4)increase the ability of logic thinking and space imagine; 5)improve the capability of combining the theory with practice; 6)apply the theories in practical life, work and study. This course also prepares students for their further study and their career after graduation.