

# Biomedical Technologist

Associate in Science Degree 2012-2013

Program Requirements.....	15
Additional Requirements.....	15
General Education/MnTC .....	30
<b>TOTAL CREDITS.....</b>	<b>60</b>

## PROGRAM INFORMATION:

This program prepares students for entry-level positions in biomedical companies or for transfer to four-year colleges, including Bemidji State University, St. Cloud State University, Minnesota State University Moorhead, and Minnesota State University Mankato. The Biomedical Technologist degree provides a solid foundation in science and technology as well as proficiency in problem solving, critical analysis, oral and written communication, and interpersonal skills. "Hands-on" learning is a key component, including a field experience with a local biomedical company. For additional information about our biomedical programs, visit our Web site at <http://anokaramsey.edu/classes/programsinterest/BiomedicalPrograms.aspx>.

## PROGRAM GOALS:

By completing this program, students will achieve the following learning goals:

1. Demonstrate the ability to integrate science and math skills with technical requirements of the medical device industry.
2. Demonstrate an understanding of trends, size, and scope of the medical device industry.
3. Demonstrate proficiency in oral and written communication, interpersonal skills and critical thinking/problem solving.
4. Demonstrate an understanding of the processes involved in the design, development and manufacture of medical devices.
5. Demonstrate knowledge of various certification standards and agencies involved in regulatory processes specific to the medical device industry.
6. Demonstrate application of classroom knowledge to industry field experience.

## DEVELOPMENTAL COURSES:

Some students may need preparatory courses in the areas of English, reading, or mathematics. Courses numbered below 1000 will not apply toward this degree.

## GENERAL INFORMATION:

College-level competence in English, writing, mathematics, and computer competency should be acquired before entering the BMED programs. All BMED program requirements are offered at the Coon Rapids campus.

## COMPLETION REQUIREMENTS:

- A minimum grade of C must be earned in all program requirements.
- All BMED program requirements must be completed through ARCC.
- A minimum of **60 semester credits** in courses numbered 1000 or above.
- A minimum cumulative grade point average (GPA) of 2.0 in courses numbered 1000 or above at ARCC.
- A minimum of **20 semester credits** applied toward the degree must be taken from ARCC. This requirement may be reduced from **20 to 12 semester credits** for students transferring in at least **8 semester credits** from either another MnSCU college or the University of Minnesota.
- Completion of specific degree requirements.

## Program Sequence:

The sequence that follows is suggested for full-time students. Part-time students will need more time to complete this program; many courses are offered in the evening.

	Fall Semester	Spring Semester
FIRST YEAR	BMED 1100.....2	BIOL 1102.....2
	BMED 2200.....3	BMED 2100.....3
	Gen'l Ed. or Electives..... 9-11	Gen'l Ed. or Electives..... 9-11
	<b>TOTAL .....14-16</b>	<b>TOTAL .....14-16</b>
SECOND YEAR	ENGL 1104.....3	BIOL 1104.....4
	BMED 2300.....3	BMED 2297.....4
	Gen'l Ed. or Electives..... 8-10	Gen'l Ed. or Electives..... 6-8
	<b>TOTAL .....14-16</b>	<b>TOTAL .....14-16</b>

## Program Requirements

15 credits

- BMED 1100 Introduction to Biomedical Devices/Industry .....2
- BMED 2100 Design & Manufacturing in the Medical Device Industry.....3
- BMED 2200 Introduction to Medical Device Regulations and Ethics .....3
- BMED 2300 Introduction to Quality Assurance.....3
- BMED 2297\* Field Experience & Seminar .....4

*\*It is recommended that all biomedical courses be completed prior to taking BMED 2297 Field Experience & Seminar. Permission of Program Director required for this course.*

## Additional Requirements:

15 credits

- BIOL 1102 Medical Terminology .....2
- BIOL 1104 The Human Body-Structure and Function.....4
- BMED 2520 Technical Writing for Regulated Industries or ENGL 1104\* Technical Writing.....3

## Electives:

Select a minimum of 6 credits from the following:

- BIOL 2201\* Microbiology.....4
- BUS 1101 Introduction to Business.....3
- BUS 1103 Human Relations in the Workplace .....3
- CAOR 1102 Career Development .....2

## General Education/MnTC Requirements:

30 credits

Complete at least 30 credits in courses from the Minnesota Transfer Curriculum (MnTC), including all courses listed. You must complete at least one course in six of the ten goal areas. One course may satisfy more than one emphasis area, but the course credits may be counted only once.

- 1. **Communication**
  - ENGL 1121\* ..... 4
  - CMST 1110, 2215 OR 2220 ..... 3
- 2. **Critical Thinking**
- 3. **Natural Science**
  - BIOL 1106\* ..... 4
  - CHEM 1061\* ..... 4
- 4. **Mathematical/Logical Reasoning**
  - MATH 1200\* ..... 3
  - MATH 1201\* OR MATH 1110\* ..... 3-4
- 5. **History/Social/Behavioral Sciences** ..... 3-4  
(Select one Psychology or Sociology course)
- 6. **Humanities/Fine Arts**
- 7. **Human Diversity**
- 8. **Global Perspective**
- 9. **Ethical/Civic Responsibility**
- 10. **People and the Environment**

\* Course has a prerequisite. Prerequisites are listed on the course schedule and in the ARCC Catalog Course Descriptions pages.

NOTE: The requirements of this program are subject to change without notice. You are encouraged to contact an academic advisor, Cambridge Campus 763-433-1840 or Coon Rapids Campus 763-433-1240, for course planning assistance and information about transfer credit evaluation.

