MEDICAL LABORATORY SCIENCE, BS

Medical Laboratory Science

Medical laboratory scientists are trained in the theoretical and practical aspects of laboratory medicine, which are critical to the detection, diagnosis, and treatment of diseases. Medical Laboratory Science offers a wide variety of career options, including hospitals, clinics, independent laboratories, public health facilities, and research. Students also may use this major to prepare for medical or graduate school. Students successfully completing this program are eligible to sit for a national certification exam offered by the American Society for Clinical Pathology (ASCP-BOC). The UWM Medical Laboratory Science Program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS), www.naacls.org (http://www.naacls.org), located at 5600 N. River Road, Suite 720, Rosemont, IL 60018-5119.

Requirements

Code	Title	Credits
Program Prerequisites and Support Courses		
BIO SCI 150	Foundations of Biological Sciences I	4
BIO SCI 202	Anatomy and Physiology I	4
BIO SCI 203	Anatomy and Physiology II	4
BIO SCI 325	Genetics	4
BIO SCI 383	General Microbiology	4
BMS 301	Human Pathophysiology: Fundamentals	1
BMS 302	Human Pathophysiology: Organ Systems I	1
BMS 303	Human Pathophysiology: Organ Systems II	1
BMS 304	Human Pathophysiology: Organ Systems III	1
BMS 305	Human Pathophysiology: Organ Systems IV	1
BMS 427	Clinical Immunology	3
BMS 428	Clinical Immunology Laboratory	1
CHEM 102	General Chemistry	5
CHEM 104	General Chemistry and Qualitative Analysis	5
CHEM 341	Introductory Survey of Organic Chemistry	3
CHEM 342	Introductory Organic Chemistry Laboratory	2
CHEM 501	Introduction to Biochemistry	3
HCA 224	Computational Tools for Healthcare Professionals	3
KIN 270	Statistics in the Health Professions: Theory and Practice [1]	3
Total Credits		**53**

[1] MTHSTAT 215 may be substituted for KIN 270.

Code	Title	Credits
MLS Program Requirements		
BMS 420	Clinical Hematology	3
BMS 421	Introduction To Hematology Laboratory	1
BMS 431	Clinical Chemistry	3
BMS 432	Clinical Chemistry Laboratory Theory & Operations	1
BMS 521	Applied Clinical Hematology	2
BMS 522	Hemostasis	1
BMS 523	Lectures in Advanced Clinical Hematology	1
BMS 524	Advanced Clinical Hematology Practicum	3
BMS 529	Introduction to Immunohematology	3
BMS 530	Immunohematology and Blood Banking Laboratory	1
BMS 531	Advanced Lectures in the Clinical Laboratory Sciences	1
BMS 532	Advanced Clinical Immunohematology and Immunology	3
BMS 534	Medical Microbiology	3
BMS 535	Medical Microbiology Laboratory	2
BMS 536	Applied Clinical Microbiology	2
BMS 537	Medical Parasitology and Mycology	2
BMS 538	Advanced Clinical Microbiology Practicum	3
BMS 541	Urinalysis	1
BMS 542	Applied Clinical Chemistry	2
BMS 544	Advanced Clinical Chemistry Practicum	3
BMS 547	Clinical Laboratory Diagnosis	5
BMS 548	Clinical Laboratory Practice	5
BMS 549	Professional Development in Clinical Laboratory Sciences	3
BMS 555	Toxicology and Therapeutic Drug Monitoring	1
BMS 560	Molecular and Genetic Diagnostics	2
BMS 561	Molecular Diagnostics Laboratory	1
Total Credits		**58**

Code	Title	Credits
Additional General Education Courses Required for Graduation		
Social Science		6
Cultural Diversity		3
Arts		3
Humanities		6
Total Credits		**18**

Plan of Study

Year 1

Semester 1		Credits
BIO SCI 202	Anatomy and Physiology I	4
BMS 101	Introduction to Clinical Laboratory Sciences [1]	2
BMS 205	Foundations of Diagnostic Science: Exploring Health, Technology, and Ethics [1]	3
CHEM 102	General Chemistry	5

GER Elective: Arts		3
	Credits	**17**
Semester 2		
BIO SCI 203	Anatomy and Physiology II	4
CHEM 104	General Chemistry and Qualitative Analysis	5
HCA 224	Computational Tools for Healthcare Professionals	3
GER Elective: Humanities		3
	Credits	**15**
Year 2		
Semester 1		
BIO SCI 150	Foundations of Biological Sciences I	4
BMS 301	Human Pathophysiology: Fundamentals	1
BMS 302	Human Pathophysiology: Organ Systems I	1
BMS 303	Human Pathophysiology: Organ Systems II	1
CHEM 341	Introductory Survey of Organic Chemistry	3
CHEM 342	Introductory Organic Chemistry Laboratory	2
ENGLISH 207	Health Science Writing (OWCB) [2]	3
	Credits	**15**
Semester 2		
BIO SCI 325	Genetics	4
BMS 304	Human Pathophysiology: Organ Systems III	1
BMS 305	Human Pathophysiology: Organ Systems IV	1
KIN 270	Statistics in the Health Professions: Theory and Practice	3
GER Elective: Social Science		3
GER Elective: Social Science		3
	Credits	**15**
Year 3		
Semester 1		
BIO SCI 383	General Microbiology	4
BMS 427	Clinical Immunology	3
BMS 428	Clinical Immunology Laboratory	1
CHEM 501	Introduction to Biochemistry	3
GER Elective: Humanties		3
	Credits	**14**
Semester 2		
BMS 420	Clinical Hematology	3
BMS 421	Introduction To Hematology Laboratory	1
BMS 431	Clinical Chemistry	3
BMS 432	Clinical Chemistry Laboratory Theory & Operations	1
BMS 534	Medical Microbiology	3
BMS 535	Medical Microbiology Laboratory	2
BMS 560	Molecular and Genetic Diagnostics	2
BMS 561	Molecular Diagnostics Laboratory	1
	Credits	**16**
Summer		
BMS 521	Applied Clinical Hematology	2
BMS 522	Hemostasis	1
BMS 536	Applied Clinical Microbiology	2
BMS 537	Medical Parasitology and Mycology	2
BMS 541	Urinalysis	1
BMS 542	Applied Clinical Chemistry	2
	Credits	**10**
Year 4		
Fall		
BMS 523	Lectures in Advanced Clinical Hematology	1
BMS 529	Introduction to Immunohematology	3
BMS 530	Immunohematology and Blood Banking Laboratory	1
BMS 547	Clinical Laboratory Diagnosis	5
BMS 548	Clinical Laboratory Practice	5
BMS 555	Toxicology and Therapeutic Drug Monitoring	1
	Credits	**16**
Spring		
BMS 524	Advanced Clinical Hematology Practicum	3
BMS 531	Advanced Lectures in the Clinical Laboratory Sciences	1
BMS 532	Advanced Clinical Immunohematology and Immunology	3
BMS 538	Advanced Clinical Microbiology Practicum	3
BMS 544	Advanced Clinical Chemistry Practicum	3
BMS 549	Professional Development in Clinical Laboratory Sciences	3
	Credits	**16**
	Total Credits	**134**

[1] BMS 101 and BMS 205 are recommended for students but not required.
[2] ENGLISH 207 is required for students without any credit prior to Fall 2013.

Medical Laboratory Science BS Learning Outcomes

Students graduating from the Medical Laboratory Science BS program will be able to:

- Apply laboratory testing theory and perform laboratory techniques across the disciplines of diagnostic laboratory testing.
- Practice professional conduct and identify the significance of continuing professional development.
- Communicate sufficiently to serve the needs of patients, the public, and members of the healthcare team.
- Identify and apply educational methodologies and terminologies sufficient to train/educate users and providers of laboratory services.
- Comply with the safety and governmental regulations and standards as applied to medical laboratory science.
- Analyze principles and practice of clinical study design, implementation and dissemination of results.
- Identify principles and practices of administration and supervision as applied to medical laboratory practice.

Honors in the Major

Honors in the major are granted to students who earn a GPA of 3.500 or above on a minimum of 30 completed credits at UWM.

College of Health Professions and Sciences Dean's Honor List

GPA of 3.500 or above, earned on a full-time student's GPA on 12 or more graded credits in a given semester.

Honors College Degree and Honors College Degree with Distinction

Granted to graduating seniors who complete Honors College requirements, as listed in the Honors College (https://catalog.uwm.edu/honors-college/) section of this site.

Commencement Honors

Students with a cumulative GPA of 3.500 or above, based on a minimum of 40 graded UWM credits earned prior to the final semester, will receive all-university commencement honors and be awarded the traditional gold cord at the December or May Honors Convocation. Please note that for

honors calculation, the GPA is **not** rounded and is truncated at the third decimal (e.g., 3.499).

Final Honors

Earned on a minimum of 60 graded UWM credits: Cum Laude - 3.500 or above; Magna Cum Laude - 3.650 or above; Summa Cum Laude - 3.800 or above.