TARGET GROUP
The course is aimed at trainees in radiotherapy, radiation oncologists who recognise a lack of basic radiobiological science or want to update their knowledge (i.e. for CME), medical physicists who wish to familiarise themselves with this field, physicians from other disciplines administering ionising radiation, and radiation therapists (RTTs).

COURSE AIM
The aim is to provide an introduction to radiation biology as applied to radiotherapy. It will cover the basic mechanisms of cell death/survival and the radiation response of tumours and normal tissues. Formulas of tissue tolerance will be explained. The biological basis for current approaches to the improvement of radiotherapy will be described including novel fractionation schemes, retreatment, IMRT, modification of hypoxia, hadron therapy, combined radiotherapy/chemotherapy and biological modifiers of tumour and normal tissue effects.

LEARNING OUTCOMES
By the end of this course participants should be able:
- To understand the biology of how ionizing radiation is able to effectively treat cancer
- To distinguish radiotherapy and its advantages from other cancer therapies
- To have the essential knowledge of radiobiology necessary for qualifying examinations

COURSE CONTENT
- A series of basic lectures introducing molecular and clinical radiobiology
- Mechanisms and models or radiation cell killing
- Linear-quadratic approach to fractionation
- Molecular basis of radiation response
- Radiobiology and tolerance of normal tissues to (re)treatment
- Alternative fractionation schedules in radiotherapy
- Tumour hypoxia and the microenvironment
- Combined radiotherapy and chemotherapy
- The volume and dose-rate effect in radiotherapy
- Biological response modifiers (tumours, normal tissues) and molecular approaches to therapy
- Protons and other particles in radiotherapy
- Radiation-induced malignancies.

PREREQUISITES
Before commencing this course you should:
- Ensure your knowledge of basic biology is at least high-school level
- Ensure your knowledge of basic physics is at least high-school level
- Familiarise yourself with access to the journals covering radiobiology related to radiotherapy.

LEARNING METHODS
- 31 hours of lectures
- 5 hours of tutorials
- 6 hours of discussions

METHODS OF ASSESSMENT
- MCQ
- Evaluation form

KEY WORDS
Radiobiology, radiation biology, radiation oncology radiotherapy.

WORKING SCHEDULE
The course starts on 7 March 2015 at 09:00 and ends on 11 March 2015 at 14:00. To be able to start on time, participants are encouraged to register on 6 March from 17:00 to 19:00.

LANGUAGE
The course is conducted in English. No simultaneous translation will be provided.
PRACTICAL ORGANISATION

COURSE ORGANISATION
For any further information please contact ESTRO:
Viviane Van Egten
E-mail: vvnegten@estro.org
Tel : +32 2 775 93 44
Fax : +32 2 779 54 94

COURSE VENUE
THON Hotel Brussels City Centre
Avenue du Boulevard, 17
1210 Brussels
www.thonhotels.com

TECHNICAL EXHIBITION
Companies interested in exhibition opportunities during this teaching course should contact ESTRO:
Viviane Van Egten
E-mail: vvnegten@estro.org
Tel : +32 2 775 93 44
Fax : +32 2 779 54 94

ACCOMMODATION
To book your room, please download the accommodation form from the ESTRO website: www.estro.org/school

PARTICIPANTS SHOULD REGISTER ONLINE AT:
WWW.ESTRO.ORG/SCHOOL

These pages offer the guarantee of secured online payments. The system will seamlessly redirect you to the secured website of OGONE (see www.ogone.be for more details) to settle your registration fee.

If online registration is not possible please contact us:
ESTRO OFFICE
Rue Martin V, 40 • B-1200 Brussels
Tel.: +32 2 775 93 39 • Fax: +32 2 779 54 94
E-mail: education@estro.org

REGISTRATION FEES
Please check the early deadline date on our website

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<th>EARLY FEE</th>
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<tr>
<td>In-training members*</td>
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*Radiation Therapist (RTT) members are eligible for the in-training fee

The fee includes the course material, coffees, lunches, and the social event.

Reduced fees are available for ESTRO members working in economically less competitive countries. Check the eligible countries and the selection criteria on the website of the ESTRO School.

ESTRO goes green: Please note that the course material will be available online. No course book will be provided during the courses.

ADVANCE REGISTRATION AND PAYMENT ARE REQUIRED. ON-SITE REGISTRATION WILL NOT BE AVAILABLE.
Since the number of participants is limited, late registrants are advised to contact the ESTRO office before payment, to inquire about availability of places. Access to homework and/or course material will become available upon receipt of full payment.

INSURANCE AND CANCELLATION
The organiser does not accept liability for individual medical, travel or personal insurance. Participants are strongly advised to take out their own personal insurance policies.

In case an unforeseen event would force ESTRO to cancel the meeting, the Society will reimburse the full registration fees to the participants, ESTRO ESTRO will not be responsible for the refund of travel and accommodation costs.

In case of cancellation, full refund of the registration fee minus 15% for administrative costs may be obtained up to three months before the course and 50% of the fee up to one month before the course. No refund will be made if the cancellation request is postmarked less than one month before the start of the course.