

## MEDICAL PHYSICS 265 -- PHYSICS OF THE BODY

**Instructor:** Professor Ron Wakai

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**Office hours:** by appointment

**Text:** *Medical Physics*, J. Cameron and J. Skofronick

I will post PDF files of selected chapters on Learn@UW, in addition to course notes. The text is also available on reserve at the Physics library in 4220 Chamberlin Hall, along with *Intermediate Physics for Medicine and Biology* by Hobbie.

**Homework:** problems will be assigned but not collected or graded (the answers are in a PDF posted on Learn@UW).

**Exams and grading:** Your grade will be determined by three exams. The first two are held at a regular class meeting, the last one takes place during final exam week. They will consist of a combination of multiple-choice and short-answer questions and numerical problems.

### Exam schedule

Exam 1: Feb 18

Exam 2: TBD (April 1 or 8)

Exam 3: May 11 (Sunday) 7:25 PM

**Material:** The course will roughly follow the outline, but not necessarily the content, of the text. You are responsible for all the material covered in lecture, assigned reading and problems in the text, and material posted on Learn@UW, which you should check every week.

Several visits to the hospital to see the medical equipment will be scheduled during the semester.

Chapters covered:

- 2-- Forces acting on the body
- 3-- Physics of the skeleton
- 5-- Energy, work and power of the body
- 6-- Pressure
- 13-- Sound in medicine
- 7-- Physics of the lung and breathing
- 8-- Physics of the cardiovascular system
- 16-- Physics of diagnostic x-rays
- 19-- Radiation protection in medicine
- 17-- Physics of nuclear medicine
- 9-- Electricity within the body
- 15-- Physics of eyes and vision
- 14-- Physics of the ear and hearing