

NEUROSCIENCE (NSC) – PROFESSIONAL MASTER'S

- Owen A. Ross, Ph.D., *Program Director, Mayo Clinic in Florida*
- Marissa J. Schafer, Ph.D., *Associate Program Director, Mayo Clinic in Rochester*
- Suelen Lucio Boschen De Souza, Ph.D., *Associate Program Director, Mayo Clinic in Florida*
- TBD, *Associate Program Director, Mayo Clinic in Arizona*

The Professional Master's Degree track in Neuroscience is only open to permanent employees of Mayo Clinic. Admission to the program requires an interview with the program director.

Application

Candidates must complete a Professional 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

Enrollment is restricted to current Mayo employees/appointees and is available at all three sites: Arizona, Florida, and Minnesota, as well as the Mayo Clinic Health System. Visiting clinicians, research trainees, and research collaborators are not eligible.

Applicants must have received a bachelor's degree from an accredited college or university, must have taken appropriate undergraduate science courses to adequately prepare for the Master's program, must have a minimum undergraduate grade point average that demonstrates a record of academic excellence.

Time Requirement

Time to completion can vary by student (three to five years), but all requirements for the Master's degree must be completed within five years. The five-year period begins on the start date of the term the student is appointed to. If the student's Mayo employment ends prior to completion of the program, the MCGSBS appointment will also end.

Registration Requirement

At least 75% of the coursework for the Master's degree must be completed in MCGSBS.

Minimum Credit Requirements

Students must complete a minimum of 45 credits, including MGS 6000 Responsible Conduct of Research. Didactic credits may vary by track - refer to specific program requirements for details.

Transfer Credits

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

Course Requirements

A total of **45 credits** with maintenance of at least a 3.0 GPA are required for graduation.

Code	Title	Hours
MGS Courses		13
MGS 6000	Responsible Conduct of Research	
BMB 5100	Chemical Principles of Biopolymer Systems	
BMB 5150	Molecular Cell Biology	
CTSC 6100	Mechanisms of Human Disease	
MGS 6400	Master's Capstone Project ²	
Track Courses		20
REGS 5200		
NSC 6210	Neurobiology of Disease	
NSC 6250	Skills for Effective Presentations	
NSC 6310	Methods in Neuroscience Research	
NSC 6401	Practical Neuroanatomy	
NSC 6600	Neuroscience Journal Club (1 cr./yr.) ¹	
NSC 6857	Systems Neuroscience and Behavior	
NSC 6862	Molecular and Cellular Neuroscience	
Suggested Advanced Coursework		12
Select 12 credits of the following:		
NSC 5600	Behavioral Neurology	
BME 6300	Tutorial in Neurophysiology	
IMM 5100	Basic Graduate Immunology	
BMB 5450	Genomics and Functional Genomics	
MPET 5900	Molecular Pharmacology and Receptor Signaling	
REGS 5300	Stem Cells & Development	

¹ Three credits maximum

² You must register for this during your final quarter

Program milestones are included in the Academic Progress and Graduation Requirements for Masters Programs Policy. See below for NSC-specific program highlights and instruction.

Written Qualifying Examination

The qualifying examination for the Professional Master's Degree in the Neuroscience Track is a single written qualifying exam composed of knowledge-based and research-based questions based on assigned research articles. A form signed by the track program director will be submitted to MCGSBS upon successful completion of the written qualifying exam.

Professional Master's Advisory Committee

In consultation with the program director, the student will select a Master's project mentor within the first year of the program. The mentor must have MCGSBS faculty privileges and must not be the employee's direct supervisor. In consultation with the program director and the Master's project mentor, the student will select an Professional Master's Advisory Committee comprised of four faculty members. This committee must include, at a minimum, either the track program director or the associate program directors. This committee should meet yearly to assess the student's progress and to provide guidance regarding the

Master's scholarly review article (final project). A form indicating the composition of the committee must be submitted to MCGSBS.

Master's Project Review

The project forms the central element of the Master's degree. The student should enroll in MGS 6400 Master's Capstone Project during the final quarter of tenure in the program in order to finalize the scholarly review article (final project). In general, the project will take the form of a substantial and scholarly review of the current field related to a specific topic of interest to the student. While the final form of the scholarly review article (final project) is at the discretion of the Professional Master's Advisory Committee, a 50-100 page, double-spaced document comprised of text, figures, and tables as appropriate, is recommended. This document must be written in close consultation with the Master's project mentor and must be submitted to the Professional Master's Advisory Committee for review at least one month prior to the final scholarly review article (final project) defense date. Upon successful completion of the defense and careful editing of the document, the track will pay to have 3 copies bound (one for the Master's project mentor, one for the track, and one for the student). Binding should be coordinated with the program director or associate program directors.

Scholarly Review Article (Final Project)

The scholarly review article (final project) defense is the final committee meeting. Prior to this meeting the committee will carefully review, edit, and critique the scholarly review article (final project) and will provide any changes to the student during the meeting. Committee members may orally examine the student's general and specific knowledge. Three of four committee members must vote to pass the student and a form signed by all committee members must be submitted to MCGSBS immediately upon completion of the defense.

Final Project Corrections

Significant deficits in the project will require the student to revise and resubmit the document to the committee within 30 days of the presentation date.

Course 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

Code	Title	Hours
First Year - Fall Term		
NSC 6862	Molecular and Cellular Neuroscience	3
NSC 6250	Skills for Effective Presentations	2
NSC 6650	Neuroscience Works In Progress	1

Code	Title	Hours
First Year - Winter Term		
NSC 6857	Systems Neuroscience and Behavior	3
NSC 6210	Neurobiology of Disease (Every other year)	3

Code	Title	Hours
First Year - Spring Term		
NSC 6210	Neurobiology of Disease (Every other year)	3
NSC 6310	Methods in Neuroscience Research (Every other year)	2
NSC 6401	Practical Neuroanatomy (Every other year)	2

Code	Title	Hours
Second Year - Summer Term		
MGS 5050	Critical Thinking and Scientific Writing	2
NSC 6310	Methods in Neuroscience Research (Every other year)	2

Code	Title	Hours
Second Year - Fall Term		
MGS 5051	Critical Thinking and Scientific Writing, Part II	1
NSC 6650	Neuroscience Works In Progress	1
NSC 6600	Neuroscience Journal Club	1

Code	Title	Hours
Second Year - Winter Term		
NSC 6210	Neurobiology of Disease (Every other year)	3

Code	Title	Hours
Second Year - Spring Term		
NSC 6210	Neurobiology of Disease (Every other year)	3
NSC 6310	Methods in Neuroscience Research (Every other year)	2
NSC 6401	Practical Neuroanatomy (Every other year)	2

Code	Title	Hours
Third Year - Summer Term		
NSC 6310	Methods in Neuroscience Research (Every other year)	2

Code	Title	Hours
Third Year - Fall Term		
NSC 6600	Neuroscience Journal Club	1
NSC 6650	Neuroscience Works In Progress	1