

MEDICAL LABORATORY SCIENCE

REQUIREMENTS

CORE CURRICULUM The Core Curriculum is designed to foster critical thinking skills and introduce students to basic domains of thinking that transcend disciplines. The Core applies to all majors. Information on specific classes in the Core can be found at marshall.edu/gened.

CORE 1: CRITICAL THINKING

CODE	COURSE NAME		HRS	GRADE
FYS 100	First Year Seminar	●	3	_____
CLS 105	Critical Thinking Course	●◆	3	_____
● SOC 200	Critical Thinking Course	●	3	_____
Additional University Requirements				
_____	Writing Intensive (Core II Humanities)		3	_____
_____	Writing Intensive (WI section of SOC 200)		3	_____
SOC 200	Multicultural or International		3	_____
CLS 468	Capstone		3	_____

CORE 2:

CODE	COURSE NAME		HRS	GRADE
● ENG 101	Beginning Composition	●	3	_____
ENG 201	Advanced Composition	●	3	_____
CMM 103	Fund Speech-Communication	●	3	_____
MTH 130	College Algebra	●	3	_____
● BSC 228	Human Physiology	●◆	4	_____
_____	Core II Humanities (WI)	●	3	_____
● SOC 200	Intro Sociology (CT, MC, WI)	●	3	_____
_____	Core II Fine Arts	●	3	_____

MAJOR-SPECIFIC

All Medical Lab Science majors are required to take the following courses:

CODE	COURSE NAME		HRS	GRADE	CODE	COURSE NAME		HRS	GRADE
● CHM 211	Principles of Chemistry I	◆	3	_____	● STA 225	Introductory Statistics (CT)	◆	3	_____
● CHM 217	Principles of Chemistry I Lab	◆	2	_____	● CLS 310	Clin Immun & Mol Diag	◆	3	_____
CLS 105	Medical-Lab Terminology (CT)	●◆	3	_____	CLS 320	Advanced Topics in CLS	◆	3	_____
CHM 212	Principles of Chemistry II	◆	3	_____	CLS 400	Adv Clinical Chemistry	◆	2	_____
CHM 218	Principles of Chemistry II Lab	◆	2	_____	● CLS 410	Adv Clinical Immunohematology	◆	2	_____
BSC 227	Human Anatomy	◆	4	_____	CLS 420	Adv Clinical Microbiology	◆	2	_____
● CLS 200	Clinical Biochemistry	◆	4	_____	CLS 430	Adv Clinical Hematology	◆	3	_____
CLS 230	Clinical Hematology	◆	4	_____	CLS 460	Clinical Lab Mgt & Education	◆	3	_____
● CLS 210	Clinical Immunohematology	◆	4	_____	CLS 499	Seminar in Lab Medicine	◆	2	_____
CLS 220	Clinical Microbiology	◆	4	_____	CLS 464	Lab Instrumentation & Info System	◆	3	_____
● CLS 255	Clinical Lab Problems	◆	3	_____	CLS 466	Diagnostic Physiology	◆	3	_____
CLS 270-273	15-week Hospital Based Practicum	◆	12	_____	CLS 472	Adv CLS Clinical Practicum I	◆	3	_____
● CHM 327	Introductory Organic Chemistry	◆	3	_____	CLS 473	Adv CLS Clinical Practicum II	◆	3	_____
_____	ECN 200 or ECN 250	◆	3	_____	CLS 468	Clinical Lab Research (Capstone)	◆	3	_____
					_____	Free Elective		1	_____
					_____	Free Elective		1	_____

MAJOR INFORMATION

- Students are required to know and track their degree requirements for graduation or for entrance to a professional school.
- Course offerings and course attributes are subject to change semesters. Please consult each semester's schedule of courses for availability and attributes.
- The MLT and BS-MLS programs are fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences. Students who complete CLS programs through Marshall University will be eligible for national certification examinations.
- Medical Laboratory Technology Students complete the associate degree, graduate then progress into the Bachelor of Medical Laboratory Science.
- MLS online students from other institutions must have completed an AAS in MLT from a NAACLS accredited program and will be required to fulfill the core curriculum requirements through a combination of transfer credits and MU courses; each student will be evaluated on an individual basis.
- 15-week hospital-based clinical practicum sequence Summer or Fall prior to beginning online MLS classes

● General Education Requirement
 ■ College Requirement
 ◆ Major Requirement
 ● Area of Emphasis

Milestone Course: This is a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.

MEDICAL LABORATORY SCIENCE

Medical laboratory scientists perform a variety of specialized tests in the clinical laboratory that provide information used by the physician to determine the extent and cause of disease. The tests performed by or supervised by the medical technologist are completed in such areas as hematology, blood banking, serology, immunology, clinical chemistry, bacteriology, and parasitology. The graduate medical technologist is prepared with the knowledge and abilities needed for certification by nationally recognized professional agencies. Certified medical laboratory scientists are accorded the status of professionals in the medical team. They often supervise laboratory sections, exercise independent judgement, and evaluate the work of others.

YEAR ONE	FALL SEMESTER				SPRING SEMESTER				
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE	
	CHM 211	Principles of Chemistry I	◆	3	CHM 212	Principles of Chemistry II	◆	3	
	CHM 217	Principles of Chemistry I Lab	◆	2	CHM 218	Principles of Chemistry II Lab	◆	2	
	ENG 101	Beginning Composition	●	3	CMM 103	Fund Speech Communications	●	3	
	FYS 100	First Year Sem Crit Thinking	●	3	◆	SOC 200	Introductory Sociology (CT, MC, WI)	●	3
	CLS 105	Medical-Lab Terminology (CT)	◆●	3	MTH 130	College Algebra	●	3	
	UNI 100	Freshman First Class		1					
	TOTAL HOURS			15	TOTAL HOURS			14	

Summer Term (optional):

YEAR TWO	FALL SEMESTER				SPRING SEMESTER					
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE		
	BSC 227	Human Anatomy	◆	4	◆	BSC 228	Human Physiology	●◆	4	
	◆	CLS 200	Clinical Biochemistry	◆	4	◆	CLS 210	Clinical Immunohematology	◆	4
	CLS 230	Clinical Hematology	◆	4	CLS 220	Clinical Microbiology	◆	4		
	ENG 201	Advanced Composition	●	3	◆	CLS 255	Clinical Lab Problems	◆	3	
	TOTAL HOURS			15	TOTAL HOURS			15		

Summer Term (optional):

CLS 270-273 15-week Hospital Clinical Practicum (or Fall Semester) ◆ **12** _____

YEAR THREE	FALL SEMESTER				SPRING SEMESTER					
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE		
	◆	CHM 327	Introductory Organic Chemistry	◆	3	◆	CLS 310	Clin Immun & Mol Diag	◆	3
	◆	CLS 320	Advanced Topics in CLS	◆	3	◆	STA 225	Introductory Statistics (CT)	◆	3
		◆	ECN 200 or ECN 250	◆	3		●	Core II Fine Arts	●	3
		●	Core II Humanities (WI)	●	3	◆	CLS 466	Diagnostic Physiology	◆	3
	CLS 270-273	15 week Hospital Clinical Practicum (if not taken during summer)	◆	(12)						
	TOTAL HOURS			12	TOTAL HOURS			12		

Summer Term (optional):

YEAR FOUR	FALL SEMESTER				SPRING SEMESTER					
	CODE	COURSE NAME	HRS	GRADE	CODE	COURSE NAME	HRS	GRADE		
	◆	CLS 400	Adv Clinical Chemistry	◆	2	◆	CLS 464	Lab Instrumentation & Info Systems	◆	3
	◆	CLS 410	Adv Clinical Immunohematology	◆	2	◆	CLS 472	Adv CLS Clinical Practicum I	◆	3
	◆	CLS 420	Adv Clinical Microbiology	◆	2	◆	CLS 473	Adv CLS Clinical Practicum II	◆	3
	◆	CLS 430	Adv Clinical Hematology	◆	3	◆	CLS 468	Clinical Lab Research (Capstone)	◆	3
	◆	CLS 460	Clinical Lab Mgt and Education	◆	3					
	◆	CLS 499	Seminar in Lab Medicine	◆	2					
	TOTAL HOURS			14	TOTAL HOURS			12		

Summer Term (optional):

◆ Area of Emphasis

◆ Major Requirement

■ College Requirement

● General Education Requirement

Milestone Course: This is a key success marker for your major. See your advisor to discuss the importance of this course in your plan of study.