

LE 180 (F, S) 13 hrs. cr.

**Basic Law Enforcement Academy**

The pre-certification training course for new law enforcement officers in Missouri, approved by P.O.S.T. (Peace Officer Standards and Training) Office of the State Department of Public Safety. The broad range of topics includes Missouri criminal law, traffic law, criminal investigation, reports, defensive tactics, firearms, legal subjects, and human relations. The topics are designed and required by P.O.S.T. under Section 590.100 et. seq. RSMo. Prerequisites: Permission of Training Director. (Additional lab fee for course.)

LE 181 (F, S) 13 hrs. cr.

**Basic Law Enforcement Academy II**

The pre-certification training course for new law enforcement officers in Missouri, approved by P.O.S.T. (Peace Officer Standards and Training) Office of the State Department of Public Safety. The broad range of topics includes Missouri criminal law, traffic law, criminal investigation, reports, defensive tactics, firearms, legal subjects, and human relations. The topics are designed and required by P.O.S.T. under Section 590.100 et. seq. RSMo. Prerequisites: Permission of Training Director and LE 180 (Additional lab fee for course.)

LE 190 (Demand) 2 hrs. cr.

**First Responder**

Provides basic emergency care knowledge and skills to the student. Designed to prepare students to recognize traumatic injuries and deliver quality emergency medical care to victims.

LE 200 (Demand) 3 hrs. cr.

**Criminal Investigation I**

An introduction to the basic protocol of crime scene investigation to include first response, diagramming, photography, fingerprinting, and the preservation and collection of physical evidence.

LE 210 (F, S) 3 hrs. cr.

**Criminal Procedure**

Overview of criminal justice process and procedure from first contact with law enforcement through the criminal trial. Topics include "stop and frisk", arrest, search and seizure, interrogation, identification, and the criminal trial.

LE 225 (Demand) 3 hrs. cr.

**Patrol Procedures**

Covers numerous areas confronting today's law enforcement officer during tours of duty and the proper techniques and procedures used in handling each area.

LE 230 (Demand) 3 hrs. cr.

**Community Policing**

An introduction to and analysis of theories, techniques, and programs involving police image and public response. Special attention will be paid to problems of crime prevention, community oriented problem solving policing, police-public interaction, and public safety.

LE 232 (F,S) 3 hrs. cr.

**Ethics in Criminal Justice**

A comprehensive investigation of ethical problems confronting criminal justice professionals. Focus is placed on the philosophical and practical dilemmas surrounding the modern criminal justice system, in the United States and foreign countries, to include the police, courts, and correctional subsystems. Examines various value systems and historical theories as well as promotes discussions of moral and ethical behavior from personal, social, and criminal justice perspectives.

LE 250 (F) 3 hrs. cr.

**Criminal Law**

Criminal law purposes and functions; rights and duties of officers and citizens in relation to local, state, and federal laws. The development, application, and enforcement of laws.

LE 260 (Demand) 3 hrs. cr.

**Legal and Technical Aspects of Firearms**

History and development of firearms. The nomenclature of the most commonly used police firearms and the duties and requirements of a rangemaster. The laws concerning firearms acquisitions, ownership and use. Three hours lecture per week. Lab fee and additional lab time arranged.

LE 280 (F, S) 3 hrs. cr.

**Interview and Report Writing***(Writing Intensive)*

Introduces the professional writing style utilized in reports and other written communication in the criminal justice fields. Emphasizes on-the-job writing for criminal justice professionals. Also explores various interviewing techniques. Prerequisites: Eng 101.

LE 290 (Demand) 3 hrs. cr.

**Police Supervision and Management**

Principles of personnel management as applied to law enforcement agencies: evaluation, promotion, discipline, training, employee welfare, and problem-solving leadership.

LE 298 (Demand) 1-8 hrs. cr.

**Topics in Law Enforcement**

Course content varies and is designed to meet current needs and interests in the rapidly changing field of law enforcement. Precise topics to be announced and prerequisites stipulated in course syllabus.



# MEDICAL TECHNOLOGY

Reynolds Hall 210, 417.625.9376

**Faculty** Garoutte, Mosher

The Bachelor of Science degree in Medical Technology is granted to students who complete the required program of study satisfactorily. 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 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., and Lester E. Cox Medical Center, Springfield, Mo., and Baptist Health School of Medical Technology, Little Rock, Ark. 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 crite-

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ria and selects those students to be admitted to a class from the applicants for that class. In general, this selection is based on the academic record or demonstrated aptitude for the medical field. Students are responsible for filing their own application for admission with the professional schools. Application should be made to the professional school during the early fall of the **Junior Year** or approximately 10 months prior to the expected entrance date. It is strongly suggested that the student contact the Director of the Medical Technology Program at the desired hospital early in their **Sophomore Year** to determine the exact application procedure.

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) listed 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 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

	Semester Hours
<b>Core Requirements (p. 32) 51**</b> . . . . .	<b>39</b>
<b>Biology Requirements</b> . . . . .	<b>26</b>
Bio 121 Human Anatomy and Physiology I . . . . .	4
Bio 221 Human Physiology and Anatomy II* . . . . .	5
Bio 231 General & Medical Microbiology* . . . . .	5
Bio 305 Genetics* . . . . .	4
Bio 456 Immunology* . . . . .	4
EITHER	
Bio 362 Virology* . . . . .	4
OR	
Bio 442 Pathogenic Bacteriology* . . . . .	5
OR	
Bio 308 Pathophysiology* . . . . .	4
<b>Chemistry Requirements</b> . . . . .	<b>25</b>
Chem 101 General Chemistry I* . . . . .	5
Chem 102 General Chemistry II* . . . . .	5
Chem 201 Analytical Chemistry I* . . . . .	5
Chem 300 Introduction to Modern Organic Chemistry* . . . . .	5
Chem 351 Biochemistry* . . . . .	5
<b>Other Requirements</b> . . . . .	<b>12</b>
Phys 151 Elementary College Physics I* . . . . .	5
Math 140 Algebra & Trigonometry . . . . .	5
EITHER	

Bio 303 Computer Applications in Biology . . . . .	2
OR	
Chem 320 Computer Applications in Chemistry . . . . .	2
<b>400 Level Medical Technology Courses (at Hospital)</b>	<b>32</b>
	<b>134</b>

\*See course descriptions for prerequisites.  
 \*\*Required biology, physics, and mathematics courses simultaneously satisfy Core Curriculum and major requirements.

## Suggested Order of Study

### Bachelor of Science Degree

Major Code 1223

### Medical Technology Major

*It is strongly suggested that the student take courses in the summer to reduce the semester hour loads.*

#### Freshman Year

1st Semester		Hours
Course		
Chem 101	General Chemistry I (Algebra & Trig)	5
Math 140	Algebra and Trigonometry	5
Bio 121	Human Anatomy and Physiology I	4
CORE	[Eng 101 Comp I]	3
CORE	[Psy 120 College Orientation]	1
		<b>18</b>

#### 2nd Semester

Chem 102	General Chemistry II (Chem 101)	5
Bio 231	General and Medical Microbiology	5
Chem 320	Computer Applications in Chemistry	
OR		
Bio 303	Computer Applications in Biology	2
CORE	[History 110 U.S. History]	3
CORE	[Eng 102 Comp II]	3
		<b>18</b>

#### Sophomore Year

1st Semester		Hours
Chem 201	Analytical Chemistry I (Chem 102)	5
Bio 305	Genetics	4
CORE	[Psy 100 or Soc 110]	3
CORE	[Humanities & Fine Arts]	3
CORE	[Econ 180 American Econ System]	3
		<b>18</b>

#### 2nd Semester

Chem 300	Introduction Organic Chemistry (Chem 102)	5
Bio 456	Immunology	4
CORE	[Comm 100 Oral Communication]	3
CORE	[Humanities & Fine Arts]	3
CORE	[Hist 120 or 320 U.S. History]	3
		<b>18</b>

#### Junior Year

1st Semester		Hours
Chem 351	Biochemistry (Chem 300)	5
Phys 151	Elementary College Physics I (Math 140)	5
Bio 308	Pathophysiology (Bio 301 or 306) (4)	
OR		
Bio 362	Virology (Bio 231 and 305) (4)	
OR		
Bio 442	Pathogenic Bacteriology (Bio 231) (5)	4-5
CORE	[Kine 103 Lifetime Wellness]	2

2nd Semester		
Bio 221	Human Anatomy and Physiology II	5
CORE	[Humanities & Fine Arts]	3
CORE	[Kine 101 Physical Activity]	1
CORE	[PSc 120 Gov't: U.S./St/Loc]	3
CORE	[International Cultural Studies]	3
		<b>15</b>

**Senior Year**

1st Semester		
<i>(At an approved School of Medical Technology)</i>		
MT 401	Clinical Chemistry	10
MT 403	Clinical Hematology	6
		<b>16</b>

2nd Semester		
<i>(At an approved School of Medical Technology)</i>		
MT 402	Clinical Microscopy	1
MT 404	Clinical Serology/Immunology	3
MT 405	Clinical Microbiology	7
MT 406	Clinical Immunohematology	3
MT 407	Special Topics in Medical Technology	2
		<b>16</b>

(Prerequisites)  
[Department Recommendations]

**For additional information contact:**

Dr. Melvyn Mosher  
Office: Reynolds Hall 242  
Phone: 417.625.9733  
Email: mosher-m@mssu.edu  
OR  
Dr. Michael Garoutte  
Office: Reynolds Hall 241  
Phone: 417.625.9579  
Email: garoutte-m@mssu.edu

Principles and techniques involved in the study of hemostasis, blood coagulation, and hemorrhagic disorders. Three hours lecture, 12 hours clinic/lab per week.

MT 404 (S) 3 hrs. cr.  
**Clinical Serology-Immunology**

The science of immunity including antibody development, principles of antigen-antibody interactions, and techniques of serological testing for various disease states. Three hours lecture, 12 hours clinic/lab per week.

MT 405 (S) 7 hrs. cr.  
**Clinical Microbiology**

Sterile technique, methods of handling and inoculating specimens containing pathogenic micro-organisms, isolation and identification of pathogenic micro-organisms, laboratory tests in chemotherapy, and diagnostic bacteriology, mycology, and parasitology. Four hours lecture, 12 hours clinic/lab per week.

MT 406 (S) 3 hrs. cr.  
**Clinical Immunohematology-Blood Bank**

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 407 (S) 2 hrs. cr.  
**Special Topics in Medical Technology**

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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## **Course Descriptions**

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MT 401 (F) 10 hrs. cr.  
**Clinical Chemistry**  
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, 20 hours clinic/lab per week.

MT 402 (S) 1 hr. cr.  
**Clinical Microscopy**  
Principles and techniques of the physical, chemical, and microscopic examination of urine and other excrete as related to disease processes. One hour lecture, clinic by arrangement.

MT 403 (F) 6 hrs. cr.  
**Clinical Hematology**  
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.



**Faculty** Box - Head, Ayton, Barr, Corcoran, Eller, Griffiths, Hart, Richardson

The Bachelor of Science degree Nursing Program provides intensive preparation for the first-time entering student, baccalaureate degreed graduate, and 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. Core Curriculum 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 health-care delivery system.

The program is approved 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 (1-14), granting of the Nursing baccalaureate degree does not