BMET-BIOMEDICAL TECHNOLOGY

BMET 1140. Applied Human Biology for Biomedical Technology
3 Credits (3)
Essential human biology, anatomy, physiology and medical terminology for biomedical equipment technicians. Focus on the vocabulary necessary for effective communication in the hospital environment as part of the health care team.

Learning Outcomes

1. Define the anatomic terms used to refer to the body.
2. Define the basic units of life and how they interact and function.
3. Classify the organization of the body.
4. Explain the normal functions of each body system.
5. Discuss how the different body systems work together to maintain homeostasis.
6. Explain the nature of disease and how it affects each body system.
7. Discuss how biomedical technology relates to human anatomy and pathology.

BMET 1141. Medical Electronics and Safety in Healthcare
3 Credits (3)
Introduction to the biomedical equipment technology field. Operation of common biomedical equipment to include pressure and temperature systems, infusion devices, patient monitors, and other physiologic and patient systems. Hospital safety and health regulations explained.
Prerequisite/Corequisite: BMET 1140.

Learning Outcomes

1. Identify historical developments of devices, explain the role of BMET personnel, and categorize the usage and methods of medical devices relating to the human body.
2. Identify and define, contrast, explain, and demonstrate the use of medical diagnostic and measurement devices.
3. Identify and define, compare, explain, and demonstrate the use of medical treatment devices.
4. Identify and define, and demonstrate medical system safety procedures, troubleshooting techniques, and testing methods.
5. Identify and compare, define, and demonstrate usage of biomedical test and calibration equipment.

BMET 2211. CBET Exam Preparation
1 Credit (1)
An overview of the Certified Biomedical Equipment Technician exam. Topics include anatomy and physiology, electronics principles, safety issues, equipment operation, and equipment troubleshooting.
Prerequisite/Corequisite: BMET 2241.

Learning Outcomes

1. Identify the fundamentals of anatomy and physiology and match them to the interaction with medical equipment.
2. Identify and differentiate between public safety measures in the healthcare industry.
3. Categorize electricity and electronic aspects of the biomedical field and contrast their operation functions.
4. Contrast healthcare medical devices related to their functions and operations.
5. Identify and categorize problem solving steps and procedures related to multiple medical devices.
6. Identify and compare healthcare information technology standards, regulations, and operational methods in modern medical facilities.

BMET 2241. Advanced Medical Electronics
3 Credits (3+1P)
Advanced study in biomedical equipment to include cardiovascular, pulmonary, telemetry and other critical life support systems. May be repeated up to 3 credits.
Prerequisite: BMET 1141.

Learning Outcomes

1. Identify and define, contrast, and explain patient safety and demonstrate patient safety electrical risk device maintenance.
2. Identify and define, contrast, and explain medical facility guidelines, codes, and standards and their associated regulatory agencies.
3. Identify and define, contrast, and explain electrodes, sensors, and transducers used in health care instrumentation.
4. Identify and define, contrast, and explain patient respiratory needs and distinguish between their related medical devices.
5. Identify and define, contrast, and explain intensive care unit (ICU) characteristics, types, devices, and support and demonstrate maintenance procedures for (ICU) equipment and devices.
6. Identify and define, contrast, and explain operating room needs, environments, and procedures, and distinguish between their medical devices.

BMET 2998. Biomedical Technology Internship
1-4 Credits (3-12P)
Practice working in industry as a biomedical electronics technologist. Students work on a variety of medical equipment and job tasks. An employer evaluation, student report, and a minimum of 100 work hours are required. May be repeated up to 8 credits.
Prerequisite: BMET 1140 and BMET 1141.

Learning Outcomes

1. Varies.