

MASTER SYLLABUS

COURSE NUMBER AND TITLE:

RAD 360-2 Fundamentals of Radiation Therapy

COURSE DESCRIPTION:

This course includes an introduction to the rationale for and methods employed in the treatment of cancer by radiation therapy. The role of radiation therapy and its relationship to other modalities utilized in the treatment of cancer are explored and defined. Also, an introduction to the principles and concepts of radiobiology.

COURSE OBJECTIVES:

1. Introduce and discuss the functions associated with radiation and environmental protection.
2. Demonstrate an understanding of radiation tolerance of tissues and organs.
3. Introduce and discuss the monitoring responsibilities and role of a radiation therapist.
4. Introduce and discuss various aspects of patient care, management, education, and record keeping.
5. Demonstrate an understanding of radiobiology.

COURSE OUTLINE:

PERCENTAGE:

- | | |
|-------------------------------------------------------------------|-----|
| 1. Radiation and environmental protection. | 10% |
| 2. Dose to critical structures. | 15% |
| 3. Monitoring the patient, treatment room, and treatment machine. | 35% |
| 4. Radiation therapy record keeping. | 15% |
| 5. Ethics. | 5% |
| 6. Professional interactions. | 5% |
| 7. Radiobiology | 15% |

MEANS OF STUDENT EVALUATION:

Grading Scale

- 93 - 100 = A
85 - 92 = B
77 - 84 = C
70 - 76 = D
0 - 69 = F

PREREQUISITES: Instructor approval.

TEXTBOOKS:

1. Washington, C. M., & Leaver, D. T. (2015). Principles and Practices of Radiation Therapy (4th Ed). St. Louis, MO: Mosby.
2. Optional : Travis, E.L. (1989). Primer of Medical Radiobiology (2nd Ed.) St. Louis, MO: Mosby – Year Book, Inc.
3. Optional: Vann, A. M. et al. Portal Design in Radiation Therapy (3rd Ed.) Columbia, SC. R.L. Bryan Company.