American Board of Health Physics Certification

Allen Mabry, MSPH, CHP
Board Member, ABHP
Why Certify?

● You are identified as a qualified, knowledgeable employee

● You gain professional credibility

● Your career may be advanced

● You may stand above the competition

● You are recognized based on a peer review process

● Your earnings potential increases
Why Certify?

- You meet the needs of employers, practitioners, and the public by being identified as having certain knowledge and skills
- You are recognized as having met professional standards of practice
- Your commitment to a profession and to lifelong learning is demonstrated
- You achieve a sense of pride and professional accomplishment
History of the ABHP

- Established in 1959 by the HPS shortly after its organization
- Purpose:
  - Develop standards and procedures
  - Examine candidates
  - Issue written proof of certification
- Added power reactor specialty in 1977 (discontinued in 1993)
- American Academy of Health Physics (AAHP) established in 1982
- ABHP Certification is Accredited by Council of Engineering and Scientific Specialty Board.
The AAHP, ABHP, Exam Panels and Committees are all VOLUNTEERS.

Administrative support provided by Burk and Associates, Inc., Amy Wride-Graney, Executive Secretary
On the website:

- Prospectus
- Exam Preparation Guide (PDF)
- Forms (PDF and Word Documents)
  - Instructions to Applicants
  - Application for Certification
  - Immediate Supervisor Form
  - Confidential Professional Reference Form
  - Radiation Protection Report Cover Sheet
  - Guidelines for Submittal of Radiation Protection Report
- List of members of the Board and Exam Panels
- Wm. McAdams Award Recipients

http://www.hps1.org/aahp/boardweb/abhphome.html
Online Application

Tame even the wildest of candidate applications.
Academics

- BS or graduate degree in qualifying area
  - Physical science or engineering
  - Biological science (minimum of 20 hours in physical science)
- Satisfied all requirements for degrees claimed by the time application is made for either part of the written examination
  - Must pass Part II within 7 years of passing Part I.

Definition of physical science: science that studies non-living system (physics, geology, chemistry, meteorology)
General Requirements for Certification

Work Experience

- 6 yrs **PROFESSIONAL** level experience
  - 3 yrs must be in applied health physics
  - Technician level experience **not** accepted
- Military experience - only commissioned and warrant officer grade
- Advance degree and work experience during same period of time can be accepted, but
  - Only 1 year of experience granted per calendar year
- Work experience prior to receiving qualifying degree is **prima facie** not professional level.
- **Applicant** must demonstrate experience meets criteria
General Requirements for Certification

Part I of the examination may be taken prior to completing all the requirements for certification. To qualify for early admission to Part I of the exam one must have:

- Master’s degree* in Health Physics or closely related field, or
- Bachelor’s degree in Health Physics and 1 year professional level experience, or
- Bachelor’s degree in accepted field and 2 years professional level experience.

*Degree must be obtained prior to June 30th of exam year.
General Requirements for Certification

Advanced Degree Credit
An advanced degree may count towards work experience:

- Master’s degree in health physics – 1 year work experience credit
- Doctorate in health physics – 2 years work experience credit.
Written Report

- Document written by the applicant that reflects a professional health physics effort
  - facility evaluation
  - protection guidance document
  - a major monitoring program
  - some other comprehensive effort
- must be on a topic for which the ABHP tests and certifies expertise
- must contain elements of professional judgment or application of non-regulatory protection guidance
- must be written solely or principally by the candidate
General Requirements for Certification

References

- Supervisor
- Two additional professional references
- One reference from a CHP
General Requirements for Certification

Examination

- Must be taken within 2 yrs of notification of eligibility, or a new application must be submitted.
- Must pass Part II within 7 years of passing Part I.
How Applications are Processed

- Applications are reviewed by an ABHP Board member
- Rejected applications receive second review by the Board Chair
- Applicants can appeal rejection of their application
  - Appeals should be processed through the Executive Secretary
How are the Exams Prepared

● Part I
  - Exam bank – multiple choice
  - Exam consists of 150 questions
  - Questions are reused

● Part II
  - Exam bank – short answer, calculations, short discussion
  - Exam consists of 6 core questions, 8 specialty questions
  - Questions may be reused
Part I questions are designed to evaluate candidate's knowledge of the fundamentals of health physics.

Each question has five possible answers from which to choose.

Three hours are allowed to complete Part I.

Part I questions may be reused in subsequent years; therefore the Part I examination is held in strict confidence and copies of past exams are not distributed.
How Exams are Prepared – Part I

● 19 – 23 of the questions are calculation

● 5 domains of practice
  1. Measurement and Instrumentation (~25%)
  2. Standards and Requirements (~20%)
  3. Hazards Analysis and Control (~20%)
  4. Operations and Procedures (~20%)
  5. Fundamentals and Education (~15%)

● Passing grade: usually within the range of 92 to 97 correct answers or 61 to 65%
How Exams are Prepared – Part II

- Designed to test judgment
- Test candidate’s ability to analyze and organize complex problems
- Test the use of practical skills at a high professional level
- 6 hours allowed to complete
Part II divided into 2 sections

**Section 1**
- 6 questions on core topics of health physics
- All 6 questions are graded
- Topic areas
  - personnel dosimetry (internal and external)
  - shielding and activation
  - measurements and instrumentation
  - biological effects of radiation (risk)
- Each question worth 50 points
- Short essay, calculational, or series/multiple choice format
Section 2

- 8 questions on specialized health physics topics
- Answer 4 of 8 (first 4 questions answered will be graded)
- Short essay, short answer, calculational, multiple-choice

Topical Areas:
- Accelerators
- Environmental
- Fuel Cycle and Waste Management
- Medical
- Research and Power Reactors
- University
- General (can include non-ionizing, emergency response, meteorology, standards and regulations)

- Each question worth 100 points
- Passing grade: 469 points out of 700 possible (67%).
Part I Exam Locations

- Part I of the exam is administered at testing centers
- Administered the week prior to the HPS Annual Meeting
- No longer administered at the site of the HPS Annual Meeting
- Confirmed candidates are contacted by the Secretariat with details on test administration
5,600 test centers strong
Reach your candidates with the industry’s largest and most trusted network of test centers
Which of these elements are considered a metal by the Periodic Table?

Please select three options only.

- A. 79\(\text{Au}\)
  Gold

- B. 1\(\text{H}\)
  Hydrogen

- C. 12\(\text{Mg}\)
  Magnesium

- D. 19\(\text{K}\)
  Potassium

- E. 54\(\text{Ba}\)
Part II Exam Locations

- Exam is given one day each year
- Exam given at the site of the HPS Annual Meeting and at several other locations throughout the country
- Exam sites selected by the AAHP Examination Site Selection Committee. May vary from year to year.
- Approved candidates will be sent a site selection form
- Candidates will be notified of their exam site 45 days prior to the exam date
Meaning of Certification

Certification does not end with the successful completion of the two part examination. Other obligations include:

- upholding the highest standards of professional ethics
- practicing only in those areas of health physics in which he or she is competent
- maintaining technical competence
- remaining professionally active in the field of health physics and knowledgeable of scientific, technical, and regulatory developments in the field