

Summer 2023

Medical Physics Career Preparation

GMS 5905; Section MPY1; 1 credit

CLASS MEETING INFO

Thursdays 1:45PM – 2:50PM
Room C2-33

INSTRUCTORS

Stephanie Leon, PhD; leons@radiology.ufl.edu
BC Schwarz, PhD; schwbc@radiology.ufl.edu
Guest Lectures: Lynn Rill, PhD; Manuel Arreola, PhD
Office Hours: Arrange via email

TEACHING ASSISTANTS

None

DESCRIPTION

Prepares students for their future graduate studies and future medical physics career by informing students about career choices, work environments, residencies, board certification, and ethics and professionalism.

PRE-REQUISITES/CO-REQUISITES

ENU 6657: Diagnostic Radiological Physics I
ENU 6659: Nuclear Medicine Instrumentation and Procedure
BME 6591: Therapeutic Radiological Physics I

OBJECTIVES

1. Students will become familiar with the different subspecialties of medical physics/health physics and their required qualifications, anticipated salaries, and anticipated future demand
2. Students will become familiar with available work environments for medical physicists and the benefits/drawbacks of each of these environments
3. Students will understand the rules and regulations governing the profession of medical physics
4. Students will be able to conduct a root cause analysis
5. Students will become more prepared for residency, the MP-RAP, and the board certification process
6. Students will use available guidance to analyze ethics and professionalism scenarios in medical physics
7. Students will plan their anticipated career path in graduate school and medical physics

MATERIALS AND SUPPLY FEES

AAPM Student Member Fee (\$25 application fee); https://www.aapm.org/memb/prospect/Student_Application.asp

REQUIRED TEXTBOOKS & SOFTWARE

Registration for one medical physics listserv required (MEDPHYS for therapy; DXIMGMEDPHYS for diagnostic/nuc med)

RECOMMENDED MATERIALS

None

COURSE SCHEDULE (W = Wednesday, Th = Thursday)

05/18/23 (Th): Class introduction, review of syllabus, overview of medical physics subspecialties (SL)

Assignments: Register for at least one listserv; sign up as AAPM student member

05/25/23 (Th): Overview of medical physics subspecialties continued (BCS)

Assignments: None

06/01/23 (Th): Working environments in medical physics; describe interviews project (SL)

Assignments: Students rank interviews from most interested (1) to least interested (9)

06/08/23 (Th): QMPs, rules, and regulations (SL)

Assignments: Research QMP requirements and post to discussion forum

06/15/23 (Th): ABR, ABSNM, ABMP, CHP; qualifications, process, and preparation for board certification (BCS)

Assignments: None

06/22/23 (Th): Medical physics residencies and MP-RAP; CVs and personal statements (LR, BCS)

Assignments: CV and personal statement preparation, Plan your career path

07/06/23 (Th): AAPM TG-109: Ethics and professionalism in medical physics and HIPAA (BCS)

Assignments: Reading in preparation for ethics assignment

07/13/23 (Th): Discussion of ethical dilemmas in small groups (SL, BCS)

Assignments: Summary of ethics discussion

07/20/23 (Th): Discussion of ethics with class; QA/QC, medical errors, and RCA (SL)

Assignments: Root cause analysis

07/27/23 (Th): International medical physics; role of professional societies and involvement (BCS, MA)

Assignments: None

08/03/23 (Th): Student presentations and discussion of interview assignment (SL, BCS)

Assignments: None

08/10/23 (Th): Student presentations and discussion of interview assignment (SL, BCS)

Assignments: None

ATTENDANCE POLICY; CLASS EXPECTATIONS; MAKE-UP POLICY

Attendance is required during this course as it is a highly interactive course with some of the course grade dependent on group work and participation in class. Any class periods that may be missed should be brought to the attention of the instructors as far in advance as possible.

Lectures are broadcast live online and also recorded. Students who are feeling unwell, who are under quarantine, or who are "withheld from campus" are required to stay home and may attend the live online lectures if they are feeling up to it, *with prior notification to the instructor*. Access to the recorded lectures is by instructor permission only. Documentation supporting the reason why access is needed may be requested.

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.

Excused absences must be consistent with university policies in the Graduate Catalog and require appropriate documentation:

<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>

EVALUATION OF GRADES

A list of assignments in each category is found below the table. Each assignment is weighted equally within its category.

Assignment Category	Percentage of Final Grade
Experiences	40%
Homework	50%
Participation	10%
	Total: 100%

Experiences

- **Interview a MP:** Each student will interview a working medical physicist in a different subspecialty and/or practice environment (e.g., physicists in therapy, diagnostic, nuclear medicine, and medical health physics; physicists working “in-house” in clinics or hospitals, in academic settings, in consulting, in industry, or in the military/VA). The last 2 class periods will be devoted to a presentation of each student’s interview, with class discussion.
- **Mock residency interview:** Each student will complete a mock residency interview with 2 faculty members. One interview will be in person and the other will be virtual. The faculty evaluations will be used to determine the student’s grade.

Homework

- **Plan your career path.** Each student will write a career plan, to include: 1) desired degree; 2) for PhD students, when the qualifying exam will be taken; 3) when ABR Part 1 will be taken, including application deadline; 4) when graduation is anticipated; 5) when the Match program will be entered; 6) when residency interviews will take place; 7) deadlines for MS project and PhD dissertation defense; 8) when residency will begin; 9) when ABR Part 2 will be taken, including application deadline; 10) when a resident should start looking for jobs; 11) when ABR Part 3 will be taken. Each student will identify a contingency plan that works for them if a residency spot is not obtained on the first attempt. Students not planning a clinical career in the U.S. may modify this assignment to correspond to their anticipated path.
- **Prepare your CV:** Each student will write a C.V. appropriate for a residency application. These will be graded for content, spelling/grammar, and formatting.
- **Write your personal statement:** Each student will write a personal statement appropriate for a residency application. These will be graded for content and spelling/grammar.
- **Ethics and professionalism group work.** The class will be divided into groups of 2-3 (in class). Each group will be given a paper with a situation related to ethics or professionalism. The group will have 10 minutes to discuss and write brief recommendations. The groups will be shuffled and the exercise repeated 2 more times. Each student will be asked to write a summary of their discussions and decisions about the situations for homework (individually, not as a group). At the next class, the students will participate in a discussion session about their situations.
- **Root cause analysis:** Each student will conduct a root cause analysis of a problem of interest to them, using one of four methods discussed in class. The topic can come from a provided website or from the student’s own personal life. The thoroughness of the analysis and effectiveness at identifying actionable root causes will be used to determine the grade.

Participation

- Become an AAPM member (if not already a member)
- Sign up for and actively read at least one medical physics listserv
- Participate in in-class discussions

GRADING POLICY

Percent	Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-

67-69	D+
63-66	D
60-62	D-
59 & below	E

More information on UF grading policy may be found at: <http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#grades>

STUDENTS REQUIRING ACCOMMODATIONS

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center: <https://disability.ufl.edu/get-started/>. Once registered, students will receive an accommodation letter which must be presented to, and discussed with, the instructor when requesting accommodation. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

COURSE EVALUATIONS

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

UNIVERSITY HONESTY POLICY

UF students are bound by The Honor Pledge which states, "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

SOFTWARE USE

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

STUDENT PRIVACY

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

CAMPUS RESOURCES

Health and Wellness

U Matter, We Care

Email: umatter@ufl.edu, Phone: 352-392-1575; Website: <https://umatter.ufl.edu/>

Counseling and Wellness Center

Phone: 352-392-1575; Website: <https://counseling.ufl.edu/>

Student Health Care Center:

Phone: 352-392-1161; Website: <https://shcc.ufl.edu/>

University Police Department

Phone: 352-392-1111 (or 911 for emergencies); Website: <http://www.police.ufl.edu/>

UF Health Shands Emergency Room/Trauma Center

Phone: 352-733-0111; Website: <https://ufhealth.org/emergency-room-trauma-center>

Location: 1515 SW Archer Road, Gainesville, FL, 32608

GatorWell Health Promotion Services

Phone: 352-273-4450; Website: <https://gatorwell.ufsa.ufl.edu/>

Academic Resources

E-learning Technical Support

Email: helpdesk@ufl.edu; Phone: 352-392-4357; Website: <https://helpdesk.ufl.edu/>

Career Connections Center

Phone: 352-392-1601; Website: <https://career.ufl.edu/>

Location: Reitz Union, Suite 1300

Library Support

Website: <https://uflib.ufl.edu/>

Teaching Center

Phone: 352-392-2010 or 352-392-6420; Website: <https://teachingcenter.ufl.edu/>

Location: Broward Hall

Writing Studio

Phone: 352-846-1138; Website: <https://writing.ufl.edu/writing-studio/>

Location: 2215 Turlington Hall

Student Complaints (On-Campus)

Website: <https://sccr.dso.ufl.edu/policies/student-honor-%20code-student-conduct-code/>

Student Complaints (On-Line)

Website: <https://distance.ufl.edu/state-authorization-status/#student-complaint>