

**PHYSICS 132**

**Course Outline Second Semester2018/2019**

**Textbook**: ***Halliday,Resnick,Jearl Walker, Principles of physics 10thed.***

**Prerequisites**: Physics 141

**Course description**:

Phys132 focuses on the physics laws that govern electric and magnetic

phenomena. Main topics and selected discussion problems that will be covered in this course are listed below. Students are strongly encouraged to solve additional problems on their own.

**Course Regulations:**

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* To understand the physics in this course, try to do the following steps:

1. Study each chapter from the book and from the lecture notes.
2. Solve the sample problems in each chapter.
3. Solve the discussion problems, before attending the discussion class
4. Solve the additional problems.
5. Use the office hours of your instructor.

**Evaluation**:

Your final grade will be computed as follows:

Two hour exams :50%( NO MAKEUP EXAMS)

Quizzes and attendance :10%

Final Exam :40%

**Course Schedule**:

The following table contains the schedule of lectures and exams, and also lists the numbers for selected discussion problems. Students are naturally encouraged to try additional problems on their own.

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| ***Chapter*** | ***DiscussionProblems*** | ***Additional Problems*** |
| **21: Electric charge (2 L + 1D**) | 3,6,13,24,37 | 5,22,30,31,33 |
| **22: Electric Fields**(**3L + 2D***)* | 1,4,11,20,33,41,55 | 12,14,19,23,40,49 |
| **23: Gauss’s Law** (**2L + 1D***)* | 6,17,18,23,29 | 3,13,21,25,39,43 |
| **24: Electric Potential (3L + 2D***)* | 2,7,9,13,17,22,33,46,47 | 1,3,10,12,31,60 |
| **25: Capacitance (2L + 1D***)* | 2,11,17,18,39,53 | 6,10,12,22,28,31 |
| **First Hour Exam** | |  |
| **26: Current and Resistance**  **(1L + 1D***)* | 2,3,11,15,25,45 | 13,14,17,20,32 |
| **27: Circuits** (**2L + 1D***)* | 3,8,15,18,30,52 | 2,20,21,59,61 |
| **28: Magnetic Fields**.(**3L + 2D***)* | 1,10,18,27,47,49,50,54 | 5,20,21,41,42,43 |
| **29: Magnetic Fields Due to Currents**  (**2L + 2D***)* | 5,6,8,25,34,35,53,58 | 7,23,28,45,57 |
| **Second Hour Exam** | |  |
| **30: Induction and Inductance**  (**3L + 2D***)* | 1,10,16,18,23,31,43,77 | 12,15,24,27,28,41,42 |
| **31: Electromagnetic Oscillations**  **(sections:31-1,31-2)** (2L + 1D) | 1,24,27,32,49 | 37,48,53,55,57 |
| **32)Maxwell’s Equations; magnetism of Matter** (**3L + 1D**) | 1,5,14,17,25,42,47 | 3,6,10,16,30,33 |

### ***Good Luck***