

# REGENERATIVE SCIENCES IN MEDICINE (REGS) – POSTDOCTORAL MASTERS

**Applications for the Regenerative Sciences in Medicine (REGS) Postdoctoral Masters program are currently on hold. Please check back for future availability.**

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## 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.

## Course Work

The curriculum for the Master's degree consists of **45 credits**. The student must complete all of the required courses listed below:

Code	Title	Hours
<b>Prerequisite Courses</b>		
REGS 5200		2
REGS 5210	Advanced Regenerative Medicine and Surgery	2
<b>MGS</b>		
MGS 6000	Responsible Conduct of Research	1
MGS 5050	Critical Thinking and Scientific Writing	2
BMB 5100	Chemical Principles of Biopolymer Systems	2
BMB 5150	Molecular Cell Biology	2
<b>Track Requirements</b>		
REGS 5300	Stem Cells & Development	3
REGS 5500	Topics in Regenerative Sciences and Medicine	1
REGS 6820	Principles to Practice	2
CTSC 5210	Ethical Issues in Regenerative Medicine	1
<b>Advanced Coursework</b>		<b>8</b>
Recommended courses include:		
CTSC 6100	Mechanisms of Human Disease	
IMM 5100	Basic Graduate Immunology	
VGT 5700	Virology and Gene Therapy	
CTSC 6120	Case Studies in Translation	
IMM 6865	Regenerative T Cell Immunotherapy and Cellular Engineering	
REGS 5800	Developmental Biology	
REGS 6400	Regenerative Tissue Engineering Principles (RTEP)	
REGS 6500	Introduction to Translational BioProduct Development	
REGS 6700	Genomic and Epigenomic Data Integration	
<b>Research</b>		
MGS 6100	Master's Thesis Proposal	3
MGS 6840	Master's Research (4 cr/qtr - 4 qtrs required)	16
<b>Total Hours</b>		<b>45</b>

## Qualifying Exams and Thesis Research

### Written Qualifying Examination (WQE)

The WQE is designed to demonstrate a student's ability to integrate and synthesize the core competencies of the program. Students must pass the WQE to complete the degree requirements.

For the WQE, students will develop a fundamental research question and write a critical literature review based on this selected topic in regenerative sciences in medicine. The topic should be selected by the student in consultation with their thesis mentor.

### Formation of Thesis Advisory Committee (TAC)

Master's students are strongly advised to form a TAC within 60 days of mentor selection to support their experiential training. TAC formation at

this early stage will help the student and mentor chart progress through coursework, qualifying exam and project development. TAC members may change over the course of master's studies and this early TAC formation should be viewed as a starting point to aid the student to formulate specific aims that will form the basis of the student's thesis proposal moving forward.

The student, their thesis mentor and the REGS master's program director/associate director will establish a formal TAC to monitor the student's thesis research progress. This should be established no later than 90 days from the beginning of the student's program start. The student's mentor is chair of the committee.

### **Thesis Advisory Committee Meetings**

Students are required to meet with their thesis advisory committee at least once every three months. At the meetings, the student will present progress on his, her, or their thesis project. The committee will offer advice, and an evaluation of the student's progress will be discussed with the student at the end of the meeting.

### **Thesis Proposal**

Students must complete a written thesis proposal, presentation and thesis committee discussion of their proposal. This requirement may be accomplished during the written qualifying examination or at the first thesis committee meeting. The student's TAC must be approved prior to this committee discussion.

### **Thesis Defense (Final Oral Examination)**

The final oral examination cannot be completed until the following criteria have been met:

- The Written Qualifying Examination has been passed,
- All coursework has been completed with a GPA of 3.0 or higher,
- All program milestones have been met, and
- REGS master's program director/associate director have reviewed and approved the thesis proposal

### **Publication Requirement**

Master's thesis research must make a substantial contribution to the biomedical literature and preparing work for publication is an important part of research training. The expectation is that thesis research will result in publication. To graduate, students need to publish one or two original peer-reviewed papers on which they are first author.