

Radixact® Physics Essentials

Product Training for the Radixact® Treatment Delivery System or TomoTherapy® Treatment Delivery System with iDMS® and Accuray Precision® Treatment Planning System.

The Physics Essentials course is designed for medical physicists responsible for performing commissioning and quality assurance tasks on the Radixact Treatment Delivery System. This course provides an overview of clinical operation with in-depth instruction on commissioning procedures and routine QA tools and practices.

The Physics Essentials course has two components: pre-work and in-class work. The theoretical foundation of system design and QA is learned by reviewing thoughtfully designed videos and reading assignments prior to attending class. The in-class portion provides opportunity to implement the theory learned in the pre-course assignments through guided, hands-on practice on an actual Radixact System, and discussion with peers. Completion of the course prepares the physicist to perform the necessary commissioning and testing to ensure the system is ready for clinical use.

NOTE: Physicists who create clinical treatment plans are advised to enroll in the separate Accuray Precision® Treatment Planning course for the Radixact System.

NOTE: This course does not cover the Radixact Synchrony® feature. In addition to the Radixact Physics Essentials course, Synchrony users should attend the Radixact Synchrony Physics course.

This course meets core curriculum required for implementation of a new Radixact system.

COURSE OBJECTIVES

Upon completion of this course, attendees will be able to:

- Describe system components and treatment geometries
- Explain how planning parameters influence dose calculations
- Summarize QA theory and methodology per AAPM task group recommendations

COURSE FORMAT

In-person

- Instructor-led presentations
- System demonstrations
- Hands-on labs

COURSE PRE-WORK

Review the *Physics Essentials Guide* (PEG)

DURATION

Four and one-half (4.5) days

TARGET AUDIENCE

Medical Physicists

PARTICIPANT BACKGROUND

Knowledge of the standards of practice in the field of radiation oncology

NO CE CREDITS OFFERED

SKILLS

Upon completion of this course, attendees will be able to perform the following tasks:

- Identify beamline components on a Radixact System
- Operate the Radixact System
- Perform commissioning, routine QA, and patient QA

Course Outline

Note: Course agenda is subject to change without notice.

DAY ONE

- Identify beamline components on an actual system
- Perform machine warm-up and calibration routines
- Practice scan/register/treat workflow on an anthropomorphic phantom
- Create a simple treatment plan

DAY TWO

- Verify system alignment
- Measure beam profiles in a water tank

DAY THREE

- Create a density model for treatment planning
- Perform IMRT dose calibration measurements
- Verify CTrue™ MVCT and ClearRT™ Helical kVCT image quality
- Calibrate the monitor unit display

DAY FOUR

- Verify coordination of couch, gantry, and MLC
- Perform daily, monthly, and post-service QA
- Create and deliver a patient QA plan

DAY FIVE

- Check plan quality and treatment progress
- Use the VitalHold™ Option for Surface Guided Radiation Therapy
- Final Summary