

**DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY**

**SCHOOL OF MEDICINE AND DENTISTRY**

**UNIVERSITY OF ROCHESTER**

**IMV M.S. GRADUATE STUDENT HANDBOOK**

**2024-2025**

September 2024 revision

This handbook is to be used to supplement but **not** replace the Official Bulletin of Graduate Studies, which should be reviewed by all students.

# DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY

## BS/MS GRADUATE STUDENT HANDBOOK

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### Program Director:

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Albert & Phyllis Ritterson Professor and Chair of

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Lab Website: <http://www.urmc.rochester.edu/labs/robert-lab/>

Xenopus laevis Resource for Immunobiology:

<http://www.urmc.rochester.edu/microbiology-immunology/resources/xenopus-laevis/>

### Program Coordinator:

Brenda Knorr

[Brenda\\_knorr@urmc.rochester.edu](mailto:Brenda_knorr@urmc.rochester.edu)

## **I. Master of Science Program**

### **A. Program Objective**

This degree program is designed to prepare graduates for careers in biomedical research by allowing them to earn both BS and MS degrees in 5 years. Pursuit of the MS in Immunology, Microbiology, and Virology affords the opportunity for selected students to receive intensive, advanced training in the allied fields of immunology, microbiology, virology, and biotechnology, with a focus on hands-on research and “real world” skills including critical scientific thinking, scientific communication, group dynamic, problem-solving and data analysis, and instruction in drug discovery. Active training in bioinformatics and other advanced methodologies is included. The goals are to reflect the interconnectivity and complexity biomedical sciences as well as the increasing requirement for teamwork in problem solving in the workforce.

**B. General Information** - A successful applicant for the IMV B.S./M.S. Program in Microbiology receives an official letter of acceptance from the Office of Graduate Studies of the School of Medicine and Dentistry. The letter indicates the degree program to which the student has been admitted, the amount and type of tuition scholarship which they **may** receive, and the expected matriculation date.

During the summer, incoming students will be contacted by the program director and departmental administrator with information about starting in the program.

Incoming students will also be contacted by the Senior Associate Dean for Graduate Studies in the School of Medicine and Dentistry, with the date, time and place for an official fall orientation meeting. Orientation is generally held the week before classes begin. At the orientation, University procedures are reviewed and detailed information is presented on the University Health Service, Miner Library, Graduate Student Society, *etc.* Information is also provided for course registration. The director of the IMV M.S. Program will meet with all new students at orientation to advise on re

All students should contact the program director and the program administrator to review the proposed course of study prior to registration.

**C. Program of Study for IMV M.S. Students** – Students will port in 10 credits from UR undergrad and must earn 20 credits to be eligible for the IMV B.S./M.S. Degree. You will register for 10 credits for both the fall and spring semesters.

## IMV BS/MS Curriculum

### Required Courses (total 8.0 credit hours)

Course Number	Course Name	Credit Hours	Offered
MBI 519	Experimental Design & Analysis	1.0	Fall
MBI 402	Writing in Microbiology	4.0	Spring
MBI 403	Drug Discovery	2.0	Spring
IND 501	Ethics in Research	1.0	Fall

### Select at least 4 – 400 level courses (12 or 13 credit hours)

Course Number	Course Name	Credit Hours	Offered
MBI 404	Introduction to Emerging Pathogens	4.0	Spring
MBI 414	Microbial Pathogenesis	4.0	Fall
MBI 421	Microbial Genetics & Physiology	4.0	Spring
MBI 456	General Virology	4.0	Spring
MBI 473	Immunology	4.0	Fall

### Elective/Seminar Courses:

Select a total of 3.0 Credit Hours (1 – 2.0 credit hour or 2 – 1.0 credit hour PLUS MBI 501\* for 1.0 credit hour)

Course Number	Course Name	Credit Hours	Offered
MBI 501*	Student Seminar	1.0	Fall/Spring
MBI 514	Microbial Pathogenesis Seminar	1.0	Fall
MBI 521	Microbial Genetics Seminar	1.0	Spring
MBI 540	Topics in Immunology	2.0	Spring
MBI 570	Molecular Biology Seminar	1.0	Fall and Spring
MBI 573	Immunology Seminar	1.0	Fall
MBI 580	Immunology Research in Progress (RIPS)	1.0	Fall and Spring
MBI 588	Virology Research Seminar	1.0	Spring
MBI 589	Advanced Topics in Virology	1.0	Fall

### Research (total 5-12 credit hours)

Course Number	Course Name	Credit Hours	Offered
MBI 496	MS Project I (FALL)		
MBI 496	MS Project II (SPRING)		

**BS/MS CALENDAR 2024-2025**

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**- 2024 -**

**Tuesday, August 20:** SMD Orientation

**Monday, August 26:** Fall 2024 semester start

**Friday September 27(tentative):** Meeting all students to present the plan for their research project

**End of October:** 1<sup>st</sup> Advisory committee meeting need to be held and written report of the advance of the project and student progress to be submitted

**Monday, Dec 9:** end of semester

**Dec 13-18** – Final examinations

**- 2025 -**

**Tuesday, Jan 21:** Spring 2025 semester start

**Mid-February:** 2<sup>nd</sup> Committee meeting needs to be held + evaluation report submitted

**March 13-27:** 501 seminar presentations

**BS/MS Advisory Committee**

**The committee must include 4 Members:**

1. The advisor,
2. The director of the program (Jacques Robert) or a designed member of the admission committee
3. One faculty member (Assistant Professor or higher) with primary appointment in the department of Microbiology and Immunology
4. A faculty member with a primary appointment outside Microbiology and Immunology

The Senior Associate Dean will appoint a faculty member from within your committee to chair your exam.

\*\*\* You will need to plan a first meeting with you Advisory Committee in October. This committee will make a first assessment of the suitability of your research project and progress you have made so far.

## **BS/MS THESIS DEFENSE**

**First week of March:** Committee needs to decide if the student will defend for April or July 2025

**March 11:** For defense in April, provide information to Brenda (Abstract, title page, list committee members, date, time and place of defense. Paperwork must be submitted to the Graduate Education office 10 full working days prior to defense (BRENDA will submit paperwork)

NOTE: conferral dates have not been sent out yet. Once I have the dates, I will send them on to you. Just to give you an idea – in past years if you wanted a May conferral, everything would need to be completed (your exam passed and corrections made to your thesis) by the first few days in May.

**Thursday April 27:** Last day of class

**Defense after April deadline:** Possibility to delay dissertation and defense from May 27. Corrections will need to be submitted by Monday, August 9 (not later otherwise students must register for Fall semester). Student will need to register for MBI 890 (summer in residence). There is no fee for this, it just keeps them in student status over the summer.

### **Submission of paperwork for BS/MS dissertation and defense:**

Information to BRENDA: **15 working days** prior to BS/MS defense, including:

- ABSTRACT and TITLE PAGE
- LIST OF COMMITTEE MEMBERS,
- DATE OF DEFENSE,
- TIME OF DEFENSE AND PLACE OF DEFENSE

All paperwork must be submitted to the Graduate Education office 10 full working days prior to defense (BRENDA KNORR will submit paperwork).

### **General Notes:**

- In order to be the most flexible students can start either in the Summer or Fall semesters. Research in the lab does not require to register for a Summer semester.
- Students share credits from their undergraduate degree (up to 10). They will need to complete 20 credit hours of MS coursework in 2 semesters.
- In order for the student to be eligible for financial aid, they must be registered for at least 6 credit hours of coursework per semester.
- In order for the student to be considered full time, they must register for 10 credit hours.

### **MS Essay**

Minimum of 40 pages (essay should be 40-100 pages in length – excluding references)  
6-12 data figures are expected (1/2 student should be primary person generating figures).

## MISCELLANEOUS

**Emergency or Temporary Closings and Other Changes in Class Schedules and University Operations.** The University plans to commence and conclude classes on the dates indicated in the academic calendars. But unforeseen circumstances or events may occur that require the University to temporarily close or otherwise make adjustments to its student life, residential housing, class schedules and format, method and location of instruction, educational activities, and operations because of reasons beyond the University's control. For example, such circumstances or events may include but are not limited to inclement weather, the onset of public health crises, being subject to government order(s), significant safety or security concerns, faculty illness, strikes, labor disturbances, sabotage, terrorism, war, riot, civil unrest, fire, flood, earthquake, acts of God, malfunction of University equipment (including computers), cyberattacks, unavailability of particular University facilities occasioned by damage to the premises, repairs or other causes, as well as disruption/unavailability of utilities, labor, energy, materials, transportation, electricity, security, or the internet. If any of these or other unforeseen circumstances or events outside of the University's control occur, the University will respond as necessary and appropriate, and it assumes no liability for any interruption or adjustments made to student life, residential housing, class schedules and format, method and location of instruction, educational activities, and operations caused by these or other unforeseen circumstances or events. And the University shall not be responsible for the refund of any tuition or fees in the event of any such unforeseen circumstances or events, except as may otherwise be expressly provided in the University's Leave of Absence and Withdrawal Policy or its published tuition refund schedule ([Payments and Refunds - Office of the Bursar \(rochester.edu\)](#)).

**Academic Honesty Policy** - The University of Rochester considers academic honesty to be a central responsibility of all students. Suspected infractions of University policies will be treated with the utmost seriousness. Suspected graduate academic misconduct will be reported to the department chair and associate dean for graduate studies. This section is adapted from the University of Rochester graduate studies Bulletin 2010-2012.

(<http://www.rochester.edu/GradBulletin/PDFbulletin/Regulations10-12.pdf>).

A common form of academic dishonesty is plagiarism. This is the use, whether deliberate or unintentional, of an idea or phrase from another source without proper acknowledgment of that source. The risk of plagiarism can be avoided in written work by clearly indicating, either in footnotes or in the paper itself, the source of any other major or unique idea that you could not or did not arrive at on your own. Sources must be given regardless of whether the material is quoted directly or paraphrased. Another form of plagiarism is the copying or obtaining information from another student. Submission of written work, such as laboratory reports, computer programs, or papers, which has been copied from the work of other students, with or without their knowledge and consent, is also plagiarism. In brief, any act that represents someone else's work as one's own is an academically dishonest act.

A second example of academic dishonesty relates to misuse of library materials. Any act that maliciously hinders the use of or access to library materials is academically dishonest and falls under the terms of this policy. The removal of pages from books or journals disadvantages others in the academic community. Similarly, the removal of books from the libraries without formally checking out the items, the intentional hiding of materials, or the refusal to return reserve readings



to the library is dishonest and harmful to the community.

There are several other forms of academic dishonesty including, for example, obtaining an examination prior to its administration or using unauthorized aids during an examination. It is also academically dishonest to knowingly falsify data or data analysis results or assist someone else in an act of academic dishonesty.

A student remains responsible for the academic honesty of work submitted to the University as part of the requirements for the completion of a degree (or any other coursework taken at the University) even after the work is accepted or the degree is granted. This rule applies to students who are no longer matriculated at the University of Rochester, including those who have graduated.

Ignorance of these standards is not considered a valid excuse or defense.

**Judicial Process for Academic Misconduct** - Charges of academic misconduct are referred to the student's department by the associate dean. In a school or college without departments, the school or college will handle these matters. Each department, interdisciplinary program, or college will have a written policy on file with the associate dean to deal with these matters and a designated group called the Department Hearing Panel to hear the charge. The department may utilize one of several mechanisms for hearing charges of academic misconduct. These may include a panel that consists of (1) the usual faculty group that deals with graduate student business, (2) the entire faculty of the department, or (3) a committee appointed by the department chair specifically for the purpose of hearing the academic misconduct charge. A department's written policy may also call for graduate student representation on the panel.

The Department Hearing Panel, in consultation with the associate dean and in accordance with the standards set forth in the section Fundamental Fairness above (to the extent appropriate to the circumstances—with the associate dean functioning as the “judicial officer” and the Department Hearing Panel as the “hearing team”) conducts a hearing, makes findings, and presents a recommendation to the appropriate dean or director. The dean or director then reviews the findings and recommendation, and submits them along with his or her recommendation to the University dean of graduate studies, which issues the final decision and sanction. An appeal may be made to the provost within seven days of the decision and will follow, to the extent feasible, the procedures set forth in the section Appeals above.

If either the department chair or the associate dean believes that the alleged misconduct in any way involves sponsored research (including federal training grants), threatens the integrity of the scientific method, or compromises the creation of new knowledge (including original art, scholarship, and research), the matter will be referred to and will follow the procedures outlined in the Policy on Misconduct in Scholarship and Research in the Faculty Handbook.

**Security Services** Security serves an active community of over 25,000 students, faculty and staff. Security officers patrol all University properties - 24 hours a day, seven days a week. In addition to responding to emergencies - fires, accidents, or physical crimes, for example - security staff provide a wide range of non-emergency services. These include: crime prevention training and awareness; distribution of "Security Alert Bulletins" (whenever a major crime occurs at or near the University, these bulletins describe the crime and suspect(s) and offer safety tips); victim and witness support; personal safety escorts; door openings for people who are locked out; routine building and area checks; security surveys of office space or building renovations; landscaping and exterior lighting evaluations; and lost and found property storage.

In an emergency, dial x13 from any University phone, or pick up a Blue Light Emergency Phone. An officer will be sent to your location right away. Local police, fire, or ambulance agencies will be notified as needed. To request one of the non-emergency services, call x53333; a dispatcher is on hand 24 hours a day to answer calls. The Medical Center Security Office is located at G-6009 and their number is 275-5221.

## **Important Contacts / Useful Websites**

### ***General University Information*** **University of Rochester Medical Center Home Page**

<https://www.urmc.rochester.edu/>

#### ***Social Media Education***

*University of Rochester*

<https://www.urmc.rochester.edu/education/social-media.aspx>

*Graduate Student Information*

*Graduate Student Academic Calendar*

<http://www.urmc.rochester.edu/education/graduate/current-students/academic-calendar.cfm>

*Graduate Bulletin*

<http://www.rochester.edu/GradBulletin/>

#### ***Access Services***

<https://www.urmc.rochester.edu/education/graduate/current-students/disability-supports-services.aspx>

*Diversity, Equity, and Inclusion Resources*

*Offices of Equity and Inclusion*

<https://www.urmc.rochester.edu/smd/office-of-equity-and-inclusion.aspx>

<https://www.rochester.edu/diversity/>

*UR Diversity and Inclusion*

<https://www.urmc.rochester.edu/clinical-translational-science-institute/diversity.aspx>

*Rainbow Handbook*

<https://www.urmc.rochester.edu/MediaLibraries/URMCMedia/education/md/documents/Rainbow-Book.pdf>

*Graduate Women in Science*

<https://www.urmc.rochester.edu/education/graduate/graduate-women-in-science.aspx>

*Society for Advancing Chicanos/Hispanics and Native Americans in Science (SACNAS)*

<https://www.sacnas.org>

*Annual Biomedical Research Conference for Minority Students*

<https://www.abrcms.org>

Alliance for Diversity in Science and Education

<https://www.urmc.rochester.edu/education/graduate/current-students/graduate-student-society/alliance-for-diversity-in-science-and-engineering.aspx>

*myHub and Student Trainee Group Information*

<https://www.urmc.rochester.edu/education/graduate/myhub-professional-development/student-postdoc-groups.aspx>

*Human Resources*

**Office of Human Resources Home Page**

<http://www.rochester.edu/working/hr/>

**Safety & Security**

**University Security Services**

<http://www.publicsafety.rochester.edu/>

On-Campus *Emergency Only*: x13 or

Dial #413 from Cingular or Verizon cell phones

Non-Emergency: 275-3333

Lost & Found: 275-2552

*Specialized Assistance Programs*

**Intercessor for Sexual Harassment/Sexual Assault**

<http://www.rochester.edu/sexualmisconduct/whatissexualassault.html>

Sexual Assault Hotline: 275-RAPE (7273)

Intercessor (Lynnett Van Slyke): 275-9125

Ombudspersons

<https://www.urmc.rochester.edu/education/post-doctoral/ombudspersons.aspx>

CARE Network

<https://www.rochester.edu/CARE/>

Faculty Professionalism Council

<https://www.urmc.rochester.edu/smd/academic-affairs/professionalism/smd-faculty-professionalism-council.aspx>

**Racial Harassment**

**275-2867**

**Disability Resources**

<http://www.rochester.edu/eoc/resources/forStudents.html>

University Resources Coordinator (Lynnett Van Slyke): 275-9125

Local (SMD) Resources Coordinator (Linda Lipani): 275-7288

Learning Assistance Center

<http://www.rochester.edu/college/cet/>

*Tuition, Billing & Financial Aid*

**Bursar's Office**

<http://www.urmc.rochester.edu/education/bursar/>

275-4672

**Financial Aid**

<http://www.urmc.rochester.edu/education/financial-aid/>

275-4523

*Edward G. Miner Library*

**Edward G. Miner Library**

<http://www.urmc.rochester.edu/libraries/miner/>

275-3361

Blackboard

<https://bb.urmc.rochester.edu/webapps/portal/frameset.jsp>

*Athletics/Gym Memberships*

**Goergen Gym/Athletics Center, River Campus**

<http://www.rochester.edu/athletics/facilities/>

275-7643

**Medical Center Athletic Club**

<http://www.urmc.rochester.edu/fitness-wellness-center/>

275-2437

***Other University Services***

Copy and Print Services

<http://www.rochester.edu/printcenter/>

275-3879

**Med Center Post Office/Mail Services**

[http://www.facilities.rochester.edu/support\\_ops/mail/](http://www.facilities.rochester.edu/support_ops/mail/)

Medical Center G-5172

275-2630

Medical Center Parking

70 Goler House, East Drive

<http://www.rochester.edu/parking/index.html>

275-4524

**ID Cards**

Room G-7009

273-2000

**Chase Manhattan Bank**

Medical Center Branch

G-5111

<https://www.chase.com/>

275-5703