



**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	English 102, English Composition II**	3
MTH 127 or 130**	3 or 4	SOC 200 Intro. Sociology (SS,MC,WI Sullivan)**	3
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
CLS 105CT, Medical Laboratory Terminology**	3	Freshmen Seminar or CMM 103**	3
Freshmen Seminar or CMM 103**	3		
Total Hours	17-18	Total Hours	16
Fall Semester Year 2	Hours	Spring Semester Year 2	Hours
CLS 200, Clinical Biochemistry	4	BSC 228, Human Physiology	4
CLS 230, Clinical Hematology	4	CLS 210, Clinical Immunohematology	4
BSC 227, Human Anatomy	4	CLS 220, Clinical Microbiology	4
		CLS 255, Clinical Laboratory Problems	3
Total Hours	12	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 BS in Medical Laboratory Science			
Fall Semester Year 3	Hours	Spring Semester Year 3	Hours
CHM 327 Introduction to Organic Chemistry***	3	MTH 225, Statistics	3
ECN 200 or 250 Economics	3	CHM 365 Biochem. or CHM 345 Anal. Chem.***	3 or 4
BSC 300 or 400 level elective***	3	CLS 310 Clinical Immun. And Mol. Diag. (WI)**	3
Humanities Elective**	3	Fine Arts Elective**	3
Total Hours	12	Total Hours	12-13
Fall Semester Year 4		Spring Semester Year 4	
CLS 400 Advanced Clinical Chemistry	2	CLS 466 Diagnostic Physiology	2
CLS 410 Advanced Immunohematology	2	CLS 468 Senior Research/Capstone**	2
CLS 420 Advanced Clinical Microbiology	2	CLS 472 Advanced Clinical Practicum I	3
CLS 430 Advanced Hematology	2	CLS 473 Advanced Clinical Practicum II	3
CLS 460 Laboratory Mgt. and Education	3	CLS 464 Laboratory Instrumentation	3
CLS 499 Seminar in Laboratory Medicine	2		
Total Hours	13	Total Hours	13
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 Core Curriculum requirements effective Fall 2010

*** These courses are not currently offered through online format at Marshall University, however online equivalent courses are available from consortium universities and suggestions can be made by contacting the program director.