

Guthrie Robert Packer Hospital Education Programs

Respiratory Therapy



Radiologic Technology



Medical Technology



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Introduction

The Guthrie Robert Packer Hospital Campus in Sayre, Pa., offers an excellent environment for all health education students. Our nationally renowned facility is located in scenic Northeastern Pennsylvania.

Our university medical center provides the medical sophistication of a metropolitan hospital with the advantages of a charming rural community.

Sayre, Pa., is within driving distance to regional cities such as Corning, Ithaca, Elmira and Binghamton, N.Y., and Scranton and Philadelphia, Pa. The Finger Lakes and Adirondack Mountain regions of New York State and Pocono Mountains of Pennsylvania are also within reach.

At a Glance

The Guthrie System

Guthrie Robert Packer Hospital is the largest hospital in the Guthrie health care system, which is also comprised of Guthrie Robert Packer Hospital, Towanda Campus in Towanda, Pa., Guthrie Cortland Medical Center in Cortland, N.Y., Guthrie Corning Hospital in Corning, N.Y., Guthrie Troy Community Hospital in Troy, Pa, long-term care facilities, home care entities, and a research institute.

Guthrie offers many services in addition to acute care including skilled nursing care, ventilator management and hospice care.

In addition to its support of allied health education programs, the Guthrie Foundation for Education and Research supports Guthrie's medical education programs and provides patients with access to more than 60 clinical trials related to the treatment of heart disease, cancer and other conditions.

Guthrie Robert Packer Hospital

A 288-bed tertiary care referral center and teaching hospital, Guthrie Robert Packer Hospital in Sayre, Pa., is the recipient of numerous national awards for the high-quality care it provides to patients. The hospital is a Regional Level II Trauma Center, accredited by the Pennsylvania Trauma Systems Foundation, and is served by Guthrie Air, a regional aeromedical helicopter program. Guthrie Robert Packer Hospital offers a wide range of inpatient and outpatient services from a dedicated team of skilled physicians, health care professionals and staff.

Education Complex

All health education students are educated through the Guthrie Robert Packer Department of Health Sciences and Guthrie Robert Packer Hospital. Classroom, laboratory, and clinical experiences include educational sites at all Guthrie entities and affiliates for students studying radiologic technology, respiratory therapy, medical technology and nursing.

Classrooms and modern science and nursing laboratories are located in the Patterson Education Building and Bird Sumner Administration Building.

Guthrie also has a robust residency and fellowship program where physicians can participate in diverse and complex cases, and our teaching model encourages one-on-one training with our expert faculty physicians. Residency programs include anesthesiology, emergency medicine, family

medicine, internal medicine, general surgery, orthopaedic surgery and pharmacy. Fellowship programs include pulmonary disease and critical care, gastroenterology, and cardiovascular.

In addition, each year, junior and senior medical students from Drexel University Medical School, the State University of New York, Upstate Medical University, Syracuse, N.Y. (Clinical Campus, Binghamton, N.Y.), Lake Erie College of Osteopathic Medicine, and Jefferson Medical College spend a portion of their clinical training time on the Guthrie campus in Sayre.



Student Housing

The hospital maintains a student residence. Students enrolled in the health care programs may request to live in the residence, as rooms are available. Many students choose to reside in off-campus housing within walking distance of the campus. Apartments and furnished rooms are also available in the residential area near the hospital; however, they are not affiliated with Guthrie. Student parking is offered near the hospital campus as well.

Meals

Students may elect to purchase their meals in the hospital cafeteria. Meal plans are available for all programs. Restaurants are available within walking distance of the campus and kitchen facilities are also offered in the student residence.

Recreation

The student residence includes a fitness center, Club Guthrie, which is available to all health education students. The cost of the fitness center is included in the student activity fee.



Mansfield University Respiratory Therapy Program

BACHELOR DEGREE PROGRAM

With Broome Community College and
Corning Community College Transfer Options

Faculty

Sheila Merrill, MS Ed, RRT

Program Director

Susan Ferrito, MS Ed, RRT

Director of Clinical Education

Nichole Campbell, BS, RRT

*Clinical Instructor, Guthrie Robert Packer
Hospital, Sayre, Pa.*

Jesse King, BS, RRT

*Clinical Instructor, Guthrie Robert Packer
Hospital, Sayre, Pa.*

James Walsh, MD

*Medical Director, Respiratory Care Program,
Sayre, Pa.*

Clinical Preceptors at affiliated clinical sites
(Arnot Ogden Medical Center, Elmira, N.Y.;
Bridgewater Rehabilitation, Binghamton, N.Y.;
Geisinger Medical Center, Danville, Pa.;
Gerould's Healthcare Center, Elmira, N.Y.;
Guthrie Corning Hospital, Corning, N.Y.;
Guthrie Med Supply Depot, Sayre, Pa.;
Guthrie Robert Packer Hospital campuses,
Sayre and Towanda, Pa.; Guthrie Troy
Community Hospital, Troy, Pa.; and UHS Wilson
Memorial Medical Center, Johnson City, N.Y.).

The Respiratory Therapist

Respiratory care practitioners (respiratory therapists) are energetic caring individuals making a difference in the lives of others. As life support specialists, they assist a variety of patients with diagnostic, therapeutic, and rehabilitation services. Their patients suffer from disorders such as asthma, emphysema, cystic fibrosis, pneumonia, heart failure, major surgery, or major trauma. In many hospitals, therapists provide care following physician-approved protocols. Under such a protocol, the therapist begins by assessing the patient's needs through physical exam and a thorough review of clinical data such as ECG, chest x-ray, and laboratory blood test results. From this information, the therapist selects a treatment regimen, implements therapy, adjusts it as needed, and discontinues treatment at the appropriate time. Respiratory therapists deliver many different types of treatment, such as inhaled medication, lung hyperinflation therapy, chest physical therapy, artificial airway care and continuous mechanical ventilation. To aid in diagnosis of a patient's disease, the therapist may take a sample of the patient's arterial blood to determine the levels of oxygen and carbon dioxide, or administer various tests of breathing function, at the bedside or in a pulmonary function laboratory. When internal examination of the lungs is indicated, the therapist assists the physician with a bronchoscopy under local anesthesia, taking samples of lung tissue and fluids as necessary.

Respiratory care practitioners may specialize in such areas as critical care, perinatal and pediatric respiratory care, cardiopulmonary diagnostics, pulmonary rehabilitation, sleep diagnostics, patient transport, clinical research, education, and management. A successful respiratory therapist is someone who enjoys working with their hands, head, and heart, giving comfort to others in a fast-paced, challenging environment.

Respiratory therapists evaluate and care for individuals who have breathing and other cardiopulmonary ailments ranging from moderate to life-threatening. Respiratory therapists work closely with other health care professionals to provide a wide range of diagnostics and therapy to patients.



Career Opportunities

Respiratory care is a diverse field with many opportunities. The United States Department of Labor reports that employment opportunities in respiratory care are growing much faster than average – 23% from 2020 to 2030. Upon program completion, career opportunities are available in acute care hospitals, pulmonary function laboratories, long-term acute hospitals, skilled nursing facilities, home care, physician offices and medical equipment companies.



Program Overview

The Mansfield University Respiratory Therapy Program is a full-time, four-year, Bachelor of Science (BS) degree program. It is a collaborative program with Mansfield University's Department of Health Sciences and Guthrie Robert Packer Hospital. Students spend the first two years on the campus in Mansfield, Pa., completing program prerequisites and general education courses (transfer students are considered and eligible to apply).

After meeting the program prerequisites, students spend their second two years plus one summer engaging in respiratory- specific didactic course, clinical courses, and hands-on experiences at Guthrie Robert Packer Hospital, where they complete classroom and clinical experience. Students also rotate to several other clinical affiliates, gaining valuable hands-on clinical experiences.

Respiratory therapy courses consist of tightly coordinated classroom, laboratory and clinical training conducted Monday through Friday primarily during the day. In all clinical courses, the clinical instructor provides ongoing feedback to the student through weekly written performance evaluations. Each student provides the program with weekly feedback through completion of online clinical instructor and rotation evaluation surveys.

Guthrie Robert Packer Hospital is the primary site of clinical training. Each student's clinical experience assignments will also include rotations to:

- Arnot Ogden Medical Center, Elmira, N.Y.
- Bridgewater Rehabilitation Center, Binghamton, N.Y.
- Guthrie Corning Hospital, Corning, N.Y.
- United Health Services, Johnson City, N.Y.
- Geisinger Medical Center, Danville, Pa.
- Guthrie Troy Community Hospital, Troy, Pa.
- Gerould's Healthcare, Elmira N.Y.
- Guthrie Med Supply Depot, Sayre, Pa.

Regarding clinical experience assignments to off-site facilities, all students are responsible for their own transportation, meals, and housing expenses (if applicable).

At the end of their studies, students are awarded the BS in Respiratory Care and are immediately eligible to sit for the Therapist Multiple Choice Exam (TMC) and then Clinical Simulation Exam (CSE) given by the National Board of Respiratory Care (NBRC) to obtain their Registered Respiratory Therapist (RRT) credential.

Mission Statement

The mission of Mansfield University Respiratory Care program is to develop and prepare students to become an advanced level Registered Respiratory Therapists (RRT). Graduates of this program are qualified to take the National Board of Respiratory Care (NBRC) exams.

The specific objectives of the program are to prepare students as registered respiratory therapists and competent respiratory care practitioners for advanced-level careers in respiratory care and leadership roles such as:

- Educators
- Researchers
- Managers
- Clinical specialist
- Respiratory care equipment sales representatives

Employment

The Mansfield University Respiratory Care program has 100% job placement; never has a graduate of this program been unsuccessful in securing employment following graduation. Often, they have several offers from which to choose.

Credentialing Exams

There are two exams for respiratory care practitioners. The first is the TMC exam, which has a low and high cut score. Achieving the low-cut score awards the CRT credential and state license. Achieving the high-cut score allows the graduate to sit for the Clinical Simulation Exam (CSE). Passing both the TMC at the high-cut score and the CSE earns the graduate the RRT credential.

Why Choose this Program?

- Program has received national recognition for exemplary outcomes.
- Guthrie Robert Packer Hospital, the primary clinical affiliate, is a 288-bed tertiary Level II Trauma Center.
- Faculty are exceptionally dedicated to student success.
- Graduates have high first-attempt pass rate on National Board exam.
- Low student/instructor ratios in classroom, laboratory, and clinical areas.
- Multiple clinical affiliates provide a broad range of clinical experiences.
- Graduates and employers highly recommend the program.



Program Effectiveness Data

CoARC Three Year Outcomes	Mansfield/Guthrie Resp Care Program	National Average
CRT Success (Credentialing Exam)	100%	93.7%
RRT Success (Credentialing Exam)	100%	80.2%
Retention	94%	87.5%
Job Placement	100%	84.8%

Admission

New students may apply for admission to the program in the fall or spring semester. Students not already enrolled at Mansfield University must apply for admission to the Mansfield University Admission office. Early application is encouraged since class size is limited.

The application form is available online at <https://www.mansfield.edu/apply/>, or you may call Admissions at 800-577-6826 or 570-662-4243 or email admissions@mansfield.edu.

Once the application, application fee, and high school and/or college transcripts have been received, the Admission Office reviews the application.

Academic high school preparation for the Respiratory Care Program should include at least 3 credits of math and one credit each of biology and chemistry, with a minimum 2.7 grade point average in the math and science courses.

Transfer students will be considered for respiratory major seats at either the first year (freshman) or advanced standing (sophomore or begin the program as a junior level), pending seat availability. Admission standards for transfer students include 2.7 cumulative GPA or higher in all college coursework: grades C or better in Human Anatomy

and Physiology I and II, Introductory Chemistry, Microbiology and College Algebra. The program is accredited for 12 clinical seats; if more than 12 students meet the standards for progression to the initial 3rd year (junior level) respiratory therapy courses offered at the Sayre campus, preference will be given based on cumulative grade point averages.

Accreditation

The Mansfield University Respiratory Care Program is accredited by the Commission on Accreditation for Respiratory Care (CoARC), 264 Precision Blvd, Telford, TN 37690 (telephone 817-354-2835). www.coarc.com. The program annually submits a comprehensive annual report to CoARC. CoARC Outcomes data from the Annual Report of Current Status includes retention, job placement and success on the national credentialing exams.

coarc.com/students/programmatic-outcomes-data

Mansfield University CoARC Program Number:
200019

Corning Community College and Broome Community College Transfer Option

Corning Community College (CCC) and Broome Community College (BCC) students may complete many of the Respiratory Care Program course requirements at CCC/BCC before seeking admission to Mansfield University. Several transfer courses are identified below. After transfer to Mansfield, the professional courses required for the Respiratory Care degree will be taken on the Guthrie Clinic campus in Sayre, Pa. Interested transfer students are encouraged to contact the Mansfield University Respiratory Care Program Director for advisement prior to taking transfer courses, since acceptance into the program is not guaranteed and candidates must meet program acceptance requirements.



Corning Community College (CCC) and Broome Community College (BCC) Transfer Courses			
CCC Course Title	BCC Course Title	MU Course Title	Credit Hrs.
ENGL 1010 College Composition I	ENG 110 College Writing I	ENG-1112 Composition I	3
SPCH-1080 Public Speaking	SPK-110 Effective Speaking	COM-1101, 1102, or 1103 Communication Elective	3
MA-1215 College Mathematics I	MAT-136 College Algebra and Trigonometry I	MA-1128 College Algebra	3
PSYCH-1101 General Psychology	PSY-110 General Psychology	PSY-1101 Intro to Psychology	3
BIOL-1210 Principles of Anatomy/Physiology I OR BIOL-2030 Anatomy and Physiology I	BIO 131/BIO 131L Human Biology I with lab	BSC-1121 Human Anatomy and Physiology I	4
BIOL-1220 Principles of Anatomy/Physiology II OR BIOL-2030 Anatomy and Physiology II	BIO 132/BIO 132L Human Biology II with lab	BSC-1122 Human Anatomy and Physiology II	4
CHM-120 Fundamental Chemistry	CHM-120 Fundamental Chemistry	CHM-1101 Intro Chemistry	4
BIOL-2010 Microbiology	CLT 208 Pathogenic Microbiology	BSC-3271 Microbiology	4
	HCM-196 Healthcare Ethics or MDA 208 Medical Ethics	PHL-3380 Healthcare Ethics	3

Health, Insurance and Background Check Requirements

Prior to enrollment in the initial clinical course, Clinical Practicum I, each student must provide the results of child abuse and criminal background checks as well as other health care requirements to the Program Director. The background checks must be conducted within the six-month period immediately before the initial clinical course. More information may be found in the Program Student Handbook or may be obtained by contacting the Program Director.

Tuition, Fees, Housing and Dining

Current information concerning tuition, miscellaneous fees, housing fees, and dining fees may be obtained from the University Office of Student Accounts (telephone 570-662-4888) or by visiting the University website (<https://esd.mansfield.edu/tuition-and-fees/index.cfm>). Housing and dining facilities are available on both the Mansfield and Sayre campuses. For information about housing and dining on the Sayre campus, contact Judith Brayer, Coordinator of Student Services, by telephone at 570-887-4716 or by email at jbrayer@mansfield.edu.

Program Standards

Respiratory Care students are subject to all Mansfield University policies plus the following Respiratory Care Program standards:

1. A grade of C or above must be earned in all respiratory (RTH) courses.
2. A grade of C or above in BSC 1121, BSC 1122, BSC 3271, CHM 1101 or CHM 1110 and MA 1128 (or equivalent courses) is required to progress in the respiratory program.
3. A cumulative GPA of 2.7 or higher is required to enroll in the initial RTH courses.
4. Once a student is taking upper-division respiratory courses at the junior level, he/she may progress if his/her cumulative average falls below 2.7 providing the student has earned a grade of C or above in all respiratory prefix courses. However, the student must maintain a GPA of 2.0.
5. If more than 12 students meet the standards for progression to the junior level, students who have consistently met program standards are given priority. For those who have not consistently met the standards for progression, decisions are based on grade point averages.

*Please note that the terms freshman, sophomore, junior or senior are defined by the level/year of the respiratory program, NOT the number of credits earned.





Assignment of Clinical/Laboratory Sections

Respiratory clinical and laboratory sections will be assigned by faculty based on best educational principles. Student section preference will be considered, however, not guaranteed due to appropriate student-to-instructor ratios that must be maintained.

Transportation

Due to the nature of multiple clinical affiliates utilized, students are required to provide their own transportation to clinical experiences during the program. Clinical experiences begin at the junior level.

Scholarships and Awards

Several scholarships and awards are presented to only Respiratory Care students while in the program. These scholarship/awards are typically presented in the senior year. All respiratory care students are eligible and do not need to apply. The awards include Lester Rosenberry III Clinical Achievement Award, L. Marilyn Taylor Memorial Scholarship, Lori Peterson Stroll Memorial Scholarship and PSRC (Pennsylvania Society for Respiratory Care) Outstanding Student Award.

Graduation Requirements

1. Satisfactory completion of all required courses.
2. Completion of all professional courses with a grade no lower than "C" in each course.
3. Final grade point average of at least 2.00.
4. Payment of all tuition, fees and debts owed to the University.

National Board Exams

Application for the credentialing exams administered by the National Board for Respiratory Care (NBRC) may be made online at www.nbrc.org. Graduates of this program are immediately eligible for the National Board for Respiratory Care exams leading to the Certified Respiratory Therapist (CRT) and Registered Respiratory Therapist (RRT) credentials. This program has three-year average of 100% for both CRT credential and RRT credential.

Professional Organization

The American Association for Respiratory Care (AARC) is the national professional organization for respiratory therapists and respiratory therapy students. The AARC was created in 1947 to advance the science, technology, and art of respiratory care through education, research, and legislation. The AARC promotes standards of excellence in ethics, education, administration, and technical and clinical performance for respiratory care practitioners.

Among services provided to its members are professional journal and publications, insurance, employment opportunities, government representation, and continuing education programs. Information concerning membership is provided to each student and is available at the AARC website (www.aarc.org).

All students are strongly encouraged to support their profession through membership and voluntary service in the AARC.

Course Descriptions for the Respiratory Care Program

RTH 3110

PULMONARY FUNCTION TESTING

This course covers lung function in health and disease. Techniques used to measure lung function are discussed and demonstrated. The student is instructed in the interpretation of pulmonary function tests. (2 hours lecture/week) (Prerequisites & Notes: Prerequisites: BSC-1121 BSC-1122 BSC-3271 CHM-1101 & MA-1128 with a grade of at least a "C" or better in each and a GPA of at least 2.7)

RTH 3112

ARTERIAL BLOOD GASES

This course covers instruction of the sampling and analysis of arterial blood and the interpretation of physiologic data derived from these samples. (2 hours lecture/week) (Prerequisites & Notes: Prerequisites: BSC-1121 BSC-1122 BSC-3271 CHM-1101 & MA-1128 with a grade of at least a "C" or better in each and a GPA of at least 2.7)

RTH 3121

CLINICAL PRACTICUM I

The student will demonstrate continuing competence in the administration of fundamental respiratory care procedures and practice respiratory care procedures in the critical care units and diagnostic laboratories. The student will consistently develop knowledge and ability to perform more advanced skills needed to care for patients in the assigned clinical setting. The student will develop personal behaviors consistent with professional expectations of the registered respiratory therapist. (8 clinical hours/week) (Prerequisites & Notes: Prerequisites: BSC-1121 BSC-1122 BSC-3271 CHM-1101 & MA-1128 with a grade of at least a "C" or better in each and a GPA of at least 2.7)

RTH 3204

RESPIRATORY CARE PHARMACOLOGY

This course examines the action and uses of pharmacologic agents. Emphasis is on drugs used in the diagnosis and treatment of cardiac and pulmonary disease and included the calculation of dosages and solutions. (2 hours lecture/week) (Prerequisites & Notes: Prerequisites: RTH-3301 RTH-3303 RTH-3112 RTH-3121 RTH-3110 with a grade of at least a "C" in each.)

RTH 3205

RESPIRATORY DISEASE I

This course provides the respiratory therapy student with knowledge of pulmonary diseases necessary to implement therapist-driven protocols and provide appropriate care to patients. Topics include Respiratory Assessment and Failure, acute and chronic obstructive, acute, and chronic infectious respiratory disease, neuromuscular disease, interstitial lung disease and sleep disordered breathing conditions. (3 hours lecture/week) (Prerequisites & Notes: Prerequisites: RTH-3301 RTH-3303 RTH-3112 RTH-3121 RTH-3110 with a grade of at least a "C" in each.)

RTH 3210

RESPIRATORY CARE IN ALTERNATIVE SITES

This course examines alternative areas that respiratory care is practiced outside of acute hospital setting. At the end of this course, the students will understand their role as respiratory therapists in the homecare, subacute care, pulmonary rehabilitation, sleep lab and long-term ventilator hospital. This course provides a pulmonary rehabilitation, home care respiratory therapy and respiratory therapist's role in disease management. (2 hours lecture/week) (Prerequisites & Notes: Prerequisites: RTH-3301 RTH-3303 RTH-3112 RTH-3121 RTH-3110 with a grade of at least a "C" in each.)

RTH 3211

MECHANICAL VENTILATION I

The mechanics of ventilation and breath delivery is presented along with an introduction of ventilators. Discussion includes the mechanics of ventilator modes classification, the control interrelations, the electro-pneumatic/microprocessor systems and the audiovisual alarm systems, a selection of current ventilator models are presented during lab and provide hands on experience in troubleshooting, setup, control function, alarm setting and mode changes. A selection of current ventilator models is presented using labs to provide hands-on experience in troubleshooting, setup, control function, alarm setting and mode change. (3 hours lecture and 3 hours laboratory per week: 4 credits) (Prerequisites & Notes: Prerequisites: RTH-3301 RTH-3303 RTH-3112 RTH-3121 RTH-3110 with a grade of at least a "C" in each.)

RTH 3222

CLINICAL PRACTICUM II

This semester's clinical experience is intended primarily to allow the student to become proficient in the administration of common respiratory therapy modalities to patients. Floor therapy and intensive care rotations allow the student to establish competence in providing oxygen and aerosol (including medications) therapies, lung expansion and airway clearance techniques. Students will practice manual ventilation and basic care of the artificial airway in the ICU and PACU settings. Students will rotate through the arterial blood gas and pulmonary function laboratories learning to procure blood samples and conducting pulmonary function tests. A rotation to the Non-Invasive Cardiology lab will allow the students to gain experience in performing electrocardiograms and observing several non-invasive cardiac procedures. Learners will have an observational rotation in the operating room at Robert Packer Hospital under guidance of staff anesthesia personnel. (16 hours clinical/week) (Prerequisites & Notes: Prerequisites: RTH-3301 RTH-3303 RTH-3112 RTH-3121 RTH-3110 with a grade of at least a "C" in each.)

RTH 3301

FUNDAMENTALS OF RESPIRATORY CARE I

An examination of respiratory system anatomy and physiology, medical gas physics, chest radiology, and the principles of electrocardiography. (3 hours lecture/week) (Prerequisites & Notes: Prerequisites: BSC-1121 BSC-1122 BSC-3271 CHM-1101 & MA-1128 with a grade of at least a "C" or better in each and a GPA of at least 2.7)

RTH 3303

FUNDAMENTALS OF RESPIRATORY CARE II

Classroom instruction and laboratory practice of fundamental respiratory care assessment and therapeutic procedures. Topics include physical examination of the patient, bedside pulmonary function tests medical gas therapy, aerosol therapy, airway pharmacology, lung expansion therapy, airway clearance therapy, airway management, and infection control. (3 hours lecture and 3 hours laboratory per week – 4 credits) (Prerequisites & Notes: Prerequisites: BSC-1121 BSC-1122 BSC-3271 CHM-1101 & MA-1128 with a grade of at least a "C" or better in each and a GPA of at least 2.7)

RTH 3506

RESPIRATORY DISEASE II

This course provides the respiratory therapy student with additional knowledge of pulmonary diseases necessary to implement therapist-driven protocols and provide appropriate care to patients. Topics include Acute conditions such as Hemodynamic emergencies and Shock, Acute Respiratory Distress Syndrome, Heart Failure and Pulmonary Vascular Conditions, Interstitial lung disease, infections in the immunocompromised patient, Lung Cancer and pulmonary compromise associated with specific lung injuries (trauma, near drowning, smoke inhalation and burns). (2 hours lecture/week) (Prerequisites & Notes: Prerequisites: RTH-3205 with a grade of at least a "C")

RTH 3523

CLINICAL PRACTICUM III

The primary focus of the RTH 3523 Clinical Practicum III course is the assessment, development, and implementation of a respiratory care plan for the stable and critically ill patients. Clinical time will be devoted to care of adult patients requiring ventilatory support (both acute and long term) and each student will be returning to the arterial blood gas laboratory, pulmonary function laboratory, and operating room. Students will also participate in rotations through the specialty areas of home care, pulmonary rehabilitation, and sleep disorders to gain knowledge and understanding of these aspects of respiratory care. (24 hours clinical/week) (Prerequisites & Notes: Prerequisites: RTH-3110, RTH-3204, RTH-3205, RTH-3211 & RTH-3222 with a grade of at least a "C" in each.)

RTH 4108

PERINATAL/PEDIATRIC RESPIRATORY CARE

Students will learn the pathology, pathophysiology, diagnosis, and treatment of the cardiopulmonary diseases unique to the newborn and pediatric patient population. There will be discussion of the development of the fetus, high-risk pregnancies, and the roles of respiratory therapists in labor and delivery. This course is intended to prepare the student for hands-on clinical rotation to the neonatal and pediatric intensive care units and introduce the student to this area of specialization. (3 lecture hours/week) (Prerequisites & Notes: Prerequisites: RTH-3110, RTH-3204, RTH-3205 & RTH-3211 with at least a "C" in each.)

RTH 4111

MECHANICAL VENTILATION II

The mechanics of ventilation and breath delivery is presented along with an introduction of ventilators. Discussion includes the mechanics of ventilator modes classification, the control interrelations, the electro-pneumatic/microprocessor system and the audiovisual alarm systems, a selection of current ventilator models are presented during lab and provide hands on experience in troubleshooting, setup, control function, alarm setting and mode changes. A selection of current ventilator models is presented using labs to provide hands-on experience in troubleshooting, setup, control function, alarm setting and mode change. (2 lecture hours and 3 laboratory hours per week- 3 credits) (Prerequisites & Notes: Prerequisite: RTH-3211 with at least a "C" grade.)

RTH 4112

ADVANCED CARDIOPULMONARY CARE

A discussion of the care of patients with cardiovascular problems. Hemodynamics of critically ill patients is emphasized and discussion of how ventilator management affects hemodynamic status. (3 lecture hours/week) (Prerequisites & Notes: Prerequisites: RTH-3110, RTH-3204, RTH-3205 & RTH-3211 with at least a "C" in each.)

RTH 4124

CLINICAL PRACTICUM IV

Application of respiratory care to the patient in critical and long-term ventilator unit. The student will demonstrate competence in the arterial blood gas and pulmonary function labs and continue practicing endotracheal intubation and assisting the physician with bronchoscopy. Students will complete a course in Advanced Cardiovascular Life Support (ACLS) and earn the American Heart Association certification in ACLS. (24 hours clinical/week) (Prerequisites & Notes: Prerequisite: RTH-3523 with a grade of at least a "C").

RTH 4216

RESPIRATORY CARE LEADERSHIP AND MANAGEMENT

This course provides a discussion of current practices/trends of techniques used in the leadership of the health care environment. Emphasis will be placed upon specific skill sets used by managers of today's workforce. (3 lecture hours/week) (Prerequisites & Notes: Prerequisites: RTH-4112 & RTH-4124 with a grade of at least a "C" in each.)

RTH 4224

RESPIRATORY THERAPY SEMINAR

This is an advanced course that includes a comprehensive review of respiratory care research. A discussion of the methods of scientific research including an overview of the research process, components of a research paper, developing research questions, framing a hypothesis, performing a literature search and review, and designing a research proposal. (3 lecture hours/week) (Prerequisites & Notes: Prerequisites: RTH-4112 & RTH-4124 with a grade of at least a "C" in each.)

RTH 4225

CLINICAL PRACTICUM V

This final clinical course provides the student with many opportunities to integrate didactic knowledge and psychomotor skills in preparation for the respiratory therapy national board (NBRC) exams as well as future employment. The student continues to practice and demonstrate competence in several areas including care of the critically ill patient, floor therapy, endotracheal intubation, arterial blood gas and pulmonary function labs and assisting the physician with bronchoscopy. Specialty rotations are included to the neonatal intensive care unit, pediatric intensive care unit and physician rounds. (24 hours clinical/week) (Prerequisites & Notes: Prerequisites: RTH-4124, RTH-4108, RTH-4111 & RTH-4412 with a grade of at least a "C" in each and health care provider BLS and ACLS certification).

Mansfield University Radiologic Technology

ASSOCIATE DEGREE PROGRAM

With Corning Community College Transfer Option and
Bloomsburg University Baccalaureate Degree Option

Faculty

Mary Sullivan, MHA, R.T. (R)

Program Director

Caitlyn Daly, BA, R.T. (R)

Director of Clinical Education

Matthew Marsiglio, R.T. (R)

Clinical Instructor

Hailey Comstock, R.T. (R) (RDMS)

Preceptor Ultrasound

Carolyn Kopatz, R.T. (R) (CT)

Preceptor CT

Shawna Chamberlin, R.T. (CT) (MR)

Preceptor MRI

Joanne Barry, R.T. (R) (T)

Preceptor Radiation Therapy

Jessica VanDyke, R.T. (R) (M)

Preceptor Mammography

Harold Hulings R.T. (CV)

Preceptor Vascular Interventional Radiography

Wendy Madigan, R.T. (R) (CV) (CNMT)

Preceptor Nuclear Medicine

Career Opportunities

Upon program completion, career opportunities are available in hospitals, imaging centers, medical clinics and mobile units. Although there is no formal job placement service, job opportunities exist throughout the U.S. With additional education or training, radiographers can pursue employment in specialty areas including:

- Mammography
- Ultrasound
- MRI
- CT
- Radiation Therapy
- Nuclear Medicine
- Vascular Interventional Radiography

Graduates who pursue a Baccalaureate Degree may be considered for positions in education or administration.

The Radiographer

The term diagnostic radiography is used to describe a variety of radiographic or x-ray examinations. Most people are familiar with chest X-rays and also know that X-rays are the best way to diagnose broken bones. The radiographer performs these procedures as well as procedures that require the use of contrast agents that make it possible to study organs and blood vessels that otherwise cannot be seen. Radiographers are valued members of the health care team.



Accreditation

The Mansfield University Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). The Mansfield University program was most recently accredited in 2015 for a period of 8 years. The program received continuing accreditation in 2019 after submitting its Interim report to the JRCERT. The next program accreditation review by the JRCERT will take place in 2023.

The Joint Review Committee on Education in Radiologic Technology (JRCERT)

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Fax: 312-704-5304

<https://www.jrcert.org/mail@jrcert.org>



Program Description

The Radiologic Technology Program is jointly sponsored by Mansfield University, a member of the Pennsylvania State Higher Education System, and Guthrie Robert Packer Hospital, a tertiary care teaching hospital, Level II Regional Trauma Center. The Program is an intensive, hands-on, two-year program leading to an associate in applied science (A.A.S.) degree and employment as a radiologic technologist. Students are on the Mansfield, Pa., campus the first semester. The remaining five semesters, including two summer sessions, require clinical and classroom experience at Guthrie Robert Packer Hospital, in Sayre, Pa.

Radiology students attend an orientation session at Guthrie Robert Packer Hospital during the start of the regular first spring semester. When assigned to the Sayre campus, students complete up to 40 clinical/classroom hours per week. The average daily times of attendance are from 8 a.m. to 4 p.m. Monday through Friday. Occasionally, attendance at a late afternoon class that extends beyond 4 p.m. is required. While the majority of courses are taught using traditional in-class instruction, some are completed via online learning.

Clinical education includes extensive clinical experience in the Radiology Department at Guthrie Robert Packer Hospital. Students are routinely assigned to diagnostic areas and gain familiarity with specialty areas by completing a short clinical rotation within each modality. During the second year, each student rotates through an evening clinical assignment that takes place from 4 to 8 p.m.

Students are subject to the rules and regulations of both the university and medical center affiliate.

Mission Statement

The mission of the Radiologic Technology program is to integrate Mansfield University's liberal arts emphasis to develop competent entry-level diagnostic radiographers. As graduates, these radiographers will possess the expertise necessary to meet the needs of the communities they serve, while providing compassionate, patient-centered care.

Program Goals and Student Learning Outcomes

Goal #1: To provide the health care community with competent, entry-level diagnostic radiographers.

1. Students will position patients accurately.
2. Students will align CR accurately.
3. Students will select optimal exposure factors.
4. Students will apply radiation protection principles.
5. Students will successfully perform diagnostic procedures while under the supervision of staff technologists.

Goal #2: Students will demonstrate appropriate patient communication and education skills.

1. Students will identify themselves and the patient, verify the body part to be imaged, and obtain an accurate history.
2. Students will explain the procedure and process for obtaining the diagnostic report.

Goal #3:

Students will demonstrate problem-solving and critical thinking when performing medical imaging procedures.

1. Students will demonstrate critical thinking while performing radiographic procedures.
2. Students will evaluate radiographic images for appropriate positioning and image quality.

Goal #4: Students will demonstrate professionalism.

1. Students will demonstrate professional and ethical conduct.
2. Students will demonstrate professionalism through appropriate attendance and punctuality.

Goal #5: The program will continuously monitor its effectiveness.

1. Students will complete the program.
2. Graduates will pass the ARRT Certification Exam on the first attempt within six months of graduation.
3. Graduates pursuing employment will be employed within 12 months after program completion.

Goal #6: The program will promote graduate and employer satisfaction.

1. Graduates will express satisfaction with the training received during the program.
2. Employers will express satisfaction with the performance of the graduate.

Admission

The radiologic technology program accepts a maximum of 10 majors and a minimum of 3 alternate students annually. Admission is granted only for the fall semester and the Admissions Committee will select candidates based on:

- A high school diploma or GED.
- Submission of high school and/or college-level transcripts.
- A completed application form with the non-refundable fee.
- Preference will be given to candidates with a B or better in preferred science and math courses, which include: Algebra I, Algebra II, Geometry, Trigonometry, Calculus, Anatomy and Physiology, Chemistry, Physics, Biology and ACE or AP science and math courses.
- Minimum 2.5 cumulative GPA required to be considered for transfer into the Radiology Program. Transfer candidates must possess a strong science and math background for consideration.
- A completed personal interview and shadowing experience.



Program Effectiveness Data

The performance of radiography programs is summarized by program effectiveness data which includes the program completion rate, credentialing examination pass rate and job placement rate. The data is required by the Joint Review Committee on Education in Radiologic Technology (JRCERT) (20 N. Wacker Drive, Suite 2850, Chicago, IL 60606-3182, 312-704-5300, www.jrcert.org). The Mansfield University Radiology Technology Program's effectiveness data is found below. This information can also be obtained at www.jrcert.org/resources/program-effectiveness-data.

Credentialing Examination: *The number of students who pass, on the first attempt, the American Registry of Radiologic Technologists (ARRT) certification examination, or an unrestricted state licensing examination, compared with the number of graduates who take the examination within six months of graduation. The five-year average benchmark established by the JRCERT is 75%.*

Credentialing Examination Rate	number passed on 1st attempt divided by number attempted within 6 months of graduation
Year	Results
Year 1 - 2017	10 of 10 - 100%
Year 2 - 2018	9 of 9 - 100%
Year 3 - 2019	8 of 8 - 100%
Year 4 - 2020	8 of 8 - 100%
Year 5 - 2021	7 of 8 - 88%
Program 5-Year Average	42 of 43 - 97.7%

Job Placement: *The number of graduates employed in the radiologic sciences compared to the number of graduates actively seeking employment in the radiologic sciences within twelve months of graduating. The five-year average benchmark established by the JRCERT is 75%.*

Job Placement Rate	number employed divided by number actively seeking employment within 12 months of graduation
Year	Results
Year 1 - 2017	5 of 6 - 83%
Year 2 - 2018	6 of 6 - 100%
Year 3 - 2019	6 of 6 - 100%
Year 4 - 2020	6 of 6 - 100%
Year 5 - 2021	8 of 8 - 100%
Program 5-Year Average	31 of 32 - 96.9%

Program Completion: *The number of students who complete the program within the stated program length. The annual benchmark established by the program is 70%.*

Program Completion Rate	number graduated divided by number started the program
Year	Results
Year 1 - 2021	8 of 8
Annual Completion Rate	100%

Applicants must also comply with program technical standards:

- Read small print and write legible notes
- Speak clearly and be understood
- Handle sterile and non-sterile instruments with dexterity
- Hear speech when the speaker wears a mask and the listener's ears are covered with a cap
- Lift, move and assist patients
- Perform x-ray equipment manipulation
- Wear a protective apron when necessary
- Access, without assistance, all clinical areas
- Perform all CPR movements
- Wear all personal protective equipment (PPE) when required

Admission Process

Applicants must submit a completed application with the nonrefundable fee to the Mansfield University Enrollment Services Department along with high school/college transcripts and SAT and/or ACT scores if available. The Enrollment Services Department selects candidates who meet the minimum University admission requirements and forwards their applications and transcripts to the Program Director of the Radiologic Technology Program and the Admissions Committee for review.

Since class size is limited, only applicants with acceptable SAT scores if available and a solid high school and/or college math and science background and are granted a personal interview. Preferred math and science courses are Algebra I, Algebra II, Geometry, Trigonometry, Calculus, Anatomy and Physiology, Chemistry, Physics, Biology and ACE or AP science and math courses.

During the interview, applicants will receive information about the program and when permitted, will participate in a shadowing experience within Guthrie Robert Packer Hospital Radiology

Department. Interviewees will receive information regarding their acceptance status from the Mansfield University Admissions Office within approximately two weeks following the interview.

Applicants who receive a rejection letter may reapply to the program after completing math and science college level courses. Courses completed must include BSC 1121 Anatomy and Physiology I and MA 1128 College Algebra at Mansfield University. A minimum grade of grade of “C-” must be attained in each course to be reconsidered for acceptance. Applicants who request re-consideration will be admitted on a space-available basis and their scores will be considered with other applicant scores at the time of re-consideration.

Alternate Status

In addition to the ten majors, the program accepts a minimum of three alternate students annually. Alternate status enables the applicant to begin his/her studies at Mansfield University in the fall semester under the Academic Exploration Program and take all the required courses within the radiology program’s fall curriculum.

If an opening occurs during the fall semester, alternate students will be considered for full acceptance into the program. Alternate students who are accepted must attain at least a grade of “C” in each course, and those with the highest numerical average of grades in BSC 1121 Human Anatomy & Physiology I, XRT 1010 X-ray Technology I, and MA 1128 College Algebra will be accepted first.

If alternate students are not accepted into the program during the fall semester, they may continue taking general education courses required within the Radiologic Technology Program at Mansfield University. They are guaranteed acceptance into the Radiology Technology Program for the following spring semester provided they have attained a minimum grade of “C” in XRT 1010 X-Ray Technology I, and a minimum grade of C- in BSC 1121 Human Anatomy and Physiology I and MA 1128 College Algebra. They must also attain a passing grade in all attempted general education courses within the radiology program’s curriculum.

Obtaining Program Information and an Application

Information and an application form can be obtained by calling the Mansfield University Enrollment

Services Office at 570-662-4243 or by contacting Mary Sullivan, Program Director, at 570-887-4007. The same information and an online application may also be obtained by visiting www.mansfield.edu.

Application Deadline

To receive proper consideration, applications should be received by the University no later than January 15. Applications submitted after January 15 will be accepted on a space-available basis.

Transfer Credit

Appropriate credit may be given for comparable college-level course work. For questions regarding transfer credit contact Mansfield University Admissions at 570-662-4815 or online at admissions@mansfield.edu

Change of Major

Any Mansfield University student who would like to be considered for acceptance into the Radiologic Technology Program must notify the Program Director by phone: 570-887-4007 or by e-mail: MaryK.Sullivan@Guthrie.org or msulliva@mansfield.edu. Students must contact the registrar’s Office at Mansfield University and request that the following documents be sent to the program Director:

1. Original application to Mansfield University
2. All post-secondary transcripts including the Mansfield University transcript

The Admissions Committee will consider the request using the same acceptance criteria as for external applicants. All candidates are notified of their final application status by the Program Director. Upon notification of acceptance, candidates must submit a complete the Change of Major process.

Health, Insurance and Background Check Requirements

To be allowed to treat patients at Robert Packer Hospital and other affiliated hospitals, each radiology student must comply with the health, insurance, and background check requirements established by the hospital and/or state health department. Each radiology student must provide documentation of the following:

Health and Insurance Requirements:

- Two MMR (measles, mumps, rubella) vaccinations, or rubella and rubeola titers confirming immunity. (For students born before January 1, 1957, a rubeola titer is not needed.)
- Two chicken pox (varicella) immunizations or varicella titer confirming immunity.
- Hepatitis B immunizations (series of three).
- A two-step PPD
- Tdap (tetanus, diphtheria and pertussis) shot within last ten years.
- Flu shot for current flu season.
- Proof of COVID-19 vaccination.
- Evidence of personal health insurance.
A photocopy of your insurance card will suffice. For students who do not have health insurance, or are no longer covered by their parents' healthcare plan, consider www.healthcare.gov.
- Proof of professional liability insurance.
Students may purchase the required minimum coverage \$1,000,000 each incident/\$3,000,000 aggregate, at www.proliability.com.

Criminal and Child Abuse:

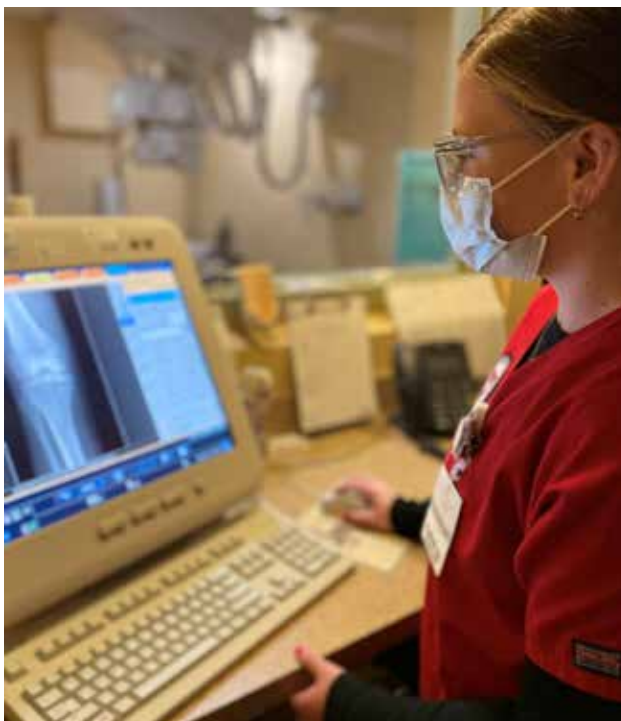
- Pennsylvania State Police Criminal History Record (SP4-164)
- Department of Human Services Child Abuse Report CY-113
- Federal Criminal History Record information (CHRI) - FBI Report FBI Service code: 1KG756

Link for all 3 background checks can be found here:
<http://keepkidssafe.pa.gov/resources/clearances/index.htm>

Please carefully read and follow directions on website for completing background checks.

Expenses incurred meeting the above requirements are the responsibility of the student. Specific instructions for completing Criminal background checks will be provided by the Program Director after acceptance into the program. Students will receive directions from Guthrie Medical Education via their Mansfield University email for uploading documents into document repository.

Students must keep a copy of all submitted documentation for their records.



Corning Community College Transfer Option

Corning Community College (CCC) students have the opportunity to complete many of the Radiologic Technology Program course requirements at CCC. Appropriate CCC transfer courses are identified below. After transfer to Mansfield University, most professional courses, required for the Radiologic Technology Associate Degree, will be taken on the Guthrie Healthcare Campus in Sayre, PA. Interested CCC students are encouraged to contact the Mansfield University Radiologic Technology Program Director for advisement prior to taking transfer courses, since acceptance into the MU Radiologic Technology Program is not guaranteed and candidates must meet program acceptance requirements.

Corning Community College Transfer Courses		
CCC Course Title	MU Course Title	Credit Hrs.
ENGL-1010 Composition I	ENG-1112 Composition I	3
SOCI--1010 Introduction to Sociology I	SOC-1101 Introduction to Sociology I	3
PSYC-1101 General Psychology I	PSY-1101 Introduction to Psychology	3
MA-1215 College Mathematics I	MA-1128 College Algebra (substitutes)	3
SPCH-1080 Public Speaking	COM-1101, 1102, or 1103 Communication Electives	3
BIOL-1210 Principles of Anatomy & Physiology I	BSC-1121 Human Anatomy and Physiology I	4
BIOL-1220 Principles of Anatomy & Physiology II	BSC-1122 Human Anatomy and Physiology II	4
or		
BIOL-2020 Anatomy and Physiology I	BSC-1121 Human Anatomy and Physiology I	4
BIOL-2030 Anatomy and Physiology II	BSC-1122 Human Anatomy and Physiology II	4

Tuition, Fees, Housing, and Dining

Current information concerning tuition, miscellaneous fees, housing fees, and dining fees may be obtained from the University Office of Student Accounts (telephone 570-662-4888) or by visiting the University web site (www.mansfield.edu). Housing and dining facilities are available both on the Mansfield and Sayre campuses. Information concerning housing and dining on the Mansfield campus is available through the Office of Housing, Dining and Campus Life at: 570-662-4934 or 570-662-4952 or housing@mansfield.edu.

Housing on the Sayre campus is limited, but priority for housing is given to freshmen and sophomore students. For information about housing and dining at the Sayre campus, contact Judi Brayer, Coordinator of Student Services, by telephone at 570-887-4716 or by e-mail: jbrayer@mansfield.edu.

Transportation to Guthrie Troy Community Hospital

During either the second spring or second summer semester students are assigned to a one-week clinical rotation at Guthrie Troy Community Hospital in Troy, Pa. to gain additional clinical experience. Students must provide their own transportation to and from the hospital.

Program Standards

Radiology students are subject to all Mansfield University policies plus the following Radiologic Technology Program standards:

1. A minimum grade of “C-” in BSC 1121 Human Anatomy & Physiology and MA 1128 College Algebra is required for enrollment in the radiology courses in Sayre.
2. A minimum grade of “C” must be achieved in all professional courses (those with an XRT prefix) and modules. Any module grade below “C” will result in failure of the entire course. Any student receiving a “C-” or lower grade cannot continue in the program until the course is repeated and a “C” or higher grade is attained.
3. Professional courses can be repeated only once. Students will be readmitted on a “space available” basis. Any student who fails to earn at least a grade of “C” upon completion of the repeated course will be dismissed from the program.
4. All degree work must be completed within three years.

Scholarships and Loans

There are numerous educational loan programs sponsored by state and federal governments. Information on these can be found in a high school guidance office or the Financial Aid Office of Mansfield University. You may contact the University Financial Aid Office at 570-662-4129 for more information.

For state-sponsored scholarships and low-interest loan programs, contact your local state department of education.

In addition, scholarships are available through the American Society of Radiologic Technologists (ASRT) Foundation. The following scholarships are available to outstanding entry-level radiologic sciences students who are student members of the ASRT:

Jerman-Cahoon Student Scholarship
Royce Osborn Minority Student Scholarship
The Ricard S. Kay Endowed Scholarship
Parsons Degree Achievement Scholarship
LGBTQ+ Scholarship
Memorial Scholarship

More scholarships and information may be found at the ASRT Foundation website:

<https://foundation.asrt.org/>

The Guthrie Clinic offers two categories of scholarships. One is for students who are planning a career in health care and the other is for children of Guthrie employees who are enrolling in an accredited junior college, college or university. This scholarship will support any field of study.

Students can obtain an application and further instructions by visiting **www.guthrie.org/news**, then click “Download Application” in the right margin under Scholarships.

Pregnancy Policy

A number of studies have suggested that the embryo/fetus may be more sensitive to ionizing radiation than an adult, especially during the first three months of pregnancy. To reduce exposure to the unborn during potentially sensitive periods of gestation, the Mansfield University Radiologic Program has adopted the recommendations of the National Council on Radiation Protection (NCRP) in Report no. 116. The NCRP recommends a monthly dose limit not exceeding 0.05 rem (0.5 mSv) and a limit during the entire pregnancy not to exceed 0.50 rem (5.0 mSv). These dose limits exclude both medical and natural background radiation.

If a pregnancy does occur, the student may choose to keep her pregnancy status confidential or undisclosed. Disclosure or declaration of pregnancy is strictly voluntary.

If the student decides to declare pregnancy, they must submit a written notification from their physician verifying the pregnancy and a predicted due date. The student will then meet with the radiation Safety Officer (RSO) and will be asked to sign a Declaration of Pregnancy form. The RSO will then provide the student with a fetal radiation monitoring device which must be worn in the proper location during all clinical assignments. The RSO will check the fetal doses to ensure that the recommended limit is not exceeded. The pregnant student should involve the expertise of the RSO in regard to questions about the risks of fetal irradiation and in all radiography course decisions where the use ionizing radiation equipment is required. Records of dose to an embryo/fetus will be maintained in the permanent dosimetry records. If requested in writing by the student, the facility will provide fetal dose records to subsequent licensees to document embryo/fetal dose calculations. These records will not be routinely released to subsequent licensees when requests are submitted for the student's dose. The lower dose limit for the pregnant student is in effect until the declared pregnant person: (1) is known to have given birth, (2) informs that they are no longer pregnant, or (3) informs that she no longer wants to be considered declared pregnant.

A student may withdraw their declaration of pregnancy at any time by submitting a written notice to the Program Director.

The student who is pregnant will have several options to consider regarding the continuation of her educational program at Mansfield University:

The student may remain in all program courses through program completion without any modification or interruption because of their pregnancy. The student will wear both their primary dosimeter and the fetal dosimeter in the proper locations during all clinical assignments. The student will wear a 0.50 mm wrap-around lead apron when assigned to portables and fluoroscopic exams.

The student may remain in all program courses and request special modifications related to the higher dose clinical areas (e.g. portable imaging, surgery, fluoroscopy, etc.). However, all clinical objectives and competencies must be met prior to graduation.

The student may take a leave of absence from all program coursework with the duration of leave not to exceed a period of time that will prevent program completion within the 36 months.

Graduation Requirements

1. Satisfactory completion of all required courses.
2. Completion of BSC 1121 and MA 1128 with a grade no lower than "C-"
3. Completion of all professional courses with a grade no lower than "C" in each course.
4. Final Q.P.A. of at least 2.00.
5. Payment of all required tuition, fees, and debts.

ARRT Certification Examination

Graduates of the program are eligible to sit for the certification examination of the American Registry of Radiologic Technologists (ARRT). Candidates must meet all ARRT requirements and ethical standards. Conviction of a crime (felony, gross misdemeanor, or misdemeanor) and drug/alcohol related violations can affect a graduate's eligibility to sit for the examination.

Certified radiographers may use the letters "R.T. (R)" after their names and ARRT certification satisfies most state radiographer licensure laws.

More information can be obtained at the website, www.arrt.org.

The program boasts an outstanding pass rate on the certification examination.

Professional Organization

The American Society of Radiologic Technologists (ASRT) is a national society to which certified radiographers and students are eligible to belong. The ASRT publishes an online journal that provides educational articles and opportunities for employment, conducts regional and national conferences, produces educational materials/self-study programs, supports legislation for improvements in radiologic science, produces curriculum guides for programs in the various imaging modalities, reviews and approves continuing education programs, and maintains education records for its members. Visit the website, www.asrt.org for more information.

Student Counseling Services

Academic, personal, and career counseling services provided on the Mansfield campus by the Academic Advising Center and the Counseling Center both located in South Hall (570-662-4436), and the Career Center in Alumni Hall (570-662-4133). Tutoring services are provided by the Learning Center located in South Hall (570-662-4828) or (570-662-4436)

At the Sayre site, program faculty members are available for academic, career, and tutoring services throughout the year. Students can also take advantage of the Guthrie Clinic Employee Assistance Program. At no cost to the student, the program will provide professional counseling for the following problems: family or marital problems; stress problems; interpersonal difficulties; depression and related problems such as insomnia, weight gain or loss, etc.; and any other human problems that interfere with the student's sense of well-being. The service, provided by the EAP counselor, is free of charge. The EAP counselor may be contacted at 570-887-5397 or 866-838-3271 or online <https://guthrie.mysupportportal.com/>



Bloomsgburg University

BACCALAUREATE DEGREE OPTION

Articulation Agreement Under the terms of an articulation agreement between Mansfield University and Bloomsgburg University, graduates from the Mansfield University Radiologic Technology Program are guaranteed admission with advanced standing at the junior level to Bloomsgburg University.

Following successful completion of the BU Medical Imaging Program, graduates will earn a Bachelor of Science Degree. Mansfield University (MU) and Bloomsgburg University (BU) officially confirm the following terms of this agreement:

1. After admission to MU, an interested student signs a letter of intent to transfer to BU at the time the Associate in Applied Science Degree is completed.
2. The Office of Admissions at BU reserves a place for the student as a junior year transfer student upon receipt of the student's letter of intent.
3. One year prior to matriculation at BU, the student confirms the intent to enroll by completing the transfer admissions application.
4. BU accepts all 72 credits from MU.
5. A minimum of 48 additional semester hours of credit must be completed to be awarded the BU Bachelor of Science Degree. BU residency requirements must be observed (30 credits from BU).

For more information, contact:

Jennifer Venditti, Ph.D.

Allied Health Coordinator, Professor of Biological
and Allied Health Sciences

jvenditt@bloomu.edu

Phone: 570-389-4400



Bloomsburg University Requirements for the Medical Imaging Program Bachelor of Science Degree		
		Credit Hrs.
MU A.S. Degree in Radiologic Technology		72
Biology 114	Concepts in Biology I	4
Biology 208	Medical Terminology	3
Physics 107	Physics for Health Sciences or	4
Physics 111	Introduction to Physics I	
Compsci 110	Introduction to Computer Science or	3
ITM 175	Information Technology Management Applications or	
Chemistry 101	Introduction to Chemistry	
Math 116	Math for Health Science	3
At least 15 credits must be taken from one of the emphasis areas: Science Emphasis or Management Emphasis OR If a student completes a second clinical modality (e.g. Nuclear medicine, Sonography, Cardiovascular, MRI, etc), 17 additional clinical credits can be transferred to BU and count towards the BS degree in place of the Emphasis credits. Note: BU does not offer these clinical programs.		15
General Education (it is estimated that approximately 18 credits will be required) Courses to earn the required General Education Points toward: Goal 2: Information Literacy Goal 4: Cultures of Diversity Goal 7: Arts & Humanities Goal 9: Healthy Living Goal 10: Citizenship		
Free electives (if needed) to complete the 120-credit minimum graduation requirement	TOTAL	120

Professional Courses

XRT 1010

X-Ray Technology I (3)

Course content provides an introduction to the basic elements of radiologic technology. Students will discuss and evaluate medicolegal issues, professionalism, radiation protection practices, radiologic terms, and basics of digital imaging. This course is a professional course within the Radiologic Technology curriculum and radiology students are given preference. With instructor permission, course enrollment is open to any university student.

XRT 1020

X-Ray Technology II (5)

The goal of this course is to present a basic introduction to imaging equipment operation and concepts of patient care. Students will also learn radiographic examination considerations for the extremities, spine, shoulder girdle, pelvic girdle, and bony thorax. (Prerequisites: XRT 1010, BSC 1121, and MA 1128)

XRT 1030

X-Ray Technology III (3)

Course content acquaints the student with principles of radiation biology. Emphasis will be placed on radiographic examinations of the biliary, urinary, and digestive systems. Basic contrast studies and pediatric radiography is also presented. Drug pharmacology and radiographic contrast media will be discussed. (Prerequisite: XRT 1020)

XRT 1040

X-Ray Technology IV (3)

Course content is designed to impart an understanding of the components, principles and operation of digital imaging systems found in diagnostic radiology. Factors that impact exposure factors, image acquisition, display, archiving/retrieval, and image quality are included. This course also includes radiographic examinations of the cranium, mobile, and trauma radiography and a review of previously learned concepts from other professional courses. (Prerequisites: XRT 1030 and BSC 1122)

XRT 1105 (3)

X-Ray Technology V

This course includes the study of pathology and disease. Computed Tomography (CT), and quality assurance. (Prerequisite: XRT 1040)

XRT 1106

X-Ray Technology VI (4)

The purpose of this course is to review the knowledge and skills underlying the performance of the major tasks typically required of an entry-level diagnostic radiographer. Students will also become familiar with the basic concept of technical reporting and evaluation. (Prerequisite: XRT 1105)

XRT 1107

Fundamentals of Radiologic Science and Health Care (1)

This course is designed to provide an overview of the foundations in radiography and the practitioner's role in the health care delivery system. Principles, practices, and policies of the health care organization will be examined and discussed in addition to professional responsibilities of the radiographer. (Prerequisites: XRT 1010, BSC 1121, and MA 1128)

XRT 1108

Medical Terminology for the Radiographer (2)

Students will be introduced to the origins of medical terminology and the word-building system used in the medical field. The words, abbreviations, and symbols used in the medical environment will be discussed. An orientation to the understanding of radiographic orders and interpretation of diagnostic reports will be addressed through the related terminology. (Prerequisites: XRT 1010, BSC 1121, and MA 1128)

XRT 2203

X-Ray Physics (3)

This course will provide the student with knowledge of basic radiologic physics. Atomic theory, nature and characteristics of radiation, x-ray production, and fundamentals of photon interactions with matter are discussed. (Prerequisite: XRT 1030)

XRT 2221

Clinical Course I (3)

The main purpose of this course is to familiarize students with the proper operation and utilization of modern diagnostic radiologic equipment. Initially, students will receive a general orientation regarding the clinical facilities and policies. While under the direct supervision of clinical faculty and registered radiographers, students will perform the radiographic examinations presented in course XRT 1020. Students are required to demonstrate and practice the competencies, which are included in the course goals and objectives. (Prerequisite: XRT 1010)

XRT 2222

Clinical Course II (3)

Students will practice the competencies acquired in the previous clinical practicum and begin working towards achieving competency for radiographic examinations presented in course XRT 1030. Clinical rotations will begin in the specialty areas. Students are required to demonstrate and practice the competencies, which are included in the course goals and objectives. (Prerequisites: XRT 1020 and XRT 2221)

XRT 2223

Clinical Course III (3)

Students will continue to practice the competencies acquired in previous clinical courses while working towards achieving competency for examinations of the skull. Emphasis will be placed on radiographic examinations from courses: XRT 1020, 1030, and 1104. Clinical rotations will continue in the specialty areas. Students will also begin an evening clinical rotation which emphasizes trauma radiography. Students are required to demonstrate and practice the competencies which are included in the course goals and objectives. (Prerequisites: XRT 1030 and XRT 2222)

XRT 2224

Clinical Course IV (3)

Students will have the opportunity to demonstrate competency on general diagnostic examinations of most systems of the body, while continuing to practice the competencies acquired in previous clinical courses. Clinical rotations in specialty areas will continue. Students are required to demonstrate and practice the competencies, which are included in the course goals and objectives. (Prerequisites: XRT 1040 and XRT 2223)

XRT 2226 (4)

Clinical Course V

During this final clinical practicum, students will complete clinical assignments that require the demonstration of competency in a wide variety of general diagnostic entry-level radiologic examinations. Students will have a final opportunity to practice competencies achieved in previous clinical practice. Clinical rotations through the specialty areas will be completed. Students are required to demonstrate and practice the competencies, which are included in the course goals and objectives. (Prerequisites: XRT 1105 and XRT 2224)

General Education

BSC 1121

Human Anatomy & Physiology I (4)

This course presents an integrated approach to the study of the anatomy and physiology of various organ systems of the human body.

BSC 1122

Human Anatomy & Physiology II (4)

A continuation of BSC 1121. Completes an integrated approach to the study of the anatomy and physiology of the various organ systems of the human body.

MA 1128

College Algebra (3)

Review of ideas in basic algebra, graphs, equations, inequalities, and a strong emphasis on functions (general, polynomial, rational, exponential and logarithmic).

ENG 1112

Composition I (3)

Intensive reading and writing of expository prose. Analytical and critical thinking and college-level research skills are emphasized. Pre-requisite: exemption from ENG 0090 or equivalent transfer course.

SOC 1101

Introduction to Sociology (3)

Introduction to the basic concepts, premises and techniques involved in the scientific approach to the study of human societies. Analysis is made of selected aspects of social behavior at interpersonal, intergroup and societal levels of contemporary American society.

COM 1101

Oral Communication (3)

The objectives are to help the student to formulate his/her own ideas coherently, evaluate factual material and use sound reasoning patterns in his/her preparation and attempts to communicate concepts orally, to determine and select the most effective means of expression in formal and informal speaking situations.

COM 1102

Effective Public Speaking (3)

COM 1102 introduces students to the principles of effective communication, with a specific focus on public speaking. Course topics include audience analysis, organization structure, the use of supplementary visual and auditory aids, components of different types of speeches, and delivery elements. Students will develop public speaking skills through in-class activities, collaborative learning, peer critiques, and analysis of public speeches and other messages.

COM 1103

Speaking Effectively in Groups (3)

COM 1103 introduces students to principles of effective communication with a specific focus on speaking formally and informally in groups. Course topics include the basics of communications, developing effective speaking skills in a group context, group dynamics, teamwork, and problem-solving. Students will participate in various types of group presentations and engage in analytical message critique. This course enables students to work more effectively in groups, develop teams, lead, and make effective group and individual presentations.

PHL 3380

Health Care Ethics (3)

Health care does not exist in a vacuum and neither do the concepts learned in this course, which offers a thorough examination of the arguments designed to provide solutions to moral problems commonly faced by patients and health care providers. Topics include: confidentiality; reproductive rights; death, dying and euthanasia; the distribution of scarce resources (including health insurance plans). No background in philosophy or in medicine is necessary. Prerequisites and Notes: Must have 30 earned credits.

PSY 1101

Introduction to General Psychology (3)

This course is designed to familiarize students with the application of scientific psychology to human life. Emphasis is on "normal" behavior and its antecedents. It includes the study of broad categories of human behavior through various psychological models.

Mansfield University Associate Degree Program	
Curriculum	Credit Hrs.
Fall - Mansfield University Campus	
BSC 1121 Human Anatomy & Physiology I	4
MA 1128 College Algebra	3
XRT 1010 X-ray Technology I	3
FYS 1100 First Year Seminar	3
COM 1101, 1102, 1103 Communication Electives	<u>3</u>
	16
Spring - Robert Packer Hospital	
BSC 1122 Human Anatomy & Physiology II	4
XRT 2221 Clinical Course I	3
XRT 1020 X-ray Technology II	5
XRT 1107 Fundamentals of Radiologic Science and Health Care	1
XRT 1108 Medical Terminology for the Radiographer	<u>2</u>
	15
Summer - Robert Packer Hospital	
XRT 2222 Clinical Course II	3
XRT 1030 X-ray Technology III	<u>3</u>
	6
Fall - Robert Packer Hospital	
SOC 1101 Introduction to Sociology	3
XRT 2203 X-ray Physics	3
XRT 2223 Clinical Course III	3
XRT 1040 X-ray Technology IV	3
ENG 1112 Composition I	<u>3</u>
	15
Spring - Robert Packer Hospital	
PHL 3380 Allied Health Care Ethics	3
XRT 2224 Clinical Course IV	3
XRT 1105 X-ray Technology V	3
PSY 1101 Introduction to Psychology	<u>3</u>
	12
Summer - Robert Packer Hospital	
XRT 2226 Clinical Course V	4
XRT 1106 X-ray Technology VI	<u>4</u>
	8
TOTAL	72

Medical Laboratory Science/ Medical Technology Program

Staff and Specialty Areas

Stacy Pond, MS, MLS(ASCP)CM

Program Director

Barbara Tubby, BS, MT(ASCP)SBB

Immunohematology

Michael Katchuk, BS, MT(ASCP)

Point of Care Testing

Nicole Osman, MT(ASCP)

Lab Administrator

Jennifer Lison, BS, MT(ASCP)

Technical Specialist for Hematology

Maureen Villanti, BS, MT(ASCP), SM

Microbiology Technical Supervisor

Stacye Allington, BS, MT(ASCP)

Lab instructor for Bacteriology

Molly Fagnan, BS, MT(ASCP)

Lab instructor for Immunohematology

Cindy Horrocks, BS, MT(ASCP)

Lecturer in Bacteriology

Cyera Mosier, BS, MT(ASCP)

Lab Instructor

Caitlin Kinsley, BS, MT

Lab Instructor

Ed Sperduto

Histology Supervisor

Bonnie Wood

Phlebotomy and Courier Supervisor

The Profession

Medical technologists are laboratory scientists who perform laboratory tests used in the diagnosis and treatment of disease, health maintenance, drug monitoring, organ transplantation, and forensic medicine. Medical technologists are a vital member of the health care team.

Medical technologists utilize the latest technology to perform laboratory tests. They use state-of-the-art analyzers, complex computers, microscopes, and precision instruments in assisting with the diagnosis and treatment of disease.

Students in the Medical Technology program are educated to be clinical laboratory scientists. This incorporates the sciences of hematology immunology, clinical chemistry, medical microbiology, clinical microscopy and blood banking sciences. The internship provides the theoretical foundation in the clinical sciences and is complemented by an extensive clinical laboratory experience at the Guthrie Clinic clinical laboratory.

Emerging Roles for Medical Technologists

New roles for the laboratory scientists in the next century are in the fields of:

- DNA Biotechnology
- Virology
- Immunology
- Reproductive Endocrinology
- In-vitro Fertilization Technology
- Molecular Biology
- Forensic (CSI) Sciences

Career Opportunities

There is a steady need for laboratory professionals nationwide more now than ever.

Employment opportunities are abundant and career options are limitless. A career in medical technology gives the student the opportunity to work in a variety of fields with a baccalaureate degree with the advancement potential and at the same time, allows the student mobility throughout the country. Our program has a 100% employment rate for the past several years. The majority of medical technologists/laboratory scientists work in the health care field. Numerous career opportunities exist for laboratory professionals in:

- Health Care Laboratories
- Physicians Office Laboratories
- Forensic Laboratories (CSI Labs)
- Government Laboratories (CDC, NIH, NCI)
- Research Foundation or University Laboratories
- Pharmaceutical or Industrial Laboratories
- Veterinary Clinics
- University Laboratories

Educational Opportunities

The rapid evolvement of clinical laboratory science as a profession is reflected in the advancement of training into post-graduate areas. Several universities now offer Masters and Ph.D. degrees in laboratory sciences. Many administrative positions are available to qualified technologists in hospitals, industry and as program directors for clinical laboratory science programs. Certification in management is now available.

Laboratory Careers for Biology Majors

Clinical Laboratory Sciences is an excellent career choice for Biology Majors who are looking for an exciting career that is both academically stimulating and socially rewarding. This option will enable biology graduates to enter the workforce without having to seek an advanced degree in the biology field. Students only need to meet the admissions requirements and complete the professional one year internship at Guthrie Robert Packer Hospital. Students interested in this option should apply to the program at the beginning of their junior year.



Program Officials

The Medical Technology/Clinical Laboratory Science Program is administered by:

Stacy Pond, MS, MLS(ASCP)CM
Program Director

Mission Statement

The Guthrie Robert Packer Hospital School of Medical Technology has the following purposes:

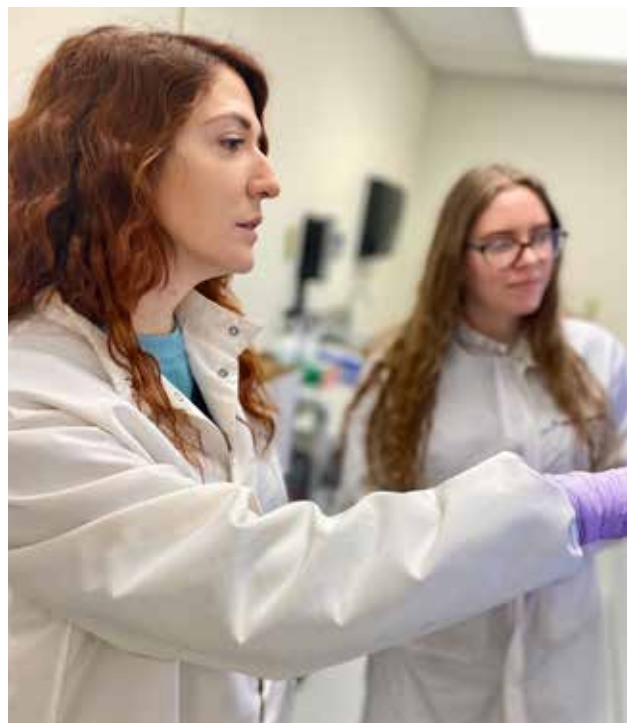
1. To provide the highest quality education in Medical Laboratory Sciences to our students.
2. To prepare our graduates to make meaningful contributions toward enhancing the quality of health care and medical decisions.
3. To create learning experiences that will enable the graduate to become an integral member of the health care team.
4. To promote the principles of life-long learning.
5. To provide opportunities, instruction, and guided experiences by which students may gain the basic knowledge and skills essential to the practice of their profession.

Program Goals

1. To provide a high quality, stimulating academic curriculum which will provide preparation in all disciplines of the medical laboratory sciences to establish a strong knowledge base for students.
2. To provide and ensure a thorough and effective clinical program which correlates and supports the foundation of knowledge base.
3. To assist students in preparation for national certification examinations.
4. To prepare graduates as entry level medical laboratory scientists.
5. The program will continuously monitor its program effectiveness.
6. The program will promote student and employer satisfaction.

Statement of Non-Discrimination

The Guthrie Robert Packer Hospital School of Medical Technology/Clinical Laboratory Science does not discriminate on the basis of race, gender, color, age, national origin, disability, and marital status in the recruitment of students, the recruitment and employment of faculty and staff, or the operation of the program activities, as specified by Federal and State Laws and Regulations.



Admissions Procedures

Application materials may be secured by writing or by a telephone call to the Program Director.

To be considered for admission, applicants must submit the following:

1. An official application form.
2. The \$10 application fee.
3. An official transcript from the College or University.
4. Three letters of recommendation.
5. Arrangement for a professional interview with the Program Director.

When to Apply

The application period is July 1 through October 25 each year. Applications should apply to the medical technology program approximately one year prior to the anticipated year of admission. For example, if you anticipate attending our program during your senior year, then apply at the beginning of your junior year.

The deadline for applications is October 25 of each year.

Admission Requirements

Admission to the program is determined by academic and personal qualifications. Acceptance will be considered by the Program Director upon evaluation of the applicant's official transcript, letters of recommendation and personal interview.

Admission to the program will be considered when the applicant has met the following criteria:

1. Submittal of application form and fee.
2. Official transcript from college or university.
3. Three letters of recommendation from academic sources.
4. A minimum GPA of 2.7 maintained throughout academic history.
5. Minimum grade of "C" in all required prerequisite courses.
6. Completion of at least 90 credit hours of academic credit.
7. Compliance with Essential Functions (described in this catalog).



Required Coursework for Admission

CHEMISTRY - (16 semester). 8 credit hours in general chemistry. 8 credit hours of Organic Chemistry. 4 credits of biochemistry is highly recommended for New York State applicants. Other courses to fulfill the requirements may be selected from qualitative or quantitative chemistry, biochemistry, and instrumental analysis.

BIOLOGICAL SCIENCES - (16 semester hours). Minimum 3 credit hours of Microbiology or Bacteriology; 3 credit hours of immunology, as a separate course is required; 3 credits in physiology; 3 credits in Molecular Biology/ Molecular diagnostics.

MATHEMATICS: A minimum of 3 credit hours in math Statistics is required.

All prerequisite course work must be completed prior to admission to the medical technology program.



Essential Functions for Admission

The applicant must be able to:

- Visually distinguish red and blue colors.
- Communicate in oral and written English.
- Manipulate laboratory glassware in the mixing, transferring, and pipeting of reagents.
- Operate minor lab instruments, i.e. centrifuges, and spectrophotometers.
- Operate technical equipment with both hands simultaneously.
- Perform microscopic examinations on various specimens.

Preadmission Health Examination and Hepatitis B Immunization

Required for entrance into the program is a physical examination, which must be completed prior to the admissions date. The PRE-ENTRANCE PHYSICAL EXAMINATION form will be forwarded to you after you have been accepted for admission to the program.

Guthrie now requires students entering any of the health sciences programs to receive the Hepatitis B immunization series. This is a mandatory requirement for admission. The PRE-ENTRANCE HEALTH EXAMINATION and Hepatitis B immunization should be completed prior to August 1 of each year of admission. Allowances are made for late acceptances only.

Mandatory Immunizations, Drug Screens and Insurance for Admissions

1. Completed health examination form.
2. Results of a 10-panel urine drug screen/with EXPANDED OPIATES, Within 3 Months of Start of the Program.

Verification of required immunizations:

1. Hepatitis B #1, #2, #3 and Hepatitis B titre
2. MMR #1
3. MMR #2 (total of two vaccines)
4. Varicella #1
5. Varicella #2 (total of two vaccines) or documentation of positive Varicella Titre
6. Tdap (once as an adult), (not the Dtap or Td). Dtap < 19 years does not meet the requirement
7. Polio 25
8. PPD #1 (within one year of start of MLS program)
9. PPD #2 (within 3 months of start of program) or T-Spot TB test results (age 17 yr and older) [better than the two-step PPD]

Proof of Health Insurance (not liability). It is a requirement for admission to have a photocopy of your (or your parents') medical insurance coverage.

Professional Liability Insurance

All Guthrie students are required to maintain professional liability insurance while attending Guthrie programs on campus. Documentation must be submitted to the Program Director prior to start of the program in August.

To purchase professional liability insurance, students may contact Pro Liability insurance at www.proliability.com for a free quote. A minimum coverage of \$1,000,000 per incident, \$3,000,000 aggregate must be purchased. The cost is about \$35 for one year. Click on Student at the Left column, select student (non physician), select no association at appropriate question.



General Education Courses

MT-1

URINALYSIS AND BODY FLUIDS (3)

In this course, students will study the anatomy and physiology of the kidney and excretory system. Student will be able to discuss and explain the medical biochemistry of renal function, the histology of the kidney and glomerulus, and the interpretation of urinalysis tests. Emphasis for this course is on specimen collection and preservation, laboratory test procedures, clinical microscopy, histology of urine sediment, clinical significance and interpretation of laboratory results. The course also covers laboratory procedures and clinical significance of analysis of spinal fluid, seminal fluid and other body fluids commonly examined in the laboratory. Lectures, text reading assignments, lab exercises and problem based case studies are used to teach this course. 2 Class Hours, 2 Laboratory Hours per day.

MT-2

HEMATOLOGY AND COAGULATION (5)

This course is a comprehensive study of the hemopoietic and hemostasis systems. Major concepts of this course are the histology and morphology of normal and abnormal red blood cells, white blood cells and platelets. Students will study the medical biochemistry of iron deficiency vitamin B12/Folate deficiency anemia and the medical biochemistry of various hemoglobinopathies, determination of blood measurements in anemias, leukemias and other blood diseases. The medical biochemistry of coagulation, fibrinolysis, coagulopathies, and laboratory procedures for coagulation testing will be covered in detail. Emphasis is on histology and morphology of red and white blood cells, biochemical test principles, analytical procedures, and clinical interpretation of routine and special tests. The course is presented using lectures, lab exercises, and problem based case studies. 2 Class Hours, 3 Laboratory Hours per day.

MT-3

CLINICAL BIOCHEMISTRY (6)

This course is designed to give the student a comprehensive and sequential overview to the study of Medical Biochemistry and human pathophysiology. The contents of this course will introduce the student to specimen collection, transport and storage, specimen variable and laboratory mathematics. This course will also cover the concepts of Spectral techniques, immunoassays, quality control and quality assurance. This course is intended to present the concepts of chemical principles, reference ranges, test method evaluation and clinical significance of the following selected chemical components: carbohydrates, non-protein nitrogens, electrolytes, acid-base physiology, blood gas physiology, proteins, lipids, enzymes, Liver function, cardiac markers, tumor markers, endocrinology, vitamins, and calcium-phosphorus metabolism. The student will also be introduced to the topics of Toxicology and therapeutic drug monitoring. 2 Class Hours, 2 Laboratory Hours per day.

MT-4

IMMUNOHEMATOLOGY (3)

Introduction to immunohematology and blood banking. This course covers the biochemistry, genetics and laboratory techniques for the testing of the ABO, Rh and other blood group systems. Emphasis is on ABO grouping, RH typing, direct anti-globulin testing, indirect anti-globulin testing, pre-transfusion (compatibility) testing, antibody identification with panels, component preparation and storage, transfusion therapy, donor requirements for blood donation, fetal-maternal blood banking and pre-natal testing, and quality assurance in the blood bank. 2 Class Hours, 2 Laboratory Hours per day.

MT-5

MEDICAL IMMUNOLOGY/SEROLOGY AND MOLECULAR BIOLOGY/MOLECULAR DIAGNOSTICS (3)

This course is the study of biochemistry and physiology of the immune system to include the study of humoral and cell mediated immunity, complement, hypersensitivity, auto-immunity, immunodeficiency, tumor immunology, transplant immunology, viral hepatitis, and the serology of infectious diseases such as syphilis, Rubella, HIV, and Epstein Bar Virus. Emphasis is on biochemical principles, laboratory procedures, clinical significance and interpretation of laboratory results. Laboratory tests include, antibody quantitation, agglutination tests, immunoelectrophoresis, fluorescent antibody tests, enzyme immunoassay, PCR and Western Blot techniques. 2 Class Hours, 2 Laboratory Hours per day.

Molecular Biology/diagnostics:

This Section of the course is a comprehensive introduction to the principles of molecular biology and molecular diagnostics. This course covers with an overview of essentials unique terminology, clinical applications, advantages, and disadvantages of molecular diagnostics. Most importantly, the principles behind molecular diagnostics are presented in detail, giving a strong foundation in laboratory techniques in molecular biology with an emphasis on molecular diagnostics, DNA replication, transcription, translation, gene expression and regulation, recombinant DNA and RNA techniques, DNA/RNA hybridization techniques and DNA/RNA amplification techniques such as PCR, and real time PCR, Southern Blot, Northern Blot and Western Blot analysis.

MT-6

MEDICAL PARASITOLOGY (1.5)

This course is the study of medically important parasites of man. Topics include the introduction to the theory, practical application, technical performance and evaluation of procedures for isolation and identification of medically important parasites of man and other animals. Emphasis is on the identification, of Nematodes, Cestodes, Trematodes, Protozoans and Sporozoans and the study of their life cycles and laboratory techniques. 2 Class Hours, 1.5 Laboratory Hours per day.

MT-7

MEDICAL BACTERIOLOGY-VIROLOGY (7)

This course is a comprehensive study of medically important pathogenic bacteria. Course topics include: specimen handling, staining methods, media/culture methods, rapid diagnostic tests, serologic grouping, taxonomy, morphology, metabolism, pathology, and growth requirements and biochemical characteristics, culture techniques, biochemical identification, transmission, and antibiotic susceptibility testing of medically important bacteria, mycobacteria, rickettsia, and viruses. Fundamentals of virology including structure, classification and pathology and laboratory techniques. 2 Class Hours, 3 Laboratory Hours per day.

MT-8

MEDICAL MYCOLOGY (1.5)

Mycology is the study of pathogenic fungi of medically important fungi to man. Topics included are classification, nomenclature, methods of culture and colony morphology and identification, identification of genus and species based on microscopic morphology of selected fungal species, study of fungal diseases and antifungal therapy. 2 Class Hours, 1 Laboratory Hour per day.

MT-9**LABORATORY MANAGEMENT/ EDUCATION (1)**

This is a student self-directed study of the principles of managing a clinical laboratory. Emphasis is on leadership theory, human resource management, communications, marketing, budgeting, problem solving, regulatory issues, inventory and laboratory information systems. Educational topics include: learning theories, program development and evaluation, instruction media, domains of learning and test development 15 - 20 Total Class and Project Hours.

MT-10**SEMINAR (1)**

The seminar is design to develop the student's understanding and evaluation of published research design and practice. The seminar prepares the student to be an informed consumer of research published in the field. The course is designed to develop the student's use of the library and Internet resources, evaluation of research, critical thinking skills, and oral presentation skills. The student is responsible for topic selection, literature search, presentation development and poster board presentation. This project is completed with the guidance of the program director. A professional oral presentation and poster required for this course.

Expenses

Tuition and fees will be billed to you upon your arrival at Guthrie Robert Packer Hospital. They will be payable in 30 days. Please note that the cost for textbooks is estimated. The cost for residence housing applies only if you choose to live in the Residence Building. The Meal Plan is not mandatory. One half of this amount must be paid upon admission and the other half is payable by March 30.

Program Fees

Please refer to our web site for the up-to-date fee schedule at www.guthrie.medtech.com.

Scholarships, Student Work Program and Payment Options

Although the Guthrie Medical Technology program does not qualify to handle and disperse Federal and State financial aid, if you plan to attend the program as your senior year and you receive financial aid through your college, you may continue to qualify for financial aid through your college for the senior year internship. (Use your college FA code when applying for financial aid for the senior year internship only.) If you have already graduated with your baccalaureate degree, you no longer qualify for Federal and State financial aid. Students in this category usually pay for their tuition and fees using personal loans, credit cards or our monthly student payment plan, which spreads payments for yearly tuition and feed over a 10-month period.

Student Work Program

Accepted students in the Medical Technology Internship will have the opportunity to apply for part-time jobs in the Guthrie Clinical Laboratory. This provides students with the opportunity to work in a real clinical setting, gain experience, and offset their financial obligations. Guthrie may hire up to 2 to 4 students per year. Once you are accepted to the internship, you will be notified when the application period is (usually in May or June of each year).

Grading, Evaluations, and Records

Students are thoroughly evaluated during the internship in three areas:

1. Cognitive abilities
2. Professional behavior
3. Psychomotor performance

The grade code for written examinations is defined as follows:

A: 94 - 100%	4.00
A-: 92 - 93%	3.70
B+: 89 - 91%	3.33
B: 86 - 88%	3.00
B-: 84 - 85%	2.70
C+: 82 - 83%	2.33
C: 79 - 81%	2.00
C-: 76 - 78%	1.70
D: 73 - 75%	1.33
D-: 70 - 72%	1.00
F: Below 70%	0.00

Students must maintain a minimum grade of 70% in each course listed in the curriculum catalog. Students are evaluated on behavioral (affective) characteristics such as cooperation, motivation, teamwork, communication, dependability, appearance, and ethical awareness. In addition, written evaluations on technical and manual performance (psychomotor performance) of laboratory procedures will be maintained for each student.

The student academic record will contain applications, letters of recommendation, official transcripts, and written notices. The academic records are maintained indefinitely. Academic records are available for view by the student at any time.

Attendance Requirements

Class attendance is expected of all students. Students are expected to participate in an appropriate manner. Absence from class is considered a serious matter and never excuses a student from assignments. A student must complete all assignments, examinations and other requirements. The program understands, however, that students may need to be absent from classes. A student who presents the Program Director with an

adequate and documented reason for an absence will be given an opportunity to make up the work missed. Student-interns are allowed five (5) personal days and five (5) sick days to use throughout the program. These days are generally used for graduation or job interviews during Term II. They may not be used concomitantly, i.e. five days in a row, to be used as a vacation week. This would result in too much of the clinical rotation being missed. If the student-intern is absent for more than the five personal days and five sick days, this time must be made up at the end of the internship. Certificates of graduation may be withheld if the time is not made up.

Requirements for Graduation

Common requirements for graduation are successful completion of all courses for the certificate/degree as contained in this catalog. The student must maintain a 70% average in all courses contained in this catalog. The student must satisfy all obligations to the program and specific curriculum requirements. Students must meet attendance requirements. All tuition and fees must be paid in full, prior to graduation. If full payment is not received, certificates of graduation may be withheld until full payment is received by the Guthrie Finance Office.

Professional Certification

Upon successful completion of the college curriculum and clinical internship, the student becomes eligible to sit for nationally recognized certification examinations. Granting of the baccalaureate degree and program certificate are not contingent upon passing the exam.

Student Health Services

Health services to students enrolled in the program are provided by the Guthrie Clinic, Family Practice Center. All students seeking health care should contact the Family Practice office between the hours of 8 a.m. and 4:30 p.m. Monday through Friday. The students must identify themselves as students of the medical technology program. Not all the services received at the Family Practice clinic may be covered by the health care fee. In an emergency, students can go directly to Guthrie Robert Packer Hospital Trauma Center (Emergency Room). If other health care services are necessary, they may be obtained at the Guthrie Clinic. Medical services at the hospital and clinic are not free. The program does not provide medical insurance; however, it is required that students have adequate health insurance coverage.

Student Counseling/Advising/Guidance Services

The program takes an active role in providing an orientation in the beginning of the academic year. Sessions involve familiarization to the campus, services available to students, and discussion regarding the transition to a professional internship. Academic counseling is available to help students put their efforts into proper perspective by analyzing study, social and work habits to enable them to utilize their time in the most efficient way. Personal counseling is available for students experiencing social, personal, or family concerns. Counseling is offered through the Guthrie Employee Assistance Program (EAP). The program will maintain confidentiality and impartiality of student counseling/advising/guidance of all students through the program.

Withdrawal and Tuition Refund Policy

The School of Medical Technology has committed itself to a philosophy of providing assistance necessary to aid the student in completing his/her academic goals. Students are encouraged to seek academic and personal counseling prior to withdrawal. Students who decide to withdraw must notify the program director in writing. Failure to do so may cause the student to lose any possible refund. The date on which the original request for withdrawal is filed is considered the official date of withdrawal. Any refund to which the student may be entitled is computed using this date.

Refund of institutional tuition and fees will be made according to the following schedule only when a student voluntarily withdraws from the program because of personal illness, certified by an attending physician, or because of other reasons as may be approved by the program director.

Refund Schedule

Before 1st day.....	100%
1st week.....	75%
2nd week.....	60%
3rd week.....	40%
4th week.....	after the 4th week no refund will be paid

The same policy and schedule will apply for Term II of the program beginning in March. When the student pays tuition and fees to the college affiliate rather than directly to the program, and said college then pays the Program tuition and fees, this policy will be implemented and tuition refunded to the college.

Leave of Absence Policy

This policy provides a provision for medical technology students who need to leave the education program for periods of time due to certain life events such as birth/maternity, adoption, illness, military leave and FMLA federal laws. A leave of absence (LOA) is defined as an approved absence away from the required curriculum in excess of five days. Reasons for an LOA include but are not limited to personal illness, maternity, injury, adoption, military leave and immediate family member illness.

With the exception of absence from personal injury or illness, the student must submit a request for LOA in writing to the Program Director as soon as possible. When the leave is foreseeable, the student must provide a minimum of 30 days' notice and make efforts to schedule the leave to cause the minimal disruption to the completion of course objectives and requirements.

The LOA is generally granted on the assumption that the student will be able to return to the internship on a specified date, usually within six weeks. Students returning from LOA must confirm their return date with the program director at least two weeks prior to their scheduled return. Failure to return on the specified date of return may result in suspension from the program.

Upon return to the program, the student is required to make up or complete all missed courses and clinical rotation obligations. Students who miss required course work, courses or clinical rotations are required to complete the course work during the next academic term as an independent study or during the next academic year. Students returning from LOA during the clinical rotation will resume their clinical schedule in cycle and make up any missed assignments at the end of their rotation cycle until all assignments have been completed. All academic assignments and obligations must be completed within 12 months.

All students must complete the requirements for graduation as stated in this catalog.

Admission of Individuals with Foreign Degrees

1. Prior to application to the Medical Technology Program, individuals who hold foreign educational degrees must have their credentials evaluated by a registered member of the National Association of Credential Evaluation Services (NACES).
2. Evaluation of foreign academic credentials is necessary for determining if the applicant satisfies the minimum requirements for admissions required by the program.
3. Individuals who possess a foreign baccalaureate degree and wish to enter the program must satisfy at least one of the following criteria:
 - a. Possession of a foreign baccalaureate degree with a major in either chemistry or biology. Course work must meet the minimum requirements of this program as specified in this catalog.
 - b. Possession of a foreign baccalaureate degree in either general studies or in a professional area with a minimum of 90 academic semester hours or equivalent, which are exclusive of any practical clinical components, including 16 semester hours or equivalent in both chemistry and biology. The course work must meet the requirements of the program.
 - c. Admission to an accredited graduate program in a United States university should also be acceptable when the college or university has accepted the foreign degree, regardless of the declared major. The course work must meet the requirements specified by the program and should be subject to review and evaluation by the program director.
4. Information on credential evaluation services may be obtained through the office of the program director. Students with foreign degrees should initiate their credential evaluation well in advance of the academic year planned for enrollment.

Verbal and Written English Requirements

Applicants with foreign degrees or who have completed three or more years of education at a foreign university must be able to demonstrate competent use of oral and written English at the college level.

Applicants with foreign degrees (or three years of foreign education) are required to submit test scores from the TOEFL (Test of English as a Foreign Language) examination and must have a minimum score of 550 (paper examination) or 220 (computer examination) to be considered for admissions to the medical technology program. Exceptions to this policy are those students who have a bachelor's degree from accredited universities in Australia, UK, Canada (except Quebec), and Ireland or international students with a bachelor's/ master's degree from an accredited university from the United States. An official copy of the report must be sent to the program director. Admissions decisions will not be made without the official results of such an assessment. Submission of results does not guarantee acceptance into the program. Any fee for the evaluation is the responsibility of the student candidate.

University Affiliations of the Program		
Bloomsburg University 400 East Second Street Bloomsburg, PA 17815-1301 Judy Kipe-Nolt, PhD Department of Biology/Allied Health Services 570-389-4319	Clarion University 909 E. Wood Street Clarion, PA 16214 Douglas M. Smith, PhD Professor of Biology 357 Science and Technology Center 814-393-2561	East Stroudsburg University of PA 200 Prospect Street East Stroudsburg, PA 18301 Abdalla Aldras, MSPH, ScD Director of Biotechnology Program Director of Medical Technology Program Room 226 Science and Technology Building 570-422-3704
Elmira College One Park Place Elmira, NY 14901 607-735-1852 Christine Bezotte, PhD Department of Biology	King's College 133 N. River St. Wilkes-Barre, PA 18711 Mary Sanders, Professor Biology and Pre-Health Professions Advisor 570-208-5900 Ex. 5726	Mansfield University 31 S. Academy Street Mansfield, PA 16933 Stephen Hensley, PhD Department of Biology 570-662-4533
Marywood University 2300 Adams Ave. Scranton, Pa 18509 Deanne Garver, PhD Department of Health Sciences 570-348-2478	Wilkes University 84 West South St. Wilkes-Barre, PA 18766 William Biggers, PhD Professor and Chair, Division of Biology/Health Sciences 570-408-4763	

Certification Exam Pass Rate:

2021 - 100%
 2020 - 88%
 2019 - 100%
 2018 - 100%
 2017 - 100%

5 Year Certification Examination Pass Rate: 98%**Graduation Rate**

2021 - 100%
 2020 - 100%
 2019 - 100%
 2018 - 100%
 2017 - 100%

5 Year Graduation Rate: 100%**Employment/Placement Rate**

2021 - 100%
 2020 - 100%
 2019 - 100%
 2018 - 100%
 2017 - 100%

5 Year Employment/Placement Rate: 100%**Professional Membership to the A.S.C.L.S.**

The American Society for Clinical Laboratory Sciences is the national professional society to which certified medical technologists are eligible to belong. Students enrolled in a Medical Technology/Clinical Laboratory Science program are also eligible to join A.S.C.L.S. as student members. A student forum exists within A.S.C.L.S. for active student participation. As with many professional organizations, this offers an opportunity to share in the business and technical progress of medical technologists as a group. The society is organized on a state and local basis with the national organization.

For more information contact:

Stacy Pond, Medical Laboratory Science Program/Medical Technology

Phone: 570-887-4736

Email: Stacy.Pond@Guthrie.org

www.Guthrie.org/medtech



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