

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	_____
_____	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

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			
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			
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			
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			
Summer Term (optional):								

Milestone Course
 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.

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MEDICAL LABORATORY SCIENCE – 2023-2024

INVOLVEMENT OPPORTUNITIES

- Student Government Association
- Campus Activity Board
- JMELI
- Commuter Student Advisory Board
- Club Sports
- Religious Organizations
- Political Organizations
- Residence Hall Association
- Cultural Organizations
- National Society of Leadership and Success
- Greek Life

RELATED MAJORS

- Biology
- Microbiology
- Chemistry
- Biomedical Engineering
- Health Sciences

GRADUATION REQUIREMENTS

- Have a minimum of 120 credit hours (some colleges or majors require more);
- Have an overall and Marshall Grade Point Average of 2.00 or higher;
- Have an overall Grade Point Average of 2.00 or higher in the major area of study;
- Have earned a grade of C or better in English 201 or 201 H;
- Have met all major(s) and college requirements;
- Have met the requirements of the Core Curriculum;
- Have met the residence requirements of Marshall University, including 12 hours of 300/400 level coursework in the student's college (see section entitled "Residence Requirements" in the undergraduate catalogue);
- Be enrolled at Marshall at least one semester of the senior year;
- Have transferred no more than 72 credit hours from an accredited West Virginia two-year institution of higher education.

Colleges and specific programs may have unique requirements that are more stringent than those noted above. Students are responsible for staying informed about and ensuring that they meet the requirements for graduation.

This academic map is to be used as a guide in planning your coursework toward a degree. Due to the complexities of degree programs, it is unfortunate but inevitable that an error may occur in the creation of this document. The official source of degree requirements at Marshall University is DegreeWorks available in your myMU portal. Always consult regularly with your advisor.

YEAR ONE



Have questions? Need to talk? You already have a Friend-At-Marshall ready to help you succeed. Find your FAM Peer Mentor here: www.marshall.edu/fam



Stay on the Herd Path and come to class! Class attendance is more important to your success than your high school GPA, your class standing, or your ACT/SAT scores.



In order to graduate on time, you need to take an average of 15 credits per semester. Are you on track? Take 15 to Finish!



Join the Marshall Mentor Network and connect with professionals in your field to discuss your major, career path, and more.



Take a pulse check. Know what you need to do every year to keep your grants, scholarships, or federal financial aid.



Think about who can help you grow as a student and a professional (professors, advisors, alumni, etc.) and ask at least one to be your mentor.

Develop relationships while attending office hours of professors (in person or virtually); good relationships can lead to good references.

YEAR TWO



Are you completing enough credits to graduate on time? Dropping or failing a class can put you behind. Use summer terms to quickly get back on track.



Develop relationships while attending office hours of professors (in person or virtually); good relationships can lead to good references.



Stay on the Herd Path and come to class! Class attendance is more important to your success than your high school GPA, your class standing, or your ACT/SAT scores.



Apply for scholarships within the field of CLS i.e. ASCLS, Mary George, Linda Brown Scholarships.



In order to work in your field, you need to take a certification exam. Develop a study strategy now. Check with your advisor.



Did you do really well in a hard course? Become a Tutor or a Supplemental Instructor.



Take a pulse check. Know what you need to do every year to keep your grants, scholarships, or federal financial aid.

YEAR THREE



Develop relationships while attending office hours of professors (in person or virtually); good relationships can lead to good references.



Be at the top of your professional game! Prepare a final resume and practice your interview skills with a career coach in Career Education.



Are you on track to graduate? Meet with your advisor for your Junior Eval to make sure you know what requirements you have left.



Join or create a club or organization on campus about a particular issue you care about. Marshall has more than 200 student organizations.



Join the Marshall Mentor Network and connect with professionals in your field to discuss your major, career path, and more.



Apply for scholarships within the field of CLS, i.e. ASCLS, Mary George, Linda Brown Scholarships.



Take a pulse check. Know what you need to do every year to keep your grants, scholarships, or federal financial aid.

YEAR FOUR



This is it! Are you on track to graduate? Meet with your advisor for your Senior Eval to see what requirements you have left.



Develop relationships while attending office hours of professors (in person or virtually); good relationships can lead to good references.



Want to continue your education and increase your opportunities? Talk to a faculty member about whether graduate school fits your career goals.



Prepare your Senior Capstone project in preparation for graduation in the spring.



In order to work in your field, you need to take a certification exam. Develop a study strategy now. Check with your advisor.



Be at the top of your professional game! Prepare a final resume and practice your interview skills with a career coach in Career Education.



Don't enter your field with zero experience! Secure an internship related to your field of study.

TRANSFERABLE SKILLS ASSOCIATED WITH THIS MAJOR

- Science and Analytical Skills
- Reasoning Skills
- Time-Management Skills
- Collaboration Skills
- Attention to Detail
- Oral and Written Communication Skills

ASSOCIATED CAREERS

- Hospital Laboratory
- Armed Forces
- Physicians' Offices
- State and Federal Health Agencies
- Research and Product Development
- Product Testing Labs
- Health Care Administration
- Bioengineering
- Pharmaceuticals
- Medical Writing



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