COVID SYLLABUS TEMPLATE
(Survey of Clinical radiation Therapy)

The University of Toledo
(Department of Radiation Oncology, Division of Medical Physics)
(UT HSC Course MPHY6110/8110)*

Instructor: E. Ishmael Parsai, Ph.D.
Email: e.parsai@utoledo.edu
Office Hours: Available by appointment
Office Location: Room 2050 DCC
Instructor Phone: (419) 383-5113
Offered: Fall 2021

Course Website: To be taught in person
Class Location: Rupert Center- Room 0005
Class Day/Time: Mondays, 1:30 – 3:30 PM
Lab Location: (DCC, Room 2050 Dosimetry Area
Lab Day/Time:
Credit Hours: 2

SPECIAL COURSE EXPECTATIONS DURING COVID-19

ATTENDANCE

The University of Toledo has a missed class policy. It is important that students and instructors discuss attendance requirements for the course. Students must perform a daily health assessment, based on based on **CDC guidelines,** before coming to campus each day, which included taking their temperature. Students who are symptomatic/sick should not come to class and should contact the Main Campus Health Center at 419-530-3451. *Absences due to COVID-19 quarantine or isolation requirements **are** considered excused absences*. Students should notify their instructors and these absences may not require written notice.

FACE COVERINGS

All students must wear face coverings while on campus, except while eating, alone in an enclosed space, or outdoors practicing social distancing. NO students will be permitted in class without a face covering. If you have a medical reason that prevents you from wearing a face covering due to a health condition deemed high-risk for COVID-19 by the Centers for Disease Control and Prevention (CDC), you should submit a request for an accommodation through the Student Disability Services Office (SDS) by completing the online application. Students will need to provide documentation that verifies their health condition or disability and supports the need for accommodations. If a student is already affiliated with SDS and would like to request additional accommodations due to the impact of COVID-19, should contact their accessibility specialist to discuss their specific needs.

SOCIAL DISTANCING

Students should practice social distancing inside and outside the classroom please follow signage and pay attention to the seating arrangements. Do not remove stickers or tape from seats and/or tables, this is there to provide guidance on the appropriate classroom capacity based on the recommended 6 feet of social distancing between individuals. Please be conscious of your personal space and respectful of others. Also be cognizant of how you enter and exit the room; always try to maintain at least 6 feet of distance between yourself and others.

DESKS AND WORK SPACES

Students will need to sanitize their desks and/or work space before class with the University provided sanitizing spray and paper towels their desks.

SPECIAL NOTES

It's important to note that based on the unpredictability of the COVID-19 virus things can change at any time so please be patience and understanding as we move through the semester. I also ask that you keep me informed of concerns you may have about class, completing course work/assignments timely and/or health concerns related to COVID.

*Required

CATALOG/COURSE DESCRIPTION*

An introduction to the field of clinical radiation oncology covering some basic topics in medical physics dosimetry, and a review of various treatment modalities.

COURSE OVERVIEW/ TEACHING METHODOLOGY

The aim of this course is to provide an overview of various modalities in radiation oncology in addition to providing introductory lectures to basic concepts of radiation dosimetry and medical physics. The students at MSBS and Ph.D. level are eligible to take this course upon their admission in medical physics program.

STUDENT LEARNING OUTCOMES*

Upon successful completion of this course, the student will be able to describe:

1. The physical and biological basis of radiation oncology
2. Develop some introductory understanding of radiobiology in cancer care
3. The main concepts in radiation dosimetry and clinical use of high energy photon and electron beams
4. The logic behind special procedures and methods of radiation delivery in modalities such as Intraoperative Radiation Therapy, Stereotactic Radiosurgery, and Brachytherapy.
5. Basics of radiation measurement, equipment used, and common protocols.
6. Use of radionuclide therapy and application of other radiopharmaceuticals in this field for treatment of cancer.

Concepts, terminology, and instrumentation used in radiation oncology quality assurance and radiation safety

PREREQUISITES AND COREQUISITES*

Consent of Instructor.

TEXTS AND ANCILLARY MATERIALS*

1. Technological Basis of Radiation Therapy (4th ed.)
   Authors: S.Levitt, J. Purdy, C. Perez, S. Vijayakumar
2. Introduction to Clinical Radiation Oncology (3rd ed.)
   Authors: Lawrence R. Coia, David J. Moyian Handouts provided by instructor
3. Hand out materials provided by the course instructor

TECHNOLOGY REQUIREMENTS

Class material including supplement to lecture notes will be distributed in PDF form and is available on a shared network drive.

ACADEMIC POLICIES*

Undergraduate Policies: http://www.utoledo.edu/policies/academic/undergraduate/
Graduate Policies: http://www.utoledo.edu/policies/academic/graduate/

If an instructor has evidence that an act of academic dishonesty has occurred, it may result in an automatic "F" being issued to the student or students involved. Examples of academic dishonesty include cheating on tests, having someone sit in for you to take a test on your behalf, copying another person's

work as your own (e.g. plagiarism), using outside sources without giving proper credit, using untrue excuses for missed or late work, etc.

COURSE EXPECTATIONS

1. Regular attendance in lecture sessions
2. Active participation in class discussions and activities
3. Completion of all reading assignments
4. Acceptable performance on all examinations

OVERVIEW OF COURSE GRADE ASSIGNMENT*

The weight for exams are listed below. The final grade will be determined based on relative performance of the class.

Midterm Exam: 50%
Final Exam: 50%

UNIVERSITY POLICIES*

Policy Statement on Non-Discrimination on the Basis of Disability (ADA)* The University is an equal opportunity educational institution. Please read The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance. Students can find this policy along with other university policies listed by audience on the University Policy webpage (http://www.utoledo.edu/policies/audience.html/#students).

Academic Accommodations* The University of Toledo embraces the inclusion of students with disabilities. We are committed to ensuring equal opportunity and seamless access for full participation in all courses. For students who have an accommodations memo from Student Disability Services, I invite you to correspond with me as soon as possible so that we can communicate confidentially about implementing accommodations in this course. For students who have not established affiliation with Student Disability Services and are experiencing disability access barriers or are interested in a referral to healthcare resources for a potential disability or would like information regarding eligibility for academic accommodations, please contact the Student Disability Services Office (http://www.utoledo.edu/offices/student-disability-services/) by phone: 419.530.4981 or email at StudentDisability@utoledo.edu.

ACADEMIC AND SUPPORT SERVICES*

Please follow this link to view a comprehensive list of Student Academic and Support Services (http://www.utoledo.edu/studentaffairs/departments.html) available to you as a student

SAFETY AND HEALTH SERVICES FOR UT STUDENTS*

Please use the following link to view a comprehensive list Campus Health and Safety Services available to you as a student.

INCLUSIVE CLASSROOM STATEMENT

In this class, we will work together to develop a learning community that is inclusive and respectful. Our diversity may be reflected by differences in race, culture, age, religion, sexual orientation, gender identity/expression, socioeconomic background, and a myriad of other social identities and life experiences. We will encourage and appreciate expressions of different ideas, opinions, and beliefs so that conversations and interactions that could potentially be divisive turn, instead, into opportunities for intellectual and personal development.

COURSE SCHEDULE*

WEEK	DATES		TOPIC	ASSIGNMENTS DUE
1	8-30-2021	EP	The Physical and Biological Basis of Radiation Oncology	Chp 1&2 Coia, Chp 1 Levitt + Handout materials
2	9-6		Labor Day Holiday	
3	9-13	DS	Introduction to Radiobiology	Chp 3 Coia+ Handout materials
4	9-20	EP	Dosimetry of Electron and Photon Beams	Handout materials
5	9-27	EP	Clinical Use of Photon and Electron Beams in Radiation Oncology	Chp 7, Levitt,+ Handout materials
6	10-4	PCI	Fundamentals of Treatment Planning, Clinical Sites and Staging	Handout materials
6	10- 8 (make up) 1:00 – 3:00 pm	EP	Data Collections and Applications, Information Management System	Handout materials
7	10-11	EP	Simulations, Patient Immobilization and Port Verification	Chp 6&8 Levitt+Handout materials
8	10-14		Fall Break (10-14 & 10-15)	
9	10-18	EP	Three-dimensional Treatment Planning, Conformal Therapy and IMRT	Chp 5, 9 &10 Levitt + Handout materials
10	10-25		**Midterm Exam**	
10	10-29 (make up) 1:00 – 3:00 pm	EP	Intraoperative Radiation Therapy	Handout materials
11	11-1	PCI	Cranial/Extra-Cranial Stereotactic Radiosurgery & Radiotherapy	Chp 11 Levitt+Handout materials
11	11-5 (make up) 1:00 – 3:00 pm	PCI	Clinical Applications of Radionuclides and Other Radiopharmaceuticals in Radiation Oncology	Article by Stephen Karesh: Radionuclide Therapy, Past Present, and Future, from Applied Radiology 1991
12	11-8	DS	Biological, Physical and Clinical Aspects of Hyperthermia	Handout materials + Lecture Notes
13	11-15	EP	Physical Principles and Clinical Applications of High and Low dose-rate Brachytherapy	Chp 12,14,15 Levitt+GEC ESTRO Handout of Brachy
14	11-22	EP	Latest Technological Advances in Radiation Oncology, Tomotherapy, Cyberknife, Heavy Particle Therapy, Nanotechnology, etc.	Chp 20 Coia + Lecture notes

*Required

WEEK	DATES		TOPIC	ASSIGNMENTS DUE
15	11/29	EP	Clinical Implementation of Technology and Quality Assurance In Radiation Oncology	Chp 21 Coia, Chp 16 Levitt + handout materials
15	12/3 Friday	EP	Review	
16	12/6	EP	Final Exam	

Remarks: Materials presented in this course may not be found in the textbook used for the course, as the suggested textbooks are used for reference guide. Some of the professors may supply you with their lecture material handout, but not all may provide reading materials. Therefore, it is the student's responsibility to take proper notes, understand the concepts presented in class and check other reference texts on the topic. As always, the student is encouraged to ask questions.