**THE AMERICAN BOARD OF MEDICAL PHYSICS**

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**INFORMATION BOOKLET 2010**

**(WEB VERSION, modified 2/13/2010)**

**American Board of Medical Physics, Inc.**

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**PURPOSES OF THE BOARD**

The American Board of Medical Physics, Inc., is an independent, non-profit organization which was incorporated in July, 1988.

The objectives and purposes of the Board are as follows:

1. To establish minimum acceptable standards of profesional knowledge and improve the quality of practice of medical  physics.  For the purposes of the Board, medical physics is defined as the application of physics and related sciences to the clinical practice of medicine.
2. To develop standards and procedures for the certification of medical physicists.
3. To establish and evaluate qualifications of voluntary candidates requesting examination for certification in medical physics.
4. To arrange, control, and conduct examinations to test the competence of candidates for certification.
5. To grant and issue certificates in the field of medical physics to applicants who have been found qualified by the Board.
6. To maintain a registry of holders of such certificates and serve the medical and lay public by preparing and furnishing lists of medical physicists  who have been certified by the Board.

**CERTIFICATION**

The American Board of Medical Physics offers voluntary certification by examination for eligible candidates.  Upon successfully passing the prerequisite examination (Part I) in General Medical Physics **or** Magnetic Resonance Imaging Science **and** both written (Part II) **and** oral (Part III) specialty examinations in MRI Physics, or Medical Health Physics, candidates may identify themselves as Certified Medical Physicists or Diplomates of the American Board of Medical Physics.  The certificate awarded by the Board is not a license, and therefore does not confer any legal qualification or privilege to practice medical physics.

**ELIGIBILITY REQUIREMENTS**

The following minimum qualifications are required of candidates who wish to take the three part American Board of Medical Physics examinations.  Admission to the examinations will be determined by the Board of Directors.

**Part I (General Medical Physics) for Health Physics and/or MRI Physics.**

1. Education

    A graduate degree in physics, medical physics, or other appropriate related field from an accredited university.

2. Professional Experience

   (a) No professional experience required.

**Part I (Magnetic Resonance Imaging Science) for MRI Physics only.**

1. Education

    A graduate degree in physical science involving nuclear magnetic resonance or MRI from an accredited university.

2. Professional Experience

   (a) No professional experience required.

**Part II Medical Health Physics; Magnetic Resonance Imaging Physics**

1. Education

   (a) Requirements as specified above for Part I

2. Professional Experience

   (a) Must have participated in clinical residency training from an accredited program or **must have been engaged in the practice of clinical medical physics or MRI science post graduate** under the supervision of a Board certified medical physicist for a minimum period of time preceding the date of the examination. (See Table I).  The experience for Medical Health Physics must be obtained as a provider of services in a healthcare facility.

    (b) same as in (b) of Part III.

**Note:**  The ABMP will waive Part I (General Medical Physics or MRI Science) exam requirement for physicists who are already passed the Part I examination offered by the ABMP, ABR, the CCPM (Canadian College of Physics in Medicine), or ABHP (American Board of Health Physics).  A medical physicist who is certified by any of the above boards and is eligible to apply for certification in another subspecialty offered by the ABMP, can apply directly for Part II examination in that subspecialty.

**FEES**

For each part, the entire amount due in U.S. dollars must accompany the completed application.

Payment may be made by check or money order.  Make checks or money orders payable to: American Board of Medical Physics, Inc.

Applications accompanied by incorrect fees will be returned.  For applications received after the due date, a non-refundable late fee will be assessed for each part of the examination.

**Part I   FOR Medical Health Physics and Magnetic Resonance Imaging Physics Candidates.**

|  |  |
| --- | --- |
| Testing Fee | $100.00 |
| Late Fee | $100.00 |

**Part II: Medical Health Physics and Magnetic Resonance Imaging Physics Candidates.**

|  |  |
| --- | --- |
| Testing Fee | $400.00 |
| Late Fee | $100.00 |

**Part III:  Medical Health Physics and Magnetic Resonance Imaging Physics Candidates.**

|  |  |
| --- | --- |
| Testing Fee | $400.00 |
| Condition retake | $200.00 |
| Late Fee | $100.00 |

**The testing fee must be submitted each time a candidate requests to take an examination, including retake examinations.  Once accepted to any part of the examination there will be no transfer or refund if the candidate requests a postponement or fails to appear.**

**Fees are non-refundable and non-transferable after notice of acceptance has been mailed.**

**AMERICAN BOARD OF MEDICAL PHYSICS**

**PROTOCOL FOR CONDUCT OF ORAL EXAMINATIONS**

**EXAMINATION COMMITTEE:**

The examination panel will consist of a chairman and two to three members, all of whom vote on the candidate's performance.

**EXAMINATION STYLE:**

Candidates for oral examination will have already demonstrated an adequate fund of knowledge by successfully completing the written examinations of Parts I and II.  The purpose of the oral examination is to assure that the candidate has sufficient clinical experience and can demonstrate proper responses to clinical situations.  The examination will be approximately two hours in length.

**EXAMINATION SCORE:**

There are 3 possible outcomes - pass, conditional pass or fail. Conditional pass may be obtained in up to three of the topics of the exam; conditioned candidates will be required to be reexamined only in the conditioned topics at the next examination date.

**2010 TESTING SCHEDULE**

**Part I: General Medical Physics Written Exam**

Saturday, July 17, 2010 in conjunction with the AAPM 52nd Scientific Meeting in Philadephia, PA  8 AM – 12 PM (specific place to be determined)

**Part I: Magnetic Resonance Science Written Exam**

Saturday, July 17, 2010 in conjunction with the AAPM 52nd Scientific Meeting in Philadephia, PA  8 AM – 12 PM (specific place to be determined)

**Part II: Medical Health Physics Written Exam**

Sunday, July 18, 2010 in conjunction with the AAPM 52nd Scientific Meeting in Philadelphia, PA , USA  8 AM – 12 PM (specific place to be determined)

**Part II: Magnetic Resonance Imaging Physics Written Exam**

Sunday, July 18, 2010 in conjunction with the AAPM 52nd Scientific Meeting in Philadelphia, PA , USA  8 AM – 12 PM (specific place to be determined)

\*\*\*\* Applications must be received no later than **May 1, 2010** in order to take the written examinations in July, 2010 \*\*\*\*\*

**Part III:  Magnetic Resonance Imaging Physics Oral Exam**

Saturday, July 18, 2010 in conjunction with the AAPM 52nd Scientific Meeting in Philadelphia, PA, USA  8 AM – 5 PM (specific place to be determined)

**Part III:  Medical Health Physics Oral Exam**

Saturday, July 18, 2010 in conjunction with the AAPM 52nd Scientific Meeting in Philadelphia, PA , USA  8 AM – 5 PM (specific place to be determined)

\*\*\*\* Applications must be received no later than **May 1, 2010** in order to take the oral examinations on July, 2010 \*\*\*\*\*

**Part III Orals - All Exams**

1. Prerequisites

    (a) Must have successfully passed Parts I and II.

2. Professional Experience

   (a) **Must have been engaged in the practice of clinical medical physics or MRI science post graduate for a minimum period of time preceding the date of the examination.** (See Table I).  The experience for Medical Health Physics must be obtained as a provider of services in a healthcare facility.

   (b) Only one-half of total training years will be credited towards professional experience.  Applicants from clinical residency programs will receive full credit.

**VERIFICATION OF QUALIFICATION**

Each applicant will be required to submit proof of certain educational and experience prerequisites.  Candidates applying for Part II  examination will also be required to obtain two (2) letters of endorsement to verify their work experience and professional qualifications.  Acceptable verification must be obtained from a Certified  Medical Physicist and a Certified Physician who practices in a medical specialty related to the candidate's field, and who have personal knowledge of the candidate's training, experience, and ethical standing.  Letters of endorsement must be forwarded directly to the Board by the professional references.  It is the applicants responsibility to ensure that these letters are received in a timely manner.  The application will be considered incomplete without the two letters.

**TABLE I:**

**PROFESSIONAL EXPERIENCE REQUIREMENTS**

|  |  |  |
| --- | --- | --- |
| **Highest Degree** | **Experience Required for Part II (Years)** | **Experience Required for Part II**I **(Years)** |
| M.S. (physical science or engineering) | 4 | 6 |
| M.S. (medical physics or MRI science program) | 2 | 4 |
| M.S. (medical physics accredited program) | 1 | 3 |
| Ph.D. or other doctoral degree (physical science or engineering) | 2 | 4 |
| Ph.D. or other doctoral degree (medical physics or MRI science program) | 1 | 3 |
| Ph.D. or other doctoral degree (medical physics accredited program) | 1 | 2 |
| M.S. (accredited program +clinical residency) | 0 | 1 |
| Ph.D. or other doctoral degree (accredited program + clinical residency) | 0 | 1 |

**EXAMINATIONS**

The examination is in three (3) parts:

**Part I**   is written and consists of matching, multiple choice, and true-false questions of the objective type.  It is designed to determine the competence of the candidate in fundamental aspects of medical physics.

**Part II**   is written and consists of matching, multiple choice, and true-false questions of the objective type.  It is designed to determine the competence of the candidate in a specialty area of medical physics.

**Part III** is an oral examination conducted by a multi-member examination panel.  It is designed to determine the candidate's knowledge and fitness to practice clinical medical physics in a designated specialty area.

            A study guide/syllabus, found on the ABMP web page, is available for each part of the examination.

            Parts I and II of the examination may be taken together or individually.  Only one (1) Part II specialty exam may be taken on a single testing date. Candidates must pass both Part I and Part II before taking Part III.

            Separate application forms must be submitted for each part of the examination accompanied by the appropriate fees.

**EXAMINATION CONTENT**

**OUTLINES**

**Part I. General Medical Phyiscs (may be used only for Medical Health Physics and/or MRI Physics certification)\***

|  |  |
| --- | --- |
| **SUBJECT** | **WEIGHT** |
| **Radiological Physics** | **20** |
| **Radiation Detection and Measurement** | **15** |
| **Biology and Radiobiology** | **5** |
| **Radiation Protection** | **15** |
| **Imaging and Other Diagnostic Studies** | **17** |
| **Principles of Radiation Therapy** | **15** |
| **Anatomy, Physiology, and Medical Science** | **7** |
| **Computers** | **6** |

**Part I. Magnetic Resonance Science ( may be used only for MRI Physics certification)\***

|  |  |
| --- | --- |
| **SUBJECT** | **WEIGHT** |
| **Atomic & Nuclear Physics** | **15** |
| **Chemistry & Biochemistry** | **15** |
| **Anatomy & Physiology** | **15** |
| **Medical Biophysics** | **10** |
| **Imaging Science and Image Processing** | **15** |
| **Medical & Radiological Practice** | **10** |
| **Clinical Statistics & Random Error Analysis** | **10** |

**Part II. Medical Health Physics**

|  |  |
| --- | --- |
| **SUBJECT** | **WEIGHT** |
| **Instrumentation** | **15** |
| **Laboratory Design** | **5** |
| **Standards and Regulations** | **10** |
| **Structural Shielding Design** | **15** |
| **Radiation Oncology:  Quality Assurance** | **10** |
| **Brachytheraphy:  Quality Assurance** | **10** |
| **Diagnostic X-Ray:  Quality Assurance** | **10** |
| **Nuclear Medicine:  Quality Assurance** | **10** |
| **Radiopharmaceutical Therapy** | **10** |
| **Non-Ionizing Radiation** | **5** |

**Part II. Magnetic Resonance Imaging Physics**

|  |  |
| --- | --- |
| **SUBJECT** | **WEIGHT** |
| **The Physics of NMR** | **15** |
| **MR Imaging Theory & Image Reconstruction** | **15** |
| **Image Characteristics & Artifacts** | **15** |
| **Advanced Imaging Techniques & System Features** | **15** |
| **Radiation Oncology:  Quality Assurance** | **15** |
| **Contrast Enhancement, MR Angiography & Cardiac MRI** | **15** |
| **MR Technology & Equipment Quality Control** | **15** |
| **Site Planning & Safety of MR Examinations** | **10** |

\***Please Note:** Those who have previously passed the ABR’s Part One examination on General Medical Physics may petition to waive the requirement to take both the General Medical Physics and Magnetic Resonance Science Part I ABMP examinations.

**EXAMINATIONS IN TRADITIONAL AREAS OF MEDICAL PHYSICS**

**The Radiation Oncology Phyiscs and Diagnostic Imaging Physics Examinations were offered by ABMP for the *final time* in 2005.**

**Individuals interested in certification in these, traditional areas, of medical physics are encouraged to contact the American Board of Radiology:**

***The American Board of Radiology***  
5441 East Williams Blvd., Suite 200  
Tucson, AZ 85711  
Phone (520) 790-2900   
Fax: (520) 790-3200

Email: [information@theabr.org](mailto:information@theabr.org)

Website: [www.theabr.org](http://www.theabr.org/)

**Full details of the 2001 agreement between the ABMP & ABR may also be accessed at the ABMP website:**

[***http://www.abmpexam.com/gpage7.html***](http://www.abmpexam.com/gpage7.html)

**RE-EXAMINATIONS**

A candidate who fails to pass any part of the three part examination may be admitted to a second examination after paying the appropriate fee.  If any part of the examination has been taken unsuccessfully three (3) times, the candidate will be required to reapply for the entire sequence of examinations. There is a time limit of 10 years to complete the certification process.

**REVOCATION OF CERTIFICATION**

The American Board of Medical Physics, Inc. has the right to revoke any certificate which it has awarded in the event that the recipient engages in actions which are considered to be in violation of the statement "Guidelines For Ethical Practice For Medical Physicists" published by The American Association of Physicists in Medicine.

**CHANGES IN REQUIREMENTS**

Current requirements, procedures, and fees of the American Board of Medical Physics, Inc. are subject to change without notice. No changes will be retroactive. Information regarding the agreement between the ABMP and ABR and FAQ's may be found on the ABMP website.

For application forms and study guides contact:

***American Board of Medical Physics, Inc.***

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Barker, Texas 77413  
Phone: (281) 944-9482; Fax: (866) 861-8280 [tollfree]  
Email: [abmpexdir@comcast.com](mailto:abmpexdir@comcast.com)

Website: [www.abmpexam.com](http://www.abmpexam.com/)

**TEST CENTER INFORMATION**

Eligible registered candidates will be sent an admission card prior to the test date indicating the location, date, and time of the test.  Each candidate must present this admission card and a picture identification in order to be admitted to the test.

The following rules will be observed at all test centers in order to ensure uniform testing conditions for Part I and Part II examinations:

1. Candidates must follow instructions on the admission card and arrive at the test center on time.  Proctors will not admit candidates who arrive after the reading of the examination instructions has begun.

2. Candidates should bring several #2 pencils with them to the test center.

3. Non-programmable silent calculators (not requiring electrical outlets) may be taken into the test center.

4. No test materials, documents, or memoranda of any kind may be taken from the test center.

5. Visitors will not be permitted in the test centers

6. Proctors will be instructed to answer questions about testing procedures only.  They will not  respond to  inquiries regarding test content.

7. Any candidate giving or receiving assistance from another candidate will be required to turn his/her test materials in and leave the test center.   The candidate will be required to reapply for the entire sequence of examinations.

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**EXAMINATION PANELS**

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Magnetic Resonance Imaging

Terry Button, Ph.D. &

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