BIOE 546: Fundamentals of Biomedical Imaging
X-ray and Nuclear Biomedical Imaging

A graduate level introduction to core principles of biomedical imaging

- Learn fundamental concepts common to all medical imaging methods:
  - The physics of imaging biology in humans
  - The imaging equation
  - The inverse problem
  - Contrast agents
  - Image SNR
  - Multi-dimensional Fourier transforms

- Focused on x-ray and nuclear imaging systems, including combined PET/CT and SPECT/CT
- Lectures use an engineering systems approach with computational projects using Matlab

Prerequisites: Signal and systems (linear systems), Fourier transforms and advanced linear algebra, scientific programming (e.g. Matlab or other languages) or permission of instructor

Instructor: Paul Kinahan, Professor of Radiology and Bioengineering
Credits: 4
Lectures: Tuesday & Thursday 10:00-11:20 AM
Quiz / Review session: Tuesday 2:30-3:20 PM
SLN: 23284

or point your phone camera at this