

Medical Physics Certification in Asia-Pacific

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Asia-Oceania region:
diverse geographically, culturally,
economically & technologically.



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IOMP Regional Organizations in Asia





**ASIA-OCEANIA FEDERATION OF ORGANIZATIONS
FOR MEDICAL PHYSICS**

Collaborating/supporting international organizations e.g. IAEA initiatives on strengthening medical physics in radiation medicine. These include defining the role and responsibilities of medical physicists; education, training, and professional **certification of clinical medical physicists**; staffing levels of medical physicists; and raising awareness of the profession.

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Country	Post-grad Programs (MS, PhD)	Required on-the-job training	Certification or Accreditation	The post-graduate education and clinical training of medical physicists
Australia	✓	✓	✓	
Bangladesh	✓	✓	✗	
China	✓	?	✗	
Hong Kong	✓	✓	✗	
India	✓	✓	✓	
Indonesia	✓	✓	✗	
Japan	✓	✓	✓	
Malaysia	✓	✓	✗	
Mongolia	✗	✗	✗	
Nepal	✗	✗	✗	
New Zealand	✓	✓	✓	
Philippines	✓	✓	✗	
Singapore	✗	✓	✗	
South Korea	✓	✓	✓	
Taiwan	✓	✓	✓	
Thailand	✓	✓	✗	

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Certification Status in Asia-Pacific

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Australia/ New Zealand

1977 ACPSEM formed



1987 Start of certification of MPs in Radiotherapy QA followed by Radiology (2007), Nuclear Medicine (2013) and Radiopharmaceutical Scientists (2018)

2019 Currently 441 certified MPs and 8 RPS

Courtesy of Angela Wong

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Eligibility to certifying examination of medical physicists

Since 2018, MPs now complete TEAP (a structured 3-5 yr in-service training program) to be eligible for certification.

Certification Requirements:

- Masters (or PhD) in Medical Physics
- Undergraduate degree majoring in physics
- Completion of TEAP (3-5 yr ACPSEM in-service clinical training program)
- Pass in both written and practical examinations
- Research and publication in a peer reviewed journal
- Presentation at a national/international conference

Courtesy of Angela Wong

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Hong Kong



Hong Kong Association of Medical Physics
香港醫學物理學會

Hong Kong Association of Medical Physics (HKAMP)

- Organization founded in 1985
- Professional certification scheme started in 2006
- No. of medical physicists certified as in June 2019: 58
- IMPCB accreditation: April 2018
- Certification specialties:
 - Radiotherapy Physics
 - Imaging Physics
 - Medical Health Physics

Courtesy of

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Hong Kong

Hong Kong Institution of Physicists in Medicine (HKIPM)

- Organization founded in 2011
- Medical Physicists Certification Board established in 2013
- IMPCB accreditation on 11 November 2015
- Certification specialties:
 - Radiation Oncology Physics
 - Medical Imaging Physics
- Number MP certified as in June 2018: 28



Courtesy of KY Cheung



Photos taken during IMPCB accreditation visit in Nov 2018

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Japan Society of Medical Physics

Japan

1987 started by JRS. Number of medical physicists first certified was 70. The number was around 100 for 15 years.

2000 JSMP formed.

2003 certification emphasized.

The government supports certified medical physicists is necessary for reimbursement for high-precision therapy (such as IMRT).

2019 ~1180 certified MPs

Courtesy of Hajime MONZEN

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Revision of eligibility to certifying examination of medical physicists (2003 & 2017)

Before 2003:

- Master (or Ph D) of Physical Sciences
- + Clinical experience (more than 2 y)

After 2003:

1. As above
2. Master (or PhD) of Radiological Technology
- + Clinical experience (more than 2 years)
3. Bachelor of Radiological Technology
- + Paper presentations to medical physics related meetings
- + Clinical experience (more than 5 y)

since 2009 JBMP	2017 onwards	1, 2 On going
		3 Phased out

Courtesy of Hajime MONZEN

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South Korea

1990 started by KSMP.

- Number of medical physicists first certified was 3.
- The number was around 87 for 25 years.

The government partially supports to reimburse medical physicist working for some high-precision radiotherapy (eg. IMRT, SRS, and SBRT).

Courtesy of Geon-Ho Jahng

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Eligibility to certifying examination of medical physicists

Those who hold a master's degree or higher and have a clinical career of 3 years or more from among the following:

1. Those who have completed a graduate degree program approved by the KSMP
2. Those who have completed a clinical academy/resident program approved by the KSMP
3. Those who have obtained the international qualifications approved by the KSMP
4. Those who have completed Basic Medical Physics course supervised by KSMP

Courtesy of Geon-Ho Jahng

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Taiwan

1996 - Chinese Society of Medical Physicist, Taipei (CSMPT) established

1999 - Number of first certified medical physicists was 22.

2019 - almost 400 members in CSMPT, more than 230 certified therapeutic medical physicists and about 10 diagnostic medical physicists servicing in hospitals and universities.

Courtesy of Ming-Hsiang Liou

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Taiwan

Eligibility and Renewal

The prerequisite for medical physicist board certification examination requires 3 to 4 years of clinical training after attaining master's degree, and 2 years of clinical training after PhD degree.

All certification renewal requires 500 course points of continuing education every 5 years.
e.g. annual meeting 30 points/day, monthly meeting 15 points/2hrs, general education 2 points/hr.

Courtesy of Ming-Hsiang Lion

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Education and Training of Medical Physicists
Competency of Clinically Qualified Medical Physicists
Certification Structure

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Two key outcomes from RAS6038

2003-2012



Objective	Progress
Development of guides for clinical training of medical physicists in the disciplines of ROMP, DRMP or NMP.	The 3 guides developed <i>Available in English, Russian, French and Spanish</i>
Trialling of the programs in a number of member states.	4 ROMP trials 3 DRMP trials 3 NMP trials



RAS6087

Four year IAEA/RCA project 2018-2021 on medical physics clinical training.
Emphasis on TCDC, continuing the development of AMPLE, setting guidelines for clinical training.

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Asian countries



IMPCB
INTERNATIONAL MEDICAL PHYSICS
CERTIFICATION BOARD

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Medical Physics Certification in Asia-Pacific

Steady Growth

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