



# discover BIOMEDICAL ENG

## Program Requirements 2012-2013 CATALOG

### BIOMEDICAL ENGINEERING TECHNOLOGIST ASSOCIATE DEGREE

Schoolcraft program code # AAS.00128

The Biomedical Engineering Technologist Program (BMET) is designed to develop technicians able to maintain and service medical electronic equipment in hospitals, pathological and hematological laboratories, and industries engaged in the manufacture and sale of medical electronic equipment. The program is divided into two components. The first year (three semesters) culminates in an Electronic Technology certificate. In order for candidates to be eligible to apply for the second year of the program, they **must** meet the following qualifications:

- 1) Have an overall GPA of 2.5
- 2) Achieve a minimum GPA of 2.5 in each electronics course
- 3) Achieve a minimum GPA of 3.0 in Biology 105

Candidates who have met these conditions must be approved by the BMET Internship Coordinator before registering in BMET 116, BMET 204, BMET 254 or BMET 255. Due to the limited availability of worksites, candidates who have met these conditions will be prioritized for admission into the BMET sequence based on the following elements: BMET application date, overall GPA, position in the sequence of program courses. Students must complete internships to be eligible to fulfill program requirements.

All courses are not offered each semester. Students should work with the Counseling Center to set up a schedule that will work for them. Students who satisfactorily complete all College Requirements qualify for an Associate in Applied Science Degree.

**This program requires a special admissions process. Contact the Admissions and Enrollment Center at 734-462-4426 or [admissions@schoolcraft.edu](mailto:admissions@schoolcraft.edu) to complete an application.**

#### SAMPLE SCHEDULE OF COURSES

##### ADMISSION PREREQUISITES

##### FIRST YEAR Fall Semester

ELECT 131	Basic Measurement and Reporting Skills	3
ELECT 137	DC Circuits and Mathematical Modeling	5
ENG 101	English Composition I	3
BIOL 105	Basic Human Anatomy and Physiology	4
		<b>15</b>

##### Winter Semester

ELECT 138	AC Circuits and Mathematical Modeling	5
ELECT 139	Diodes and Transistors	3
COMPS 126	Technical Programming	3
		<b>11</b>

##### Spring/Summer Session

ELECT 215	Operational Amplifiers and Linear Integrated Circuits	4
ELECT 219	Digital Logic Circuits	4
		<b>8</b>

### ADMISSION TO THE BIOMEDICAL PROGRAM INTERNSHIP SEQUENCE

#### SECOND YEAR Fall Semester

BMET 116	Biomedical Instrumentation Terminology and Safety I	3
Mathematics	Select I	3-4
MATH 101	Business Mathematics	
MATH 113	Intermediate Algebra for College Students	
Social Science	Select I	3
POLS 209	International Relations	
PSYCH 153	Human Relations	
SOC 210	Cultural Diversity	
Elective	Select from the list below	3
English	Select I	3
ENG 102	English Composition 2	
ENG 116	Technical Writing	
		<b>15-16</b>

#### Winter Semester

BMET 204	Biomedical Instrumentation Terminology and Safety 2	4
BMET 254	Biomedical Equipment Internship I	3
Elective	Select from the list below	6
HUM 106	Introduction to Art and Music	1
		<b>14</b>

#### Spring/Summer Session

BMET 255	Biomedical Equipment Internship 2	3
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**PROGRAM TOTAL 66-67 CREDITS**

Students planning to transfer should check the transfer institution's requirements/guides or discuss their options with a counselor or advisor. Number of credits may vary depending on the course selection.

#### ELECTIVES

BMET 125	Laser Safety Concepts	3
CIS 171	Introduction to Networking	3
CIS 235	Managing and Troubleshooting PCs	3
COMPS 124	Introduction to Personal Computers and Software	3
ELECT 144	Introduction to Microcontrollers	3
ELECT 145	Fluid Power	4
ELECT 218	AC/DC Motors	3
ELECT 228	Electronic Troubleshooting	3
ELECT 251	Programmable Logic and Industrial Controls	4
MET 102	Introduction to Materials Science	3

# ENGINEERING TECHNOLOGY

## BIOMEDICAL APPLICATIONS POST-ASSOCIATE CERTIFICATE

Schoolcraft program code # PAC.00178

This post-associate certificate in Biomedical Applications is designed to provide working professionals who have experience and/or training in Biomedical Engineering opportunities to study new technologies and innovations.

Completion of this program will enhance a professional's ability to meet the demands of rapidly changing technologies in the biomedical field. These courses are also intended to meet requirements for current and future professional certification.

Prior to admission to this program, students must have completed a minimum of an accredited Associate Degree in Biomedical Engineering Technology. All courses are not offered each semester. Students should work with the Counseling Department to set up a schedule that will work for them. The post-associate certificate is awarded upon successful completion of 16 credit hours (exact number may vary slightly due to credit value or content of course).

### PROGRAM COURSES

A student is required to choose the two courses listed below:

CIS 171	Introduction to Networking. . . . .	3
CIS 235	Managing and Troubleshooting PCs . . . . .	3

A student may choose from any of the courses listed below:

BUS 220	Supervision. . . . .	3
CIS 125	Principles of Information Security. . . . .	3
CIS 172	Network Security Fundamentals. . . . .	3
CIS 173	Wireless Local Area Networks. . . . .	3
CIS 178	Technical Microsoft Windows . . . . .	3
CIS 250	Systems Development and Design. . . . .	4
CIS 251	IT Project Management . . . . .	3
CIS 271	Local Area Networks . . . . .	3
CIS 273	TCP/IP and Network Architectures . . . . .	3
ELECT 144	Introduction to Microcontrollers. . . . .	3
QM 107	Quality Planning and Team Building. . . . .	3

Completion of a minimum of 16 credit hours is essential.

Courses can be taken through independent study.

Students may choose an applicable 200-level elective.

**Go to [www.schoolcraft.edu/academicprograms](http://www.schoolcraft.edu/academicprograms) to see the Gainful Employment Disclosure which includes additional information about this program, such as program costs, student graduation rates, and the median debt of students who complete the program.**



**Virtually any program at Schoolcraft College can be a transfer program if you plan to continue at a four-year institution to earn a bachelor's degree in your major. Visit [www.schoolcraft.edu/transfer](http://www.schoolcraft.edu/transfer) for information about transfer options. To ensure that the Schoolcraft courses you select are the specific ones required by the four-year college of your choice, be sure to consult regularly with your counselor/advisor.**

