

OUR LADY OF LOURDES CATHOLIC HIGH SCHOOL

Course Title: Grade 12 University Physics

Course Code: SPH 4U1

Credit Value: 1.0

Prerequisite: SPH 3U1

Course Description / Ontario Catholic School Graduate Expectations

This course enables students to deepen their understanding of the concepts and theories of physics. Students will explore further the laws of dynamics and energy transformations, and will investigate electrical, gravitational, and magnetic fields; electromagnetic radiation; and the interface between energy and matter. They will further develop their inquiry skills, learning, for example, how the interpretation of experimental data can provide indirect evidence to support the development of a scientific model. Students will also consider the impact on society and the environment of technological applications of physics. The study of any science helps students to learn to be reflective, critical, and creative thinkers, as well as discerning believers, who can apply their knowledge to the world around them. They can then make appropriate decisions in light of Gospel values and Church teachings.

Units: Titles and Themes

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|---|----------|
| 1. Dynamics | 25 hours |
| 2. Energy and Momentum | 20 hours |
| 3. Electric, Gravitational, and Magnetic Fields | 15 hours |
| 4. The Wave Nature of Light | 20 hours |
| 5. Quantum Mechanics/Special Relativity | 15 hours |

Course Resources

Physics Concepts and Connections, Book Two; Irwin Publishing, 2002

Replacement Cost: \$80

Assessment and Evaluation

A variety of assessment strategies will be utilized throughout the course.

Term work (70%)	Culminating Assessment (30%)
10% Communication 20% Knowledge and Understanding 30% Applications/Making Connections 40% Inquiry	This 30% is made up of: Compulsory Final Exam and/or culminating activity.

Late / Missed Assignments

Students are expected to complete all assessment and evaluation activities on the date determined by the teacher. The teacher (and/or principal when necessary) will decide if a late activity will be accepted for evaluation purposes or only for formative assessment with no level/mark recorded for grading.

Cheating and Plagiarism

Please see information regarding this topic in the Catholic Student Planner.

General Course Information

- Regular attendance and good work habits are essential to success in this course. Extra help is offered regularly at lunch. Please see schedule posted in classroom.
- A scientific calculator is required.

Textbook

Students are loaned a copy of the textbook Physics concepts and Connections by Irwin Publishers. The replacement cost is \$90.

Parent/Guardian/Student Signature

My signature below indicates that I have read and understood the course overview.

Student Signature: _____

Date: _____

Parent/Guardian Signature: _____

Date: _____

Students: Please keep this sheet in your notebook. Good luck in this course!

Assigned text # _____ student initial: _____