

Western Technical College

10605204 On-Site BioMedical Clinical Experience 2

Course Outcome Summary

Course Information

Description	This course is a continuation of the On-Site Bio-Medical Clinical Experience 1 typical HTM job related skills. Laboratory sessions continue to be primarily hospital based. Preparation for a CBET (Certified Biomedical Equipment Technician) practice exam focuses on solidifying program knowledge base in electronics, codes/standards/safety practices, computers/networking, anatomy/physiology, medical equipment, communications, and HTM problem solving.
Career Cluster	Science, Technology, Engineering and Mathematics
Instructional Level	Associate Degree Courses
Total Credits	3

Textbooks

Biomedical Device Technology: Principles and Design. 2nd Edition. Copyright 2016. Chan, Anthony Y.K. Publisher: Charles C. Thomas. **ISBN-13**: 978-0-398-09083-8. Required.

Learner Supplies

Safety glasses with side eye protection that meet Z87 OSHA guidelines. **Vendor**: Campus Shop. Required.

Core Abilities

1. **Apply mathematical concepts.**
2. **Demonstrate ability to think critically.**
3. **Demonstrate ability to value self and work ethically with others in a diverse population.**
4. **Make decisions that incorporate the importance of sustainability.**
5. **Transfer social and natural science theories into practical applications.**

6. **Use effective communication skills.**

7. **Use technology effectively.**

Course Competencies

1. **Prepare for continuing education aspect of BMET career.**

Assessment Strategies

- 1.1. Homework Assignments
- 1.2. Networking with professionals

Learning Objectives

- 1.a. Participate in professional Journal reading
- 1.b. Investigate professional biomedical associations
- 1.c. Research topics of interest to the biomedical profession
- 1.d. Investigate new and existing medical technologies

2. **Demonstrate proficiency in the professional workplace skills necessary to be a successful biomedical equipment technician.**

Assessment Strategies

- 2.1. Clinical participation
- 2.2. Classroom participation

Learning Objectives

- 2.a. Be on time for clinical
- 2.b. Dress appropriately for clinical
- 2.c. Communicate in a professional business manner
- 2.d. Use the computers and internet in a professional manner
- 2.e. Demonstrate integrity and honesty in all clinical activities

3. **Demonstrate proficiency in the utilization of test equipment to perform testing procedures on biomedical equipment.**

Assessment Strategies

- 3.1. Clinical activities
- 3.2. Classroom lab activities
- 3.3. Homework assignment

Learning Objectives

- 3.a. Identify the function of a variety of test equipment
- 3.b. Operate a variety of test equipment
- 3.c. Select the correct test equipment for a particular task
- 3.d. Describe the requirements of a test equipment verification program

4. **Demonstrate proficiency performing quality-assurance testing on a wide array of patient care equipment.**

Assessment Strategies

- 4.1. Clinical activities
- 4.2. Objective test
- 4.3. Homework assignment

Learning Objectives

- 4.a. Demonstrate a furtherance of understanding of numerous medical devices
- 4.b. Independently test a limited number of medical devices
- 4.c. Follow manufacturers recommended test procedures
- 4.d. Examine the appropriateness of any particular test procedure

5. **Demonstrate competency in reading schematics, manuals, and other technical information.**

Assessment Strategies

- 5.1. Clinical activities
- 5.2. Homework assignment
- 5.3. Objective test

Learning Objectives

- 5.a. Utilize manufactures publications while checking medical devices
- 5.b. Utilize a variety of sources while completing assignments
- 5.c. Interpret hardware documentation (such as schematics block diagrams, flowcharts, and parts layout diagrams)

6. Demonstrate a proficient application of the codes and standards relevant to Healthcare Technology Management

Assessment Strategies

- 6.1. Objective test
- 6.2. Clinical activities

Learning Objectives

- 6.a. Adhere to the codes and standards while checking medical equipment on clinical
- 6.b. List the agencies responsible for producing the codes and standards
- 6.c. Describe which agencies are responsible for which codes and standards
- 6.d. Identify which codes and standards are pertinent to particular areas

7. Assume responsibility of a healthcare professional, with tolerance and compassion for fellow human beings.

Assessment Strategies

- 7.1. Clinical activities
- 7.2. Class participation

Learning Objectives

- 7.a. Follow clinical policies
- 7.b. Follow school policies
- 7.c. Follow program policies

8. Document clinical activities in a professional manner.

Assessment Strategies

- 8.1. Journal clinical activities
- 8.2. Clinical activities
- 8.3. Pass an objective test

Learning Objectives

- 8.a. Use professional English grammar on documentation
- 8.b. Document clinical activities in clinical medical equipment database
- 8.c. Document clinical activities in journals

9. Pass a CBET practice test with a 50 percent or better score.

Assessment Strategies

- 9.1. Participation with CBET study guide
- 9.2. Objective test

Learning Objectives

- 9.a. Explain aspects of Anatomy and Physiology
- 9.b. Explain aspects of Public safety in the healthcare facility
- 9.c. Explain aspects of Fundamentals of Electricity and Electronics
- 9.d. Explain aspects of Healthcare Technology Function and operation
- 9.e. Explain aspects of Healthcare technology problem solving
- 9.f. Explain aspects of Healthcare Information Technology