

Immunology & Medical Microbiology, B.S.

Degree Offered

- Bachelor of Science

Introduction

Every day of our lives, we are exposed to microbes such as bacteria, viruses, and parasites. For the most part we suffer no disease or symptoms from these organisms, and they often go unnoticed. The single system in the body that allows life to continue in the face of these assaults is the immune system. The immune system is the network of cells and their biological processes that enable the body to recognize diseased cells or the invasion by microorganisms (bacteria, viruses, parasites, and prions) and eliminate them. The scientific discipline called immunology is the study of this system, and medical microbiology is the study of the disease states induced by the invasion of microorganisms. Collectively, these two disciplines address how humans and other mammals respond to infectious disease. These scientific disciplines have become the cornerstone for many industries - including the biotechnology, pharmaceutical, and medical and public health industries. These are all areas of particular emphasis and are being targeted for further development in West Virginia.

Educational Objectives

The Bachelor of Science (BS) degree in Immunology and Medical Microbiology will prepare students from diverse backgrounds to serve as professionals that are knowledgeable about the immune system of humans and other mammals, how the immune system functions, and the consequences of its malfunction on the health of the host. Knowledge of the immune system will be fully integrated with an excellent understanding of the diversity of microorganisms that cause disease in humans and other mammals and mechanisms of disease pathogenesis. Graduates will possess the laboratory skills and knowledge needed to assess the functional status of the immune system and to safely cultivate and identify microorganisms that cause disease in mammals. Graduates will be qualified to pursue several professional career paths in private industry, state and federal government, and academic institutions. The degree can also provide a strong foundation to progress to advanced studies including medical school, dental school, and graduate school.

Relationship of the Objectives to the Mission of WVU

The Bachelor of Science (BS) degree in Immunology and Medical Microbiology directly fulfills many of the stated objectives in the Strategic Plan for WVU, the WVU Health Sciences Center, and the WVU School of Medicine. It will be a financially viable, innovative, and dynamic educational program that provides a unique opportunity to earn a degree in Immunology and Medical Microbiology for both in-state and out-of-state undergraduate students. Its learner-centered curriculum will integrate both classroom and hands-on laboratory experiences. Graduates of the program will provide the state of West Virginia with a well-trained healthcare and research workforce who have the education and experience to work in a variety of occupations that require knowledge in immunology, medical microbiology and related disciplines.

ADMINISTRATION

CHAIR

- Mariette Barbier - PhD (Universitat de les Illes Balears)
Associate Professor

VICE CHAIR OF UNDERGRADUATE EDUCATION

- Kelly Collins - PhD (University of Cincinnati)
Teaching Associate Professor

DIRECTORS

- Kathy Brundage - PhD (University of Pennsylvania)
Research Assistant Professor and Director, WVU Flow Cytometry and Single Cell Core Facility
- F. Heath Damron - PhD (Marshall University)
Associate Professor and Director, Vaccine Development Center
- Karen Martin - PhD (Duke University Medical Center)
Director of Core Resources

FACULTY

CHAIR

- Mariette Barbier - PhD (Universitat de les Illes Balears)

PROFESSORS

- Tim Eubank - PhD (The Ohio State University)
- Ming Lei - PhD (Cornell University)
Sr. Associate Vice President, Office of Research and Graduate Education and Vice Dean of Research, School of Medicine
- Slawomir Lukomski - PhD (University of Lodz, Poland)
- Cory Robinson - PhD (Miami University of Ohio)
Vice Chair for Research and Graduate Education, Microbiology, Immunology, and Cell Biology, School of Medicine

ASSOCIATE PROFESSORS

- F. Heath Damron - PhD (Marshall University)
Director, Vaccine Development Center
- Ivan Martinez - PhD (University of Pittsburgh)
- Edwin Wan - PhD (City University of Hong Kong)

SERVICE PROFESSOR

- Kathy Brundage - PhD (University of Pennsylvania)
- Karen Martin - PhD (Duke University Medical Center)

TEACHING ASSOCIATE PROFESSOR

- Kelly Collins - PhD (University of Cincinnati)
Vice Chair of Undergraduate Education, Microbiology, Immunology, and Cell Biology
- Meenal Elliott - PhD (University of Alabama)

ASSISTANT PROFESSORS

- Jonathan Busada - PhD (East Carolina University)
- Michael Hu - PhD (Peking University)
- Tracy Liu - PhD (University of Toronto)

TEACHING ASSISTANT PROFESSORS

- Chad Sethman - PhD (Miami University)
- Valerie Watson - MS (West Virginia University)

TEACHING INSTRUCTOR

- Michelle Witt - MS (Virginia Tech)

ADJUNCT PROFESSORS

- Lisa Holland - PhD (University of North Carolina at Chapel Hill)
- Qiang Ma - PhD (Rutgers University)
- John Noti - PhD (Purdue University)
- Vazhaikkurichi Rajendran - PhD (University of Madras)
- Rita Rio - PhD (Yale University)
- Robert Taylor - PhD (Mississippi State University)
- David Weissman - MD (Northwestern University)

ADJUNCT ASSOCIATE PROFESSOR

- Candice Brown - PhD (Duke University)
- Matthew Dietz - MD (Temple University School of Medicine)
- Salik Hussain - PhD (Université Paris Cité)
- Emidio Pistilli - PhD (West Virginia University)

ADJUNCT ASSISTANT PROFESSORS

- Stacey Anderson - PhD (West Virginia University)
- Margaret Bennewitz - PhD (Yale University)
- Brian Boone - MD (University of South Florida College of Medicine)
- Tara Cotroneo - DVM (Western University of Health Sciences)

- Jennifer Franko - PhD (Case Western Reserve University)
- Brett Green - PhD (University of Sydney)
- Ida Holaskova - PhD (West Virginia University)
- Sreekumar Othumpangat - PhD (University of Mysore)
- Yong Qian - PhD (West Virginia University)
- Jenny Roberts - PhD (West Virginia University)

ADJUNCT RESEARCH INSTRUCTOR

- Jamie McCall - PhD (University of Nebraska Medical Center)

ADJUNCT ASSOCIATE SERVICE FELLOW

- Tara Croston - PhD (West Virginia University)

PROFESSORS EMERITI

- John B. Barnett - PhD (University of Louisville)
- Nyles Charon - PhD (University of Minnesota)
- Christopher Cuff - PhD (Temple University)
- Laura Gibson - PhD (West Virginia University)

ASSOCIATE PROFESSORS EMERITI

- Rosana Schafer - PhD (Temple University)

Admissions for 2026-2027

In order to be admitted to the BS program in Immunology and Medical Microbiology, you must fulfill the general admission requirements for WVU and the following program-specific requirements.

Entering WVU freshmen are admitted directly into the program with a high school GPA of 3.5 or higher and placement into CHEM 115 (e.g., 26 Math ACT, 610 Math SAT, or ALEKS placement score of 65). Applications are reviewed on a case-by-case basis if the applicant does not submit test scores, and/or the applicant's GPA or test scores are below the published requirements for automatic direct admission.

Prospective transfer students must have a 3.0 cumulative grade point average (GPA) and be progressing towards completion of BIOL 115/115L and CHEM 115/115L (or equivalents). Admission is also contingent on whether there is space available in the program, as only 40 students can be accepted into any class (freshman, sophomore, junior, senior). Transferees must be approved by the Immunology and Medical Microbiology Scholarship Committee.

Major Code: 8352

[Click here to view the Suggested Plan of Study \(p. 7\)](#)

General Education Foundations

Please use this link to view a list of courses that meet each GEF requirement. (<http://registrar.wvu.edu/gef/>)

NOTE: Some major requirements will fulfill specific GEF requirements. Please see the curriculum requirements listed below for details on which GEFs you will need to select.

Code	Title	Hours
General Education Foundations		
F1 - Composition & Rhetoric		3-6
ENGL 101 & ENGL 102 or ENGL 103	Introduction to Composition and Rhetoric and Composition, Rhetoric, and Research Accelerated Academic Writing	
F2A/F2B - Science & Technology		4-6
F3 - Math & Quantitative Reasoning		3-4
F4 - Society & Connections		3
F5 - Human Inquiry & the Past		3
F6 - The Arts & Creativity		3
F7 - Global Studies & Diversity		3

F8 - Focus (may be satisfied by completion of a minor, double major, or dual degree)	9
Total Hours	31-37

Please note that not all of the GEF courses are offered at all campuses. Students should consult with their advisor or academic department regarding the GEF course offerings available at their campus.

Curriculum Requirements

Code	Title	Hours
A minimum GPA of 2.75 is required in all coursework.		
University Requirements		19
Immunology and Medical Microbiology Program Requirements		42
Immunology and Medical Microbiology Major Requirements		59
Total Hours		120

University Requirements

Code	Title	Hours
General Education Foundations (GEF) 1, 2, 3, 4, 5, 6, 7, and 8 (31-37 Credits)		
Outstanding GEF Requirements 1, 4, 5, 6, and 7		18
IMMB 191	First-Year Seminar	1
Total Hours		19

Immunology and Medical Microbiology Program Requirements

Code	Title	Hours
A minimum grade of C- is required in Immunology and Medical Microbiology Program Requirements.		
BMM 339	Introduction to Human Biochemistry	4
BIOL 115 & 115L	Principles of Biology and Principles of Biology Laboratory	4
BIOL 117 & 117L	Introductory Physiology and Introductory Physiology Laboratory	4
BIOL 219 & 219L	Cellular and Molecular Biology and Cellular & Molecular Biology Laboratory	4
CHEM 115 & 115L	Fundamentals of Chemistry 1 and Fundamentals of Chemistry 1 Laboratory	4
CHEM 116 & 116L	Fundamentals of Chemistry 2 and Fundamentals of Chemistry 2 Laboratory	4
CHEM 233 & 233L	Organic Chemistry 1 and Organic Chemistry 1 Laboratory	4
Select one of the following:		3
MATH 150	Applied Calculus	
MATH 155	Calculus 1	
Select one of the following:		3
STAT 211	Elementary Statistical Inference	
STAT 215	Introduction to Probability and Statistics (or)	
ECON 225	Elementary Business and Economics Statistics	
Select one of the following sequences:		8
PHYS 101 & 101L & PHYS 102 & PHYS 102L	Introductory Physics 1 and Introductory Physics 1 Laboratory and Introductory Physics 2 and Introductory Physics 2 Laboratory	

PHYS 111 & 111L & PHYS 112 & PHYS 112L	General Physics 1 and General Physics 1 Laboratory and General Physics 2 and General Physics 2 Laboratory	
Total Hours		42

Immunology and Medical Microbiology Major Requirements

Code	Title	Hours
A minimum grade of C- is required in Immunology and Medical Microbiology Major Requirements.		
IMMB 150	Microbiology Colloquium 1	2
IMMB 175	Immunology and Medical Microbiology Colloquium	2
IMMB 201 & 201L	Basic Medical Microbiology and Basic Medical Microbiology Laboratory	4
IMMB 275	Immunology Colloquium 1	2
IMMB 276	Principles of Immunobiology	3
IMMB 305	Microbial Genetics	3
IMMB 310 & 310L	Bacterial Pathogenesis and Bacterial Pathogenesis Laboratory	4
IMMB 320	Cellular Immunobiology	3
IMMB 350	IMMB Careers and Professional Development	1
IMMB 375	Immunology Colloquium 2	2
IMMB 405	Scientific Integrity	2
IMMB 420 & 420L	Molecular Immunobiology and Molecular Immunobiology Laboratory	5
IMMB 450	Immunology/Microbiology Journal Club 2	1
IMMB 460	Contemporary Issues for Majors	3
IMMB 470	Medical Virology	3
IMMB 484	Senior Thesis (Capstone)	3
IMMB 494	Seminar	1
IMMB Electives		15
IMMB 293	Special Topics (Origins of Western Medicine)	
IMMB 327	Parasitology	
IMMB 480	Vaccinology	
IMMB 490	Teaching Practicum *	
IMMB 491	Professional Field Experience **	
IMMB 497	Research ***	
AEM 216	Living in a Microbial World	
AEM 401 & 401L	Environmental Microbiology and Environmental Microbiology Laboratory	
AEM 445 & AEM 449	Food Microbiology and Food Microbiology Lab	
ANPH 424	Physiology of Reproduction	
BIOL 302	Biometry	
BIOL 310 & 310L	Advanced Cellular/Molecular Biology and Advanced Cellular/Molecular Biology Laboratory	
BIOL 313	Molecular Basis of Cellular Growth	
BIOL 315	Communicating Natural Science	
BIOL 316 & 316L	Developmental Biology and Developmental Biology Laboratory	
BIOL 324 & 324L	Molecular Genetics and Molecular Genetics Laboratory	
BIOL 335	Cell Physiology	
BIOL 348	Neuroscience 1	
BIOL 349	Neuroscience 2	

BIOL 409	Biochemical Basis of Therapeutics
BIOL 410	Cell and Molecular Biology Methods
BIOL 413	Molecular Endocrinology
BIOL 415	Epigenetics
BIOL 418	Medical Genetics
BIOL 420	Genomics
BIOL 422	Current Topics in Genome Biology
BIOL 423	Biochemistry of Nucleic Acids and Proteins
BIOL 424	Protein Structure and Function
BIOL 426	Molecular Biology of Cancer
BIOL 430	Bioinformatics
BIOL 453	Molecular Basis of Disease
BIOL 455	Evolution of Infectious Diseases
BIOL 457	Ecology of Parasites
BIOL 461	Principles of Evolution
BIOL 474	Neurogenetics and Behavior
BIOL 475	Neurobiological Diseases
BIOL 476 & 476L	Computational Neuroscience and Computational Neuroscience Laboratory
BIOL 478	Sensory Neural Systems and Behavior
BIOL 490	Teaching Practicum
BMM 235	Introduction to Molecular Medicine
BMM 407	Methods to Diagnose Diseases
BMM 445	Molecular Mechanisms of Age-Associated Diseases
BIOC 452	Molecular Mechanisms of Metabolic Disorders
CHEM 234 & 234L	Organic Chemistry 2 and Organic Chemistry 2 Laboratory
FDST 445	Food Microbiology
FDST 445L	Food Microbiology Laboratory
HIST 393	Special Topics (Epidemics in Modern World History)
PALM 200	Medical Terminology
PALM 205	Introduction to Human Anatomy
PALM 206	Human Anatomy Laboratory
PCOL 449	Drugs and Medicine
PHIL 331	Health Care Ethics
PSIO 241	Elementary Physiology
PSYC 234	Drugs and Behavior
PUBH 201	Global Perspectives of Public Health
PUBH 222	Epidemiology
SOC 393	Special Topics (Bioarcheology)
SOC 481	Society and Health
VETS 401	Veterinary Anatomy

Total Hours

59

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A total of 2-credits of IMMB 490 can be applied to the IMMB Approved Electives Group.

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A total of 3-credits of IMMB 491 can be applied to the IMMB Approved Electives Group.

A total of 3-credits of IMMB 497 can be applied to the IMMB Approved Electives Group.

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
IMMB 191		1 IMMB 175	2
IMMB 150		2 GEF 4, 5, 6, or 7	3
ENGL 101 (GEF 1)		3 MATH 150 or 155 (GEF 3)	3
CHEM 115 (GEF 8)		3 BIOL 117	3
CHEM 115L		1 BIOL 117L	1
BIOL 115 (GEF 8)		3 CHEM 116 (GEF 2)	3
BIOL 115L		1 CHEM 116L	1
		14	16

Second Year

Fall	Hours	Spring	Hours
IMMB 201		3 IMMB 275	2
IMMB 201L		1 IMMB 276	3
BIOL 219		3 PHYS 101	4
BIOL 219L		1 PHYS 101L	0
CHEM 233		3 IMMB Elective	3
CHEM 233L		1 GEF 4, 5, 6, or 7	3
ENGL 102 (GEF 1)		3	
		15	15

Third Year

Fall	Hours	Spring	Hours
IMMB 320		3 IMMB 375	2
IMMB 305		3 IMMB 310	3
BMM 339		4 IMMB 310L	1
IMMB Elective		3 IMMB 350	1
GEF 4, 5, 6 or 7		3 PHYS 102	4
		PHYS 102L	0
		IMMB Elective	3
		16	14

Fourth Year

Fall	Hours	Spring	Hours
IMMB 420		3 IMMB 484	3
IMMB 420L		2 IMMB 470	3
IMMB 450		1 IMMB 460	3
IMMB 405		2 IMMB 494	1
STAT 211 or 215		3 IMMB Elective	3
IMMB Elective		3 GEF 4, 5, 6 or 7	3
		14	16

Total credit hours: 120

Accelerated Programs

- Accelerated B.S. Immunology and Medical Microbiology and M.S. Medical Laboratory Science
- Accelerated B.S. Immunology and Medical Microbiology and M.P.H. Public Health

Accelerated Bachelor's/Master's Degree Requirements

A minimum grade of C- is required for students for the duration of the ABM, including both undergraduate and graduate study. In addition, students must maintain a minimal cumulative GPA of 2.75 to remain in the program. Students who fail to meet or maintain these minimal requirements will be

eligible for dismissal. Students will also be subject to IMMB academic and professional standards while classified as undergraduate students and to MLS academic and professional standards while classified as graduate students.

ABM Curriculum Requirements

Code	Title	Hours
	Undergraduate IMMB Curriculum Requirements	105
	Shared Bachelor's/Master's Curriculum Requirements	16
	Graduate MLS Curriculum Requirements	39
Total Hours		160

Shared Bachelor's/Master's Curriculum Requirements

Code	Title	Hours
IMMB 527	Medical Parasitology	2
IMMB 540	Medical Mycology	2
PALM 432	Clinical Chemistry Laboratory	2
PALM 442	Clinical Hematology Laboratory	2
PALM 462	Urinalysis and Body Fluids Laboratory	1
PALM 530	Clinical Chemistry	3
PALM 540	Clinical Hematology	3
PALM 560	Urinalysis and Body Fluids	1
Total Hours		16

SUGGESTED PLAN OF STUDY

First Year

Fall	Hours	Spring	Hours
IMMB 191		1 IMMB 175	2
IMMB 150		2 BIOL 117 & 117L (GEF 8)	4
BIOL 115 & 115L (GEF 2)		4 CHEM 116 & 116L (GEF 8)	4
CHEM 115 & 115L (GEF 8)		4 ENGL 102 (GEF 1)	3
ENGL 101 (GEF 1)		3 MATH 150 (GEF 3)	3
		14	16

Second Year

Fall	Hours	Spring	Hours
IMMB 201 & 201L		4 IMMB 275	2
BIOL 219 & 219L		4 IMMB 276	3
CHEM 233 & 233L		4 PHYS 101 & 101L	4
GEF 4, 5, 6, or 7		3 GEF 4, 5, 6, or 7	3
		GEF 4, 5, 6, or 7	3
		15	15

Third Year

Fall	Hours	Spring	Hours
IMMB 305		3 IMMB 310 & 310L	4
IMMB 320		3 IMMB 350	1
BMM 339		4 IMMB 375	2
STAT 211		3 IMMB 527	2

GEF 4, 5, 6 or 7		3 PALM 560 & PALM 462	2		
		PHYS 102 & 102L	4		
		16	15		
Fourth Year					
Fall	Hours	Spring	Hours	Summer	Hours
IMMB 405		2 IMMB 460		3 PALM 544 & PALM 446	2
IMMB 420 & 420L		5 IMMB 470		3 PALM 580	3
IMMB 450		1 PALM 530 & PALM 432		5 PALM 604	1
IMMB 484		3 PALM 540 & PALM 442		5 PALM 606	1
IMMB 494		1			
IMMB 540		2			
		14	16		7
Fifth Year					
Fall	Hours	Spring	Hours		
PALM 465		2 PALM 525	4		
PALM 510 & PALM 412		3 PALM 535	4		
PALM 520 & PALM 422		5 PALM 545	4		
PALM 550 & PALM 452		5 PALM 555	4		
		PALM 602	1		
		15	17		

Total credit hours: 160

Accelerated Bachelor's/Master's Degree Requirements

Students must fulfill all degree requirements for the B.S in Immunology and Medical Microbiology, and must maintain a cumulative GPA of 3.0 or higher in IMMB in order to be eligible to continue in the accelerated IMMB-MPH program. They must continue to maintain a minimum 3.0 GPA beginning with the semester in which they enroll in MPH courses, continuing through the end of the ABM program, and must successfully complete 120 undergraduate credit hours by the end of year 4. Students are expected to remain in compliance with all Immunology and Medical Microbiology policies and procedures during the undergraduate portion, and with all Public Health policies and procedures during the graduate portion.

ABM Requirements

Code	Title	Hours
A minimum GPA of 2.75 is required in all coursework.		
	Undergraduate IMMB Curriculum Requirements	106
	Shared Bachelor's/Master's Curriculum Requirements	14
	Graduate Public Health Curriculum Requirements	25
Total Hours		145

Shared Bachelor's/Master's Curriculum Requirements

Code	Title	Hours
EPID 501	Epidemiology for Public Health	3
BIOS 501	Applied Biostatistics 1 *	3
BIOS 502	Applied Biostatistics Lab	1
PUBH 200	Introduction to Public Health Careers and Information **	1

PUBH 510	Contemporary Foundations of Public Health Practice	2
PUBH 520	Building and Sustaining Public Health Capacity	2
PUBH 540	Leading and Managing Health Organizations	3
PUBH 541	Systems Thinking in Public Health Practice	2
PUBH 596	Graduate Seminar	1
Total Hours		14

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ABM students take BIOS 501 instead of STAT 211 in the undergraduate curriculum.

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ABM students replace one credit of general elective with PUBH 200.

Suggested Plan of Study

First Year

Fall	Hours	Spring	Hours
BIOL 115 & 115L (GEF 2))		4 BIOL 117 & 117L (GEF 8)	4
CHEM 115 & 115L (GEF 8)		4 CHEM 116 & 116L (GEF 8)	4
ENGL 101 (GEF 1)		3 ENGL 102 (GEF 1)	3
IMMB 150		2 IMMB 175	2
IMMB 191		1 PUBH 101 (GEF 4)	3
		14	16

Second Year

Fall	Hours	Spring	Hours
BIOL 219 & 219L		4 IMMB 275	2
CHEM 233 & 233L		4 IMMB 276	3
IMMB 201 & 201L		4 PHYS 101 & 101L	4
MATH 150 (GEF 3)		3 PUBH 200	1
		PUBH 201 (GEF 7)	3
		GEF 5, 6	3
		15	16

Third Year

Fall	Hours	Spring	Hours
BIOS 501 & BIOS 502		4 IMMB 310 & 310L	4
BMM 339		4 IMMB 350	1
IMMB 305		3 IMMB 375	2
IMMB 320		3 PHYS 102 & 102L	4
PUBH 510		2 PUBH 540	3
		GEF 5, 6	3
		16	17

Fourth Year

Fall	Hours	Spring	Hours	Summer	Hours
EPID 501		3 IMMB 460		3 PUBH 630	3
IMMB 405		2 IMMB 470		3	
IMMB 420 & 420L		5 IMMB 484		3	
IMMB 450		1 IMMB 494		1	

PUBH 541		2 PUBH 520	2	
		PUBH 596	1	
		13	13	3
Fifth Year				
Fall	Hours	Spring	Hours	
PUBH 521		3 PUBH 613	3	
Area of Emphasis Courses		6 PUBH 629	1	
Area of Emphasis Elective		3 Area of Emphasis Courses	6	
		12	10	

Total credit hours: 145

1

Note: Students in the ABM program are not required to take PUBH 511 or PUBH 512.

Major Learning Outcomes

IMMUNOLOGY & MEDICAL MICROBIOLOGY

The Bachelor of Science degree in Immunology and Medical Microbiology will prepare students from diverse backgrounds to serve as professionals that are knowledgeable about the immune system of humans and other mammals, how the immune system functions, and the consequences of its malfunction on the health of the host. Knowledge of the immune system will be fully integrated with an excellent understanding of the diversity of microorganisms that cause disease in humans and other mammals and mechanisms of disease pathogenesis. Graduates will possess the laboratory skills and knowledge needed to assess the functional status of the immune system and to safely cultivate and identify microorganisms that cause disease in mammals. Graduates will be qualified to pursue several professional career paths in private industry, state and federal government, and academic institutions. The degree can also provide a strong foundation to progress to advanced studies including medical school, dental school, and graduate school.

Students will:

- Summarize and apply the basic concepts of microbiology and microbial pathogenesis.
- Summarize and apply the basic concepts of immunology and immunological disorders.
- Demonstrate expertise in the laboratory skills and knowledge needed to assess the functional status of the immune system.
- Demonstrate expertise in the laboratory skills and knowledge needed to safely cultivate and identify microorganisms that cause disease in mammals.
- Critically interpret microbiological and immunological assay data.
- Discuss, critique, and interpret primary literature in microbiology, microbial pathogenesis, and immunology.
- Demonstrate oral, written, and visual communication skills that result in clear and organized dissemination of material at a level appropriate for the audience.

Policies

REQUIREMENTS TO REMAIN IN THE IMMB PROGRAM

Students will be reviewed at the completion of each semester and summer term by the Microbiology, Immunology, and Cell Biology Academic and Professional Standards Committee. Students must be in good academic standing as determined by the following:

- Maintain a cumulative GPA of # 2.75 in all coursework attempted
 - Students who do not maintain a minimum cumulative GPA of # 2.75 will be placed on probation for one semester and be required to meet with their academic advisor on a monthly basis. Students on probation, who do not raise their cumulative GPA to 2.75 or better after one semester, will be dismissed from the program. Exceptions to this requirement must be approved by the IMMB Scholarship Committee and the Chair of the MICB Department.
- Pass all required courses for the IMMB major with a grade of C or better
- A student who earns a W as a first attempt in a required IMMB course may re-enroll in the course two more times to earn a grade of C or better. If the student fails to earn a grade of C or better on the third attempt, the student will be dismissed from the major.
- A student who earns a grade of D, F, FNA, or FSA in any course required for the Immunology and Medical Microbiology Bachelor of Science degree may repeat that course ONCE and must earn a grade of C or better.
- A student may only repeat ONLY ONE Immunology and Medical Microbiology core course (i.e. a course with an IMMB prefix). Students who earn a D, F, FNA, or FSA in more than one IMMB core course will be dismissed from the major.

- Any exceptions to these requirements must be approved by the Academic and Professional Standards Committee and the Chair of the MICB Department, Dr. Mariette Barbier.
- Dismissal from the program under the circumstances described above is not dismissal from WVU and the student may be eligible to enroll in another degree program.
- Pre- or corequisite courses in which students earn a grade of D, F, U, or W must be repeated prior to the student's progression to the next course(s) in the sequence.
- Any general education course that is not a pre- or corequisite of the Immunology and Medical Microbiology program and in which a grade of D has been earned, must be repeated prior to graduation if it is to be counted toward graduation requirements (WVU requirement).