

Residency Programs & Accreditation



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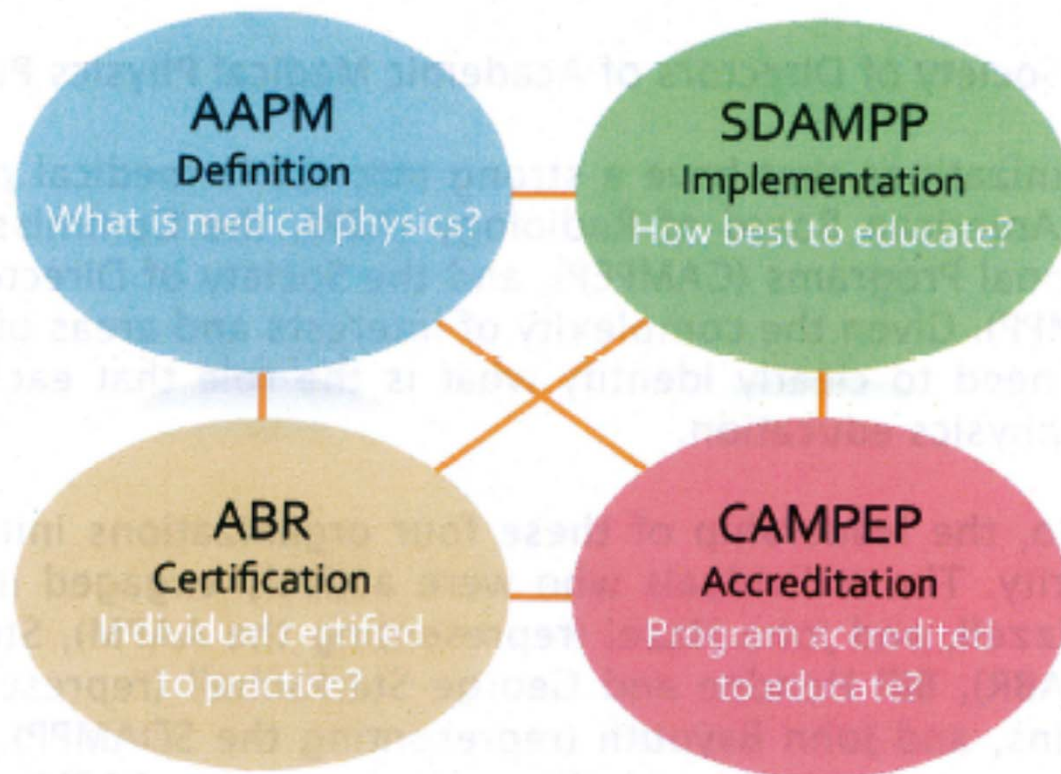
Goals

- **Purpose of the Residency Education Program Review Committee (REPRC)**
- **Understand the accreditation process**
- **Residency Standards**
- **Requirements for maintenance of accreditation**

Presentation Outline

- 1. Purpose of the Residency Education Program Review Committee (REPRC)**
- 2. Accreditation process**
- 3. Residency entrance requirements**
- 4. Residency programs & statistics**
- 5. Match update**

Relative roles of SDAMPP, AAPM, CAMPEP, and ABR for the Education of Medical Physicists in the United States



CAMPEP Composition:

- 1. Graduate Education Program Review Committee (GEPRC)-accredits graduate programs**
- 2. Residency Education Program Review Committee (REPRC)-accredits residency programs**
- 3. Continuing Education Committee**
- 4. CAMPEP Board of Directors**

Purpose of the REPRC

**That section of CAMPEP that is
responsible for the accreditation and
reaccreditation of residency programs in
medical physics**

2014 INITIATIVE

**To sit for the ABR board examination
in 2014 and beyond, applicants
must have graduated from a
CAMPEP accredited residency
program**

**Appropriate didactic preparation for entry into a CAMPEP –
accredited residency in
North America may be demonstrated in one of three ways**

- a. Graduating from a CAMPEP-accredited graduate program**
- b. Completion of a CAMPEP-accredited Certificate program – this pathway is only available for graduates with a PhD in Physics or a closely related field (17)**
- c. Alternate pathway for PhD in physics or closely related field**

Individual consideration for graduates with a Ph.D. in physics or closely related field

Required to take 6 core courses:

- 1. Anatomy and physiology**
- 2. Radiation therapy physics**
- 3. Imaging physics**
- 4. Radiological physics and dosimetry**
- 5. Radiation biology**
- 6. Radiation safety and shielding**

Core courses taken outside of a CAMPEP-accredited graduate program:

- 1. Can be evaluated for their equivalence by the GEPRC for \$250/course**
- 2. Can be evaluated by the residency program director for their equivalence-
this must be documented and could jeopardize the program's accreditation if
courses are found to be non-equivalent during a program review**

Accreditation Process

- 1. Institution submits fee & self-study for review**
- 2. Consistent with Residency Standards**
- 3. Reviewed by volunteer program directors**
- 4. Site visit**
- 5. Evaluation and Self-Study submitted to REPRC for vote**
- 6. Evaluation and Self-Study submitted to CAMPEP BOARD**

Residency Program in Medical Physics

Institution

Self Study

Date

Program Director

Name

Address

Telephone Number

Email Address

Program Website URL

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Standards for Accreditation of Residency Educational Programs in Medical Physics

Revised March 2015

Preamble

Medical Physics is a branch of physics that applies the concepts and principles of physics to the diagnosis and treatment of human diseases. Medical Physics encompasses four fields: Imaging Physics, Nuclear Medicine Physics, Radiation Oncology Physics and Medical Health Physics. This document focuses on the essential educational and experience requirements needed to engage in medical physics research and development, and to enter a residency program in preparation for clinical practice of one of the first three fields.

Terms such as “shall”, “must”, “require”, “should”, “may” and “recommend” are frequently used in these standards. The terms “shall”, “must”, and “require” denote items or activities that CAMPEP believes are mandatory components of an educational program. That is, they are required components. The terms “should”, “may” and “recommend” are considered desirable but not essential components of an educational program.

Residency Standards

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1. Program Goal and Objectives

The objective of a residency educational program in medical physics is to instill into its graduates a level of competency sufficient to engage in independent clinical practice in a specified field of medical physics. The knowledge and skills that the resident should attain during residency education include:

- 1.1. The technical knowledge and skills related to the sophisticated technologies used in the practice of medical physics;
- 1.2. A critical awareness and evaluation of research and scholarship in the field;
- 1.3. An understanding of the protocols and practices essential to the deployment of technologies to detect, diagnose and treat various illnesses and injuries;
- 1.4. The ability to use analytical and research methods to solve problems arising in the clinical environment;
- 1.5. The professional attributes and the ethical conduct and actions that are required of medical physicists;
- 1.6. The communication and interpersonal skills that are necessary to function in a collaborative environment;
- 1.7. An awareness of the complexity of knowledge in the field and a receptiveness to other interpretations, new knowledge, and different approaches to solving problems;
- 1.8. An awareness of the need for confidentiality of patient information and familiarity with relevant regulations;
- 1.9. An appreciation of the clinical purpose and applications of sophisticated technologies;
- 1.10. The acknowledgement of the role of medical physicists in a clinical environment in which physicians, nurses, technologists and others work in cooperation;
- 1.11. The sensitivity to potential hazards that residents may encounter and appropriate measures to take to prevent risks to themselves and equipment;
- 1.12. The recognition and correction of suboptimal application or unsafe use of technologies;
- 1.13. The commitment to continued education so that practice knowledge and skills remain current.

C A M P E P

Commission on Accreditation of Medical Physics Education Programs, Inc.

Confidential

Program Evaluation

Residency Program: *****

Program Director: *****

Reviewers: # 1, #2, #3, Physician

Date of Site Visit: To be scheduled following response from institution

Date of Evaluation: 6/15/15

Notes:

This report makes reference to the Self-Study document submitted as part of this review process and which contains full details of the program.

1. **Compliance** refers to CAMPEP published standards
2. **Observations** are general comments related to performance of the program within the context of the appropriate CAMPEP standards.
3. **Requirements** are conditions that must be met by the program as part of the accreditation process. **The responses to the requirements shall be provided in your next annual report submitted to CAMPEP.**
4. **Recommendations** are suggestions by the program reviewers that are offered as improvements in the program but that are not requirements for accreditation. **The response to recommendations shall be provided in your next annual report.**
5. **Clarifications** are issues raised by the reviewers that require additional information from the institution.

Summary

Compliance

	Substantial	Partial	Non Compliant
1. Program Goal and Objectives	x		
2. Program Structure and Governance			x
3. Program Director	x		
4. Program Staff		x	
5. Institutional Support			x
6. Educational Environment	x		
7. Scholarly Activities	x		
8. Training Requirements	x		
9. Residents		x	
10. Future Plans		x	

Recommendations

The program review team recommends accreditation for a ___-year period ending 31 December 20__.

Requirements:

1. Steering committee shall meet twice per year (Standard 2.6)
2. Public website shall be available providing information on the residents (Standard 2.11)
3. Procedure for resident feedback must be provided (Standards 6.5 & 6.6)
4. Program director must meet periodically with the resident (Standard 3.8)

Public Disclosure Posting: Items 1 through 4 listed in the requirements are subject to public disclosure on the CAMPEP website.

Summary of Specific Recommendations:

1. Consider making available a separate computer for the residents.
2. Provide some teaching opportunities for the resident
3. CVs provide for all personnel involved in the resident's training

Full Accreditation: Programs that are granted initial accreditation will be accredited for a period of three (3) years. If programs submit acceptable annual reports during the first three (3) years of accreditation, the accreditation will be extended to five (5) years on the recommendation of the REPRC and approval by the Board. This level of accreditation is awarded to an applicant that is in substantial compliance with CAMPEP standards.

Provisional Accreditation: New educational programs that have yet to graduate one resident may be granted provisional accreditation for a period less than three years. If a residency program has not yet admitted its first resident, provisional accreditation will be for a period until the first resident has completed the first year of study, at which time a full site visit will determine if accreditation should be extended for an initial period of three years, with the opportunity to extend an additional two years as described in E.06.01. If the residency program has undergone a full site visit prior to provisional accreditation, then initial three-year accreditation, extendable for an additional two years, will be granted upon graduation of its first resident or demonstration of compliance with CAMPEP standards for accreditation. These programs are required to provide evidence of graduation of their first resident or remediation as appropriate in which case Initial Accreditation will be granted.

Accreditation Deferred: This action may be appropriate for programs that are found be non-compliant to CAMPEP standards for accreditation to allow an adequate period of time for the institution to implement planned or suggested improvements in the program. This action postpones a final decision until specific additional information is provided which brings the program into compliance with CAMPEP standards.

Accreditation Withheld: This action is appropriate for programs that are found be not non-compliant to CAMPEP standards for accreditation, nor does it appear that program changes could be achieved within a reasonable period of time to qualify for accreditation. After this decision, should accreditation be pursued, a new application shall be required including the appropriate fee.

6. Educational Environment

<i>Standard</i>	<i>Compliance</i>	<i>Comments</i>
6.1 <i>A residency program shall be situated in an environment that encourages open communication and facilitates the exchange of knowledge, experience and ideas. The existence of other educational programs for physicians, technologists, etc. helps foster a productive educational environment;</i>	F	
6.2 <i>Conferences, journal clubs, and teaching rounds shall include residents, and residents should be encouraged to present at appropriate institutional conferences;</i>	F	Residents are encouraged to attend local and national meetings, but they are not reimbursed for their attendance.
6.3 <i>Residents shall have access to a sufficient variety of journals, books, and resource materials appropriate to medical physics, as well as to the internet and a general medical library;</i>	F	
6.4 <i>Residents shall have access to adequate clinical facilities appropriate for a medical physics residency program;</i>	F	Residents have use of the division's laptop computer which must be checked out.
6.5 <i>Residents shall be provided with a mechanism for feedback concerning the quality of their instruction and the diligence of their mentors. The residents shall be protected from repercussions if that mechanism is used. Feedback on the entire program should be sought from program graduates;</i>	P	In further developments the program recognizes the need to to improve resident feedback and documentation to provide timely information to the resident.
6.6 <i>Issues and concerns identified by feedback from residents and graduates shall be evaluated by the steering committee, and remedial action taken where appropriate.</i>	N	It appears that these issues are only beginning to be addressed by the program.
<p>Observations: Adequate support facilities are available to the resident. A divisional laptop computer is available to the resident. It appears that feedback from the resident and its evaluation are only beginning to be addressed.</p> <p>Requirements: Procedures for obtaining resident feedback must be implemented to be in compliance with Residency Standards 6.5 and 6.6.</p> <p>Recommendations: Consider providing a separate computer for the resident's use.</p>		

Residency Program non-compliance issues

Individual program non-compliance issues are posted on the CAMPEP website

The following programs have been found to be non-compliant with one or more of CAMPEP standards. These programs ,maintain their accreditation while these issues are addressed and are required to report on progress towards meeting the standards annually.

Xxxxxxxx Residency Program

- **Non-compliance with CAMPEP Standard 2.4: Admission requirements shall be consistent with CAMPEP policy as described in the Policy and Procedures Manual**

Xxxxxxxx Residency Program

- **Non-compliance with CAMPEP Standard 7.3: All educational and scholarly activities engaged in by residents shall be recorded in an activities journal maintained personally by each resident and examined periodically by the program director and steering committee to ensure that the resident is progressing satisfactorily.**

Program must have a website available to the public

**Besides providing information on their program
the website must provided information on their
residents**

- **Number of applicants**
- **Number offered admission**
- **Number admitted**
- **Graduates and information on employment**

Program Review-time frame

**Assign review team after fee & self-study submitted
(1→ 2 mo)**

Evaluate self-study (4 → 6 weeks)

Institution response to evaluation (1→2 mo)

Schedule site visit (1→ 4 mo ???)

**Review team submits report to REPRC for
discussion/vote (2 weeks)**

**REPRC sends recommendation to CAMPEP BOD
for vote/discussion (2 weeks)**

Process: 6 months→year

Reaccreditation

Submit self-study and fee last year of accreditation

Two reviewers assigned

Typically not require site visit

Vote on by REPRC

Vote on by CAMPEP Board

Reminder

40 “volunteer” reviewers

Patience in Review Process

Imaging (11)

Columbia University 2013

Cross Cancer Institute - University of Alberta* 2005

Emory University 2014

Henry Ford Health System* 2009

Mayo Clinic* 2010**

Stony Brook University Medical Center 2009

University of Chicago 2014

University of Florida College of Medicine 2013

University of Texas M. D. Anderson Cancer Center* 2002

Upstate Medical Physics* 2010**

West Physics* 2013**

Nuclear Medicine (2)

MD Anderson

Cross Cancer Institute University of Alberta

Summary of Residency Programs

Programs	Accredited	In Process
Therapy	80	0
Diagnostic	11	1
DMP	2	0
Nuc Med	2	0

**For 2015 there were the
following number of openings in
residency programs**

Therapy: 104

Imaging: 13

How many medical physicist required per year?

Estimates are

≈ 125 in therapy

$\approx 20 \rightarrow 30$ in Imaging

$\approx 5 \rightarrow 10$??? In Nuclear Medicine

Residency Slots

	2009	2010	2011	2013
Slots per year				
Therapy	47.5	51.5	58.5	115.5
Imaging	6.0	5.5	7.5	(total)
Total enrolled				
Therapy	88	102	130	267
Imaging	11	12	19	(total)
# Completed program				
Therapy	36	40	48	100
Imaging	6	5	5	(total)

Nuclear Medicine Residencies???

The 2 +1 Nuclear Medicine Physics Residency Training Program

With the current need for qualified nuclear medicine physicists CAMPEP has agreed to allow a 2 + 1 residency program. This 2 + 1 program allows for the following:

- i. A CAMPEP-accredited two-year Imaging Residency Program can offer an additional 12 months of Nuclear Medicine Physics training to its residents, or**
- ii. A CAMPEP-accredited two-year Nuclear Medicine Residency Program can offer an additional 12 months of imaging specific training to its residents.**

Affiliate Sites

(Spoke)

(3 / 1)

POLICY

Medical Physics Residency Education Programs encompassing affiliate sites (spokes) shall ensure that uniform standards and procedures are maintained across all participating institutions.

New affiliate/spoke sites added to an accredited program?

- **New site provide CAMPEP with a self study to be reviewed by CAMPEP**
- **The site must have all the associated structure & documentation previously described – including an Associate PD**
- **Will require a site visit**
- **Additional fees will be assessed by CAMPEP for conducting the site review**

Key Points to Remember

- **Single body with clear line of responsibility**
- **Single faculty albeit with different affiliations**
- **Residents communicate regularly with each other
meetings or tele /video**
- **Elected resident to sit on the residency committee**
- **Standardized evaluation mechanism**
- **Written contractual agreement among components**
- **Director at the Hub is responsible for the entire program**

Residency Match Program

See May-June Newsletter

- **Programs participating – 86**
- **Applicants participating – 280**
- **Average ranking submitted – 13.9**
- **Positions offered – 112**
- **Positions filled 108 (96%)**
- **Applicants matched - 39%**
- **31 programs received > 150 applications**

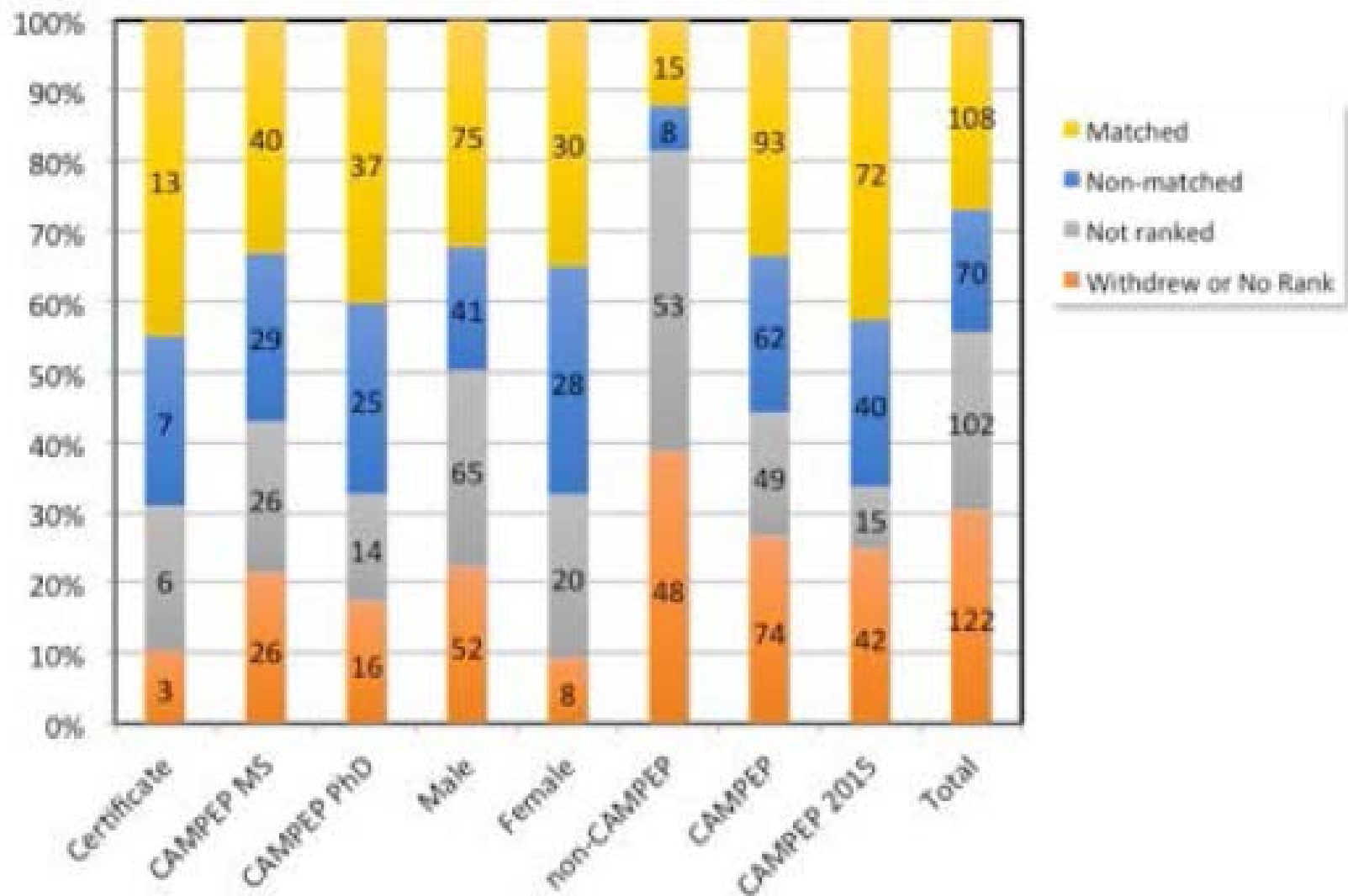


Figure 5. Match statistics for various subsets of applicants. The size of each colored region indicates the proportion of that class of applicant in that category.

Registering for the Match

Common Application Program (CAPs)



**Medical Physics-Residency Application Program
(MP-RAP)**

Thank you for your attention



Questions ???