

More Physics Around Us

Andrew Robinson, PhD.

Physics is an experimental science based on observation of the world around us. In this all-new series by award-winning educator Dr. Andrew Robinson, familiar everyday examples will illustrate principles of physics in a descriptive and non-mathematical way. This series will cover fluids and gases, heat transfer and wind chill, ocean waves and light waves, gravity, splitting the atom, and 'weird' optics. The classes will be highly interactive, with many opportunities for discussion and questions, on topics of interest to those attending. An interest in science is recommended, but no scientific knowledge is needed.

PLEASE NOTE: More Physics Around Us is a good companion to, but is distinct from, the initial Physics Around Us lecture series. This series has no prerequisites, and no background knowledge of physics is needed.

Schedule of Topics:

1. Fluids

Liquids and gases, and their properties.

2. The Heat Is On

Heat transfer, thermal properties, wind chill, thermometers.

3. Waves

Ocean waves, light waves, earthquake waves.

4. Splitting the Atom

The History of Atomic Physics in the 1930s, and Canada's role

5. Gravity

We all live in the Earth's gravity field (even astronauts in Earth orbit).

6. Weird Optics

When light doesn't travel in straight lines

Recommended Reading

There is no one set book for this course, but here are a few suggestions which will be of interest.

“A Short History of Nearly Everything”, by Bill Bryson.

This is a light-hearted look at science from the well-known author. It’s surprisingly good on the big picture of science, and Bryson does come up with some amusing anecdotes about science, and scientists.

“A Brief History of Time”, by Stephen Hawking.

This is probably the best known science book by one of the most eminent and best known physicists of the present day. It’s not a textbook, but nevertheless is quite a demanding read. It also looks good on your coffee-table.

“Cosmos” by Carl Sagan (original version) or “Cosmos: A Spacetime Odyssey” by Neil deGrasse Tyson

The late Carl Sagan was a tireless populariser of science, and this is still one of the finest books on science and the universe. It’s beautifully illustrated too. Twenty years later, the astrophysicist Neil deGrasse Tyson produced a follow-up series, with some updated science. This too, is a classic TV series.

“The Science Book: Everything You Need to Know About the World, and How It Works” by National Geographic magazine, with a foreword by the splendidly named Marshall Brain.

A wonderfully illustrated book, as you would expect from National Geographic. It’s overambitious, so the depth of the science is not that great, but it does give a good overview of things.