Hong Kong Institution of Physicists in Medicine
Certificate Course on Basic Engineering Physics

Course Content

Basic electrical principles

- Electricity in Hong Kong
- Wiring regulations
- General safety requirements
- Common electrical and electronics components used in imaging and radiotherapy equipment

Engineering principles of radiotherapy equipment

- Interaction between charged particle and electromagnetic fields
- Acceleration of electrons by static and time varying electric fields
- Engineering principles of therapy X-ray tubes and generators
- Engineering principles of linear accelerators
- Engineering principles of circular accelerators
- Commonly used megavoltage treatment equipment
- Heavy particle therapy equipment
- Engineering principles of radiotherapy simulators
- Cooling, control and interlock systems

Engineering principles of imaging equipment

- Engineering principles of diagnostic X-ray tubes and generators
- Radiography equipment
- Fluoroscopy equipment
- Computed tomography
- Gamma camera equipment
- Ultrasound equipment
- MRI equipment

Maintenance of Medical Equipment

- Breakdown maintenance
- Preventive maintenance
- Pre- and post-maintenance procedures, reporting, handover, and user testing
- Operation and maintenance log

Equipment Safety and management

- Classification and safety standards of medical equipment
- Hazards and safety associated with radiological equipment
- Protection and safety interlocks
- Warning signs and symbols
- Safety testing of medical equipment
- Equipment safety alert and notification
- Management of medical equipment

Engineering aspect of equipment QA

- QA of major radiological equipment
- Engineering aspect of equipment QA
- The role of maintenance staff on equipment QA
- Engineering aspect of safety tests

Date, Time and Venue:

The course will be held on:

Date	Time
01 June 2013	2:00pm-6:00pm
08 June 2013	2:00pm-6:00pm
15 June 2013	2:00pm-6:00pm
22 June 2013	2:00pm-6:00pm

Duration of course:
16 hours lectures, Q&A and examination

Venue:
Room 1102, 11/F, Li Shu Pui Block,
Nursing School, Hong Kong Sanatorium & Hospital

Speaker
KY CHEUNG, Ph.D., CertMedPhy, CEng, MIET, FHKIE
Senior Medical Physicist, Medical Physics & Research Department
Hong Kong Sanatorium & Hospital

Target participants:
Physicists, doctors, radiographers, radiation therapist, biomedical engineers.
Preference will be given to applicants who are currently working with radiological equipment in hospital environment.

Assessment:
A written (MCQ) examination will be held at the end of the course.

Accreditation:
This course has been approved by the Hong Kong Institution of Physicists in Medicine.
CME accreditation by College of Radiologists
(Max. 15 points, 4 points/day awarded under Category B, Code: AM41173C)
CPD accreditation by Hong Kong Radiographer's Board
(pending for approval)

Course Award:
A certificate of completion of the course "Engineering Physics" will be issued to the applicants who had passed the examination with full attendance.
An attendance certificate will be issued if a student has a full attendance but fails the examination.

Teaching Medium
The course will be conducted in English, and the written examination will be in English.

Tuition Fee*:
HKD $600 (HKIPM member)
HKD $1,200 (member of HKART and HKRA)
HKD $4,000 (NON-HKIPM member)

*A 50% discount will be given to trainees from the hospital that provide venue for training.

Enrollment:
Completed registration form shall be sent with a cheque for the tuition fee to Ms. Ruby Ho, Secretary of the Hong Kong Institution of Physicist in Medicine at the address give below. The cheque should be crossed and made payable to "Hong Kong Institution of Physicist in Medicine". (Full payment must be made and no refund for withdrawal will be entertained due to any circumstances).

Ms. Ruby Ho
Medical Physics & Research Department
8/F, Li Shu Fan Block
Hong Kong Sanatorium & Hospital
2 Village Road
Happy Valley
Hong Kong Island .

Closing Date for Application:
Friday, 24 May 2013