

IMPORTANT: This syllabus form should be submitted to OAA (gsbs_academic_affairs@uth.tmc.edu) a week before the start of each semester.

NOTE to STUDENTS: If you need any accommodations related to attending/enrolling in this course, please contact one of the Graduate School's 504 Coordinator, Natalie Sirisaengtaksin, PhD. We ask that you notify GSBS in advance (preferably at least 3 days before the start of the semester) so we can make appropriate arrangements.

Term and Year: Summer 2026 Course Number and Course Title: GS02 1021: Supervised Clinical Experience in Radiation Therapy Physics Credit Hour: 1 Prerequisites: GS02 1093: Introduction to Medical Physics I: Basic Interactions and GS02 1113: Introduction to Medical Physics III: Therapy Meeting Location: MDA, Pickens Towers (in front of Light Bytes) NOTE: Dr. Lim will bring students to clinic areas. Building/Room#: TBD	Program Required Course: <u>No</u> Approval Code: <u>Yes</u> (If yes, the Course Director or the Course Designee will provide the approval code.) Audit Permitted: <u>No</u> Classes Begin: May 20, 2026 Classes End: August 5, 2026 Final Exam Week: August 12, 2026
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Class Meeting Schedule

Day	Time
Wednesday	8:00 a.m. – 12:00 p.m.

Course Director Name and Degree: Tze Yee Lim, PhD Title: Associate Professor Department: Radiation Physics Institution: MDACC Email Address: tlim@mdanderson.org Contact Number: 832-404-4466 NOTE: Office hours are available by request. Please email me to arrange a time to meet.	Instructors 1 Tze Yee Lim, PhD Institution: MD Anderson Cancer Center Email Address: tlim@mdanderson.org 2. Fahed Alsanea, PhD Institution: MD Anderson Cancer Center Email Address: fmalsanea@mdanderson.org 3. Yao Zhao, PhD Institution: MD Anderson Cancer Center Email Address: yzhao15@mdanderson.org
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Course Description:

The Supervised Clinical Experience in Radiation Therapy Physics course is an elective course intended for students to be exposed to the practical working environment of a radiation oncology clinic. The time commitment for this elective is 4 hours a week with no didactic portion. This course offers a general supervised clinical experience whereby the student will rotate one morning every week with each site-specific physicist from the Department of Radiation Physics at MD Anderson Cancer Center.

Textbook/Supplemental Reading Materials

- Safety is No Accident. ASTRO. <https://www.astro.org/practice-support/quality-and-safety/safety-is-no-accident>

Course Objectives:

Upon successful completion of this course, students will demonstrate a practical understanding of radiation therapy workflows, as well as develop a better appreciation for patient-centered approaches in providing care

Specific Learning Objectives:

1. Define the radiation therapy workflow and personnel involved in each step.
2. Differentiate various imaging and treatment equipment in a radiation oncology clinic.
3. Explain the rationale behind setup and beam delivery techniques of each site
4. Compare motion considerations and motion management techniques of each site.
5. Demonstrate a deeper awareness of the value of teamwork in a radiation oncology clinic.

Student responsibilities and expectations:

Students will be expected to:

1. Attend supervised clinical experiences and record these experiences in the clinical log.
2. Participate in conversations with the instructors centered around the list of discussion points provided at the start of each supervised clinical experience session.
3. Refresh their theoretical understanding by referring back to their previous courses' textbooks as needed, based on what they observed in clinic.
4. Be familiar with all discussion points in preparation for the final oral examination.

Students will be divided into small groups of 2-3 to reduce disruption to the clinic during their observations. Every Wednesday morning, students will meet with the site-specific physicist at the same meeting location, and the disease-site-specific physicist will bring the students to the relevant clinical areas. At the start of the semester, students will be given a list of discussion points to draw their attention to important concepts. Students are encouraged to ask questions (at appropriate times during the clinical activities, in consideration of the patients). Students will be individually tested on the discussion points during a half-hour oral examination. It may be helpful to practice among classmates to be able to answer questions accurately and concisely. The oral examination format may be new to most students. This course will give students a chance to experience this oral examination format in preparation for the American Board of Radiology Part 3 Oral Examination that students will be taking in the future to become a board-certified medical physicist.

Grading System: **Pass/Fail**

Student Assessment and Grading Criteria:

Percentage	Description
Final Exam (20%)	Students will be tested on the discussion points from each clinical observation.
Participation and/or Attendance (80%)	Students are expected to attend clinical observation sessions and participate in group discussions.

CLASS SCHEDULE

Date	Duration (Hour(s) taught by lecturer)	Lecture Topic	Lecturer/s
5/20/2026	-	Introduction/Reading	Tze Yee Lim, PhD
5/27/2026	4	Gamma Knife	Yana Zlateva, PhD
6/3/2026	4	Head and Neck/Proton Therapy Center	Fahed Alsanea, PhD
6/10/2026	4	Breast Cancer	Yao Zhao, PhD
6/17/2026	4	Gynecologic Malignancies	Shiqin Su, PhD
6/24/2026	4	Gastrointestinal Tract Cancers	Luis Perles, PhD
7/1/2026	4	Central Nervous System/Pediatric Cancers	Muhammad Shafiq ul Hassan, PhD
7/8/2026	4	Hematologic Malignancies/Melanoma/Sarcomas	Tze Yee Lim, PhD
7/15/2026	4	Genitourinary Cancers	Sarath Vijayan, PhD
7/22/2026	N/A	Break (AAPM Annual Meeting)	N/A
7/29/2026	4	Thoracic Cancers	Christopher Peeler, PhD
8/5/2026	4	Treatment Planning & Conclusion	Tze Yee Lim, PhD and Paige Nitsch, MS
8/12/2026	4	Final Oral Examination	Tze Yee Lim, PhD