

Image-Guided Radiation Therapy Hands-on course

You have a bachelor's degree or higher and want to boost your skills in IGRT. We offer RT professionals a programme on Image-Guided Radiation Therapy that is complementary to their basic training.

Introduction to the course

The various and rapid developments in the field of 3D imaging techniques, treatment planning and treatment delivery have led to more accurate and optimal radiotherapy (RT) treatments. Image-Guided Radiation Therapy (IGRT) is an example of a recent innovation and has been implemented in many RT clinics. During this course the RT professional will acquire the necessary knowledge and skills in the field of state-of-the-art Image-Guided Radiation Therapy with the focus on accurate treatment delivery.

The IGRT course has been developed by the research group Medical Technology of Inholland University (InhU) of Applied Sciences, together with professionals from the RT departments of the Erasmus Medical Centre (Erasmus MC), the Antoni van Leeuwenhoek Hospital – Netherlands Cancer Institute (NKI), the University Hospital Utrecht (UMCU), the UZ Brussel and the Vrije Universiteit medical centre (VUmc). This course is the core part of a complete educational module but can be followed separately.

The aim is an intensive course with optimum interaction between students and teachers. Therefore the number of participants will be restricted to 30, including the students that follow the complete module.

Content

Interactive teaching sessions, focused on situations in practice, are an important part of the course; various experts from renowned RT departments will share their experience in IGRT. Subjects discussed will be a.o.: advanced imaging for treatment planning and in-room verification, geometrical uncertainties and margins, and set-up verification using stereoscopic imaging. Clinical experts will elucidate the different IGRT approaches for head-and-neck, lung, breast and prostate cancer tumour sites.

The core parts of the course are practical hands-on sessions and demonstrations carried out at InhU and in the RT departments of the Erasmus MC, NKI, UMCU, UZ Brussel and VUmc. These sessions are given by a team of experts in the field on various systems. The possibilities of image fusion will be

explored during an intensive workshop guided by an expert of the NKI-AVL. Furthermore participants will perform imaging studies, analyse data obtained using various advanced imaging systems such as 3D and 4D CT, EPID, cone-beam CT, image fusion and infrared tracking. In addition experienced users in the RT departments will give a number of practical demonstrations including the use of CyberKnife, Novalis, MRI Linac, MRIdian (Cobalt MRI), Tomotherapy and VERO. In this way the participants of the course will gain experience and insight in IGRT techniques for various tumour sites.

Target group and aims

This hands-on course is suitable for students with a bachelor's degree or higher who have some experience in using patient imaging in modern radiotherapy. Potential participants include radiation therapy technologists (RTTs), medical physicists/radiation oncologists (in training) and medical engineers working in RT departments. RTTs, physicists or engineers working for companies producing RT products will also benefit from this course.

After completion of the hands-on course the student will be able to:

- understand the principles of multi-modality patient imaging and apply them in RT;
- critically analyse the possibilities and limitations of image fusion software;
- understand the principles of IGRT, including the influence of technical, physical and clinical factors and apply them;
- appraise the recent developments of in-room IGRT.

Organizers and teachers

The course coordinators are Mirjam Soumokil and Jelle Scheurleer; Monica Van de Burgt-Buijs (NKI) and Ingrid Kuijper (VUmc) are course advisors. The teaching faculty consists of radiation oncologists, medical physicists, medical engineers and RTTs from the Erasmus MC, NKI, UMCU, UZ Brussel and VUmc. The course will be held in the English language.

Further Information

For more information about the course please contact:

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For all practical information, including accommodation and public transport from Amsterdam railway station and airport to the course venue, please contact the secretariat of the course:

e-mail: gsw.academy@inholland.nl
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Type	Hands-on course
Level	post-graduate
Price	€ 1100,- (this fee includes most drinks during the breaks and 2 days with lunches lunches and the costs for two days of transfers to the different institutes)
Duration	Tue 5 APR 2016 - Sun 10 APR 2016
Studyload	40 hours
Venue	Inholland University of Applied Sciences, Haarlem;The Netherlands Erasmus Medical Centre, Rotterdam; Antoni van Leeuwenhoek Hospital – Netherlands Cancer Institute, Amsterdam; Universitair Ziekenhuis Brussel; Vrije Universiteit medical centre, Amsterdam; THE NETHERLANDS
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