



ACPSEM

Australasian College of Physical Scientists & Engineers in Medicine

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ACPSEM Registration Policy



Contents

1	PURPOSE.....	3
2	SCOPE.....	3
3	KEY ROLES AND RESPONSIBILITIES	3
4	DEFINITIONS.....	4
5	ACPSEM REGISTRATION FRAMEWORK.....	4
6	ADMISSION TO THE REGISTER	5
7	PRINCIPLES APPLYING TO EXPERIENCED CANDIDATES	6
8	REQUIREMENTS FOR EXPERIENCED CANDIDATES	7
9	MAINTENANCE OF REGISTRATION	8
10	REMOVAL FROM THE REGISTER.....	9
11	RE-ENTRY TO THE REGISTER	10
12	APPEALS.....	10
	APPENDIX 1: ACPSEM ADAPTED CANMEDS FRAMEWORK.....	12
	APPENDIX 2: COMMON AREAS OF EXPERTISE FOR BESPOKE ASSESSMENT PATHWAY	12



1 Purpose

The primary purpose of registration for health care professions is to protect the public from harm due to issues linked to professional practice.

Medical Physicists and Radiopharmaceutical Scientists (RPS) as yet are not registered professions under the Australian Health Practitioner Regulation Agency in Australia and the Health Practitioners Competence Act in New Zealand.

As the recognised professional body representing Medical Physicists and Radiopharmaceutical Scientists in Australia and New Zealand, the ACPSEM has established robust processes to evaluate the professional competence of both Medical Physicists and Radiopharmaceutical Scientists.

ACPSEM maintains a publicly accessible register of individuals who have demonstrated competency to practice safely and independently in their chosen specialty in Australia and New Zealand and who are continuing to maintain those skills by demonstrating sufficient commitment to continuing professional development.

The purpose of ACPSEM's Training Education and Assessment Program (TEAP) Certification is to equip graduates with broad expertise in their area of specialty while the purpose of registration is to ensure that any person on the ACPSEM register is a safe and competent practitioner.

Five categories of registration are currently recognised:

- i. Register of Medical Physics Specialists for Radiation Oncology (ROMP)
- ii. Register of Medical Physics Specialists for Nuclear Medicine
- iii. Register of Medical Physics Specialists for Radiology
- iv. Register of Radiopharmaceutical Scientist Specialists (RPS)
- v. Register of Medical Physics Specialists via Bespoke Assessment pathway

2 Scope

This document specifies the principles behind and the mechanisms for attaining ACPSEM registration as a Medical Physicist or Radiopharmaceutical Scientist and the requirements for maintaining that registration.

3 Key Roles and Responsibilities

The Professional Standards Board (PSB) is responsible and accountable for setting the overall procedure for registration and provision of detailed guidelines to ensure best practice, robust, and fair assessment processes.

Each specialty Certification Panel is responsible for setting detailed expectations of knowledge, skills and experience to be demonstrated to achieve registration in their specialty. They are also responsible for oversight of the assessment of a candidate in line with guidelines provided by the PSB, and ensuring any assessors appointed receive sufficient training to carry out assessment of candidate in line with the Registration Policy.

TEAP Coordinators are responsible for the processing of applications in line with guidance from the PSB and Certification Panels.

Registration candidates are responsible for ensuring that evidence of knowledge, skills and experience is submitted in line with this procedure and associated documents, and that they comply with timelines and requests from ACPSEM as their application is processed.



4 Definitions

Definition of a Medical Physicist

Medical Physicist is a health professional, with specialist education and training in the concepts and techniques of applying physics in medicine and practices in one or more subfields (specialities) of medical physics.

A Medical Physicist is a professional who applies the principles of physics to medicine to enhance the safety, accuracy, and effectiveness of medical technologies, diagnostics, and treatments. Medical Physicists work in clinical, research, regulatory, and industry settings, ensuring the optimal application of physics-based techniques in healthcare.

There are three main areas of specialisation for medical physicists:

Radiation Oncology Medical Physicist (ROMP)

Nuclear Medicine Medical Physicist

Radiology Medical Physicist

The latter two specialisations are grouped under an umbrella term of Diagnostic Imaging Medical Physicist (DIMP). This policy uses both the collective term DIMP and the specific terms radiology medical physicist and nuclear medicine medical physicist, as applicable.

Other areas of specialization include, but are not limited to:

Radiation Safety and Protection

Non-Ionising Medical Physics

Physiological Measurement & Bioinstrumentation

Computational & AI-Based Medical Physics

Definition of a Radiopharmaceutical Scientist

A Radiopharmaceutical Scientist (RPS) is a health professional with a chemistry, pharmacy or other appropriate science background and who is involved in the design, manufacture and analysis of radiopharmaceuticals. By utilising their scientific knowledge and analytical skills, RPS also provide knowledge and guidance on the safe and efficacious use of these products to ensure their suitability for clinical application.

5 ACPSEM Registration Framework

The ACPSEM Registration framework is based on the [CanMEDs competency-based framework](#) that identifies and describes the abilities required to effectively meet the health care needs of the people they serve.

The framework is structured into seven domains of expertise:

- i. **The Medical-Scientific Expert in the field of Medical Physics or Radiopharmaceutical Science**
Medical Physicists and Radiopharmaceutical Scientists integrate application of a scientific approach, clinical knowledge and skills, and professional values in our provision of high-quality and safe patient-centred care. The Medical-Scientific Expert is the central role in the expert domains framework.
- ii. **The Communicator**
As Communicators, Medical Physicists and Radiopharmaceutical Scientists form relationships with other health care professionals, patients, their families and that facilitate the gathering and sharing of essential information for effective health care.
- iii. **The Collaborator**
As Collaborators, Medical Physicists and Radiopharmaceutical Scientists work effectively with other health care professionals to provide safe, evidence based, high-quality, patient-centred



care.

iv. **The Leader**

Medical Physicists and Radiopharmaceutical Scientists engage with others to contribute to a vision of a high-quality, evidence based, health care system and take responsibility for the delivery of excellent patient care through their activities as scientists, administrators, scholars, or teachers.

v. **The Health Advocate**

As Health Advocates, Medical Physicists and Radiopharmaceutical Scientists contribute their expertise and influence as they work with communities or patient populations to improve health. Medical Physicists and Radiopharmaceutical Scientists work with those they serve to determine and understand needs, speak on behalf of others when required, and support the mobilisation of resources to effect change.

vi. **The Scholar**

As Scholars, Medical Physicists and Radiopharmaceutical Scientists demonstrate a lifelong commitment to excellence in practice through continuous learning, by teaching and supporting others, evaluating evidence, and contributing to scholarship.

vii. **The Professional**

Medical Physicists and Radiopharmaceutical Scientists are committed to the health and well-being of individual patients and society through ethical practice, high personal standards of behaviour, accountability to the profession and society, profession-led regulation, and maintenance of personal health.

See Appendix 1: ACPSEM Adapted CanMEDS framework for a diagrammatic representation of how these domains overlap.

6 Admission to the Register

Admission to the Register is available via a number of routes.

- i. The most common route to registration is by certification through completion of the TEAP. Details of TEAP requirements can be found in the [TEAP admission and enrollment policy](#) and the [Certification policy](#). Certification through TEAP leads automatically to eligibility for registration.
- ii. Historically, there were a variety of routes leading to admission to the register such as through ARECQA (Accreditation in Radiotherapy Equipment Commissioning and Quality Assurance), accreditation in Radiology Medical Physics and accreditation in Nuclear Medicine Medical Physics. These routes are now closed.
- iii. Via assessment of competence as an experienced candidate.



7 Principles applying to experienced candidates

Experienced candidates shall demonstrate competence against the seven domains of expertise in the ACPSEM registration framework (see section 5).

7.1 ROMP, DIMP (Radiology and Nuclear Medicine) and RPS Pathway

For the Medical-Scientific Expert domain candidates must demonstrate evidence of competency to a level equivalent to that obtained in the relevant ACPSEM TEAP.

However, it is recognized that experienced candidates will not necessarily be competent in every area of scientific knowledge and clinical skills that are required for completion of the ACPSEM TEAP but will bring with them skills and competence reflecting their own training and experience.

However, there are certain areas of scientific knowledge and clinical skills that a ROMP, DIMP or RPS must have competence in to practice safely. These are defined as essential competencies or requirements.

For the purposes of admission to the register for experienced candidates, competencies or requirements of the TEAP clinical training guides for Radiology, Nuclear Medicine, Radiation Oncology and Radiopharmaceutical Science have been identified as falling into one of two categories:

- Essential competencies or requirements: Experienced candidates must be able to demonstrate sufficient skills and experience in these areas.
- Desirable competencies or requirements: Experienced candidates should ideally be able to demonstrate skills and experience in these areas, but they are not mandatory for registration as an experienced Medical Physicist and Radiopharmaceutical Scientist.
- Statements of skills, knowledge and experience the candidate possesses, and evidence in support of these statements is required as part of the application process.

The ACPSEM [Registration Procedure](#) provides more details.

7.2 Bespoke Assessment pathway

For those candidates who practice as Medical Physicists but not specifically in the domain of ROMP or domains of DIMP, assessment is based on the candidate's declared practice field via the Bespoke Assessment pathway. Common practice fields are listed in Appendix 2, while provision exists for candidates to describe their own practice field if none of the listed fields are appropriate.

7.3 Overseas Certifications and Registrations

There are a variety of overseas certifications or registrations for Medical Physicists. It is recognised that over time experienced candidates will have fulfilled a variety of requirements to achieve these registrations and certifications, and they will not be exactly equivalent to ACPSEM requirements.

Given ACPSEM is working towards national registration in both Australia and New Zealand, ACPSEM demonstrates equity by taking the achievements these registrations into account in its assessment of candidates. Examples of selected evidence will be requested during the registration assessment process.



8 Requirements for experienced candidates

8.1 Experienced candidates must demonstrate the following

8.1.1 Academic Qualifications

Medical Physicists

- Hold an appropriate undergraduate degree (to Australian Qualifications Framework Level 7 or above - usually called Bachelor) equivalent to an Australian or New Zealand degree majoring in Physics or Engineering.
- A relevant postgraduate degree (to Australian Qualifications Framework Level 9 or above - usually called Master or PhD) specifically relevant to Medical Physics and including a significant research component.

Radiopharmaceutical Scientists

- Hold an appropriate undergraduate degree (to Australian Qualifications Framework Level 7 or above - usually called Bachelor) equivalent to an Australian or New Zealand degree in chemistry, medicinal chemistry, pharmacy, pharmacology or other relevant discipline.
- A relevant postgraduate degree (to Australian Qualifications Framework Level 9 or above - usually called Master or PhD) in chemistry, medicinal chemistry, pharmacy, pharmacology or other relevant specialty.

Degree requirements for both Medical Physicists and RPS may be modified if the candidate is able to demonstrate extensive work experience and meet all other requirements.

8.1.2 Experience

Candidates, other than those holding overseas certifications or registrations, must have a minimum of 6 years' full time equivalent recent experience practicing as a Medical Physicist or RPS, excluding university studies and excluding clinical training.

8.1.3 Demonstration of competence in Domains of Expertise

i. Medical-Scientific Expert

For ROMP, DIMP (Radiology and Nuclear Medicine) and RPS

Candidates must demonstrate evidence of competency in the essential areas as defined in the Registration procedure. Evidence of competence in desirable areas is beneficial but not mandatory to the application.

For candidates holding registration or certification evidence is not required to be submitted at the time of application. Examples of selected evidence will be requested during the registration assessment process.

For Bespoke Assessment pathway

The candidate shall self-nominate the field of Medical Physics in which they are competent to practice, and present evidence of that competence. This could include some of the ROMP or DIMP competencies, but the nominated field of practice must not imply competence as a ROMP or DIMP. The list of common practice fields is defined in appendix 2.

This competence should include evidence across the whole range of domains of expertise in section 3, but with emphasis on the medical-scientific expert as other domains are dealt with below.

ii. The Communicator

iii. The Collaborator

iv. The Leader

v. The Health Advocate



Specific evidence to these domains should be provided via the candidates own self- reflection and feedback from two referees.

vi. **The Scholar**

Evidence of research capabilities through such things as publications in peer reviewed scientific journals, presentations at national or international scientific conferences, or major reports on original work.

Demonstration of on-going commitment to CPD in their current context.

vii. **The Professional**

Specific evidence to this domain should be provided via the candidates own self- reflection and feedback from two referees.

8.1.4 English language competency

A minimum standard of command of the English language is required in order to practice Medical Physics and Radiopharmaceutical Science in Australia and New Zealand and is expected of all those who achieve ACPSEM registration, irrespective of the country in which they work. A command of written and spoken English to a standard that enables the Medical Physicist or Radiopharmaceutical Scientist to communicate effectively in professional settings is required.

Details of the expected standard are set out in the Registration Procedure.

9 Maintenance of Registration

Entry to The ACPSEM Register of Qualified Medical Physics Specialists and Radiopharmaceutical Scientists constitutes a binding agreement that the registrant will:

1. Abide by the ACPSEM Code of Ethics (whether or not the registrant is an ACPSEM member);
2. Agree for the registrant's name, specialty and principal place of practice and expiry date if relevant, to be publicly available and published on the Register to be made available by the ACPSEM through various means including on the ACPSEM website;
3. Provide permission for the ACPSEM to state whether the registrant is on the Register to employers or regulators;
4. Maintain Continuing Professional Development (CPD) in accordance with ACPSEM requirements as defined in the [ACPSEM CPD Compliance Policy](#); and
5. Maintain recency of practice in accordance with the standard required by the ACPSEM. This requires the registrant to practice as a Medical Physicist or Radiopharmaceutical Scientist for at least 450 hours in any three-year period.

The Conditions of Registration may be varied by the ACPSEM from time to time.



10 Removal from the register

10.1 Maintenance requirements of registration not fulfilled

The Chair of the Professional Standards Board (PSB) has authority to immediately suspend a registrant.

The PSB Chair may recommend removal of a registrant from the Register to the Professional Standards Board if requirements to maintain registration (including CPD requirements and maintain recency of practice) are not met. The Professional Standards Board then may decide to remove a registrant from the register if maintenance requirements are not met.

10.2 Disciplinary matters, professional misconduct and complaints

Registrants may be removed from the Register by the ACPSEM Board on the recommendation of the Professional Standards Board acting as the Disciplinary Committee under the ACPSEM Constitution or as the investigation and adjudication body for the ACPSEM. Removal from the Register in these circumstances may be on the grounds of:

- Failure to comply with the ACPSEM Code of ethics;
- Professional misconduct that fails to meet the standards expected in medical environments in Australia and New Zealand;
- Upholding of complaints from the public, patients, employers, colleagues or other members; and
- Conduct likely to bring disrepute to the professions or the ACPSEM, including behaviour not related directly to professional responsibilities

In cases with potential to compromise the safety of the public, potential serious professional misconduct and disciplinary matters likely to lead to public disrepute, the PSB Chair may make an interim recommendation to the ACPSEM Board that the ACPSEM Board immediately suspend the registrant from the Register, pending the further investigation and adjudication of the matter. Where such an interim decision is made, the ACPSEM will make every effort to advise the Registrant of the interim decision and publish the interim decision, noting that further investigations and adjudication will take place.

The Professional Standards Board may approve any process to investigate and adjudicate these matters, either in a standard policy or to deal with specific cases, if required, including:

- The appointment of any panel to conduct an investigation or hearing;
- The use of external bodies or professionals to conduct an investigation or hearing; and
- The receipt of any report of proceedings, investigations or hearings from any other body for their own consideration



11 Re-entry to the Register

Previous participants of the ACPSEM register can apply for re-entry to the register.

11.1 Past participants who held limited registration

For past participants who were on the Register in a limited registration category (which is no longer available), a full application via the experienced candidate entry pathway (see section 8) is required.

11.2 Previous voluntary withdrawal or removal for non-compliance with registration maintenance requirements

For previous voluntary withdrawal or removal from the register under section 10.1 above, the following requirements shall be met:

Time away from the ACPSEM register	Requirement
0 to 3 years	Supply evidence they have been performing relevant CPD and demonstrate recency of practice. The specific requirements will be decided on a case-by-case basis.
3 years +	Long absences from the profession may require a supervised practice period or mentorship to refresh hands-on skills. An assessment or exam may be required to ensure competency against current standards. The specific requirements will be decided on a case-by-case basis.

11.3 Previous removal for disciplinary reasons

For removal from the register under section 10.2 for disciplinary reasons, a written request shall be made to the ACPSEM board detailing why readmission to the register should be allowed. If the ACPSEM board agrees that readmission is appropriate, the criteria for time away from the register detailed in section 11.2 above shall apply.

12 Appeals

Any decision relating to the Admission to the Register or Removal from the Register may be appealed, according to the relevant policy, which may include one or more of the following:

1. [ACPSEM Grievance Handling and Appeals Policy](#)

Advice of an admission to or removal from the register will always include notification of the applicable Appeals policies.



Document History

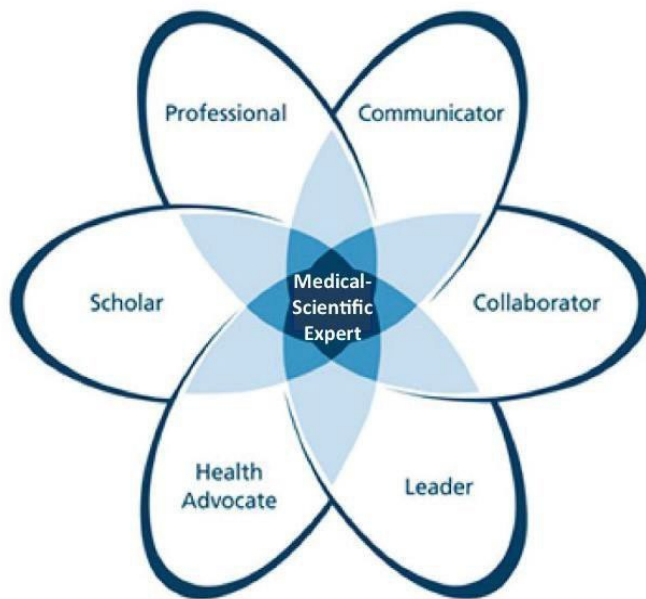
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13 Appendix 1: ACPSEM Adapted CanMEDS framework



14 Appendix 2: Common areas of expertise for Bespoke Assessment pathway

- Radiation protection in healthcare
- Use of non-ionising radiation in healthcare
- Academic or research aspects of medical physics
- Application of computational techniques and artificial intelligence in medicine
- Other – described using the style:
[nature or action] of/for.in [setting or environment] (maximum 15 words and must not be ambiguous with other defined practice fields)