



Plan B (non-thesis) MS Degree: 30 credits, including a review paper project (Independent Study)

REQUIRED COURSES

	<u>Healthcare Track</u>	<u>Research Track</u>
Year 1 Fall: Cell and Molecular Biology (Choose one)		
• PATH 475	3 cr	-
• IBMS 455/ IBMS 453	-	6 cr
Year 1 Spring: Basic Pathologic Mechanisms (PATH 510)	4 cr	4 cr
PATH 650 Independent Study (2 terms x 1 credit each)	1 cr	1 cr
Concentration Electives (Choose at least one)	3-4 cr	3-4 cr
▪ PATH 416 Fundamental Immunology (4 cr)		
▪ PATH 465 Advanced Immunology (4 cr)		
▪ PATH 481 Immunology of Infectious Diseases (3 cr)		
▪ PATH 418 Tumor Immunology (3 cr)		
▪ PATH 406 Cancer Biology at the Interface of Clinical Oncology (3 cr)		
▪ PATH 422 Current Topics in Cancer (3 cr)		
▪ PATH 444 Neurodegenerative Diseases (3 cr)		
▪ ANAT 412 Histology and Ultrastructure (4 cr)		
TOTAL REQUIRED	12-13 cr	15-16 cr

*Students must take at least one "Concentration Elective" per MS degree. More are encouraged, but not required.
The remainder of the MS degree program is composed of elective coursework.*

PRE-APPROVED ELECTIVES

▪ BIOL 426	Genetics	3 cr	Fall/ Spring/Summer
▪ PATH 513	Immunology Journal Club	1 cr	Fall/ Spring
▪ BIOC 452	Nutritional Biochemistry and Metabolism	3 cr	Fall/ Spring
▪ BIOC 407	Biochemistry: Molecules to Medicine	4 cr	Fall
▪ BIOC 501	Biochemical & Cellular Techniques for Biotech	3 cr	Fall
▪ IBMS 456B	Since You Were Born: Nobel Prize Research	1 cr	Fall
▪ MGRD 410	Introduction to Clinical Inquiry I	3 cr	Fall
▪ PATH 410	Aging and the Nervous System	1 cr	Fall
▪ PATH 420	Topics in Evolution and Medicine	3 cr	Fall
▪ PATH 466	Proposal Writing for Immunologists	1 cr	Fall
▪ PATH 511	Pathology Seminar	1 cr	Fall
▪ PATH 525	Neurodegenerative Diseases of the Brain & Eye	3 cr	Fall
▪ PATH 526	Introduction to Scientific Grant Writing	1 cr	Fall
▪ PHRM 409	Introduction to Pharmacology	3 cr	Fall
▪ RGME 535	Foundations in Regenerative Medicine	3 cr	Fall

▪ BIOL 443	Microbiology	3 cr	Spring/ Summer
▪ IBMS 500	Responsible Conduct of Research	1 cr	Spring
▪ MGRD 411	Introduction to Clinical Inquiry II	3 cr	Spring
▪ MBIO 445	Molecular Biology of DNA and RNA Viruses	3 cr	Spring
▪ PATH 480	Logical Dissection of Biomedical Investigations	3 cr	Spring
▪ PATH 512	Pathology Seminar	1 cr	Spring
▪ PHOL 466	Cell Signaling	3 cr	Spring
▪ PQHS 450	Clinical Trials and Intervention Studies	3 cr	Spring
▪ BIOC 405	Introduction to Biochemistry	3 cr	Summer
▪ ANAT 410	Gross Anatomy	6 cr	Summer

OTHER ELECTIVES

These electives require permission from the MS Program Director prior to registration.

▪ ANAT 401	Virtual Anatomy of the Human Body	2 cr	Fall
▪ ANAT 411	Gross Anatomy	6 cr	Spring
▪ ANAT 414	Neurological Anatomy	4 cr	Fall
▪ ANAT 431	Statistical Methods I	3 cr	Fall
▪ ANAT 491	Embryology	3 cr	Fall
▪ BIOC 502A	Biotechnology Laboratory: Molecular & Biochem	2 cr	Spring
▪ BIOC 502B	Biotechnology Laboratory: Euk. Cell Biology	2 cr	Spring
▪ NEUR 401	Biological Mechanisms of Brain Disorders	3 cr	Fall
▪ NEUR 402	Principles of Neuroscience	3 cr	Spring
▪ NTRN 401	Nutrition for Community & Healthcare	2 cr	Summer/Fall
▪ PHOL 410	Basic Oxygen and Physiologic Function	3 cr	Summer/ Fall
▪ PHOL 479	Clinical Reasoning: Applied Medical Physiology	3 cr	Summer/ Fall
▪ PHOL 492	Clinical Reasoning II	3 cr	Summer/ Spring
▪ PHOL 481	Medical Physiology I	6 cr	Fall
▪ PHOL 482	Medical Physiology II	6 cr	Spring
▪ PHOL 485	Comparative & Evolutionary Physiology	4 cr	Summer/ Spring
▪ STAT 425	Data Analysis and Linear Models	3 cr	Fall
▪ STAT 445	Theoretical Statistics I	3 cr	Fall

Other electives are available upon request.