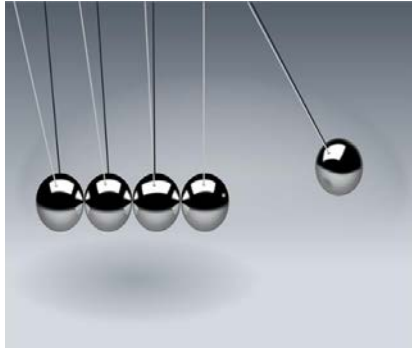


# Minor in Physics at Nipissing



## PHYS 1006: Mechanics

This course introduces fundamental notions and physical laws in classical mechanics. Topics include Newton's three laws of motion; mechanical energy and energy conservation; rotational motion; Newton's law of universal gravitation, Kepler's three laws, planetary and satellite motion.

## PHYS 1007: Mechanical Wave, Fluid Mechanics and Thermodynamics

This course introduces concepts and physical laws in mechanical wave, fluid dynamics, and thermodynamics and the applications of these laws in modern technology.

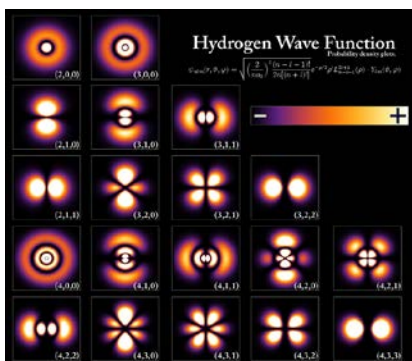


## PHYS 2006: Electromagnetism

This course covers the concepts and physical laws of electricity and magnetism, and applications of electromagnetic theory in modern science and technology. It covers: electrostatics, direct current, static magnetism, electromagnetic induction, and electromagnetic waves.

## PHYS 2007: Optics and Introduction to Modern Physics

Students study concepts and physical laws in geometric optics, physical optics, and interaction of light with matter. This course also provides an introduction to topics in modern physics including the theory of special relativity, fundamentals of quantum physics, atomic physics and nuclear physics.



## PHYS 3006: An Introduction to Quantum Physics

This course we explores the difficulties arising from the "old physics" and the historical development which led to a crisis in classical physics, and finally to the quantum revolution.

We then develop the basic mathematical and conceptual tools to describe wave properties of matter.

## PHYS 3007: Computational Physics

Computational Physics is a project-oriented course demonstrating how computers enable us to both broaden and deepen our understanding of physics. Students learn how to apply numerical methods and algorithms to problems in physics. Students choose a physical problem, and pose scientific questions, and implement a computer simulation while developing techniques and skills for programming, analysis, and presentation of their results.

