

Biomedical Equipment Technician (BMET)

Associate in Applied Science (AAS) Degree

Technical Requirements57

General Education/MnTC 15

Total Credits72

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

By completing this program, students will achieve the following learning outcomes.

1. 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.
2. 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.
3. Biomedical Systems: Convey the understanding of complex relationships between sections of specialized equipment through written, verbal, and/or demonstrative methods.
4. Troubleshooting: Demonstrate principles of troubleshooting and logical diagnosis by using critical thinking skills to define, analyze, and implement a solution.
5. Biomedical Applications: Evaluate and determine that all biomedical equipment is in proper working condition, ensuring a safe, reliable health care environment.
6. Safety Compliance: Participate in class in a professional manner, by acting in compliance with documented safety procedures and appropriate industry standards.
7. Test Equipment: Demonstrate solid understanding of test equipment used by technicians in the health care industry.

Course Prerequisites

Some courses may require appropriate test score or completion of basic math, basic English and/or reading courses with a "C" or better.

Graduation Requirements

All Anoka Technical College students seeking an Associate in Applied Science (AAS), diploma, or certificate must meet the cumulative grade point average (GPA) of 2.0 or higher.

Transfer Opportunities

To see how credits from this program may transfer into other Anoka Technical College programs or into a program at another college, visit:

- [Minnesota Transfer](http://www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search): (www.mntransfer.org/students/plan/s_agreements.php?numResults=25&archive=false&from_inst=70&from_prog=&to_inst=&Search=Search)
- [Anoka Technical College transfer student](http://www.anokatech.edu/BecomeStudent/Transfers.aspx) (www.anokatech.edu/BecomeStudent/Transfers.aspx)

Industry Information

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/>

Wages/Outlook/Advancement

Wage information is available from the [Minnesota Department of Employment and Economic Development](https://mn.gov/deed/job-seekers/job-outlook/) (https://mn.gov/deed/job-seekers/job-outlook/).

Technical Education: 57 Credits

<input type="checkbox"/>	BMED 2100*Design & Manufacturing in Medical Device Industry	..... 3
<input type="checkbox"/>	BMED 2200 *Introduction to Medical Device Regulations/Ethics	..... 3
<input type="checkbox"/>	BMED 2300*Introduction to Quality Assurance	..... 3
<input type="checkbox"/>	BMET 1200 Biomedical Equipment and Terminology	..... 2
<input type="checkbox"/>	BMET 1301 Biomedical Networking	..... 2
<input type="checkbox"/>	BMET 2012 Biomedical Instrumentation	..... 4
<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 1170 Programmable Logic Controllers (PLCs)	..... 2
<input type="checkbox"/>	ETEC 1202 Solid State Electronic	..... 5
<input type="checkbox"/>	ETEC 1250 Digital 1	..... 3
<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



(continued)

2019-2020

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- ETEC 2011 Machine-to-Machine Wireless Communications 2
- ETEC 2138 LabVIEW and Data Acquisition 4
- ETEC 2276 Industrial Networking IOT/M2M..... 4
- * Evening courses taken at Anoka-Ramsey Community College

General Education/MnTC Requirements: 15 Credits

Fifteen (15) general education credits of Minnesota Transfer Curriculum (MnTC) are required. MnTC credits must be from three different goal areas. Student is required to take:

- BIOL 1104* The Human Body-Structure & Function 4
- OR**
- BIOL 1130 Human Biology..... 4
- MATH 1550 Introduction to Statistics 4
- SPCH 1200 Interpersonal Communication 3
- General Education/MnTC Courses..... 4

* Course is taken at Anoka-Ramsey Community College

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

Start Dates

Fall Semester.....August
*Spring SemesterJanuary

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

Sample Program Sequence

Full Time

	Fall Semester	Spring Semester	Summer Semester
1st YEAR	ETEC 1102..... 3	BMET 1301.....2	MATH 1550 4
	ETEC 1113..... 3	ETEC 1170.....2	SPCH 1200.....3
	ETEC 1141..... 4	ETEC 1202..... 5	TOTAL 7
	ETEC 1151..... 3	ETEC 1260.....2	
	ETEC 1250..... 3	ETEC 1271.....3	
		ETEC 1281.....2	
	TOTAL..... 16	TOTAL..... 16	
2nd YEAR	Fall Semester	Spring Semester	
	BMED 2100 3	BMED 2200.....3	
	BMED 2300..... 3	BMET 2012..... 4	
	BMET 1200 2	BIOL 1104 OR	
	ETEC 2138..... 4	BIOL 1130..... 4	
	ETEC 2276..... 4	ETEC 2011 2	
	TOTAL 16	Gen Ed/MnTC* ... 4	
	TOTAL 17		

**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.*