



Department of Clinical Laboratory Sciences MLT to MLS Career Ladder Curriculum

Fall Semester Year 1	Hours	Spring Semester Year 1	Hours
English 101, English Composition I**	3	SOC 200 Intro. Sociology (SS, MC, WI)**	3
MTH 127 or 130**	3 or 4	CHM 212, Principles of Chemistry II	3
CHM 211, Principles of Chemistry I**	3	CHM 218, Principles of Chemistry II Lab	2
CHM 217, Principles of Chemistry I Lab**	2	Freshmen Seminar or CMM 103 **	3
CLS 105CT, Medical Laboratory Terminology**	3	****see notes below	
Freshmen Seminar or CMM 103**	3		
Total Hours	17-18	Total Hours	11
Fall Semester Year 2	Hours	Spring Semester Year 2	Hours
English 201, English Composition II **	3	BSC 228, Human Physiology	4
CLS 200, Clinical Chemistry	4	CLS 210, Clinical Immunohematology	4
CLS 230, Clinical Hematology	4	CLS 220, Clinical Microbiology	4
BSC 227, Human Anatomy	4	CLS 255, Clinical Laboratory Problems	3
Total Hours	15	Total Hours	15
15 Week Hospital Based Clinical Practicum Sequence – Summer or Fall Semester			
CLS 270 Clinical Practicum Hematology	3	CLS 272 Clinical Practicum Blood Bank	3
CLS 271 Clinical Practicum Clinical Chemistry	3	CLS 273 Clinical Practicum Microbiology	3
Practicum Total Hours			12
Associate Degree in Medical Laboratory Technology earned after successful completion of clinical practicum 72-73 total credit hours			
Additional Career Ladder Coursework for online BS in Medical Laboratory Science			
Fall Semester Year 3	Hours	Spring Semester Year 3	Hours
CHM 327 Introduction to Organic Chem **	3	STA 225, Statistics	3
ECN 200 ,250 or MGT 320 Economics	3	CLS 310 Clinical Immun. And Mol. Diag.**	3
CLS 320, Advanced Topics in CLS**	3	Fine Arts Elective**	3
Humanities Elective**	3	CLS 466 Diagnostic Physiology (WI)**/**	3
Total Hours	12	Total Hours	12
Fall Semester Year 4	Hours	Spring Semester Year 4	Hours
CLS 400 Advanced Clinical Chemistry**(1 st 8 wks)	2	CLS 464 Laboratory Instrumentation**	3
CLS 410 Adv. Immunohematology*** (2 nd 8 wks)	2	CLS 468 Laboratory Research Capstone /WI**/**	3
CLS 420 Adv. Clinical Microbiology** (2 nd 8 wks)	2	CLS 472 Advanced Clinical Practicum I**	3
CLS 430 Advanced Hematology**	3	CLS 473 Advanced Clinical Practicum II**	3
CLS 460 Laboratory Mgt. and Education**	3		
CLS 499 Seminar in Laboratory Medicine**	2		
Total Hours	14	Total Hours	12
All CLS 300 and 400 level courses offered through online course delivery **BS in Medical Laboratory Science = 122-124 total credit hours			

** Courses to meet Marshall University Core Curriculum requirements

** Courses with this asterisk are only offered in the semesters listed only once per year; please plan coursework accordingly

***The credit hours for this semester could be higher depending on ACT scores of students below 21, which would mean additional chemistry requirement of CHM 111 before taking CHM 211