RADI 6025
Clinical Therapy Rotation 1

Fall 2016

CLASS DAYS and TIME: Monday – Friday 8:00 a.m. – 5:00 p.m.

CLASSROOM: CTRC Building – Radiation Oncology Clinic

COURSE FACULTY: Niko Papanikolaou, Ph.D., Sotirios Stathakis, Ph.D., Alonso N. Gutierrez, Ph.D., M.B.A., Neil Kirby, Ph.D., Karl Rasmussen, Ph.D., James Prete, Ph.D.

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READ THIS DOCUMENT CAREFULLY - YOU ARE RESPONSIBLE FOR ITS CONTENTS.

COURSE DESCRIPTION AND OBJECTIVES

The first clinical rotation is designed to give an introduction and an overview of all the clinical processes and the basic safety training. In detail the student will cover the following topics: employee orientation, radiation oncology orientation, HIPAA training, introduction to radiation protection, introduction to nursing and introduction to simulation, introduction to LINACs, LINAC QA and warm up, monitor unit calculations, electronic medical records orientation, regulations and professional recommendations.

Pre-requisites – Completion of Year 1 & 2 and has passed the Core Knowledge Exam

Semester credit hours – 12

By the end of this course, each student should be able to:

- Understand the Radiation Process.
- Describe the simulation process, purpose of simulation and why the data is important for accurate patient treatment.
- Describe the LINAC treatment process, dose rates and MLS structure available on each LINAC, LINAC QA, and have a working knowledge of QA equipment.
- Understand electronic medical records and have a working knowledge of MOSAIQ.
- Demonstrate ability to accurately perform MU calculations for conventional SSD and SAD treatments.

COURSE ORGANIZATION

The student is assigned a mentor from the physics staff and performs clinical tasks under the mentor's direct supervision. A rotation is considered complete when all rotation assessments have been signed off by the mentor and student.

Materials – See below

Computer Access – Many of the presentations are given in the common lecture format and are accompanied by Pdf converted PowerPoint slide files. You are responsible for all information included in the lecture materials. However, you should not assume that all testable lecture material is found only in the posted materials. That is, lectures may be expanded and enhanced during in-class presentations. So, take good notes because any information discussed in class is

considered testable.

Reading Assignments – Required reading assignments are assigned throughout the rotations. Unless specifically noted by the instructor, anything in the required readings, whether emphasized in class or not, is considered testable on exams.

ATTENDANCE

In order to achieve the expected level of competency, students must be fully engaged. Therefore, attendance for every class session is expected. It is recognized that a student may occasionally arrive late to class due to unexpected traffic problems or inclement weather. However, chronic lateness is considered an unprofessional behavior that disrupts the learning environment for everyone else in the classroom.

TEXTBOOKS

Required: Click here to enter text.

GRADING POLICIES AND EXAMINATION PROCEDURES

A rotation is considered complete when all rotation assessments have been signed off by the mentor and student. Failure to complete a rotation or unsatisfactory progress in a rotation will be reviewed by the DMP Committee on Graduate Studies (COGS). The student will be notified in writing of their probationary status and will be given a plan for remediation.

Secure a passing grade for twenty one (21) monthly written exams on the assigned topics that will be covered during each rotation. Each exam is two hours long, and has up to 50 multiple choice questions. Passing grade is considered to be a score above 70%. In case of a failing exam grade, a second exam will be given within 7 days. After a second failed attempt, the student will be given a plan for remediation that has to be completed before the next examination.

Complete a comprehensive oral examination every 6 months. Oral examinations are considered complete when the oral evaluation form has been signed by the appropriate faculty mentor and student. A minimum of two faculty members must be present during the examination or else the examination will be rescheduled.

REQUESTS FOR ACCOMODATIONS FOR DISABILITIES

In accordance with policy 4.2.3, **Request for Accommodation Under the ADA and the ADA Amendments Act of 2008 (ADAAA)**, any student requesting accommodation must submit the appropriate request for accommodation under the American with Disabilities Act (ADA, form 100). to his/her appropriate Associate Dean of their School and a copy to the ADA Coordinator. Additional information may be obtained at http://uthscsa.edu/eeo/request.asp.

ACADEMIC INTEGRITY AND PROFESSIONALISM

Any student who commits an act of academic dishonesty is subject to discipline as prescribed by the UT System Rules and Regulations of the Board of Regents. Academic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an exam for another person, signing attendance sheets for another student, and any act designed to give unfair advantage to a student or the attempt to commit such an act. Additional information may be obtained at http://catalog.uthscsa.edu/generalinformation/generalacademicpolicies/academicdishonestypolicy/

TITLE IX AT UTHSCSA

Title IX Defined:
Title of the Education Amendments of 1972 is a federal law that prohibits sex discrimination in education. It reads "no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance."

University of Texas Health Science Center San Antonio's Commitment:
University of Texas Health Science Center San Antonio (UTHSCSA) is committed to maintaining a learning environment that is free from discriminatory conduct based on gender. As required by Title IX, UTHSCSA does not discriminate on the basis of sex in its education programs and activities, and it encourages any student, faculty, or staff member who thinks that he or she has been subjected to sex discrimination, sexual harassment (including sexual violence) or sexual misconduct to immediately report the incident to the Title IX Director.

In an emergency, victims of sexual abuse should call 911. For non-emergencies, they may contact UPD at 210-567-2800. Additional information may be obtained at http://students.uthscsa.edu/titleix/

EMAIL POLICY

Every student is issued a University e-mail address and account at the time of enrollment. As a matter of University Policy, communications between students and faculty that occur using the student's University e-mail address is considered official business. Therefore, students are expected to check their university email inboxes on a regular basis so that any announcements, instructions, or information regarding this course will be received in a timely way. Missed communications due to inadequate monitoring of incoming emails on the University's email server will never be a valid excuse for unsatisfactory academic progress.

USE OF RECORDING DEVICES

Recording of lectures and other learning activities in this course by any means (*e.g.*, video, audio, etc.) is only permitted if approved by the instructor or required for compliance with Americans with Disabilities Act (ADA).

ELECTRONIC DEVICES

Cell phones must be turned off during all class meetings and exams. Computers and electronic tablets are allowed only for participating in classroom activities (*e.g.*, viewing slides presented in lecture or conference materials). No texting, tweeting, emailing, web-surfing, gaming, or any use of electronic devices that is not directly connected with classroom activities is permitted.

Objectives Master Checklist
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Activity
Employee Orientation
Radiation Oncology Orientation
HIPPA Training
Introduction to Radiation Protection. Resident is able to: A) identify the sources of radiation within the department, B) describe the concepts of time, distance and shielding, C) explain the ALARA principle, D) describe the current allowed exposure limits to public, workers, fetus, and minors, E) describe the purpose and operation of a monitoring badge.
Introduction to Nursing. Resident understands the roles of physicians and nurses in the treatment process.
Introduction to Simulation. Resident is able to: A) describe the simulation process, B) describe the purpose of simulation, C) describe why data collected is important for accurate patient treatment.
Introduction to LINACs. Resident is able to: A) describe the treatment process, B) describe the energies and dose rates and MLC structure available on each LINAC, C) find treatment data in a chart.
LINAC daily QA and warm up. Resident is able to: A) describe the warm up process of each LINAC, B) list the QA measurements made and why they are important, C) list professional document(s) that recommend QA procedures/limits.
LINAC monthly QA. Resident is able to: A) describe the mechanical and dosimetric parameters checked and their limitations, B) have working knowledge of QA equipment, C) list professional document(s) that recommend QA procedures/limits.
Monitor Unit Calculations. Resident is able to: A) write the monitor unit calculation equation and describe each factor, B) demonstrate ability to accurately perform MU hand calculations for conventional SSD and SAD treatments.
Electronic Medical Record orientation. Resident understands what patient information is in MOSAIQ and how it is organized.
Regulations and Professional Recommendations: Resident is familiar with all Federal and State regulations and with recommendations of professional organization(s).
Professional Organizations: Resident is aware of the AAPM, ACMP, and ASTRO and has been encouraged to become a member.
Resident has read and understands the six basic requirements to graduate from the program.
Resident has read and understands the requirement to evaluate the program and mentors.
Resident has been informed upon entering the program that alterations and enhancements may occur to the curriculum during their tenure at the discretion of the Residency Committee. They will be given an one month notice of changes.

Activity
Monthly LINAC QA. Resident has performed QA on at least 2 LINACs per month.
IMRT QA. The resident is able to perform IMRT QA independently at the start of Rotation 2.
TG-142. Resident has a thorough understanding of QA procedures and tolerances for the various linacs
Participate in EPID QA. Resident is proficient with EPID QA by the end of rotation. *The resident can operate the EPID and explain how an image is formed.*
Participate in routine QA of the HDR unit. The resident should be able to perform the morning HDR QA by the end of **October**.
CT Simulator QA. Resident has participated in daily, monthly and annual QA.
LDR brachytherapy. Resident has participated in required prostate implant procedures.
Pinnacle External Beam Planning.
RADI7005 course completed successfully and the resident is proficient with basic 2D and 3D treatment planning with Pinnacle.
Pinnacle data collection guide for photons and electrons
Pinnacle physics tool: photon beam modeling
Pinnacle physics tool: electron beam modeling
In vivo/patient specific dosimetry. Complete Checklist R.2.A