

US and International Certification Programs

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US Programs

- International Certification Commission
 - Run by AAMI
 - CBET Program
 - CRES Program
 - CLES Program
- Healthcare Technology Certification Commission
 - Run by ACCE Healthcare Technology Foundation
 - CCE program

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Biomedical Equipment Technology

- Over 5000 certified
- Program advertised, supported and managed by AAMI
- Long track record and well respected program
- Exam based on body of knowledge defined by the BMET Board of Examiners
- Study Guide produced by AAMI

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Biomedical Equipment Technology

- CBET Requirements
 - AAS degree in BMET and two years as FT BMET
 - AAS degree in ET and 3 ½ years as FT BMET or
 - Four years full-time BMET work experience
- CRES & CLES Requirements
 - At least 40% over past two years or
 - At least 25% over past five years in the designated specialty area
- Candidate Status
 - Permitted to take exam early

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Biomedical Equipment Technology

- 150 multiple choice questions
- Administered by Professional Testing Corporation (PTC) in NYC
- Board of Examiners creates new questions for the question bank
- Board of Examiners reviews new exams before they are used.
- PTC gives the exams and is responsible for security

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Biomedical Equipment Technology

- Pass rate about 60%
- Most who do not pass do not prepare well
- Preparation can include
 - Review classes (25-30 attended this weeks)
 - Sample questions / study guide
 - Study groups
 - Review current issues
 - Review the basics
 - Commit 3-4 hours per week for 3-4 months prior to exam

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Biomedical Equipment Technology

- Body of Knowledge
 - Anatomy and Physiology (13%)
 - Safety in Healthcare (17%)
 - Fundamentals of Electronics (20%)
 - Medical Equipment Function (23%)
 - Medical Equipment Problem Solving (27%)



Clinical Engineering

- About 250 currently certified and practicing
- AAMI CCE program terminated
- ACCE re-engineered the CCE program
- The newly formed HTCC “recognized” previously certified individuals
- 10-20 take the exam each year.
- Pass rate is about 75%



Clinical Engineering

Eligibility Requirements

- 3 years of clinical engineering experience +
 - BS eng + 5 years eng experience
 - MS eng
 - BS or higher degree in related fields of science or mathematics + 6 yrs eng exp.
- BSET degree in engineering technology + 8 years of engineering experience
- Three professional references



Clinical Engineering

- Exam based on body of knowledge
 - BoK obtained by survey of clinical engineers
 - Performed every 3-4 years
- CCE Exam
 - 150 Multiple choice questions
 - Exam administered by PTC
 - 45 minute oral exam by two Board members
- CCE Exam based on practical knowledge needed to function in the job
- Periodic renewal is required



Clinical Engineering

- The common knowledge you need to know to function. For instance, how to:
 - Keep track of equipment
 - Determine maintenance intervals
 - Reduce risks to patients and users
 - Determine which codes and standards apply to medical equipment
 - Investigate an accident
 - Negotiate a contract, etc.
 - Acquire a medical system



Clinical Engineering

Body of Knowledge	
Technology Management.....	25 %
Service Delivery Management.....	18 %
Product Development, Evaluation, & Modification ..	7 %
IT / Telecom	7 %
Education of Others	9 %
Facilities Management.....	5 %
Risk Management / Safety	10 %
General Management.....	12 %
Other	7 %



International Certification

Clinical Engineering Certification programs exist in

- Brazil
- Germany
- Ireland
- UK
- Malaysia
- Mexico
- Canada
- South Africa
- Sweden
- China
- Japan
- US



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Future Certification Programs

- Healthcare Technology Manager
- Clinical Systems Engineer
- IT related

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Why Certification Programs

- To protect the public
- To insure quality practitioners
- To provide a method for professional achievement
- To identify competent practitioners
- To identify those who display professional commitment

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Why become certified?

- My organization wants me to
- It shows I've met the national standard
- I want to continue to advance professionally
 - Professional Development
- I can get a pay increase if I do
- When I apply for my next job it may give me an advantage

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Thank You !

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