

BMT 111 Intro to the Biomedical Field

COURSE DESCRIPTION:

Prerequisites: None

Corequisites: None

This course introduces the fundamental concepts of the healthcare delivery system. Topics include hospital organization and structure, Biomedical Equipment Technician (BMET) duties and responsibilities, and the professional and social interaction between services. The course consists of lectures, laboratory sessions, and a final exam.

Course Hours per Week: Class, 1, Lab, 1, Semester Hours Credit, 2.

LEARNING OUTCOMES:

Upon completing requirements for this course, the student will be able to:

1. Understand the BMET field
2. Describe the different departments and organizations that can be found in a typical hospital.
3. Identify electronic and medical terminology commonly used in the field of BMET.
4. Learn about main medical equipment used in healthcare delivery.

OUTLINE OF INSTRUCTION:

- I. General Introduction
 - A. Introduction to the course syllabus and outline
 - B. Welcome to Introduction to the Biomedical Field
- II. Hospital organization structures
 - A. Classification of hospitals
 - B. Organizational structures of hospitals
- III. BMET career, responsibilities, and certifications
 - A. BMET job responsibilities
 - B. BMET career advancement opportunities
 - C. Certified Biomedical Equipment technician
 - D. Certified Associate in Biomedical Technology (CABT) program
- IV. Medical and Technical Terminology for BMET
 - A. Biomedical Equipment inventory, technical documentation
 - B. Sterilization, Compliance, Calibration, Troubleshooting
 - C. Preventive maintenance, Equipment lifecycle
- V. Basic Electronic terminology and components
 - A. Definitions of circuits, signals, noise, frequency, voltage, and current
 - B. Resistors, capacitors, inductors, medical sensors, etc.

- VI. Introduction to Common Medical Equipment
 - A. Diagnostic equipment such as ECG, EEG, Pulse Oximeter, Blood pressure monitor, etc.
 - B. Therapeutic equipment such as Infusion pump, Ventilator, pacemaker, etc.

REQUIRED TEXTBOOK AND MATERIAL:

The textbook and other instructional material will be determined by the instructor.