

Course Number

PHY-210-01

Course Description

This course introduces the technologies used in modern medicine and the basic physical principles that underlie them. Topics will include: laser surgery, ultrasound imaging, laparoscopic surgery, diagnostic x-ray imaging, nuclear medicine, computed tomography (CAT) scans, magnetic resonance imaging (MRI) scans, and radiation therapy. Safety issues involved in the use of each technique will be considered in depth, and discussions will include societal implications of the growing use of technology in medicine. Specific medical applications discussed will include (but are not limited to): colon cancer screening, arthroscopic knee surgery, laser eye surgery, dermatological laser surgery, obstetrical ultrasound, cardiovascular ultrasound, mammography, osteoporosis screening, cancer radiation therapy, and applications of PET and MRI brain scans in neuroscience.

Academic Term

21/SP

Instructor

LaBrake, Scott

Location & Meeting Time

Integrated Science & Engineering Complex-387+ M/W/F 09:30AM-10:35AM LEC

Credits

1.00

Capacity

12

Total Students

6

Additional Information

<http://www.union.edu/Physics>

Common Curriculum

WAC Writing Across Curriculum

Academic Department

Physics and Astronomy

Field Of Study

Physics (PHY)