

## Course outline for PHYS-109 (Semester 391: Fall 2018)

**Textbook: PHYSICS FOR THE LIFE SCIENCES, THIRD EDITION.**

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From Sunday	Weeks	Chapters	Sections	Problems
Part I: Mechanics				
02/09/18	01	02: Kinematics	2.1-2.6	1, 2, 5, 9, 23
09/09/18	02	03: Forces	3.1-3.9	1, 7, 25, 28, 31
16/09/18	03	04: Newton’s Laws	4.1-4.8	3, 7, 10, 11, 12
23/09/18	04	05: Centre of Mass and Linear Momentum	5.1-5.4	5, 7, 16, 20, 21
30/09/18	05	06: Torque and Equilibrium	6.1-6.3, 6.5	1, 3, 23, 26, 27
07/10/18	06	07: Energy and Its Conservation	7.1-7.4	3, 9, 17, 19, 30
Part II: Thermodynamics and Fluid Mechanics				
14/10/18	07	08: Gases	8.1, 8.3	3, 4, 6, 13, 17
21/10/18	08	11: Static Fluids	11.1-11.4	4, 7, 8, 9, 11
		12: Fluid Flow	12.2	1, 3, 4, 12, 15
Part III: Basic Electricity				
28/10/18	09	16: Electric Force and Field	16.1, 16.2, 16.4	1, 11, 13, 17, 24
04/11/18	10	17: Electric Energy and Potential	17.1-17.4	1, 5, 6, 15, 16
11/11/18	11	18: The Flow of Charges	18.1	1, 3, 5, 7, 13
Part IV: Atomic, Electromagnetic, and Optical Phenomena				
18/11/18	12	19: The Atom	19.1-19.3	2, 3, 4, 5, 7
25/11/18	13	21: Geometric Optics	21.1-21.5	5, 7, 11, 13, 17
02/12/18	14	22: The Atomic Nucleus	22.1-22.3	2, 3, 7, 12

### Credit hours distribution:

4 (3+0+2)

3 hours of lectures a week (14 weeks in the semester).

2 hours a week for 10 laboratory experiments.

### 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

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

### **Chapters Distribution for the Exams:**

**M1: CHAP: 02-07**

**M2: CHAP: 08, 11, 12, 16-18**

**F: All the 15 CHAPTERS**

### **Absence Policy:**

#### **I. Attendance percentage:**

- Student should attend the course lectures during the 14 weeks of the semester.
- Students with absence hours more than 25% of the total course hours will be banned from the Final Exam.

#### **II. Absence from Examinations:**

- If you are unable to attend an examination (first or second midterm) owing to illness or other unavoidable circumstances, you should provide an acceptable evidence of 'good cause' for such absence to the competent commission. If the absence is regarded as authorized, student will grant a Makeup Exam only once.
- All Makeup Exams will be scheduled at the same time one week before the Final Exam.
- No other Makeup Exam will be done in the same semester. If you miss the Makeup Exam, you will have a mark of zero.

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