

**GMS 5905**  
**Graduate Seminar in Medical Physics**  
**Course Syllabus Fall 2021**

**Instructor:** Manuel Arreola, PhD  
[arreom@radiology.ufl.edu](mailto:arreom@radiology.ufl.edu)

**Textbooks:** None

**Sessions:** 3:00PM - 3:50 Thursdays  
 Room C1-17, Communicore

Date	Topic
Thursday, August 26	Dr Leon: Image Quality Analysis of Reconstruction Algorithms in CT
Thursday, September 2	Dr O’Dell: Dose Errors and Consequences to Normal Tissue Surrounding Lung Tumors During Free-Breathing Proton Therapy
Thursday, September 9	Dr Hidalgo: The Importance of MRI Hardware in Clinical Applications
Thursday, September 16	Dr Gayle Woloschak: X-Ray Fluorescence Microscopy Applications in Radiation and Medicine
Thursday, September 23	Dr Bova: Image Guidance – Principles and Applications
Thursday, September 30	Dr Morin: Medical Physics Beyond Clinical Practice – What Goes On in the AAPM, ACR, ASTRO, RSNA, ABR, et al?
Thursday, October 7	Dr Bolch: The Life Span Study of the Atomic Bomb Survivors – A Review of Organ Dose Estimates and the J45 Phantom Series
Thursday, October 14	Dr Banks: Radiographic Measurement of 3D Skeletal Kinematics – Who Wants In? Is it Clinically Feasible?
Thursday, October 21	Dr Merck: Medical Image Analysis and Visualization
Thursday, October 28	Penny Butler: New ACR Diagnostic Reference Levels for Pediatric CT Examinations
Thursday, November 4	Dr Leon: Diagnostic Physics Collaborations in Radiotherapeutic Procedures
Thursday, November 11	No class – Veterans Day
Thursday, November 18	Dr Yan: Application of Machine Learning in Radiotherapy Quality Assurance
Thursday, November 25	No class – Thanksgiving
Thursday, December 2	Dr Lu: How to Master Doctor’s Minds, Deep Learning in Auto-Planning

**Policies:**

**Examinations:** None

**Course Grade:** Will be calculated as follows:

Timely Attendance      90%  
 Participation              10%

**Grading Scale:** 93-100 A; 90-92 A-; 86-89 B+; 83-85 B; 80-82 B-; 76-79 C+; 73-75 C; 70-72 C-

*Grades will be curved*

**Office Hours:**

*By appointment*

**Academic Honesty:**

*All students are required to abide by the University's honesty policy as published in UF Rule 6CI-4.017. Students should be familiar with the entire rule which can be reviewed at: <http://www.aa.ufl.edu/aa/Rules/4017.htm> and specifically addresses cheating;*

**Cheating:**

*The improper taking or tendering of any information or material which shall be used to determine academic credit. Taking of information includes, but is not limited to, copying graded homework assignments from another student; working together with another individual(s) on a take-home test or homework when not specifically permitted by the teacher; looking or attempting to look at another student's paper during an examination; looking or attempting to look at text or notes during an examination when not permitted. Tendering of information includes, but is not limited to, giving your work to another student to be used or copied; giving someone answers to exam questions either when the exam is being given or after having taken an exam; giving or selling a term paper or other written materials to another student; sharing information on a graded assignment.*

**Class Attendance:**

*Students are expected to attend each class period. Periods which may be missed should be brought to the attention of the Instructor as far in advance of the class period as possible. In the event of an unexcused absence, it is the student's responsibility to obtain and review the material that was covered during that class period. Students must participate in each laboratory exercise.*

**Make-up  
Labs & Assignments:**

*Make-up laboratory exercises and assignments will only be considered for exceptional circumstances and will be implemented by the instructor on a case-by-case basis.*

**Class Demeanor:**

*Class distractions such as cell phones and pagers are unacceptable. Students will ensure that any such devices that are brought into the classroom will be turned off, or operated in a silent mode, during the class period.*

**Students w/ Disabilities:**

*Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.*