

# Biomedical Equipment Technician (BMET)

Associate in Applied Science (AAS) Degree

Technical Credits .....57

MnTC General Education Credits.....15

Total Credits .....72

## Program Information

The Anoka Technical College Biomedical Equipment Technician (BMET) program is a 72-credit Associate of Applied Science (AAS) degree that includes technical and general education components. This degree provides the skills for working in hospitals, manufacturing, and field service plus the possibility to pursue a Bachelor of Arts (BA) degree with cooperating colleges and universities. Full time students can obtain an applied associate science degree in two years. Financial assistance is available for those who qualify and there are several BMET program-specific scholarships available.

Designed by biomedical and manufacturing industry leaders, the program provides a comprehensive, hands-on, career-oriented curriculum. Students will obtain a solid education in biomedical devices/industry fundamentals, electronic engineering fundamentals, computer/networking fundamentals.

Biomedical technicians play a vital role in health care, enhancing the user experience by ensuring all medical equipment is safe and in proper working condition. Technicians inspect, calibrate, maintain, and repair diagnostic equipment, monitoring equipment, therapeutic and life-saving medical equipment (defibrillators, ventilators, drug delivery pumps, CT and MRI Scanners, and more) found in hospitals, medical clinics, imaging centers and medical device companies.

## Program Learning Outcomes

- Interpersonal and employability skills: Communicate with peers and customers using professional, ethical and appropriate verbal and nonverbal communication skills; by accepting constructive feedback and displaying appropriate behavior; participating as a member of a team, exhibiting leadership and lifelong learning skills.
- Electronic Theory: Demonstrate a solid understanding of electronics; by interpreting electronic schematics and diagrams; research, organize and interpret information from various technical sources; identifying components; electronic test equipment used by technician in industry.
- Biomedical Systems: Convey the understanding of complex relationships between sections of specialized equipment through written, verbal, and/or demonstrative methods.
- Troubleshooting: Demonstrate principles of troubleshooting and logical diagnosis by using critical thinking skills to define, analyze, and implement a solution.
- Biomedical Applications: Evaluate and determine that all biomedical equipment is in proper working condition, ensuring a safe, reliable health care environment.
- Safety Compliance: Participate in class in a professional manner, by acting in compliance with documented safety procedures and appropriate industry standards.
- Test Equipment: Demonstrate solid understanding of test equipment used by technicians in the health care industry.

## Career Opportunities

In today's health care market, technology is paramount. The need for a workforce knowledgeable in the theory of operation, underlying physiological principles, and safe application of biomedical equipment is a central concern of many hospitals and companies.

The BMET is a skilled technician that demonstrates the knowledge to ensure a safe, reliable health care environment. Referenced from International Certification Commission (ICC) handbook <http://www.aami.org/certification/>

Wage information is available from the [Minnesota Department of Employment and Economic Development](#)

## Program Start Dates

Fall Semester.....August  
Spring Semester.....January\*\*

\*\*Students who start in the spring will need more time to complete this program.  
Limited first semester technical courses are offered in the Spring semester.

## Course Prerequisites

Some courses in this program may require a prerequisite. Please see [course descriptions](#) for more details.

## MnTC General Education Requirements

This program requires completion of the following fifteen credits of general education from at least three goal areas of the Minnesota Transfer Curriculum (MnTC). Refer to the [MnTC course list](#) for elective courses:

- MATH 1550 Introduction to Statistics (Goal 4)..... 4
- BIOL 1130 Human Biology (Goal 2&3) or BIOL 1104\* The Human Body-Structure & Function (Goal 2&3) . 4
- SPCH 1200 Interpersonal Communication (Goal 1&7)..... 3
- MnTC Elective ..... 4

## Program Sequence

<b>Fall Semester</b> .....	<b>16</b>
<input type="checkbox"/> ETEC 1102 Mechatronics 1 DC .....	3
<input type="checkbox"/> ETEC 1113 Mechatronics 2 AC .....	3
<input type="checkbox"/> ETEC 1141 Circuit Analysis 1 .....	4
<input type="checkbox"/> ETEC 1151 Computer Troubleshooting A+ .....	3
<input type="checkbox"/> ETEC 1250 Digital 1 .....	3
<b>Spring Semester</b> .....	<b>16</b>
<input type="checkbox"/> BMET 1301 Biomedical Networking.....	2
<input type="checkbox"/> ETEC 1170 Programmable Logic Controllers (PLCs).....	2
<input type="checkbox"/> ETEC 1202 Solid State Electronic Devices.....	5
<input type="checkbox"/> ETEC 1260 Lasers and Optics.....	2
<input type="checkbox"/> ETEC 1271 Technical Documentation .....	3
<input type="checkbox"/> ETEC 1281 Engineering Technology Programming: LabVIEW and C++ .....	2
<b>Summer Semester</b> .....	<b>7</b>
<input type="checkbox"/> MATH 1550 Introduction to Statistics .....	4
<input type="checkbox"/> SPCH 1200 Interpersonal Communication .....	3



A member of Minnesota State

AnokaTech.edu

(continued)

2022-2023

# Biomedical Equipment Technician (BMET)

Associate of Applied Science (AAS) Degree

**Fall Semester** ..... 16

- BMED 2100\* Design & Manufacturing in Medical Device Industry ..... 3
- BMED 2300\* Introduction to Quality Assurance ..... 3
- BMET 1200 Biomedical Equipment and Terminology ..... 2
- ETEC 2138 LabVIEW and Data Acquisition ..... 4
- ETEC 2276 Industrial Networking IOT/M2M ..... 4

**Spring Semester** ..... 17

- BIOL 1104\* The Human Body-Structure & Function ..... 4

**OR**

- BIOL 1130 Human Biology ..... 4
- BMED 2200 \*Introduction to Medical Device Regulations/Ethics ..... 3
- BMET 2012 Biomedical Instrumentation ..... 4
- ETEC 2011 Machine-to-Machine Wireless Communications 2
- MnTC Elective ..... 4

\* Courses are taken at Anoka-Ramsey Community College

## Graduation Requirements

Students must earn a cumulative 2.0 GPA or higher to be eligible for graduation from this program.

## Faculty Contact

[Tom Reid](#) ..... 763-576-4139  
[Daniel Truchon](#) ..... 763-576-4185

For information on how to apply, to schedule a tour, or for service during summer hours, contact Enrollment Services at 763-576-7710 or [EnrollmentServices@anokatech.edu](mailto:EnrollmentServices@anokatech.edu)

*Also see: Robotic and Electronic Engineering Technology AAS and Electronic Technology diploma*