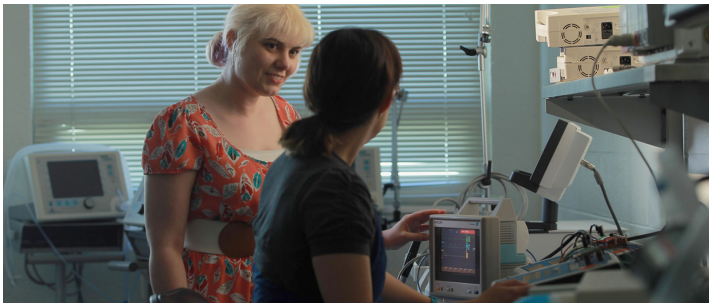
# BIOMEDICAL CLINICAL EQUIPMENT TECHNICIAN, ASSOCIATE OF APPLIED SCIENCE



## Program Information

Are you a hands-on kind of person with a technical mind? If so, San Jacinto College's Biomedical Clinical Equipment Technician program might be the path for you. Biomedical clinical equipment technicians are essential to the medical field. Technicians must have the skills necessary to repair and replace, test and calibrate, and perform preventative maintenance on sophisticated medical equipment. They must also facilitate training sessions on medical equipment such as patient monitors, defibrillators, medical imaging equipment, and more.

The San Jacinto College Biomedical Clinical Equipment Technician program:

- Provides quality training in computer and electronics technology in today's medical equipment operation and repair;
- Offers an occupational certificate that will start to build a foundation for developing an understanding in medical equipment and computer and electronics operation and repair; and
- Teaches students skills necessary to repair and replace parts on medical equipment, test and calibrate equipment, perform and record preventative maintenance, procure and track inventory, and facilitate training sessions on the equipment.

## Career Opportunities

Professionals with an associate degree and at least two years of work experience can become a Certified Biomedical Equipment Technician (CBET) through the Association for the Advancement of Medical Instrumentation (AAMI).

## Earning Potential

Medical Equipment Repairer: $49,425 per year [1]

[1] Source: texaswages.com (http://texaswages.com), median salary Gulf Coast region, 2019

For more information, students may contact 281-998-6150, x3587.

## Campus

South Campus

## Information

The College designed the Biomedical Clinical Equipment Technician curriculum to provide basic training for students to enter and/or advance in the occupations associated with medical equipment maintenance and repair. A biomedical clinical equipment technician must possess the skills necessary to repair and replace parts on medical equipment, test and calibrate equipment, perform and record preventative maintenance, procure and track inventory, and facilitate training sessions on the equipment. A graduate in this program will gain the theoretical knowledge needed to understand the equipment as well as the practical, hands-on skills to operate and repair the equipment.

Employment of medical equipment repairers is projected to grow 31 percent from 2010 to 2020, much faster than the average for all occupations. Greater demand for health care services and the use of increasingly complex medical equipment will drive this employment growth. Those who have associate degrees in biomedical equipment technology should have the best job opportunities. Biomedical clinical equipment repair technicians are most commonly employed by hospitals or clinics, private companies, and the military. Biomedical clinical equipment repair technicians must be able to interact with health care professionals, administrators, patients, and vendors to perform their jobs. Although some medical equipment repairers are trained to fix a variety of equipment, others specialize in repairing one or a small number of machines. For less complicated equipment, such as electric hospital beds, workers make repairs as needed. Students can become a Certified Biomedical Equipment Repair Technician (CBET) through the Association for the Advancement of Medical Instrumentation (AAMI) by sitting for the exam administered by the International Certification Commission (ICC). AAMI also offers additional credentials. Eligibility requirements vary depending on the level of education and work experience. Once students have completed an associate degree in Biomedical Clinical Equipment Technology and gained two years of work experience in the field, they are eligible for certification.

As with most technology, advances in medical equipment are constantly evolving. Because of this, technicians are required to complete continuing education activities to keep their skills and equipment knowledge up to date.

The student that begins the program in the occupational certificate will start to build a foundation for developing an understanding in medical equipment, computer, and electronics operation and repair. The next two certificates (certificate of technology and the level 2 certificate) build upon these foundation classes with more specialized biomedical equipment classes to provide the student with more theoretical and practical industry expertise and the chance for an internship. All of these certificates are stackable and lead directly to the Associate of Applied Science (AAS) degree. Some students with previous biomedical equipment repair experience can enter the workplace with the certificates while students with no previous experience are encouraged to complete the AAS degree.

## Plan of Study

**South Campus**
3BIOMD-CET

| **First Term** | | **Credits** |
|---|---|---|
| BIOM 1309 | Applied Biomedical Equipment Technology | 3 |
| BIOM 2301 | Safety in Health Care Facilities | 3 |
| CETT 1302 | Electricity Principles | 3 |

| | | |
|---|---|---|
| ITNW 1325 | Fundamentals of Networking Technologies | 3 |
| ITSC 1309<br>or BCIS 1305 | Integrated Software Applications I<br>or Business Computer Applications | 3 |
| | **Credits** | **15** |
| **Second Term** | | |
| BIOM 1315 | Medical Equipment Networks | 3 |
| BIOM 1341 | Medical Circuits Troubleshooting | 3 |
| BIOM 1350 | Diagnostic Ultrasound Imaging Systems | 3 |
| BIOM 1355 | Medical Electronic Applications | 3 |
| BIOM 2311 | General Medical Equipment I | 3 |
| | **Credits** | **15** |
| **Summer Year One Term** | | |
| BIOM 2389 | Internship - Biomedical Technology/ Technician | 3 |
| | **Credits** | **3** |
| **Third Term** | | |
| BIOM 2319 | Fundamentals of X-Ray and Medical Imaging Systems | 3 |
| BIOM 2315 | Physiological Instruments I | 3 |
| BIOM 2343 | General Medical Equipment II | 3 |
| ENGL 1301 | Composition I | 3 |
| Social and Behavioral Sciences or Government/Political Science or American History | | 3 |
| | **Credits** | **15** |
| **Fourth Term** | | |
| ENGL 2311<br>or ENGL 1302 | Technical and Business Writing<br>or Composition II | 3 |
| Speech | | 3 |
| Language, Philosophy, and Culture (Humanities) or Creative Arts (Fine Arts) | | 3 |
| Select one of the following: | | 3 |
| MATH 1314 | College Algebra | |
| MATH 1332 | Contemporary Mathematics (Quantitative Reasoning) | |
| Life and Physical Sciences (Lec & Lab) | | |
| | **Credits** | **12** |
| | **Total Credits** | **60** |

**Capstone Experience:** BIOM 2343 General Medical Equipment II