The Bachelor of Science degree in Medical Technology is granted to students who satisfactorily complete the required program of study. These requirements include the basic requirements for all Bachelor of Science degree programs, required science and other supportive courses, plus 32 hours of professional course credits. The Medical Technology program advisers are in the Chemical and Physical Sciences Department and students should be advised by these faculty. Failure to do so may result in students taking unnecessary courses. The completion of this degree is required before an individual is eligible to take the certifying examination.

Missouri Southern has affiliation agreements with the Schools of Medical Technology at St. John’s Regional Medical Center, Joplin, MO, Lester E. Cox Medical Center, Springfield, MO, and Baptist Health School of Medical Technology, Little Rock, Arkansas. If a student wishes to attend an accredited school of medical technology with which the University has no formal agreement, the Vice President for Academic Affairs can negotiate an agreement for the individual student. Students should be aware that enrollment in professional schools is limited. Each of the professional schools has its own admission criteria and selects those students to be admitted to a class by the custom of the individual professional school to meet these minimum total hour requirements.

A student may enroll in the professional courses either at the hospital-based school or through Missouri Southern, depending on the policies of the hospital-based school. Students enrolled at the hospital-based school are not considered members of the Missouri Southern student body, since the hospital-based school in such cases is considered as any other accredited institution of higher education. A student enrolling through Missouri Southern is considered a member of the University student body and is therefore eligible for benefits offered all students. The weekly time requirements for the professional medical technology courses (400 level) are based on the minimum requirements for a course meeting for a normal academic term for a minimum of 16 weeks. Actual scheduling of classes may vary according to custom of the individual professional school to meet these minimum total hour requirements.

Students in this major whose career goals change or are unsuccessful in gaining admission to a professional training program are ideally suited to complete another science major with virtually no loss of academic credits.

**Bachelor of Science With a Major in Medical Technology**

**Major Codes MT00, MT01**

**Semester Hours**

**General Education Requirements (p. 45)** 46-47**........... 35

**Biology Requirements ........................................... 25-27**

- BIO 121  Human Anatomy and Physiology I**.............. 4
- BIO 221  Human Anatomy and Physiology II............. 5
- BIO 231  General & Medical Microbiology* ............. 5
- BIO 305  Genetics* ........................................ 4
- BIO 456  Immunology* ...................................... 4

And one of the following three courses:

- BIO 362  Virology* ........................................... 3
- BIO 442  Pathogenic Bacteriology* ...................... 5
- BIO 308  Pathophysiology* ................................ 4

**Chemistry Requirements ........................................... 25**

- CHEM 151  General Chemistry I* ......................... 5
- CHEM 152  General Chemistry II* ....................... 5
- CHEM 201  Analytical Chemistry I* ..................... 5
- CHEM 301  Organic Chemistry I* ......................... 5
- CHEM 350  Biochemistry I* ................................ 3
- CHEM 355  Biochemical Techniques ...................... 2

**Other Requirements ............................................. 12**

- PHYS 151  Elementary College Physics I* ............. 5
- MATH 140  Algebra & Trigonometry ........................ 5
- BIO 303  Computer Applications in Biology .......... 2

**400 Level Medical Technology Courses (at Hospital) .......... 32**

**Total ............................................................. 129-131**

*See course descriptions for prerequisites.

**Required biology, physics and mathematics courses simultaneously satisfy General Education Requirements and major requirements.

For additional information contact:

- Dr. John Summerfield
  Office: Reynolds Hall 209
  Phone: 417.625.9717
  Email: summerfield-j@mssu.edu

- Dr. Michael Garoute
  Office: Reynolds Hall 241
  Phone: 417.625.9579
  Email: garoute-m@mssu.edu
**Course Descriptions**

**MT 0401** (S)  
Clinical Chemistry  
10 hrs. cr.  
Analytical and theoretical aspects of the clinical biochemistry of body fluid constituents utilizing both manual and instrumental techniques, including automation and special procedures. Five hours lecture, twenty hours clinic/lab per week.

**MT 0402** (S)  
Clinical Microscopy  
1 hr. cr.  
Principles and techniques of the physical, chemical and microscopic examination of urine and other excreta as related to disease processes. One hour lecture, clinic by arrangement.

**MT 0403** (F)  
Clinical Hematology  
6 hrs. cr.  
The cellular elements of blood and bone marrow; theory of cell production, release and survival; morphological characteristics of normal and abnormal cells; quantitative and qualitative abnormalities. Principles and techniques involved in the study of hemostasis, blood coagulation and hemorrhagic disorders. Three hours lecture, twelve hours clinic/lab per week.

**MT 0404** (S)  
Clinical Serology-Immunology  
3 hrs. cr.  
The science of immunity including antibody development, principles of antigen-antibody interactions and techniques of serological testing for various disease states. Three hours lecture, twelve hours clinic/lab per week.

**MT 0405** (S)  
Clinical Microbiology  
7 hrs. cr.  
Sterile technique, methods of handling and inoculating specimens containing pathogenic micro-organisms, isolation and identification of pathogenic microorganisms, laboratory tests in chemotherapy and diagnostic bacteriology, mycology and parasitology. Four hours lecture, twelve hours clinic/lab per week.

**MT 0406** (S)  
Clinical Immunohematology-Blood Bank  
3 hrs. cr.  
Blood group systems and the immune response. Methods of cross matching, antibody screening and phenotyping. Administrative safeguards and legal aspects of blood banking. Proper clinical utilization of blood components. One hour lecture, eight hours clinic/lab per week.

**MT 0407** (S)  
Special Topics in Medical Technology  
2 hrs. cr.  
Lecture and/or clinical practice in the areas of in-service education, management and supervision, research and development and principles and techniques of the instructional process. Lecture and labs to be arranged.

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**Faculty** Linder - Director, Ayton, Bush, Corcoran, Eller, Haggard, Hart, Hempmsmyer, Jackson

**Mission**  
Provide contemporary nursing education at the undergraduate and graduate levels. Improve healthcare in culturally diverse local and global communities through excellence in nursing education, practice and service.

**Nursing Program**  
The Bachelor of Science degree Nursing Program provides intensive preparation for the first-time entering student, baccalaureate degree graduate, licensed practical nurse seeking licensure as a registered nurse and for the registered nurse pursuing baccalaureate education in the nursing discipline.

The program is based on the Betty Neuman Systems Model, emphasizing Person, Health, Environment and Nursing. General Education Requirements and required support courses augment nursing courses in preparing a professional nurse who is able to function at the client’s side in a diverse healthcare delivery system.

The program has full approval by the Missouri State Board of Nursing, PO Box 656, Jefferson City MO, (573) 751-0681.

**Application for registered nurse licensure in Missouri**  
According to Section 335.066 Missouri Nursing Practice Act (1-16), granting of the nursing baccalaureate degree does not guarantee eligibility to sit for the licensure examination or guarantee issuance of a license to practice nursing in the state of Missouri. For eligibility requirements to apply, write the National Council Licensure Examination for Registered Nurses (NCLEX-RN) as specified in section 335.067-1 of the Missouri Nursing Practice Act. In addition, the applicant should: 1) be of good moral character; 2) have completed high school or equivalent; 3) have successfully completed basic professional curriculum in accredited school of nursing. Section 335.086, Missouri Nursing Practice Act (1-16), provides rules for denial, revocation or suspension of license and grounds for civil immunity. The Board may refuse to issue any certificate of registration or authority and permit or license stated in subsection two of this section. Detailed information may be obtained through the Missouri State Board of Nursing Website – www.pr.mo.gov/nursing.asp

Completion of the nurse education program does not guarantee eligibility to take the licensure examination.

The program is nationally accredited by The National League for Nursing Accrediting Commission (NLNAC), 3343 Peachtree Road NE Suite 850, Atlanta, GA 30326, Phone 404-975-5000 and Fax 404-975-5020.

**Department of Nursing Program Objectives**

- Offer a nationally accredited Baccalaureate Degree in Nursing.
- Enhance higher order thinking, communication, research and therapeutic interventions in the practice of professional nursing.
- Promote lifelong learning activities for personal and professional development.
- Furnish a foundation for management and leadership roles in nursing.
- Prepare graduates to use Standards of Clinical Nursing Practice in a variety of settings.
- Provide a foundation for graduate education studies in nursing.