

PRICES	Course 5: Nuclear Medicine
Standard price	£665
University & Hospital Staff & all Trainees	£525
Full time Students	£280
Course 3 available at £115 if booked with any other course One or two day registration on Courses 4 & 5 is accepted and will be charged pro rata	

THE PHYSICS OF MEDICAL IMAGING

Course 5: Nuclear Medicine 13 - 16 March 2018

Name

Organisation

Address

Postcode(if UK) Tel No:

Fax No: Email:

Background experience:

How did you hear about this course? Course Flyer ICR website

Recommendation Other Please specify.....

I should like to enrol for Course(s): 1 2 3 4 **5** (Please circle)

Students please add: Tutor/Supervisor's signature

I enclose a cheque for the full amount of £ payable to:

"The Institute of Cancer Research"

or by Credit Card: MasterCard/Visa only accepted (tick as appropriate)

Master card Visa

Card No.

Expiry Date:..... Signature(Essential)

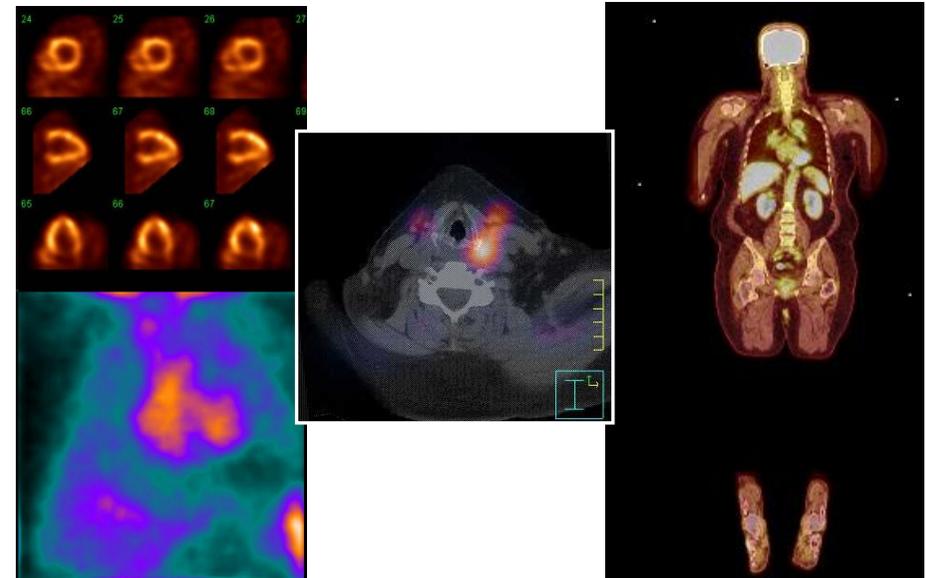
Address of Cardholder.....

Do you wish to receive accommodation details? Yes / No

Please fax/send or email this completed form, and forward payment to:

Louise Sear
Physics Department
The Royal Marsden NHS Foundation Trust
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UK Tel. +44 (0)20 8661 3075 Fax. +44 (0)20 8643 3812



The Joint Department of Physics
The Institute of Cancer Research and
The Royal Marsden NHS Foundation Trust

PROGRAMME DESCRIPTION

The ICR / Royal Marsden programme provides the necessary physics background that underpins day-to-day medical imaging physics activities. It is aimed primarily at new entrants to the profession, but should be of benefit to post-graduate students, post-doctoral research workers, physicist-managers, representatives of allied commercial organisations and anyone wishing to deepen or re-establish their understanding of the physics of medical imaging.

The faculty is composed mainly of physicists, many of whom are internationally renowned for their expertise. A selection of key talks delivered by clinicians and other scientists provides the necessary broader scientific and clinical perspective. Overviews of specialised or research related topics, such as MR Spectroscopy are given. There are many opportunities for informal discussions and there will be visits to the Department of Nuclear Medicine, Ultrasound, X-ray and Computed Tomography and the MR Unit of The Royal Marsden NHS Foundation Trust.

The programme consists of five separate courses. Each course is repeated annually. Registration on this form will be accepted for any combination of courses 1, 2, 3, 4 and 5. Cost (see back page for details) includes lunches and light refreshments and (with courses 2-5 only) a copy of Webb's Physics of Medical Imaging (2nd Edition, published 2012).

COURSE 5 – Nuclear Medicine (4 days)

This longstanding course is designed to teach the scientific principles upon which Nuclear Medicine imaging is based. It gives an introduction to the underlying physics and radiochemistry principles which form the basis of Nuclear Medicine before delivering a set of detailed lectures covering all aspects of imaging.

The course is run over 4 days (Tuesday – Friday). Each day is designed to cover a particular theme. The first day primarily covers radionuclides and radiation protection, the second day focuses on gamma camera and SPECT imaging, the third day is dedicated to PET/CT imaging. The fourth day concentrates on individual patient dosimetry / treatment planning for molecular radiotherapy.

The course is intended to be useful for medical physicists in training / post-graduate students as well as more experienced professionals seeking to refresh or expand their knowledge in key areas.

Contact: Dr I Murray , Tel: 020 8661 3715, e-mail: iain.murray@icr.ac.uk

Day 1: Radionuclides & Radiation Protection

- Physics for Nuclear Medicine
- Radiation Detectors
- Radiation Protection in Nuclear Medicine
- Radionuclide Production
- Radiopharmaceuticals
- Clinical Aspects of Nuclear Medicine

Day 2: Gamma Camera Imaging

- The Gamma Camera
- Nuclear Medicine Imaging Techniques
- SPECT Imaging
- Iterative Reconstruction
- Radiation Protection in Nuclear Medicine Therapy
- Image Processing Techniques
- Quality Control and Assessment of Gamma Cameras
- Advances in Gamma Camera Technology

Day 3: PET/CT Imaging

- PET Physics and Instrumentation
- Principles of CT imaging
- PET tracer production & molecular targeting
- Quantification & kinetic modelling in PET
- Clinical Applications of PET/CT
- PET in Radiotherapy
- Advances in PET Technology

Day 4: Internal Dosimetry

- Introduction to the MIRD Schema
- Quantitative Imaging
- Applications of Internal Dosimetry
- Radiobiology for MRT
- Dosimetry in Emerging Clinical Therapies
- Monte Carlo Techniques
- Dosimetry Practical

VENUE

The course is held on the Sutton campus of The Royal Marsden Hospital and Institute of Cancer Research:

http://www.icr.ac.uk/contact_us/sutton/index.shtml

Details of the course may also be viewed on the Physics Department website:

http://www.icr.ac.uk/medical_imaging_course