



College of Engineering
Department of
Mechanical & Industrial Engineering

The Robert W. Courter Seminar Series

3:00-4:00pm, Friday, October 25, 2019
1263 Patrick F Taylor Hall

Radiological Imaging Technology at LSU

by **Kenneth Matthews***

Louisiana State University



For more than 100 years, radiation has been a common tool in medicine for both diagnostic and therapeutic purposes. Medical physicists, typically specializing in radiological imaging or radiation therapy, work alongside radiologists and radiation oncologists to provide safe and beneficial use of radiation. After introducing medical physics, this talk will review the radiological imaging systems commonly used in hospitals, which include radiography and computed tomography, ultrasound, magnetic resonance imaging, and radioisotope imaging. We'll then discuss the radiological imaging technology that is available at LSU, and how it can be utilized as a research tool for biomedical research as well as in biology, chemistry, engineering, and other fields.

* Dr. Matthews earned his PhD in medical physics from the University of Chicago in 1997, then worked as a clinical physicist for several years before joining LSU in 2001. He is an associate professor in the Department of Physics & Astronomy, and currently serves as the Deputy Director of LSU's graduate program in Medical Physics and Health Physics. He also holds adjunct appointments in Radiology at the LSU Health Science Center in New Orleans, in Comparative Biomedical Sciences at the School of Veterinary Medicine, and at Pennington Biomedical Research Center. His expertise is generally in radiological imaging physics, with specialization in nuclear medical physics and radioisotope imaging. Dr. Matthews previously developed the imaging physics curriculum for the Medical Physics program; he currently teaches radiation instrumentation and radiation shielding design.