

## Course outline for PHYS-145 (Semester 371: Fall 2016)

Text book: Physics, Kane and Sternheim

Third edition, Wiley, ISBN 0-471-63845-5

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

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

### Marks distribution:

- 1) First Midterm Exam -----M1----- = 15 marks
- 2) Second Midterm Exam ---M2----- = 15 marks
- 3) Practical Work (Lab.)-----L----- = 30 marks
- 4) Final Exam-----F----- = 40 marks

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Total----- = 100 marks

### Sections Ditribution and dates of Exams:

M1: CH1, CH2, CH3 and CH6

M2: CH13, CH17 and CH24

F: All the 10 CHAPTERS