# **Course outline for physics-145 (Spring 2016)**

**Text book:**

**Physics**

**Kane and Sternheim**

**Third edition, Wiley**

**ISBN 0-471-63845-5**

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| --- | --- | --- | --- | --- |
| **Chapter** | **Hours** | **Section** | **Title** | **Exercises and problems (\*)** |
| **1** | **3** | **2,3,4,5** | **Motion in a Straight Line** | **16,17,26,28,33,38,43,71,72,77,80** |
| **2** | **1** | **1** | **Vectors ( Components)** | **1,2,4,5,7,9,13** |
| **3** | **4** | **3,4,5,6,8,12** | **Newton’s Laws of Motion** | **47,50,51,55,87,90,91,100,102,103** |
| **6** | **4** | **1,2,3,4,6,9** | **Work, Energy and Power** | **1,2,8,10.19,63,70,72,74** |
| **13** | **3** | **2,3,4,7** | **The Mechanics of Nonviscous Fluids** | **7,9,10,11,32** |
| **17** | **2** | **1,2,5,12** | **Direct Currents** | **1,10,11,13,18,24,25,45,46,71** |
| **24** | **4** | **1,2,3,4** | **Mirrors, Lenses and Imaging Systems** | **2,5,7,11,13,19** |
| **26** | **2** | **1,3** | **Particle Propertis of Light**  **( The Photon)** | **1,3,4,6,16,17,19** |
| **30** | **3** | **1,2,9** | **Nuclear Physics** | **1,2,4,8,11,36,43** |
| **31** | **2** | **1,2** | **Ionizing Radiation** | **14,16,17,23,29,47** |

**(\*: Underlined exercises will be done in the classroom)**

**Marks distribution:**

1. **First midterm exam ---------------------------------= 15 marks**
2. **Second midterm exam ------------------------------= 15 marks**
3. **Practical work (Lab.)-------------------------------= 30 marks**
4. **Final exam--------------------------------------------= 40 marks**

**Total---------= 100 marks**

**Lecturer:** Dr. Abubaker Ahmed Siddig

**Office: 1A 67**

**Office Tel. No.: 75647**

**Email: asiddig@ksu.edu.sa**

**Sections Ditribution in Exams:**

**First Midterm Exam: CH1, CH2, CH3 and CH6**

**Second Midterm Exam: CH13, CH17 and CH24**

**Final: ALL 10 CHAPTERS (CH1 to CH31)**