PHY-112 Course Description

(One document to find them all)

Instructor: Shanto Chakroborty (SCB)

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Consultation time: Sunday and Tuesday (11 am - 1 pm)

(If you are not available at that time, mail me.)

- **Required Textbook :** Go to the drive link : 📕 fundamentals-of-physics-textbook.pdf

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Rules: (In case you forgot!)

➢ Attendances are mandatory as per BracU policy.
➢ Assignments must be submitted within the deadline. The later the submission, the more marks will be deducted. The sooner, the better.
➢ No 11th hour consultation!
➢ Using phones during lecture time is strictly prohibited.

Suggested Problems:

- ❖ **Chapter 21: Coulomb's Law**
  - ➢ Checkpoint: 2, 3, 4.
  - ➢ Sample Problem (SP): 21.02, 21.03.
  - ➢ Problem: 10, 11, 12, 22, 39, 42, 54.
- ❖ **Chapter 22: Electric Fields**
  - ➢ Checkpoint: 1, 3, 4.
  - ➢ Sample Problem (SP): 22.01, 22.03, 22.04.
  - ➢ Problem: 7, 8, 9, 15, 39, 43, 49, 56, 64, 87.
- ❖ **Chapter 23: Gauss's Law**
  - ➢ Checkpoint: 1, 2, 3, 4.
  - ➢ Sample Problem (SP): 23.01, 23.02, 23.03, 23.04, 23.05, 23.07.
  - ➢ Problem: 2, 3, 6, 9, 10, 11, 16, 25, 33, 36, 41, 44, 69.
- ❖ **Chapter 24: Electric Potential**
  - ➢ Checkpoint: 1, 2, 3, 4, 5.
  - ➢ Sample Problem (SP): 24.01, 24.02, 24.03, 24.04, 24.05, 24.06.
  - ➢ Problem: 4, 6, 9, 14, 16, 17, 19, 23, 37, 43, 50, 59, 83, 88.
- ❖ **Chapter 25: Capacitor**
  - ➢ Checkpoint: 1, 2, 3.
  - ➢ Sample Problem (SP): 25.02, 25.03, 25.05, 25.06
  - ➢ Problem: 1, 10, 11, 14, 15, 19, 34, 46, 57, 59, 64, 73.
- ❖ **Chapter 26: Current and Resistance**
  - ➢ Checkpoint: 1, 2, 3, 5.
  - ➢ Sample Problem (SP): 26.02, 26.03, 26.04.
  - ➢ Problem: 8
- ❖ **Chapter 27: Circuits**
  - ➢ Checkpoint: 1, 2, 3, 4, 5.
  - ➢ Sample Problem (SP): 27.01, 27.02, 27.04, 27.05.

➢ Problem: 1, 18, 22, 23, 30, 33, 36, 44, 45, 92, 103.

❖ **Chapter 28: Magnetic Fields**

    ➢ Checkpoint: 1, 2, 3, 4.

    ➢ Sample Problem (SP): 28.01, 28.03, 28.04, 28.05, 28.06.

    ➢ Problem: 3, 4, 6, 18, 41, 42, 52, 61, 63, 68, 74, 77, 84, 85.

❖ **Chapter 29: Magnetic Fields Due to Currents**

    ➢ Checkpoint: 1, 2, 3.

    ➢ Sample Problem (SP): 29.01, 29.02, ~~29.03~~, 29.04.

    ➢ Problem: 4, 5, 7, 8, 10, 11, 12, ~~13~~, 21, 23, 24, ~~27~~, 29, ~~31~~, 35, 36, ~~41~~, 45, 66, 82, ~~83~~.

Others

- Electric field due to an infinite line of charge and a circular ring:
  📕 Electric_Field_Infinite_line_and_Circular_ring.pdf
- Minhazul Islam Royel's PHY112 lecture notes:
  🖼 PHY112 Notes by MInhazul Islam Royel
- Electric Potential: 📕 Electric_Potential_Presentation.pdf
- Electric Potential Problems: 📕 Electric Potential Problems.pdf
- Magnetic field: 📕 Magnetic_field_Presentation.pdf
- Magnetic field problems: 📕 magnetism_problem_annotated.pdf
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