HKCRRT Certified Nuclear Medicine Radiographers

1. Admission of Members

1.1 A candidate may admit as a Member of the HKCRRT (Nuclear Medicine) and is entitled to use the title MHKCRRT(NM) if satisfying the enlisted requirements.

1.2 Being a Radiographer registered with the Hong Kong Radiographers Board; **AND**

1.3 Have had 5 years of post-registration working experience in radiography, medical imaging or radiotherapy; **AND**

1.4 Academic requirements

1.4.1 A recognized Master degree or above in Nuclear Medicine; **OR**

1.4.2 A recognized Bachelor degree in medical imaging or related fields or Professional Diploma in Diagnostic Radiography (PDDR) of the Hong Kong Polytechnic University or equivalent, plus a Nuclear Medicine specialist qualification recognized by the College (as outlined below Section 2); **AND**

1.5 Have completed the required clinical training or experience (as outlined below in Section 3); **AND**

1.6 Being recommended by the Council.

2. Part A: Academic Requirements

Syllabus

(A) Basic NM Physics

- Type of radiation
- Half-life and radioactive decay
- Interactions of radiation
- Detection instruments
- Basic radiation protection
- Statistic of radiation counting

(B) Basic Nuclear Medicine Instrumentation and Quality control

- Introduction to gamma camera and computer
- Concepts of spatial resolution, energy resolution, sensitivity, linearity, and uniformity
- Common QC procedures
- Analyzing and evaluating the QC results
- Recognizing related artifacts

(C) Introductory Radiopharmacy

- Measuring and calculate activity
- Use of dose calibrators
- Commonly used radiopharmaceuticals and their preparation, indication, pharmacokinetics, bio-distribution and dosages

- Quality control procedures for common radiopharmaceuticals

(D) Radiation Safety in Nuclear Medicine

- Radiation hazards and dosimetry
- Basic principles in radiation protection: Time, distance and shielding
- Personnel monitoring
- Handling and disposal of radioactive materials
- Radiation surveillance
- Use of survey meters
- Decontamination procedures

(E) Basic Nuclear Medicine Clinical Procedures

Patient care in NM

- Patient assessment
- Patient monitoring: Vital signs, sedation, oxygen supplies and vital lines
- Proper communication with patients
- Verifying patient identification
- Informed consent
- Female patients of child-bearing age
- Infection control
- Vasovagal and anaphylactic reactions
- Basic pharmacology
- Patient safety in NM
- Recognizing and responding to medical emergency conditions
- Patient preparation in common NM procedures

Basic NM imaging

- **Image acquisition**
  - Concept of modes of acquisition: static, dynamic, gated and SPECT
  - Choice of collimators and their applications
  - Selecting acquisition parameters

- **Common NM procedures, key scintigraphy anatomy**
  - Bone scan
  - Renal scan
  - Cardiac
  - Thyroid scan
  - Others

- **Radiopharmaceutical administration**
  - Common routes of administration
  - Venipuncture / cannulation techniques
  - Misadministration

3. Part B: Clinical Requirements

3.1 Candidates are required to complete 400 NM examinations within a 2-year period. The 400 NM examinations shall include:

- Not less than 100 examinations of Skeletal and Infection Imaging

- Not less than 100 examinations of Cardiac
- Not less than 50 examinations of Renal
- Not less than 50 examinations of Endocrine
- Not less than 30 examinations of Paediatric

3.2 The clinical component requires the candidate's Supervisor to acknowledge completion of the required clinical examinations.

4. HKCRRT Certification Examination for NM

4.1 A NM specialist qualification is available to candidates who have attained a grade of 75% or above in an examination set by the NM Faculty Committee of HKCRRT **AND** performed the required clinical training as outlined above in Section 3.

4.2 The Certification Examination will involve a 3-hour paper consisting of not more than 150 multiple choice questions.

4.3 The approximate percentages of questions related to each topic are listed below:

Basic Nuclear Medicine Physics	*15%*
Basic Nuclear Medicine Instrumentation and Quality control	*10%*
Introductory Radiopharmacy	*10%*
Radiation Safety in Nuclear Medicine	*10%*
Basic Nuclear Medicine Clinical Procedures	*55%*
	100%

5. Admission of Fellows

5.1 A candidate may admit as a Fellow of the HKCRRT and is entitled to use the title FHKCRRT (Certified NM Radiographer) if satisfying the enlisted requirements.

5.2 Being a Radiographer registered with the Hong Kong Radiographers Board; **AND**

5.3 Academic & clinical requirements

5.3.1 A recognized Doctorate in Nuclear Medicine with 8 years of post-registration clinical experience; **OR**

5.3.2 A recognized Master degree in Nuclear Medicine or a NM specialist qualification recognized by the HKCRRT; plus 3-year full time equivalent post specialization clinical experience of NM; **AND**

5.4 2 publications in peer-reviewed journals; **AND**

5.5 2 episodes in teaching / lecturing / presentation in open conferences; **AND**

5.6 Being recommended by the Council.

5.7 The clinical experience component requires the candidate's Specialty Supervisor to acknowledge completion of the requirements.

5.8 If applicants apply for fellowship directly, the clinical requirement as stated in Section 3 should be fulfilled.

6 Continuing Professional Development (CPD)

6.1 Once certified in Nuclear Medicine (NM), the radiographer must complete 45 CPD credits in each triennium, of which 15 credits are relevant to Medical Dosimetry in order to maintain the certified specialist credential.