

LEARNING OUTCOMES:

As stated by Alberta Education (<https://www.alberta.ca/programs-of-study.aspx>), upon successful completion of this course the student will be able to:

- Explain how momentum is conserved when objects interact in an isolated system.
- Explain the behavior of electric charges, using the laws that govern electrical interactions.
- Describe electrical phenomena, using the electric field theory.
- Explain how the properties of electric + magnetic fields are applied in technologies.
- Explain the nature and behavior of EMR, using the wave model.
- Explain describe the electrical nature of the atom.
- Describe the photoelectric effect, using the quantum model.
- Describe the quantization of energy in atoms and nuclei.
- Describe nuclear fission and fusion as powerful energy sources in nature.
- Lab Skill objectives (focus on scientific inquiry) Initiate, plan, perform, record, analyze, interpret, communicate and work in a team

TRANSFERABILITY:

This course is listed in the Alberta Transfer Guide. It is accepted at colleges and universities in Alberta as equivalent to Physics 30. Please consult the Alberta Transfer Guide for more information. You may check to ensure the transferability of this course at the Alberta Transfer Guide main page <http://www.transferalberta.alberta.ca>.

**** Grade of D or D+ may not be acceptable for transfer to other post-secondary institutions. Students are cautioned that it is their responsibility to contact the receiving institutions to ensure transferability**

EVALUATIONS:

4 Unit tests	40 %
Labs, Assignments, Quizzes	10 %
Midterm	20 %
Final Exam	30 %

All tests and exams **MUST** be written at the scheduled times unless **PRIOR** arrangements have been made with the instructor. A missed test (exam) will result in a score of ZERO on that test (exam). Only in very specific cases may student be given an opportunity to make up a missed exam (student will be presented with a different version of the exam). Doctor, lawyer or police documentation may be required. The final exam is 3 hours long and is scheduled by the registrars' office during NWP Exam weeks. **Please make yourself familiar with the NWP exam policy.**

GRADING CRITERIA:

Please note that most universities will not accept your course for transfer credit **IF** your grade is less than C-.

Alpha Grade	4-point Equivalent	Percentage Guidelines	Alpha Grade	4-point Equivalent	Percentage Guidelines
A+	4.0	95-100	C+	2.3	67-69
A	4.0	85-94	C	2.0	63-66
A-	3.7	80-84	C-	1.7	60-62
B+	3.3	77-79	D+	1.3	55-59
B	3.0	73-76	D	1.0	50-54
B-	2.7	70-72	F	0.0	00-49

COURSE SCHEDULE/TENTATIVE TIMELINE:

Physics 0130 consists of four units (approx. 3 weeks each) Exam dates to be announced.

- A. Momentum and Impulse (text chapter 9)
- B. Forces and Fields (text chapters 10-12)
- C. Electromagnetic Radiation, SHM(text chapters 13-14)
- D. Atomic Physics (text chapters 15-16, ch17 as time permits)

STUDENT RESPONSIBILITIES:

Certain activities are disruptive and not conducive to an atmosphere of learning. In addition to the *Student Rights and Responsibilities* as set out in the Polytechnic calendar, the following guidelines will maintain an effective learning environment for everyone. We ask the cooperation of all students in the following areas of classroom deportment.

1. Attendance: Regular attendance and class participation is expected of all students and is crucial to good performance in the course. Students may be debarred from the final exam if your absences exceed 15% of class days.
2. Punctuality: Students are expected to arrive on time for classes, remain for the duration of scheduled classes and refrain from disruptive talking or socializing during class time.
3. Assessments: Students are expected to submit assignments on time, write exams on the days announced in class and complete homework, **at least 1.5** hours daily outside of class time.
4. Communication: Students must check **D2L** and **NWP** email on a regular basis and contact instructor if an emergency prevents attendance as soon as possible. (Documentation may be required to justify absences.) **Please communicate all requests via NWP email.**
5. Technology: Students are expected to silence cell phones during class or lab time. Technology may be used as tools for learning, but please remember to maintain an effective learning environment. No unspecified electronic devices will be permitted during exams.

STATEMENT ON ACADEMIC MISCONDUCT:

Academic Misconduct will not be tolerated. For a more precise definition of academic misconduct and its consequences, refer to the Student Rights and Responsibilities policy available at <https://www.nwpolytech.ca/about/administration/policies/index.html>.

**Note: all Academic and Administrative policies are available on the same page.

Additional Information:

Labs: Lectures are held on lab days when there is no lab. See course schedule.

- Attendance is compulsory in all labs.
- Missed labs result in a score of zero. **There are NO make-up labs.**
- If you are late and have missed the lab safety discussion, you will be excluded from participating in the lab and will receive a mark of zero.
- Download the lab sheets and complete the Pre-lab assignment before the lab period, data tables are completed during the lab and analysis and questions after the lab.

Lab Schedule

- Schedule may vary. (See myClass for dates.)