

PHYS 216 – Introductory Electricity and Magnetism

Fall 2026 (1.5 units)

Instructor Information

Primary instructor: Geoff Steeves
Office hours: Tuesday 12:30 - 1:30 PM, Elliott 116 or by appointment
Brightspace: <https://bright.uvic.ca>
Contact: gsteeves@uvic.ca (I will usually respond within 24 hours)
TA marker: Ian Baker
TA tutorials: Sahar Gholami Milani

Class Times

Lectures: Tuesday, Wednesday, and Friday, 11:30–12:20
Tutorials: Tuesday, 1:30–2:20

Teaching and Assessment Modality

The primary course delivery method will be in-class lectures (face-to-face). These lectures will be recorded and, whenever possible, made available for later viewing to support review and flexible access. Some lectures will be pre-recorded and delivered through BrightSpace in place of the live class session. Students will be notified in advance when lectures will be available online rather than in person.

Course communication, assignments, and grades will be managed through Brightspace. Students are also welcome to email the instructor with questions or concerns. All assessments (midterm exams and final exam) will be conducted in person, unless alternative arrangements are made through the Centre for Accessible Learning (CAL).

Textbook and Course Content

University Physics, Volume 2 (OpenStax)

<https://openstax.org/details/books/university-physics-volume-2>

The course will cover the following chapters:

- Chapter 5: Electric Charges and Fields
- Chapter 6: Gauss's Law
- Chapter 7: Electric Potential
- Chapter 8: Capacitance
- Chapter 9: Current and Resistance
- Chapter 10: Direct-Current Circuits
- Chapter 11: Magnetic Forces and Fields
- Chapter 12: Sources of Magnetic Fields
- Chapter 13: Electromagnetic Induction
- Chapter 14: Inductance
- Chapter 15: Alternating-Current Circuits
- Chapter 16: Electromagnetic Waves

Other Recommended Texts

Students who would like an alternative or more in-depth treatment of the course material may find the following texts useful:

- E. M. Purcell and D. J. Morin, *Electricity and Magnetism*, 3rd ed. (Cambridge University Press, 2013).
- D. J. Griffiths, *Introduction to Electrodynamics*, 5th ed. (Cambridge University Press, 2023). This text is somewhat more advanced than PHYS 216, but is an excellent reference and a useful bridge to upper-level electromagnetism.

Learning Outcomes

By the end of this course, students should be able to:

1. Apply Coulomb's law, Gauss's law, and related principles to analyze static electric fields.
2. Solve problems involving electric potential and DC circuits using appropriate mathematical methods.
3. Analyze the magnetic fields produced by currents and evaluate forces on moving charges.
4. Explain the principles of electromagnetic induction and alternating-current circuits.
5. Demonstrate problem-solving skills through written solutions and tutorial participation.
6. Communicate physics reasoning clearly using proper scientific notation, graphs, and diagrams.
7. Relate the fundamental principles of electromagnetism to real-world technologies and physical phenomena.

Assignments

Assignments will be given weekly from the textbook. Write your solutions out neatly and scan/upload them for grading. This will help you learn to organize and present your work. The feedback you receive will help you do better on the exams.

Assessment Methods

Assessment	Weight
Assignments: Weekly problem sets from the textbook. Students must submit readable scanned copies of their work to BrightSpace.	20%
Midterm Exam 1 (Oct 16)	20%
Midterm Exam 2 (Nov 13)	20%
Final Exam	40%
Total	100%

Use of AI Tools

Academic integrity: Uncited use of AI in coursework may constitute a violation of the University's Academic Integrity policy (see below). Submitting work generated by AI in whole or in part as your own is considered academic dishonesty.

Instructor use: Instructors and markers are not permitted to use AI to grade student work.

Permitted uses of AI for PHYS 216: Note that other courses will have different policies as we navigate this new technology. You may use AI for self-assessment and support in your learning, provided you do so responsibly and transparently. Examples include:

- checking your work for errors;
- copy-editing text for clarity;
- creating additional practice problems on a topic;
- generating code to help visualize problems.

UVic Academic Integrity

Academic integrity is built on honesty, respect, and fairness. Students, faculty, and staff at UVic are members of an intellectual community. As such, it is expected that we will adhere to ethical values in all our learning, teaching, and research. We have many resources on academic integrity. One of the best ways to get information is to talk to your instructors and TAs. They can help you understand and follow the complex rules of academic integrity.

<https://www.uvic.ca/students/academics/academic-integrity/index.php>

Resources for Students

Physics Aid Services

Location: McPherson Library, Room 129

Monday–Thursday: 9:00 a.m.–12:00 p.m.

Academic Concession and Accommodation Policies

<https://www.uvic.ca/students/academics/academic-concessions-accommodations/index.php>