

MATE130016	集成电路的分析与设计	学分：3	周学时：3
	Analysis and Design of Integrated Circuits	总学时：54	
预修课程：半导体物理、模拟与数字电子线路、器件原理、电子材料			
修读对象：材料科学系材料物理专业大四学生			

中文课程简介（150 字以内）

本课程是一门综合性、交叉性和实用性很强的学科，通过总共 54 个学时的教学，希望学生能够对 MOS-IC 的单元结构、材料工艺、器件结构及计算机辅助设计等内容有一个全面的了解与基本的掌握。本课程的内容主要涉及 MOS 型数字集成电路中的材料、器件、工艺及各类参数对 MOS-IC 制备和设计的影响，这是超大规模集成电路的基础。

英文课程简介

This is a comprehensive course with interdisciplinary and practical contents. It will help students to understand the basics of unit structure, material technology, device structure as well as computer-aided design of MOS-IC in total 54 class hours. This course mainly consists of material, device and technology as well as various parameters in MOS digital integrated circuit affecting the preparation and design of MOS-IC. All the contents of this course are the basics of super-large-scale integration circuit.