Self-Study Template for

CAMPEP Professional Doctorate Program Accreditation

Name of Degree Granting Institution:

Name of Program\*:

\*Must be specific, e.g., Professional Doctorate Program in Medical Physics

Name of Program Director:

Email Address:

Address:

Telephone Number:

Program Website URL:

Date of Submission:

Template: February 2023

Instructions

* Professional Doctorate programs are expected to satisfy both the Standards for Accreditation of *Graduate* Educational Programs and the Standards for Accreditation of *Residency* Educational Programs.
* The standards are available from the CAMPEP website and extracts are printed in blue for reference in each section of this template. Where they differ, the graduate standard is marked with a G and the residency standard with an R.
* The self-study document should address each CAMPEP standard for both didactic and clinical curriculum.
* The appendices are required to provide supplemental details.

**N.B.: All elements of this application are required; missing information will delay review of your application.**

Confidentiality Statement:

The accreditation assessment process and any information produced or disclosed in the accreditation process that is not publicly available shall be kept confidential until the process is completed. At the conclusion of the accreditation assessment process, certain information shall remain confidential, specifically:

* + - * The application/evaluation documents are subject to the confidentiality constraint, subject to the exceptions below;
      * Any verbal requests for confidentiality by either party, which shall be confirmed by a prompt written re-statement of that assertion.

The following types of information are not considered to be confidential:

* Information that is or becomes part of the public domain other than through the unauthorized disclosure by the recipient party;
* Information that was already known or was in the possession of the recipient party before receipt thereof from the disclosing party under the agreement;
* Information that is received legally without restriction on disclosure from a third party who has the right to make such disclosure.

Contents

Introduction 3

1. Program Goal and Objectives 4

2. Program Structure and Governance 5

3. Admissions 7

4. Program Director 8

5. Program Faculty and Staff 9

6. Institutional Support 10

7. Educational Environment 11

8G Didactic Core Curriculum 12

8R Clinical Curriculum 19

Summary 20

Appendix A - Letters of Invitation and Institutional Commitment 21

Appendix B - Documentation of *Institutional* Accreditation 22

Appendix C - Course Summaries 23

Appendix D - Program Graduates 24

Appendix E - Faculty Biographical Sketches and Program Roles 25

Appendix F – Sample Interview Evaluation Form 28

Appendix G – Sample Offer Letter 29

Appendix H – Example of Clinical Evaluation 30

Additional Files Required

**Faculty Biosketches**

**Course Summaries**

# Introduction

**Program Evolution and History**

Provide a brief history of the program’s evolution.

**Summary of Program Changes since Last Review**

If this is an application for renewal of accreditation, list here all significant changes in the program since the previous self-study submission, details to be provided in the appropriate section of the self-study.

# Program Goal and Objectives

*The objective of a 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 program objectives shall, at a minimum, include the development in the student of:*

* *an understanding of the role of patient safety in the clinical practice of medical physics;*
* *an understanding of the physics, mathematics and other physical science required for a career in medical physics;*
* *an understanding of how research and inquiry lead to the creation of new knowledge;*
* *the ability to critically evaluate research and scholarship in medical physics;*
* *the competent use of research to pose new questions and to solve problems in research and clinical settings;*
* *the communication and interpersonal skills that are necessary to function in a collaborative, multidisciplinary environment;*
* *the professional attributes and the ethical conduct and actions that are required of medical physicists; and*
* *a valuing of career-long continuing education to keep scientific knowledge and skills current.*

1.1 With reference to the CAMPEP published graduate and residency standards, state your program’s mission and objectives. Please also indicate where in the program each topic is addressed.

# 2. Program Structure and Governance

*2.1G* ***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 received appropriate equivalent recognition.*

Provide details in Appendix B

*2.1R The* ***institution*** *in which the clinical training is conducted must be accredited by the appropriate healthcare accreditation organization.*

*2.2G Graduate programs in medical physics shall be sited in a well-defined university structure where the term “university” refers to an institute of higher learning and research, with standing in the academic community, a full-time faculty, frequently 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, and with well-defined services for protecting students’ interests, e.g., an ombudsman.*

*2.2R The clinical training must be located in an appropriately structured, well-established clinical environment, with a history of stability and with the infrastructure to support resident education and training.*

*2.3 Doctorate in Medical Physics education shall be supervised and monitored by an appropriate steering committee, which is chaired by the program director or delegate and meets at least twice a year.*

*2.4 The steering committee membership shall include the program director and relevant staff involved in residency education**including a physician**and the chief (or a senior) dosimetrist****.***

*2.5 The process for appointment of the members of the steering committee shall be documented. Minutes of meetings shall be recorded.*

*2.6 Minutes of the steering committee meetings, including a summary of any actions that are proposed or taken, shall be recorded.*

Attach steering committee minutes for the preceding 2 years in Appendix C.

*2.7 A mechanism for students to communicate with the steering committee shall be available.*

*2.8 The steering committee shall establish a process for evaluating the quality of the educational program and annually assess the quality of the educational program based on this process, taking appropriate action to address improvements when needed.*

*2.9 The steering committee shall assess and monitor the strengths, weaknesses, needs, and long-term goals of the program.*

*2.10 A procedure shall be in place to appropriately counsel, censure, and, after due process, dismiss students who fail to achieve acceptable grades, or who behave unethically.*

*2.11 All courses and clinical practica, including distance learning courses, shall use well-defined and consistently applied metrics for evaluating student progress and performance.*

*2.12 A program may consist of a single institution or of a primary site plus one or more affiliated institutions. An affiliated site is a participating site that is physically separated from the primary site such that it would be impractical for the program director at the primary site to directly supervise the resident’s training at the affiliated site. Programs with multiple physical locations that are reasonable commuting distance, and where the program director can exercise direct supervision of the resident’s training at all physical sites, may be considered to be a single site.*

*For programs with affiliated sites, a formal agreement must be in place between the main site and the affiliate site(s) describing liability, responsibility, accountability and any financial arrangements.*

Provide copies of all such agreements.

*2.13 An accredited program must publicly describe the program and the achievements of its graduates and students, preferably through a publicly accessible web site, readily accessible from the program website home page. This information must be updated no less often than annually and must include, for each degree program, the numbers of applicants to the program, of students offered admission, of students matriculated, and of graduates. Where possible, information on the subsequent positions of graduates must also be provided, i.e., residencies, industrial positions, etc. This information should not identify individuals.*

Provide the URL where this information can be found.

*2.14 The clinical training portion of a DMP program shall be at least two years full-time equivalent, with progressively increasing responsibilities under the supervision of qualified medical physicists. The clinical training may take place at one or more affiliated institutions.*

# 3. Admissions

*3.1 Students entering a doctorate in medical physics program shall have a strong foundation in basic physics. This shall be demonstrated either by an undergraduate or graduate degree in physics, or by a degree in an engineering discipline or another of the physical sciences and with coursework that is the equivalent of a minor in physics (i.e., one that includes at least three upper-level undergraduate physics courses that would be required for a physics major).*

Provide a chronological list of students admitted into the program for the past 5 years.

|  |  |  |  |
| --- | --- | --- | --- |
| **Ref #** | **Degree program / start year** | **Previous Degrees (Major, Minor, Institution)** | **\*GPA, GRE and TOEFL scores** |
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Provide an alphabetical list of current students.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Student** | **Program** | **Supervisor** | **Year Entered** | **Funding Source** |
|  |  |  |  |  |
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*3.2 If a program conditionally admits applicants with deficiencies in their academic background, the remedial physics education of such students shall be well-defined.*

*3.3 Admission standards for incoming students are clearly stated.*

Provide the URL where this information can be found.

*3.4 The method of processing an application, including evaluating the application and informing the applicant of actions taken, shall be clearly stated.*

# Program Director

*4.1 The process for the appointment of the program director shall be documented.*

*4.2 A sole program director shall be responsible and accountable for ensuring that the DMP program satisfies the CAMPEP standards and shall ensure that all students receive a high-quality education in all courses and practica.*

*4.3G The program director must possess a PhD or other doctoral degree in medical physics or a closely-related discipline, and hold an appropriate academic appointment at the institution hosting the program..*

*4.3R The program director must be certified to practice medical physics by the American Board of Radiology, the Canadian College of Physicists in Medicine, or another appropriate certifying agency.*

*4.4 The program director shall have at least five years of full-time post-graduate experience in the specialization of the program.*

*4.5 The program director shall be responsible for coordinating the faculty, recruiting students into the program, advising the students, and evaluating and promoting the program.*

*4.6 The program director shall be responsible for determining and documenting that each student offered entry into the graduate program satisfies the CAMPEP admission standards for graduate education in medical physics or completes rigorous remedial education to meet the standards.*

*4.7 The program director shall ensure that all student statistics, annual reports, and other information that is required by CAMPEP are reported accurately and in a timely fashion.*

*4.8 The program director shall ensure that student progress is regularly monitored and shall meet periodically with each student during years three and four to assess progress, and minutes of the meeting shall be maintained. A copy of the minutes shall be provided to the student.*

# Program Faculty and Staff

*5.1 The process for the appointment of the program faculty and staff shall be documented.*

*5.2 An adequate number of program faculty members shall be available and have sufficient time for teaching, advising students and clinical mentoring.*

*5.3G A majority of the program faculty shall have an academic appointment at an accredited educational institution.*

*5.3R The ratio of program staff to clinical trainees in the program shall be at least 1:1.*

*5.4 A majority of the program staff shall be licensed to practice medical physics by an appropriate jurisdiction or be certified in a branch of medical physics by an appropriate certifying agency.*

*5.5 Program faculty members shall be engaged in scholarly activities such as participation in scientific societies and meetings, scientific presentations and publications, and continuing education.*

Provide a list of faculty members below. Include only individuals directly involved with the program who are either teaching courses or supervising research.

**Alphabetical List of Faculty and Staff**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Academic Appointment** | **Position (Title)** | **Primary Specialty** | **Courses Taught**  **(last 5 years)** |
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# 6. Institutional Support

*6.1 The institution that sponsors the graduate program shall provide administrative support, including educational resources, a budget, students’ office or cubicle space and access to computing resources, conference room(s), audiovisual facilities, and office support (e.g., copiers, internet access, email accounts, and telephones).*

*6.2 The institution must express its intention to support the program both financially and administratively for the-term of the accreditation.*

*6.3 Any financial support of students, including benefits, shall be described clearly to prospective applicants prior to their application to the program.*

Complete the tables below.

Financial Aid for Program Students

|  |  |
| --- | --- |
| **Funding Source** | **Student Stipend + Benefits** |
|  |  |
|  |  |
|  |  |
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Summary of Typical Annual Student Costs

|  |  |
| --- | --- |
| **Expense** | **Typical Amount** |
| Tuition Fees |  |
| Living Expenses |  |
| Books, etc. |  |
| Medical Insurance |  |
| Other costs |  |
|  |  |

*6.4 Entering students shall be provided with orientation information to ensure their efficient integration into the program.*

*6.5 The program shall instruct its students on the potential hazards that they might encounter and on the appropriate measures for them to take to minimize risks to themselves, others, and equipment.*

*6.6 The program shall instruct its students regarding the professional, ethical, and regulatory issues in the responsible conduct of research and in the protection of the confidentiality of patient information.*

# 7. Educational Environment

*7.1 The program shall have mechanisms that encourage open discussion and communication, and facilitate the exchange of knowledge, experience and ideas.*

*7.2 Conference, seminar, and journal club activities shall be used for students to practice their presentation and oral communication skills.*

*7.3 Students shall have access to a variety of journals, books, and appropriate resource materials.*

*7.4 Students shall have access to appropriate clinical and research facilities and the program shall demonstrate that clinical facilities and equipment are used in the teaching of practical aspects of core topics in imaging physics and radiation oncology physics*

Provide details of clinical and research facilities.

*7.5 Students shall be provided with a mechanism for regular feedback concerning the quality of their instruction and the diligence of their teachers and mentors. The students shall be protected from unwarranted retribution.*

*7.6 Feedback on the overall effectiveness of the program and recommendations for improvement should be sought from graduates.*

*7.7 Issues and concerns that are identified through feedback shall be evaluated by the steering committee and remedial action shall be taken where appropriate.*

*7.8G Students shall engage in research projects to develop a systematic approach to solving problems and to gain a familiarity with scientific method*

*7.8R All clinical, educational and scholarly activities engaged in by the student during the clinical training shall be recorded in an activities journal using any appropriate format maintained personally by each student and examined regularly by the program director*

# 8G Didactic Core Curriculum

Degree Requirements

Clearly state requirements for graduation

Course List

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Table 8.1: Summary of all courses offered: core (required) and elective | | | | | |
| **Course No.** | **Course**  **Title** | **Core**  **or**  **Elective** | **Credit**  **Hours** | **Current**  **Instructor** | **Semester/Term**  **in which course is offered** |
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1 credit hour is equivalent to:

Sample Academic Plan

Describe typical progression of students through your program

Core Topics

In the following table, identify the course in which the following core topics are addressed.

|  |  |  |
| --- | --- | --- |
| **Topic** | **Course #** | **Comments** |
| **8.1 Radiological physics and dosimetry** |  |  |
| 8.1.1 Atomic and nuclear structure |  |  |
| 8.1.2 Classification of radiation |  |  |
| 8.1.3 Quantities and units - radiation fields |  |  |
| 8.1.4 Quantities and units - radiation interactions |  |  |
| 8.1.5 Indirectly ionizing radiation: photons |  |  |
| 8.1.5.1 Exponential attenuation |  |  |
| 8.1.5.2 Photon interactions |  |  |
| 8.1.6 Indirectly ionizing radiation: neutrons |  |  |
| 8.1.6.1 Neutron interactions |  |  |
| 8.1.7 Directly ionizing radiation |  |  |
| 8.1.7.1 Directly ionizing radiation interactions |  |  |
| 8.1.8 Radioactive decay |  |  |
| 8.1.9 Charged particle equilibrium |  |  |
| 8.1.10 Radiation dosimetry – general |  |  |
| 8.1.11 Radiation dosimetry – calorimetry |  |  |
| 8.1.12 Radiation dosimetry – chemical |  |  |
| 8.1.13 Cavity theory |  |  |
| 8.1.14 Ionization chambers |  |  |
| 8.1.14.1 Calibration of photon and electron beams with ionization chambers |  |  |
| 8.1.15 Dosimetry and phantoms for special beams |  |  |
| 8.1.16 In vivo dosimetry (TLD, OSL) |  |  |
| 8.1.17 Relative dosimetry methods |  |  |
| 8.1.18 Neutron dosimetry |  |  |
| 8.1.19 Pulse mode detectors |  |  |
|  |  |  |
| **8.2 Radiation protection and safety** | **Course #** | **Comments** |
| 8.2.1 Introduction and historical perspective |  |  |
| 8.2.2 Interaction physics for radiation protection |  |  |
| 8.2.3 Protection principles |  |  |
| 8.2.4 Handling radiation and radioactive sources |  |  |
| 8.2.5 Radiation survey/contamination equipment |  |  |
| 8.2.6 Personnel monitoring |  |  |
| 8.2.7 Radiation dose limits |  |  |
| 8.2.8 Protection regulations |  |  |
| 8.2.9 Shielding Principles: beams and sources |  |  |
| 8.2.10 Application of statistics |  |  |
| 8.2.11 External exposure |  |  |
| 8.2.12 Internal exposure |  |  |
| 8.2.13 Environmental dispersion |  |  |
| 8.2.14 Radioactive waste |  |  |
|  |  |  |
| **8.3 Fundamentals of medical imaging** | **Course #** | **Comments** |
| 8.3.1 History of medical imaging |  |  |
| 8.3.2 Mathematical Models |  |  |
| 8.3.3 Reconstruction mathematics |  |  |
| 8.3.4 Radiography |  |  |
| 8.3.4.1 X-ray tube construction and X-Ray beam production; kV, mA, pulse width |  |  |
| 8.3.4.2 X-ray beam properties and interactions in matter |  |  |
| 8.3.4.3 Sources of image contrast and noise; detector efficiency and dose, noise power spectrum analysis |  |  |
| 8.3.4.4 Spatial and temporal resolution |  |  |
| 8.3.4.5 Detector technologies, anti-scatter grid |  |  |
| 8.3.4.6 Digital and computed radiography |  |  |
| 8.3.4.7 Mammography |  |  |
| 8.3.4.8 Performance testing and QA |  |  |
| 8.3.5 Fluoroscopy |  |  |
| 8.3.5.1 Detector technologies; flat panel imager, image intensifier/TV |  |  |
| 8.3.5.2 Radiographic contrast agents |  |  |
| 8.3.5.3 Automatic exposure control, basic imaging modes |  |  |
| 8.3.5.4 Digital angiography, digital subtraction angiography |  |  |
| 8.3.5.5 Operating technique and dose to patient and staff |  |  |
| 8.3.5.6 Performance testing and QA |  |  |
| 8.3.6 Computed tomography |  |  |
| 8.3.6.1 Basic data acquisition principles and scanning modes |  |  |
| 8.3.6.2 Basic reconstruction modes |  |  |
| 8.3.6.3 In-plane spatial resolution, slice thickness, image noise, dose |  |  |
| 8.3.6.4 Artifacts |  |  |
| 8.3.6.5 Cone-beam computed tomography |  |  |
| 8.3.6.6 Performance testing and QA |  |  |
| 8.3.6.7 CT scanning technique & patient dose |  |  |
| 8.3.7 Nuclear medicine imaging |  |  |
| 8.3.7.1 Modes and processes of radioactive decay |  |  |
| 8.3.7.2 Basics of nuclear reactions and radioactivity |  |  |
| 8.3.7.3 Nuclear counting statistics |  |  |
| 8.3.7.4 Counting systems and gamma cameras |  |  |
| 8.3.7.5 Image quality and reconstruction |  |  |
| 8.3.7.6 Physics of SPECT and PET systems |  |  |
| 8.3.7.7 Radiotracer techniques |  |  |
| 8.3.7.8 Radiopharmaceutical design and mechanisms of localization. |  |  |
| 8.3.7.9 Performance testing and equipment QA |  |  |
| 8.3.8 Magnetic resonance imaging |  |  |
| 8.3.8.1 Magnetization, precession, Larmor equation, rotating frame of reference, spin tipping |  |  |
| 8.3.8.2 T1 and T2 relaxation |  |  |
| 8.3.8.3 Pulse sequences and image formation |  |  |
| 8.3.8.4 Spin echo image formation |  |  |
| 8.3.8.5 Image contrast |  |  |
| 8.3.8.6 Definition of common acquisition parameters and signal-to-noise ratio |  |  |
| 8.3.8.7 Rapid imaging techniques |  |  |
| 8.3.8.8 Magnetization preparation techniques |  |  |
| 8.3.8.9 Artifacts |  |  |
| 8.3.8.10 Performance testing, equipment QA |  |  |
| 8.3.8.11 MR contrast agents |  |  |
| 8.3.8.12 Safety and biological effects |  |  |
| 8.3.9 Ultrasound |  |  |
| 8.3.9.1 Propagation of ultrasound through tissue; sources of contrast |  |  |
| 8.3.9.2 Diagnostic transducers |  |  |
| 8.3.9.3 2-D, 3-D ultrasound imaging |  |  |
| 8.3.9.4 Spatial and temporal resolution |  |  |
| 8.3.9.5 Doppler and color flow imaging |  |  |
| 8.3.9.6 Performance testing, equipment QA |  |  |
| 8.3.9.7 Elasticity imaging methods |  |  |
| 8.3.9.8 Artifacts |  |  |
| 8.3.9.9 US Contrast agents |  |  |
| 8.3.9.10 Safety and biological effects |  |  |
|  |  |  |
| **8.4 Radiobiology** | **Course #** | **Comments** |
| 8.4.1 History of radiation injuries in humans |  |  |
| 8.4.2 Radiation interactions in cells/tissues |  |  |
| 8.4.3 Radiation injury to DNA |  |  |
| 8.4.4 Repair of DNA damage |  |  |
| 8.4.5 Indirect effects of radiation |  |  |
| 8.4.6 Chromosomal damage and repair |  |  |
| 8.4.7 Target theory and cell survival curves |  |  |
| 8.4.8 Free radical formation |  |  |
| 8.4.9 Apoptosis, reproductive cell death |  |  |
| 8.4.10 Cell kinetics |  |  |
| 8.4.10.1 Cell recovery processes |  |  |
| 8.4.10.2 Cell cycle sensitivity |  |  |
| 8.4.11 Radioprotectors, radiosensitizers |  |  |
| 8.4.12 RBE, OER, LET |  |  |
| 8.4.13 Tissue injuries |  |  |
| 8.4.13.1 Acute effects of radiation |  |  |
| 8.4.13.2 Delayed effects of radiation |  |  |
| 8.4.13.3 Radiation carcinogenesis |  |  |
| 8.4.13.4 Radiation mutagenesis |  |  |
| 8.4.13.5 Radiation teratogenesis |  |  |
| 8.4.13.6 Other embryo/fetal effects |  |  |
| 8.4.14 Risk estimates of radiation |  |  |
| 8.4.15 History of linear no-threshold theory |  |  |
| 8.4.16 Predictions of cancers in populations |  |  |
| 8.4.17 Radiation epidemiology |  |  |
| 8.4.18 Evidence of cancers in populations |  |  |
| 8.4.19 Concept of radiation hormesis |  |  |
| 8.4.20 Tumor radiobiology |  |  |
| 8.4.21 Time, dose, fractionation |  |  |
| 8.4.22 Molecular mechanisms |  |  |
| 8.4.23 Drug/radiation interactions |  |  |
|  |  |  |
| **8.5 Medical Anatomy and Physiologic Processes** | **Course #** | **Comments** |
| 8.5.1 General terminology |  |  |
| 8.5.1.1. Anatomical reference terminology |  |  |
| 8.5.1.2. Imaging planes and orientation |  |  |
| 8.5.1.3. Diagnostic radiology terminology and conventions |  |  |
| 8.5.1.4. Radiation therapy terminology and conventions |  |  |
| 8.5.2 Sectional and radiographic Anatomy |  |  |
| 8.5.2.1. Breast |  |  |
| 8.5.2.2. Cardiovascular |  |  |
| 8.5.2.3. Digestive System |  |  |
| 8.5.2.4. Musculoskeletal |  |  |
| 8.5.2.5. Neurological System |  |  |
| 8.5.2.6. Reproductive/Endocrine |  |  |
| 8.5.2.7. Thoracic Cavity |  |  |
| 8.5.2.8. Urinary System |  |  |
| 8.5.2.9. Lymphatic System |  |  |
| 8.5.3 Human Physiology |  |  |
| 8.5.3.1 Nervous System |  |  |
| 8.5.3.2. Musculoskeletal System |  |  |
| 8.5.3.3. Cardiovascular System |  |  |
| 8.5.3.4. Respiratory System |  |  |
| 8.5.3.5. Digestive System |  |  |
| 8.5.3.6. Integumentary System |  |  |
| 8.5.3.7. Urinary System |  |  |
| 8.5.3.8. Reproductive System |  |  |
| 8.5.3.9. Immune System |  |  |
| 8.5.3.10. Endocrine System |  |  |
| 8.5.4 Pathology |  |  |
| 8.5.4.1. Neoplastic Diseases |  |  |
| 8.5.4.2. Benign Disease |  |  |
| 8.5.4.3. Trauma |  |  |
| 8.5.4.4. Cardiovascular Diseases |  |  |
| 8.5.4.5 Neurological |  |  |
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| **8.6 Radiation therapy physics** | **Course #** | **Comments** |
| 8.6.1 History of radiation oncology |  |  |
| 8.6.2 Principles of radiation oncology |  |  |
| 8.6.3 External beam treatments |  |  |
| 8.6.3.1 Sources of external beams |  |  |
| 8.6.3.2 Calibration of external beams |  |  |
| 8.6.3.3 Acquisition of external beam data |  |  |
| 8.6.3.4 Treatment planning principles |  |  |
| 8.6.3.5 Multifield radiation therapy |  |  |
| 8.6.3.6 IMRT, VMAT |  |  |
| 8.6.3.7 Image fusion, segmentation, registration, quantitation |  |  |
| 8.6.3.8 Motion management |  |  |
| 8.6.3.9 Performance testing, equipment QA |  |  |
| 8.6.4 Brachytherapy |  |  |
| 8.6.4.1 Brachytherapy sources |  |  |
| 8.6.4.2 Storing and shielding sources |  |  |
| 8.6.4.3 Brachytherapy delivery devices |  |  |
| 8.6.4.4 Brachytherapy treatment planning |  |  |
| 8.6.4.5 Brachytherapy equipment QA |  |  |
| 8.6.5 Special techniques in radiotherapy |  |  |
| 8.6.6 Radiation therapy with neutrons, protons, light ions |  |  |
| 8.6.7 Radiation protection in radiation therapy |  |  |
|  |  |  |
| **8.7 Professionalism and Ethics** | **Course #** | **Comments** |
| 8.7.1 Definition of a profession and professionalism |  |  |
| 8.7.2 Elements of a profession |  |  |
| 8.7.3 Definition of a professional |  |  |
| 8.7.4 Elements of professionalism |  |  |
| 8.7.5 How is professionalism judged? |  |  |
| 8.7.6 Do’s and don’ts of professionalism |  |  |
| 8.7.7 Physician’s charter, applicability to physicists |  |  |
| 8.7.8 Qualities of leaders |  |  |
| 8.7.9 Rules of leadership |  |  |
| 8.7.10 Causes of leadership failure |  |  |
| 8.7.11 Ethics of a profession |  |  |
| 8.7.12 Ethics of an individual |  |  |
| 8.7.13 Interactions with colleagues and co-workers |  |  |
| 8.7.14 Interactions with patients and the public |  |  |
| 8.7.15 Confidentiality |  |  |
| 8.7.16 Peer review |  |  |
| 8.7.17 Negotiation skills |  |  |
| 8.7.18 Relationships with employers |  |  |
| 8.7.19 Conflicts of interest |  |  |
| 8.7.20 Ethics in research |  |  |
| 8.7.21 Use of animals in research |  |  |
| 8.7.22 Use of humans in research |  |  |
| 8.7.23 Relationships with vendors |  |  |
| 8.7.24 Publication ethics |  |  |

Submit a separate file containing detailed information for each course according to the template provided.

# 8R Clinical Curriculum

*8R.1 The self-study document shall include written expectations of resident performance and behavior as well as the training schedule that is given to incoming residents. This training schedule shall include:*

1. *Duration of each clinical rotation*
2. *Clinical rotation objectives*
3. *Didactic educational expectations*
4. *Optional research opportunities which do not compromise clinical training*

*8R.2 The elements of clinical training shall be consistent with the curriculum described below.*

*8R.3 The self-study document shall include a summary of the elements of clinical training of each clinical rotation to include:*

1. *Documentation of specific training objectives;*
2. *Documentation of resident progress evaluation with resident name removed;*
3. *Documentation of any required remedial didactic education;*
4. *List of clinical conferences, seminars and/or journal reviews including their frequency that the resident is expected to attend.*
5. *An appropriate reading list.*

*8R.4 The process for creating or modifying training objectives shall be described.*

*8R.5 All facilities used by the residents including their location, availability, and capacity shall be listed.*

Sample Training Plan

* *Documentation of training shall include a summary of the clinical training during each rotation*
* *These summaries shall include:*
  1. *The documentation of specific training objectives and experience to be gained during each rotation*
  2. *The documentation of evaluation of progress in each rotation*
  3. *The documentation of any didactic education used to satisfy educational requirements*
  4. *Training records should include examples of work assignments, reports, and examinations*
  5. *Copies of supervising physicist evaluations shall be kept and available for review*
  6. *Include written expectations of performance and behavior as well as the training schedule that is given to incoming students*
  7. *The training schedule should include:*

1. *Dates of each clinical schedule*
2. *Clinical rotation objectives*
3. *Didactic educational expectations*
4. *Optional research opportunities, not compromising clinical training*

* *Describe clearly the pass/fail criteria for each rotation*
* *Programs with affiliate sites must clearly describe which components are provided by the primary site and which are available locally*

Consult the CAMPEP Residency Standards for a complete list of the required clinical curriculum in the specialization of the program.

# Summary

Provide here a brief summary of your program strengths, weaknesses and goals for the future.

# Program Graduates

Reverse Chronological List of Program Graduates - past 10 years

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Student Reference** | **Degree Granted, Date** | **Time in Program** | **Thesis Title, Supervisor** | **Current Occupation** | **Board Certification** |
|  |  |  |  |  |  |
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# Appendix A - Letters of Invitation and Institutional Commitment

# Appendix B - Documentation of *Institutional* Accreditation

# Appendix C - Steering Committee Minutes

# Appendix D - Program Graduates

Reverse Chronological List of Program Graduates - past 10 years

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Student Reference** | **Degree Granted, Date** | **Time in Program** | **Thesis Title, Supervisor** | **Current Occupation** | **Board Certification** |
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# Appendix E – Sample Interview Evaluation Form

# Appendix F – Sample Offer Letter

# Appendix G – Example of Clinical Evaluation