Course Title: SCTC 5202 - Medical Dosimetry II

Prerequisites:
A grade of “B” or better in Medical Dosimetry I.

Textbook(s):

Course Goals:
This course will continue building upon the material introduced during Medical Dosimetry I. More details are discussed about the factors that affect dose delivered in radiation treatments and how these factors are accounted for in dose calculations. Methods of treatment planning techniques for various diseases using single and multiple field arrangements using photons and electrons are discussed. Advanced treatment planning techniques of conformal radiation therapy including 3D treatment planning, IMRT, IGRT, Gating, Protons, and Stereotactic are also discussed. The use of Brachytherapy in radiation therapy is addressed. Characteristics of sources utilized for treatment as well as determination of source activity and dose delivered are included. Methods and instruments utilized to apply Brachytherapy treatment planning techniques to clinical treatment situations are discussed. Finally, the Ethical Standards and procedures that have been set by the Medical Dosimetrist Certification Board (“the MDCB”) must also be discussed.

The course is accompanied by a laboratory giving students the opportunity to practice the material. The laboratory sections will be designed to accompany the corresponding lectures and will allow the students to gain hands on experience on advanced treatment planning problems, while using the state of the art software currently used in clinical facilities.

Topics Covered:
1) Advanced Dose Calculation techniques
2) Advanced Treatment Planning
3) Brachytherapy
4) Quality Assurance
5) Ethical Standards

Attendance Policy:
Class attendance is advised but is not mandatory, however class participation is important and can affect your final grade.
**Exams:**
The day of the exams is announced at the beginning of semester in the Class schedule and therefore make-ups will not be granted.
The absence from an exam will result in a grade of zero.
Exams will be closed-book and require students to demonstrate knowledge and skill.
The exam covers all material covered in the class prior to the exam. This includes material that was covered in previous exams.

**Homework:**
Late submissions and makeups are not permitted.

**Grading:**
The grades will be assigned as follows:
- 1st Midterm 20%
- 2nd Midterm 20%
- Final Exam 30%
- Homework 10%
- Labs 20%

**Accommodations for Students with Disabilities:**
Any student who has a need for accommodation based on the impact of a documented disability, including special accommodations for access to technology resources and electronic instructional materials required for the course, should contact me privately to discuss the specific situation by the end of the second week of classes or as soon as practical. If you have not done so already, please contact Disability Resources and Services (DRS) at 215-204-1280 in 100 Ritter Annex to learn more about the resources available to you. I will work with DRS to coordinate reasonable accommodations for all students with documented disabilities. [http://www.temple.edu/studentaffairs/disability/accommodations/](http://www.temple.edu/studentaffairs/disability/accommodations/)

**Student and Faculty Academic Rights and Responsibilities:**
Freedom to teach and freedom to learn are inseparable facets of academic freedom. The University has a policy on Student and Faculty and Academic Rights and Responsibilities (Policy #03.70.02) which can be accessed through the following: [http://policies.temple.edu/PDF/99.pdf](http://policies.temple.edu/PDF/99.pdf)

**CARE Team in the Dean of Students Office:**
Any student who has difficulty affording groceries or accessing sufficient food to eat every day or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the CARE Team in the Dean of Students Office for support. The CARE Team web address is careteam.temple.edu. Furthermore, please notify me if you are comfortable in doing so. This will enable me to provide any other resources that I may possess.