

# 暑假课程介绍 Summer Course Description

|                              |   |              |                      |                  |                 |               |
|------------------------------|---|--------------|----------------------|------------------|-----------------|---------------|
| 课程名称<br>Course Name          | High-school<br>Physics: Electromagnetism<br>(高中物理基础)  |              | 教师姓名<br>Teacher Name | 蔡锴<br>Kai Cai    |                 |               |
| 招生对象<br>Prospective Students | 8th graders or high school students who have learned some mechanics (in particular, Newton's laws and conservation of energy)   |              |                      |                  |                 |               |
| 每周上课次数<br>Classes/Week       | 两次  | 上课日期<br>Day  | 星期二<br>Tuesday       | 星期三<br>Wednesday | 星期四<br>Thursday | 星期五<br>Friday |
|                              |   | 上课时间<br>Time |                      | 10:40-12:00      |                 | 10:40-12:00   |
| 教学目标<br>Teaching Objectives  | The goal of the course is to help students develop a conceptual and mathematical understanding of basic principles involving electricity, magnetism, waves, and geometric optics (if time allows), to apply these principles to analyze and solve problems, and to relate them to relevant phenomena and applications in everyday life. |              |                      |                  |                 |               |
| 教学内容<br>Teaching Content     | Static Electricity, Current, Resistance, Ohm's law, DC Circuits, Magnetism, Electromagnetic Induction; Waves and Sound basics, Electromagnetic Waves, and Geometric Optics.   |              |                      |                  |                 |               |
| 教学方法<br>Teaching Method      | Zoom lectures, examples, online simulations, simple experiments at home, weekly homework and in-class quizzes / Kahoot games  |              |                      |                  |                 |               |
| 使用教材<br>Teaching Materials   | Physicsclassroom.com online tutorials, class notes, and OpenStax Physics (available online for free)  |              |                      |                  |                 |               |

填表说明:

- 1) 课程名称: 选择一个既能体现课程内容, 又能吸引学生/家长注意力的名称。
- 2) 招生对象: 请详细描述招生对象的年龄或知识水平要求。
- 3) 每周上课次数: 根据你的课程内容、暑假课程时间(共8周)和暑假是“假期”的特点决定你每周上课次数。
- 4) 上课时间: 暑假课程安排在周二至周五, 分上午, 下午, 和傍晚三个时间段。上午: 9:00—10:20, 10:40-12:00; 下午: 1:30—2:50, 3:10-4:30; 傍晚: 6:40-8:00. 请根据自己的情况选择上课日期及时间。
- 5) 填表截止日期: 4/6/2023。
- 6) 请用你的姓名命名你的课程介绍, 并将填好的表格发到下列邮箱: