

# BIOMEDICAL EQUIPMENT (BIOM)

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**BIOM 1309 Applied Biomedical Equipment Technology 3 Credits (2 Lec, 2 Lab)**

This course is an introduction to biomedical instrumentation as related to anatomy and physiology. Includes medical devices for monitoring, diagnosis, and treatment of anatomical systems.

Course Type: Technical

**BIOM 1315 Medical Equipment Networks 3 Credits (2 Lec, 2 Lab)**

This course covers the identification of basic principles of medical equipment networking including hardware, software, and connectivity issues of medical equipment in health care facilities.

Prerequisite with concurrency: BIOM 1309

Course Type: Technical

**BIOM 1341 Medical Circuits Troubleshooting 3 Credits (2 Lec, 2 Lab)**

This course covers development of skills in troubleshooting of medical electronic circuits and utilization of test equipment.

Prerequisite with concurrency: BIOM 1309

Course Type: Technical

**BIOM 1350 Diagnostic Ultrasound Imaging Systems 3 Credits (2 Lec, 4 Lab)**

This course covers diagnostic ultrasound imaging systems including basic systems troubleshooting and problem solving.

Prerequisite with concurrency: BIOM 1309

Course Type: Technical

**BIOM 1355 Medical Electronic Applications 3 Credits (2 Lec, 2 Lab)**

This course covers the presentation of sensors, transducers, and supporting circuits used in medical instrumentation devices.

Prerequisite with concurrency: BIOM 1309

Course Type: Technical

**BIOM 2301 Safety in Health Care Facilities 3 Credits (3 Lec, 1 Lab)**

This course is a study of codes, standards, and management principles related to biomedical instrumentation emphasizing application of safety test equipment, preventive maintenance procedures, and documentation of work performed.

Prerequisite with concurrency: BIOM 1309

Course Type: Technical

**BIOM 2311 General Medical Equipment I 3 Credits (2 Lec, 3 Lab)**

This course is a study in analysis of selected current paths from a larger schematic including discussion of equipment and disassembly and reassembly of equipment.

Prerequisite with concurrency: BIOM 1309, CETT 1302

Course Type: Technical

**BIOM 2315 Physiological Instruments I 3 Credits (2 Lec, 2 Lab)**

This course is the theory of operation, circuit analysis, and troubleshooting physiological instruments.

Prerequisite with concurrency: BIOM 1309

Course Type: Technical

**BIOM 2319 Fundamentals of X-Ray and Medical Imaging Systems 3 Credits (2 Lec, 3 Lab)**

This course is a study in radiation theory and safety hazards, fundamental circuits, and application of X-ray systems including circuit analysis and troubleshooting.

Prerequisite with concurrency: BIOM 1309

Course Type: Technical

**BIOM 2343 General Medical Equipment II 3 Credits (2 Lec, 3 Lab)**

This course covers the theory and principles of operation of a variety of basic electro-mechanical equipment with emphasis on repair and service of actual medical equipment.

Prerequisite(s): BIOM 2311

Course Type: Technical

**BIOM 2389 Internship - Biomedical Technology/Technician 3 Credits (0 Lec, 18 Lab)**

This course is a work-based training experience that enables the student to apply specialized occupational theory, skills and concepts. A learning plan is developed by the college and the employer.

Prerequisite(s): BIOM 1309, 1315, 1341, 1355, and 2311 or Department Chair Approval

Course Type: Technical