IMMUNOLOGY (IMM) – POSTDOCTORAL MASTERS

- Kay L. Medina, Ph.D., *Program Director*
- Kathryn Knoop., Ph.D., *Associate Program Director, MN*
- Henrique Borges da Silva, Ph.D., *Associate Program Director, AZ*

Application

Candidates must complete a Postdoctoral Master's Degree Application form. This form is available on the MCGSBS Master's Programs intranet site. Supporting documents include a program fee agreement form, transcripts from previous colleges and two letters of recommendation - one preferred from your direct supervisor/manager.

Eligibility

Applicants must be employed at Mayo Clinic. The employment appointment, as documented at the time of application, must be greater in length than the time required for completion of all requirements of the program. Eligible roles include: Mayo Clinic physician, scientist, fellow or resident with a doctoral degree in a discipline applicable to clinical research or medical student who plans to have a research career (except for CTS). Visiting research fellows are eligible. However, visiting clinicians, research trainees and research collaborators are not eligible.

Time Requirement

Applicants must have adequate protected time to complete course and research requirements within designated program length. Applications with inadequate protected time to complete the program will**not**be accepted. Time to completion can vary by program and Mayo Clinic role from two to five years. All scholars must be in their program a minimum of 1 year in order to meet the MCGSBS residency requirement. Scholars must complete all program requirements within 5 years.

Students must have dedicated time for their program commitments and abide by course attendance requirements as defined in course syllabi. Students must be appropriately engaged in their program and demonstrate continued progress towards graduation.

Registration Requirement

At least 75% of the coursework for the Master's degree must be completed in MCGSBS. It is expected that a minimum of one year will be devoted to research.

Minimum Credit Requirements

Students must complete a minimum of 45 credits, which includes a maximum of 16 Research credits. (See Requirements tab within each track for specific course requirements.)

Transfer Credits

A total of 9 didactic credits may be transferred into the program. For more details, see the Credit Conversion, Transfer, Waiver, and Substitution Policy on the MCGSBS intranet site.

The Master's degree track in Immunology is open only to residents and research fellows in the Mayo School of Graduate Medical Education.

Course Requirements

The curriculum for the Basic Science Master's degree consists of **45 credits**, which can include a maximum of 16 Research credits.

Code	Title	Hours
MGS Requirements [1]		**12**
Select 12 credits of the following. See footnote for details.		
MGS 6000	Responsible Conduct of Research	
MGS 5050	Critical Thinking and Scientific Writing	
CTSC 6100	Mechanisms of Human Disease	
IMM 5100	Basic Graduate Immunology	
VGT 5700	Virology and Gene Therapy	
BMB 5100	Chemical Principles of Biopolymer Systems	
BMB 5150	Molecular Cell Biology	
BMB 5450	Genomics and Functional Genomics	
MPET 5900	Molecular Pharmacology and Receptor Signaling	
Track Requirements [2]		**4**
IMM 6863	Current Topics in Immunology (One credit per term)	
Track Tutorials		**8**
IMM 6878	Tutorial in Innate Immunity	
IMM 6879	Tutorial in Adaptive Immunity	
IMM 6880	Tutorial in Tissue Immunity	
IMM 6882	Tutorial in Bridging Innate and Adaptive Immunity	
IMM 6884	Tutorial in Generation and Function of T Cells	
IMM 6885	Tutorial in Generation and Function of B Cells	
Advanced Coursework		
Select 2 credits of any courses approved for graduate credit; select in consultation with your mentor.		
Research [4]		
MGS 6100	Master's Thesis Proposal	3
MGS 6840	Master's Research (4 cr/qtr - 4 qtrs required)	16
Total Hours		**43**

1. Select 12 credits of course work from the Biomedical Sciences core curriculum.MGS 6000 Responsible Conduct of Research and IMM 5100 Basic Graduate Immunology must be selected. Students with extensive background in particular areas of the core curriculum will have the opportunity to test out of the core courses.
2. Each student will be expected to take a minimum of four credits offered by the Immunology faculty in areas specific to the student's research interest. IMM 6863 must be taken at least once. IMM 6867 may be taken twice for credit.
3. Students who are not currently enrolled in a degree program must first obtain a signature from the IMM graduate program before enrolling in any IMM tutorial course
4. It is expected that a minimum of one year will be devoted to research.

Written Examination

The Master's candidate must pass the Immunology written qualifying exam to complete the degree requirements.

Suggested Sequence

This is a suggested sequence based on a summer term start. Individual course plans may vary depending on true start date, program, employment/

personal commitments, and research interests. Be sure to confirm you have met your requirements using your degree planning tool. Course offerings may vary slightly. Current course offerings are posted in the course catalog.

Code	Title	Hours
First Year - Summer Term		
MGS 6000	Responsible Conduct of Research	1
IMM 5200	Introduction to Flow Cytometry	1

Code	Title	Hours
First Year - Fall Term		
IMM 5100	Basic Graduate Immunology	3

Code	Title	Hours
First Year - Winter Term		
IMM 6885	Tutorial in Generation and Function of B Cells (Even years)	2
IMM 6884	Tutorial in Generation and Function of T Cells (Even year)	2
IMM 6882	Tutorial in Bridging Innate and Adaptive Immunity (Odd year)	2
IMM 6878	Tutorial in Innate Immunity (Odd year)	2
IMM 6867	Colloquium in Research	1

Code	Title	Hours
First Year - Spring Term		
IMM 6879	Tutorial in Adaptive Immunity (Even year)	2
IMM 6880	Tutorial in Tissue Immunity (Odd year)	2
IMM 6863	Current Topics in Immunology	1

Code	Title	Hours
Second Year - Summer Term		
IMM 6882	Tutorial in Bridging Innate and Adaptive Immunity	2

Code	Title	Hours
Second Year - Fall Term		
IMM 6863	Current Topics in Immunology	1

Code	Title	Hours
Second Year - Winter Year		
IMM 6885	Tutorial in Generation and Function of B Cells (Even year)	2
IMM 6884	Tutorial in Generation and Function of T Cells (Even year)	2
IMM 6878	Tutorial in Innate Immunity (Odd year)	2
IMM 6882	Tutorial in Bridging Innate and Adaptive Immunity (Odd year)	2
IMM 6867	Colloquium in Research	1

Code	Title	Hours
Second Year - Spring Term		
IMM 6879	Tutorial in Adaptive Immunity (Even year)	2
IMM 6880	Tutorial in Tissue Immunity (Odd year)	2
IMM 6863	Current Topics in Immunology	1

Code	Title	Hours
Third Year - Summer Term		
MGS 6840	Master's Research	4

Code	Title	Hours
Third Year - Fall Term		
IMM 6863	Current Topics in Immunology	1
MGS 6840	Master's Research	4

Code	Title	Hours
Third Year - Winter Term		
MGS 6840	Master's Research	4

Code	Title	Hours
Third Year - Spring Term		
IMM 6863	Current Topics in Immunology	1
IMM 6865	Regenerative T Cell Immunotherapy and Cellular Engineering	3
MGS 6840	Master's Research	4

Code	Title	Hours
Fourth Year - Summer Term		
MGS 6840	Master's Research	4

Code	Title	Hours
Fourth Year - Fall Term		
IMM 6863	Current Topics in Immunology	1
MGS 6840	Master's Research	4

Code	Title	Hours
Fourth Year - Winter Term		
MGS 6840	Master's Research	4

Code	Title	Hours
Fourth Year - Spring Term		
IMM 6863	Current Topics in Immunology	1
IMM 6865	Regenerative T Cell Immunotherapy and Cellular Engineering	3
MGS 6840	Master's Research	4

Code	Title	Hours
Fifth Year - Summer Term		
MGS 6840	Master's Research	4

Code	Title	Hours
Fifth Year - Fall Term		
IMM 6863	Current Topics in Immunology	1
MGS 6840	Master's Research	4

Code	Title	Hours
Fifth Year - Winter Term		
MGS 6840	Master's Research	4

Code	Title	Hours
Fifth Year - Spring Term		
IMM 6863	Current Topics in Immunology	1

IMM 6865	Regenerative T Cell Immunotherapy and Cellular Engineering	3
MGS 6840	Master's Research	4