

# Syllabus for Fall 2022

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## Outline

In this class, we will be learning about modern medical imaging techniques, such as X-rays, mammography, computed tomography, positron emission tomography, magnetic resonance imaging, and ultrasound.

We will also learn about the fundamentals of health physics, by looking at the biological effects of ionizing radiation.

## Requirements:

One of 4U/M PHYS (SPH4U), PHYS 1P22, 1P23, 1P92, 1P93, or permission of the instructor.

## Textbook and Lectures:

There is no textbook for the course.

Instead, you can find the contents of the course broken down into Sakai Lessons on the toolbar. Each lesson follows the lectures in sequence. The slides that I work from for each lecture can be found in the Resources tool.

There is some additional reading to accompany each lecture, as well as a few short multiple choice questions that help with some concepts in the lecture. The questions have no point value, but they are required to continue to the next lesson.

Tutorial sessions are optional, but are there to help you. I will start these sessions on time, but I don't think they will last long in terms of formal discussion. Nevertheless, when we break, I will remain online for questions from anyone - kind of virtual office hours.

## Class times:

Lectures:

Wednesdays 12:30-14:00 (WH8G)

Fridays 12:30-14:00 (WH8G)

Tutorial:

Wednesdays 11:00-12:00 (ST107)

**My apologies, there is one cancelled lecture: Friday, 9 September.**

## **Instructor:**

Thad Harroun (e-mail: [tharroun@brocku.ca](mailto:tharroun@brocku.ca))

Office hours: M 12:00-13:00 (MC B201)

## **Assignments and exams:**

11 assignments, available in the Assignment Tool

1 midterm exam, mid-October, administered in Sakai available over Friday-Saturday.

1 final exam, administered in Sakai during scheduled exam time.

Assignments can be uploaded according to instructions provided in

Lesson: "0. Overview and help"

## **The marking scheme:**

<b>Component</b>	<b>Weight</b>
Homework Assignments	47%
Midterm exam	24%
Final exam	29%

## **Midterm exam:**

The midterm exam will be written through Sakai during a scheduled lecture period in February.

## **Final exam:**

The final exam will be written through Sakai during the normal scheduled exam period in April.

## **Note:**

Penalty for late assignments: -5% per day, excluding Saturdays and Sunday