PHYS 216 - Introductory Electricity and Magnetism (1.5 units)
Fall 2025

## Instructor Information:

Primary Instructor: Geoff Steeves
Office hours: Elliott 116 - times arranged through BrightSpace: http://bright.uvic.ca

Contact: gsteeves@uvic.ca (I will try to respond within 48 hrs)

TA Marker: Laura Dufort-Gagnon
TA Tutorials: Alexandre Beaubien
Guest Lecturer: Andrew MacRae

**Lectures:** Tue, Wed and Fri from 11:30-12:20

**Tutorials**: Tuesdays 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. In accordance with UVic guidelines, a portion of 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, final exam) will be conducted in person, unless alternative arrangements are made through the Centre for Accessible Learning (CAL).

**Textbook:** University Physics Volume 2 (OpenStax)

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

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

**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**:

Weekly from the textbook - write them out neatly and scan/upload for grading. This will help you learn to organize and present your work. The feedback you get will help you do better on the exams.

**Assessment Methods:**

- Assignments (20%): Weekly problem sets from the textbook. Students must submit readable scanned copies of work to BrightSpace. Feedback will be provided before the academic drop date.
- Midterm Exam (30%): In-person, tentatively scheduled for October 24.
- Final Exam (50%): In-person during the formal exam period scheduled by the Registrar.

**Guidance on UVic's position on the use of Generative AI tools (GAITs) can be found here:**

https://teachanywhere.uvic.ca/academic-integrity/genai-position-statement/#position-statement

UVic embraces the integration of GAITs in a responsible, ethical, and equitable manner where they enhance learning and teaching. Please note:

- **Academic integrity**: Un-cited use of GAITs in coursework may constitute a violation of the University's Academic Integrity policy (see below). Submitting work generated by GAITs in whole or in part as your own is considered academic dishonesty.
- **Instructor use**: Instructors/markers are not permitted to use GAITs to grade student work.
- **Permitted uses for Phys 216 (note that other courses will have different policies as we navigate this new technology):**
- You may use GAITs 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, Rm 129

  Monday - Thursday: 9:00am - 12:00pm

- Academic Concession and Accommodation policies:

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