

**THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
DEPARTMENT OF PHYSICS**

Course #:	PHYS 5393 CRN 19785								
Course Title:	Optical Imaging for Medical Physics								
Credit Hrs:	3.0								
Term:	Fall 2021								
Course Meetings & Location:	MW 4:00 – 5:30 PM, 100 % synchronous online This section will be delivered online during scheduled times with your professor and other students. Please note required meeting days and times for this class. For additional course requirements, please refer below, as well as to announcements in Blackboard.								
Prerequisite Courses:	-								
Course Fee: (if applicable)	-								
Instructor:	Dr. Felicia S. Manciu								
Office Location:	PSCI 221 B								
Contact Info:	Phone # : (915) 747 8472								
	E-mail address: fsmanciu@utep.edu								
	Fax #: (915) 747 5447								
	Emergency Contact: (915) 747 5715								
Office Hrs:	M & W 2:30 PM – 4:00 PM								
Textbook(s), Materials:	Main textbook: The Essential Physics of Medical Imaging , by Jerrold T. Bushberg, J. Anthony Seibert, Edwin M. Leidholdt Jr., and John M. Boone, 2 nd edition, 2001.								
Course Objectives (Learning Outcomes):	The objective of the class is to provide students with knowledge about medical imaging technology and its complexity related to medical physics. During this course the students will learn from basic concepts used in medical physics to mechanisms that will enable them to interpret images.								
Grading Policy:	Grades in this course will be based on your scores on two written exams, in class quizzes, and a combined report with an oral presentation consisting of a subject of your choice. <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Midterm exam:</td> <td>30%</td> </tr> <tr> <td>Final exam:</td> <td>30%</td> </tr> <tr> <td>Report and Presentation:</td> <td>25%</td> </tr> <tr> <td>Quizzes:</td> <td>15%</td> </tr> </table>	Midterm exam:	30%	Final exam:	30%	Report and Presentation:	25%	Quizzes:	15%
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Course Activities/Assignments:	Exams, Quizzes, Report and Presentation It is essential that students become well versed in solving and analyzing problems in medical physics, which means developing the skills to set up a problem, achieve the final answer, as well as explaining their results. Exams will consist of problems similar to the explained examples in class and quizzes. Exams will be open book but closed notes.								

Make-up Policy:	An extension of the due date for the report and presentation, as well as the make-up of missing exams will be granted only in extraordinary circumstances.
Attendance Policy:	Attendance is mandatory.
Academic Integrity Policy:	Please see: http://academics.utep.edu/Default.aspx?tabid=23785
Civility Statement:	<ul style="list-style-type: none"> • Cell phones and pagers should be turned off during class time. • When absences occur, it is your responsibility to obtain handouts and notes from your peers. When possible you will complete the activities you have missed. • Academic integrity is to be practiced at all times.
Disability Statement:	<p>If you have a disability and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East Building, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.</p> <p>The student is responsible for presenting to the instructor any accommodation letters and instructions.</p>
Military Statement:	If you are a military student with the potential of being called to military service and/or training during the course of the semester, you are encouraged to contact the instructor at the beginning of the semester.
Accommodation Policy:	The University is committed to providing reasonable accommodations and auxiliary services to students, staff, faculty, job applicants, applicants for admissions, and other beneficiaries of University programs, services and activities with documented disabilities in order to provide them with equal opportunities to participate in programs, services, and activities in compliance with sections 503 and 504 of the Rehabilitation Act of 1973, as amended, and the Americans with Disabilities Act (ADA) of 1990 and the Americans with Disabilities Act Amendments Act (ADAAA) of 2008. Students requesting an accommodation based on a disability must register with the UTEP Center for Accommodations and Support Services .
Course Schedule:	<p>CHAPTER 1 – <u>INTRODUCTION TO MEDICAL IMAGING</u></p> <p>CHAPTER 2 – <u>RADIATION AND THE ATOM</u></p> <p>CHAPTER 3 – <u>INTERACTION OF RADIATION WITH MATTER</u></p> <p>CHAPTER 4 – <u>X-RAY PRODUCTION AND GENERAL (PROJECTION) RADIOGRAPHY</u></p> <p>CHAPTER 5 – <u>FLUOROSCOPY</u></p> <p>CHAPTER 6 – <u>IMAGE QUALITY</u></p>