

The background features a large, light gray watermark of the BRAC University logo, which consists of a circular emblem with the word 'BRAC' above 'UNIVERSITY' and a stylized building or book shape below.

PHY-112 | PRINCIPLES OF PHYSICS-2

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Summer 2025 | Class #0

DEPARTMENT OF MATHEMATICS & NATURAL SCIENCES

Inspiring Excellence



ASSESSMENT CRITERIA

Inspiring Excellence

INTRODUCTION

ASSESSMENT RUBRIC



How will your performance be assessed?

- ▶ 05% \Rightarrow Attendance
- ▶ 15% \Rightarrow Averaging 4 Quizzes (15 marks each)
- ▶ 15% \Rightarrow Averaging 4 Assignments (15 marks each)
- ▶ 20% \Rightarrow Mid-term examination (20 marks)
- ▶ 10% \Rightarrow Laboratory experiments (10 marks)
- ▶ 35% \Rightarrow Final examination (35 marks)

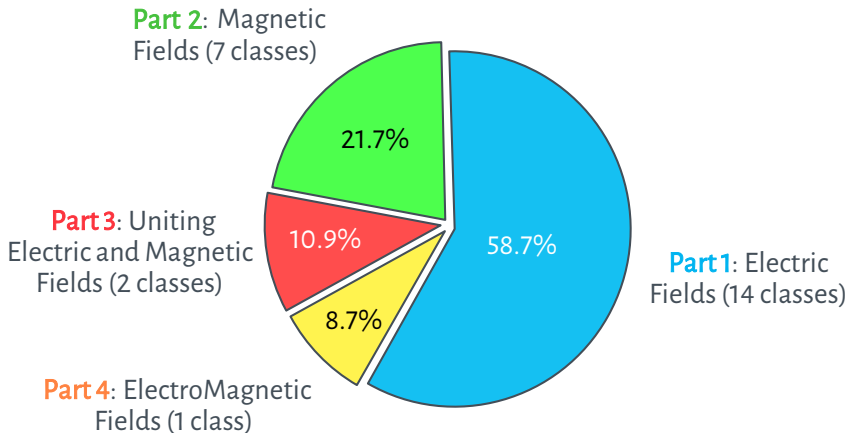
NOTE: Course is centrally monitored. There will be No Bonus Assessments! You have one shot at this. Make it count!

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SYLLABUS & PREREQUISITES

SYLLABUS

HOW THE COURSE IS STRUCTURED



PREREQUISITES

WHAT YOU NEED TO ACE THE COURSE!



► Pre-requisite: **PHY-111**

- **Vector Resolution:** Geometric and Analytical
 - Breaking any vector down
- **Vector Algebra:** Addition and Subtraction
 - Superposition of forces and fields
- **Vector Multiplication:** **Dot** and **Cross-Product**
 - Electric and Magnetic Flux (Dot)
 - Biot-Savart Law and Magnetic Forces (Cross)
- **Intuition of Fields:** **Vector and Scalar Fields** in 3D
 - Electric and Magnetic Fields
- **Work Done and Conservation of Energy**
 - Electric Potential Energy
 - Motion of charged particles

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AVAILABLE RESOURCES

RESOURCES

WHAT TO USE?



- ▶ In-Person Classes (Main Food)
- ▶ Consultation Hours (Supplementary Vitamins)
- ▶ Reference Books (Will be provided in Slack)
- ▶ Exercise Problem List (Will be provided in Slides and [YouTube Playlist](#))
- ▶ Student Tutor
- ▶ Each Other
- ▶ The Internet

RESOURCES

HOW TO USE?



- ▶ Pay *effective* Attention to in-person classes every small detail matters. Do not leave out everything for consultation hour
- ▶ Test Yourself constantly: Solve **practice problems**
- ▶ Do *more* of what works
- ▶ Do *less* of what does not
- ▶ Do not let things **pile up!!**
- ▶ Respect your time, brain, and willpower
- ▶ Rinse and Repeat

A large, faint watermark of the BRAC logo is centered in the background. It consists of a circle containing the word "BRAC" in a serif font, with a stylized graphic of three stacked chevrons or a book-like shape below it.

That is it for today!

Inspiring Excellence