

课程编号：1713000650

课程名称：原子物理学

学分/学时：2/32

先修课程：高等数学、力学、电磁学

适用专业：应用物理学

课程性质：必修

教材：褚圣麟 编. 原子物理学（第1版）. 高等教育出版社, 2016年

主要参考书：杨福家 著. 原子物理学（第4版）. 高等教育出版社, 2008年

内容简介：（600字以内）

原子物理学是高等学校物理专业一门重要的专业基础课，它是一门连接经典物理和近代物理的重要课程。通过本课程的学习，学生将熟悉原子的基本状况、原子的能级与辐射、电子自旋、外磁场对原子的作用等知识，并掌握原子物理学中的实验事实和基本规律、基本原理及研究有关问题的思路和方法。本课程将培养学生发现和提出问题、建立物理模型、定性分析与定量计算的能力，使学生初步建立描述微观世界的物理图像，掌握处理微观世界物理问题的思维方法。

Course Description

College of Science

Course Code: 1713000650

Course Name: Syllabus for Atomic Physics

Credit/Hours: 2/32

Textbooks: Chu Shenglin. Atomic Physics. Higher Education Press, 2016

Reference Books: Yang Fujia. Atomic Physics. Higher Education Press, 2008

Course Description:

Syllabus for Atomic Physics is an important compulsory course for university students majoring in physics, and it is also an important course connecting classical physics and modern physics. By studying this course, students will be familiar with the basic of atoms, atomic energy levels and emission, electron spin and magnetic field effect on the atoms. In addition, students will also be able to master the experimental facts, the basic laws and principles. This course will cultivate the students' ability to find and put forward the questions and to build the physical model, qualitative analysis and quantitative calculation, making students establish physical picture to describe the micro world and grasp the way of dealing with the problems related to the micro physical world.