**2020至2021学年 第一学期**

教 学 日 历

课程名称：大学物理（II）（全英授课） 性质：必 修

总学时：64 讲课：64 实验：0 其它：0

授课班级：2019级 学生人数：＿22人＿＿

任课教师： 覃方丽 副教授

所在院(系、部)： 理学院

系(教研室)主任签字\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

　　教材名称：Zears and Zemansky's University Physics with Modern Physics 作者：Hugh D.Young, Roger A.Freedman

　　出版单位：机械工业出版社　　 出版时间：2010.12（第12版）

中国石油大学(北京)教务处制

填 写 说 明：

1．每上一次课填写一行，节次填写数字“1－5”，一天共分5大节课，例如：一周上三次课填写三行，并在周学时栏合并单元格填写“6”，周一第3、4节，在节次栏中填写2。

2．教学日历一经制订，不应出现大的变动，但允许主讲教师在完成课程教学大纲规定的教学要求前提下，进行必要的调整，以适应不断出现的新情况。如有变动，须经课程所属系主任（教研室主任）批准，并报院（系、部）办公室备查。

3．上机、大作业、课堂讨论、外出参观、考试等如占课内学时，在“备注”栏内注明。

4．教学日历由教师自存一份、课程所属系存一份，在每学期开学后第一周内送课程所属院（系、部）办公室并发一份电子版给课程所属院（系、部）办公室；有实验和上机学时的须发一份电子版的给实践科sjk@cup.edu.cn

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 教学时间 | | | 授 课 内 容 提 要 | 周学时  （周学时大于2，可合并单元格） | 学时分配 | | | 备注 |
| 周次 | 星期 | 节次 | 讲课 | 实验 | 习题 |
| 1 |  |  | The Fourth part: Optics Chapter 1  The Nature and Propagation of Light   * 1. The Nature of Light   2. Some concepts of light propagation | 2 | 2 |  |  |  |
|  |  | 1.3 Laws of reflection and refraction  1.4Total Internal Reflection | 2 | 2 |  |  |  |
| 2 |  |  | 1.5 Huygens’s Principle  Chapter 2 Polarization of Light  2.1 Phenomenon of Polarization of Light | 2 | 2 |  |  |  |
|  |  | 2.2 malus law | 2 | 2 |  |  |  |
| 3 |  |  | 2.3 Brewster's law | 2 | 2 |  |  |  |
|  |  | Chapter 2 Interference  3.1 Superposition principle  3.2Coherent Light Source | 2 | 2 |  |  |  |
| 4 |  |  | 3.3Two-source interference of light | 2 | 2 |  |  |  |
|  |  | 2.4 Optical path and optical path difference | 2 | 2 |  |  |  |
| 5 |  |  | 2.5 Interference in Thin films | 2 | 2 |  |  |  |
|  |  |  |  |  |  |  |  |
| 6 |  |  | Summary and Exercises，quiz | 2 | 2 |  |  |  |
|  |  | Chapter 3 Diffraction  3.1Fresnel and Fraunhofer diffraction  3.2 A single-slit Fraunhofer diffraction | 2 | 2 |  |  |  |
| 7 |  |  | 3.2 A single-slit Fraunhofer diffraction | 2 | 2 |  |  |  |
|  |  | 3.3 Grating diffraction | 2 | 2 |  |  |  |
| 8 |  |  | 3.3 Grating diffraction | 2 | 2 |  |  |  |
|  |  | 3.4 X-ray diffraction | 1 | 1 |  |  |  |
| 9 |  |  | 3.5 Circular apertures and resolving power | 2 | 2 |  |  |  |
|  |  | Summary and Exercises, quiz | 2 | 2 |  |  |  |
| 10 |  |  | **The Third Part Thermodynamics**  **Chapter** 1 **Temperature and Heat**  **1.1Temperature and Thermal equilibrium**  **1.2Thermometers and Temperature Scales** | 2 | 2 |  |  |  |
|  |  | **1.3 Quantity of Heat and heat capacity** | 2 | 2 |  |  |  |
| 11 |  |  | **Chapter 2 Thermal Properties of Matter**  **2.1Equations of State** | 2 | 2 |  |  |  |
|  |  | **2.2Molecular Properties of Matter** | 2 | 2 |  |  |  |
| 12 |  |  | **2.3Kinetic-Molecular Model of an Ideal Gas** | 1 | 1 |  |  |  |
|  |  | **2.4 The Equipartition** **Theorem and Internal Energy** | 3 | 3 |  |  |  |
| 13 |  |  | Summary and Exercise，quiz | 2 | 2 |  |  |  |
|  |  | **Chapter 3 The First Law of Thermodynamics**  **3.1 The First Law of Thermodynamics**  **3.2 The Application of the First Law of Thermodynamics** | 2 | 2 |  |  |  |
| 14 |  |  | **3.2 The Application of the First Law of Thermodynamics** | 2 | 2 |  |  |  |
|  |  | **3.3 Adiabatic Process** | 2 | 2 |  |  |  |
| 15 |  |  | **3.4 The Cyclic Process and The Carnot cycle** | 2 | 2 |  |  |  |
|  |  | **Chapter 4 The Second Law of thermodynamics**  **4.1Reversible and Irreversible Process**  **4.2 Kelvin-Plank Statement and Clausius Statement of the Second Law of Thermodynamic** | 2 | 2 |  |  |  |
| 16 |  |  | **4.3 Statistical Interpretation of Entropy and the Second Law** | 2 | 2 |  |  |  |
|  |  | Summary and Exercise，quiz | 3 | 3 |  |  |  |