

CAMPEP Graduate Program Accreditation

AAPM Anaheim, 12 July 2015

B Clark, PhD

Chair, CAMPEP GEPRC

Association with CAMPEP: Board Member 2001-2007

President 2004-2007

GEPRC 2001 – present

Graduate Program Site Visits: 20+

Learning Objectives

To understand:

1. The role of the GEPRC
2. The program review process
3. The role of the standards
4. The structure of the GEPRC report
5. The role of the report in quality improvement

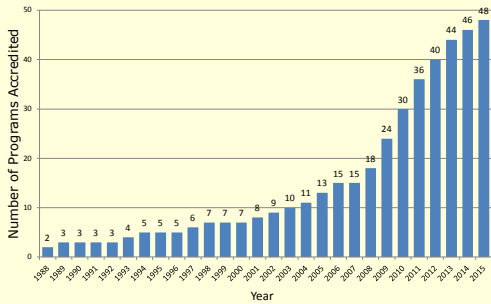
Current Status, July 2015

- # Accredited graduate programs: 48
- # Accredited DMP programs: 2
- # Programs in initial review process: 2

- # Accredited certificate programs: 17
- # Residency certificate programs: 2

- # Accredited programs in:
 - US: 35
 - Canada: 12
 - Outside North America: 1

Program Growth



GEPRC

12 “experienced” academic medical physicists, 6 with imaging experience, 6 with therapy experience, charged with:

- Development of standards
- Graduate Program Reviews - ~10-12 per year
- Certificate Program Reviews - ~1-2 per year
- Individual Course Assessment – rare occurrences
 - 2014 10 for 4 applicants
 - 2015 13 for 3 applicants

Accreditation Process

Designed to confirm compliance with published standards which define *minimum* requirements.

Steps

1. Completion and submission of a self-study document
2. Initial review by members of GEPRC
3. Resolution of immediate concerns
4. A site visit by GEPRC reviewers (at minimum each 10 years)
5. Preparation of a program evaluation by reviewers
6. Consideration of program evaluation by GEPRC
7. Recommendation to CAMPEP Board

CAMPEP Graduate Standards (216)

1. Goal and Objectives – 7 standards
2. Structure and Governance – 11 standards
3. Director – 6 standards
4. Faculty – 3 standards
5. Institutional Support – 6 standards
6. Educational Environment – 6 standards
7. Scholarly Activities – 1 standard
8. Core Curriculum – 176 standards

C A M P E P
Commission on Accreditation of Medical Physics Educational Programs, Inc.

Standards for Accreditation of Graduate Educational Programs in Medical Physics

Revised 30 November 2014

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, Therapeutic Medical 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 four listed 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.

* Items marked with an asterisk are not required for graduate certificate programs.

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Accrediting Organizations: American Association of Physicists in Medicine, American College of Radiology, American Society for Radiation Oncology, Canadian Organization of Medical Physicists, Biological Society of Health Physics
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C A M P E P

Commission on Accreditation of Medical Physics Educational Programs, Inc.

1. Program Goal and Objectives

The objective of graduate educational program in medical physics is to provide its graduates with the basic and applied scientific knowledge that is necessary both for further education and research in medical physics and for entry into a medical physics residency leading to a career in clinical medical physics. The knowledge and skills that the student should obtain during graduate education include:

- 1.1 Physics, mathematics and other basic science knowledge required for research or clinical practice in medical physics.
- 1.2 *A conceptual and methodological understanding of how research and inquiry lead to the creation of new knowledge and the reinterpretation of existing knowledge.
- 1.3 *The assimilation and analysis of current research and scholarship in medical physics.
- 1.4 *Competent use of the research process to answer new questions and to solve specific problems in research and clinical settings.
- 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 responsiveness to other interpretations, new knowledge, and different approaches to solving problems.

2. Program Structure and Governance

2.1 Institutions in the United States that offer graduate education in medical physics must be accredited by an accreditation organization recognized by the US Department of Education or the Council for Higher Education Accreditation. Programs in other jurisdictions must have obtained appropriate regional recognition.

2.2 *Graduate programs in medical physics shall be situated in a well-defined university structure where the term university refers to a high level institute of learning and research with standing in the academic community, a full time faculty, multiple schools and departments offering study in a comprehensive range of multidisciplinary areas and generally with a reputation for distinct areas of research. Although a Medical Physics Graduate Program may be newly established within the institution, it is expected that the institution be well established with a history of stability, an infrastructure to support students through their studies offering health care, counseling and with well defined services for protecting students interests, e.g., an ombudsman.

2.3 *On average, two years is needed for full-time students with appropriate backgrounds to earn a master's degree in medical physics. The time beyond the master's degree for students to complete the doctoral degree requirements is variable, but usually is at least three years.

2.4 Students entering a medical physics graduate educational program shall have a strong foundation in basic physics. This shall be demonstrated either by a degree in physics or by a degree in engineering or another area of the physical sciences with a physics component that

CAMPEP Standards for Graduate Programs

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CAMPEP Graduate Standards

- All considered to be equally important and each must be addressed individually
 - Example: 2.4 Students entering a medical physics graduate educational program shall have a strong foundation in basic physics.
 - Example: 2.9 All courses and clinical practica should use well-defined and consistently applied metrics for evaluating student progress and performance.

Self Assessment

Document describing program compliance with Graduate Standards

- Evolution and History
 1. Goal and Objectives
 2. Structure and Governance
 3. Program Director
 4. Faculty
 5. Institutional Support
 6. Educational Environment
 7. Scholarly Activities
 8. Core Curriculum
 - Future Plans
- Appendices
- A. Invitation
 - B. Institutional Commitment
 - C. Institutional Accreditation
 - D. Course Summaries
 - E. Program Graduates
 - F. Faculty Biosketches

Site Visit

- Initial application and at a minimum each 10 years
- 2-3 reviewers
- 1.5 days
- Interviews with students, faculty, university administration
- Tour of facilities

Compliance Options

- Full
- Partial
- Non-Compliant

- Public Disclosure

Evaluation

- Observations- general remarks
- Requirements – initiate public disclosure until resolved
- Recommendations – designed to aid quality improvement

Accreditation Options

- Initial Accreditation
- Full Accreditation
- Provisional Accreditation
- Accreditation Deferred
- Accreditation Withheld

Annual Reports

- Condition of accreditation
- Provide a mechanism for monitoring progress
- Provides data on student numbers, etc.

Summary

1. The program review process - 6-9 months
2. The role of the standards - to define *minimum* program quality
3. The structure of the GEPRC report – follows a template and provides suggestions for program improvement in addition to listing requirements for accreditation
4. The report is used for quality improvement – through suggestions in the report
