

**A Clinical Engineer is a professional who supports and advances patient care by applying engineering and managerial skills to healthcare technology. ACCE Definition, 1992.**

As clinical medicine has become increasingly dependent on more sophisticated technologies and the complex equipment associated with it, the clinical engineer, as the name implies, has become the bridge between modern medicine and equally modern engineering.

Clinical Engineering education is based in classical engineering, supplemented with a combination of courses in physiology, human factors, systems analysis, medical terminology, measurement, and instrumentation. It is often capped with a practicum or internship in a university hospital setting, giving the student a firm grounding in hospital operations, protocols, and ethics.

All of this background prepares the clinical engineer to fill a variety of roles in research, design, academia, and most often, in the clinical environment. In daily practice, the clinical engineer often serves as the translator walking between the worlds of the medical, engineering, and business professionals. Today, healthcare technology extends into information and communications systems and traditional medical equipment is more complex than ever. Assessing, managing, and solving problems in this hyper-tech world is the work of the clinical engineer.

## American College of Clinical Engineering

Founded in 1991, ACCE is committed to enhancing the profession of clinical engineering. With members in the United States and abroad, the ACCE is the only internationally recognized professional society for clinical engineers.

### Mission of ACCE

- To establish a standard of competence and to promote excellence in clinical engineering practice.
- To promote safe and effective application of science and technology in patient care.
- To define the body of knowledge on which the profession is based.
- To represent the professional interests of clinical engineers.

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# A Guide to Clinical Engineering Certification

## Clinical Engineering Certification Program

under the administration of the Healthcare Technology Certification Commission and the United States Board of Examiners for Clinical Engineering Certification

## What is Certification?

- **Certification is an important part of a process called credentialing. It focuses specifically on the individual and provides an indication of current competence through a voluntary examination administered to those who have attained a required level of education and/or experience.**
- **Certification in clinical engineering is highly valued and provides formal recognition of the knowledge base of clinical engineers.**

## What is the Purposes of Clinical Engineering Certification?

The purpose of certification is to promote healthcare delivery improvement in the United States through the

certification and continuing assessment of competency of professionals who support and advance patient care by

applying engineering and management skills to healthcare technology. The certification process includes:

1. Establishing and measuring the level of knowledge required for certification as a clinical engineer.
2. Providing a standard of knowledge requisite for certification; thereby assisting the employer, public, and members of the health professions in the assessment of the clinical engineer.
3. Recognizing formally those individuals who meet the eligibility requirements of the Board and pass the Examination Certification for Clinical Engineering.
- 4— Requiring continued personal and professional growth in the practice of clinical engineering to maintain certification.

## Who is Eligible to Apply?

To be eligible for certification in clinical engineering, a candidate must hold appropriate professional or educational credentials and have achieved the associated levels of engineering and clinical engineering practices. Examples of typically eligible individuals are as follows:.

- Licensed in the United States as a professional engineer (PE) plus three or more years of clinical engineering practice
- BS or higher degree in engineering plus four or more years of engineering practice, including three or more years in clinical engineering practice
- BSET degree in engineering technology (TAC/ABET accredited program) plus eight or more years of engineering practice, including three or more years of clinical engineering practice

For details, official interpretations of above, refer to the handbook for candidates and applications for the examination for certification in clinical engineering.

## How Can I Apply?

Contact Healthcare Technology Certification at 5200 Butler Pike, Plymouth Meeting, PA 19462 <http://www.thehtf.org/certification.asp>

## What is the Process?

Clinical engineering certification is a three-step process: (1) application review by the US Board of Examiners for Clinical Engineering Certification; (2) written examination; and (3) oral examination.

1. The application review consists of the assessment of information contained in the application in comparison to defined eligibility requirements, review and verification of college or university transcripts, and review of three references that attest to the candidate's clinical engineering experience and abilities.
2. The written examination consists of 150 multiple choice questions with 3 hours of allotted time.
3. The oral examination consists of 3 questions with 1 3/4 hours of allotted time. The written examination must be passed before taking the oral examination.

Additional information about the process and application fees can be found at <http://www.thehtf.org/certification.asp>