

MATE130002	材料科学基础	学分：3	周学时：3
	Fundamentals of Materials Science	总学时：54	
预修课程：普通物理、普通化学、高等数学			
修读对象：材料化学			

#### 中文课程简介（150 字以内）

本课程介绍了三大基础材料金属、陶瓷、聚合物的共同基础理论和基本问题，以及固体材料的成分、结构、加工、性质、性能及应用之间的相互关系。简要叙述了三大材料的力学、物理、化学及工艺等性能，介绍了材料热力学、扩散动力学及其材料缺陷等一些基本原理和基本概念，并概述了当今新材料研究的发展趋势和动态。

#### 英文课程简介

This course introduces the common fundamental theories and primary issues of three essential materials like metals, ceramics and polymers, and also presents relationships among composition, structure, processing, property, performance and application of solid materials. The mechanical, physical, chemical and processing properties of three fundamental materials are briefly described, some basic concepts and fundamental principles concerned with material thermodynamics, diffusion kinetics and material defects are addressed, and the development trends and dynamics relating to study of the current new materials are provided as well.