inholland university of applied sciences

Radiotherapy

Course guide 2026-2027

Semester	Spring (semester 2, term 3)
Inholland location(s)	Haarlem
Inholland faculty	Health, Sports & Social Work
Language of instruction	English
Cycle	Bachelor level
Number of ECTS	20

Content subjects

Theory
- Radiotherapy physics
- Radiobiology in practice
- Plan evaluations
- Image recognition
- Treatment Planning IMRT and V-mat
- Present treatment planning outcomes in a portfolio
- IGART
- Essay special techniques

Practical
- Practics in Treatment Planning
  - IMRT /V-mat of breast, pelvic, lung and head and neck region
- Practics in Radiotherapy Physics
- Practics in IGART techniques
- Clinical outplacement/ excursions (two days)

General
- IMRT /V-mat Treatment Planning, using CT, BEV, MLC and DVH
- IMRT treatment planning integrating radiobiology and radiophysics
- Patient Care
- Combination of Radiotherapy and others therapies.

Learning outcomes
- To develop skills in producing an optimal 3-dimensional and IMRT dose distribution of breast, pelvic and head and neck region
- To develop skills in Radiotherapy Physics treatment planning
- To develop skills integrating Radiobiology in treatment planning
- To evaluate the products as well as the process of preparation of the treatment of these patients.
- To develop skills in IGRT techniques.
- Further develop communicative and co-operative skills.
- Have insight into the role of the Radiotherapy-technician in relation to the organization of a Radiotherapy department in the Netherlands
- Be able to produce an optimal 3 D dose distribution
- Be able to produce an IMRT dose distribution
- Be able to argue the choices you made
- Be able to reflect on your products and your process

Mode of delivery, planned activities and teaching methods
- Group meetings
- Lectures
- Skills training using with and without lecturer
- Individual study
- Project and report writing in English
- Oral presentations of the report in English
- Skillslab training: training on Monaco treatment planning system and IGART system
- Clinical placement/excursion (max. two days)

Prerequisites and co-requisites

Prior practical and theoretical knowledge and experience with RT is necessary to complete the course. This course is only available for radiation therapy students (and radiology students under restrictions) from institutes which are member of the Erasmus Radiography Group (ERG). Application only through the ERG coordinator of the home university.

Recommended or required reading and/or other learning recourses/tools

- Study guide Radiotherapy on Moodle
- Literature in the library Inholland University of Applied Sciences Haarlem

Assessment methods and criteria

- Attending mandatory classes with a satisfactory contribution
- Practical examination by marked tasks
- Produce an optimal 3 dimensional and IMRT isodose distribution
- Evaluate all stages of / in the procedures
- Clinical placement
- Poster and presentation
- Practical exam

Lecturer(s)

Coordinator Radiotherapy: Mark Smit (mark.smit@inholland.nl)