MEDICAL COLLEGE OF WISCONSIN MICROBIOLOGY & IMMUNOLOGY GRADUATE PROGRAM HANDBOOK Revised September 2023

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#### Ver August 14 2023 Welcome

Welcome to the Department of Microbiology and Immunology. Whether you matriculated thorough IDP, NDP, MSTP or the M&I Department Admission program, you are M&I students at the start of your thesis research (MSTP), from the very start of the program (Department Admission), or upon completion of your qualifying exam (IDP&NDP). This handbook outlines expectations of yourself, your PhD mentor, M&I faculty, and the graduate program directors. It also outlines resources available to graduate students and important milestones throughout your graduate career. The milestones are the same for all M&I students, but the dates for expected milestone completion will differ for each entry track, please see specific timeline flow charts at the end of the handbook.

First and foremost, it is the <u>sole</u> responsibility of doctoral students in the Microbiology and Immunology Graduate Program to be familiar with and meet deadlines listed in this guide, and to obtain and submit completed forms to the Graduate School and the Microbiology and Immunology Graduate Program, as applicable. Students are also responsible for keeping a copy of the completed forms for their own records and providing a copy to their mentor for their respective records if requested. Scheduling biannual committee meetings is the <u>sole</u> responsibility of the student as is making sure all forms associated with committee meetings are completed, signed by all committee members and given to the respective administrative staff for record keeping. If the committee meeting is not documented by the Microbiology and Immunology Graduate Program with the appropriate paperwork, the committee meeting never happened.

#### **Section 1. Student Resources**

Maintaining personal wellness including mental and physical health are important pieces of graduate school. This includes wellness across many facets of life including occupational, intellectual, financial, mental/emotional, physical, spiritual, environmental, and social wellness.

#### A. Student Health and Wellness

General resources available regarding student health and wellness can be found here.

#### **B. Mental Health Resources**

Mental health support is available free of charge and additional information can be found <u>here</u>.

#### C. Parental/family leave

Parental leave policies are outlined in the MCW All Student Handbook which can be found <u>here</u>. Clear, timely communication with graduate school personnel (as outlined in the All Student Handbook) as well as with your PhD mentor and graduate program directors will help to maximize your wellbeing while maintaining expectations for degree completion.

- D. MicroMoms- this is a departmental group of faculty, staff and students who gather once a month over the lunch hour to connect over their shared experiences of balancing work/school and motherhood. All moms (expectant through empty nesters) are more than welcome. This is a casual group and attendance is entirely voluntary. If you wish to be added to the e-mail list for meeting invites, please connect with Michelle Riehle, <u>mriehle@mcw.edu</u>
- E. Student Connection Groups: MCW Graduate School Connection Groups: These are student-led spaces focused on specific groups of learners (e.g., Student Parent Group, LGBTQ+ Group, International Student Group). Students may email Allison Schneider at <u>allischneider@mcw.edu</u> for more information.
- **F. MCW Graduate School Career Center** MCW Graduate School Career Services offers a diverse array of services to help MCW graduate students and postdoctoral fellows explore and achieve their career goals. More information is available <u>here.</u>

#### G. Graduate Student Association

GSA provides a voice and fosters communication among the ~300 MCW graduate students. More information including involvement in GSA student committees is available <u>here</u>

#### H. MyIDP (Individualized Development Plan), Student Portfolio, and Biosketch An individualized development plan is a tool often used in industry and adopted by academia to help individuals define and pursue their career goals. MyIDP is a web-based career-planning tool designed for PhD students and postdocs in the sciences. MyIDP can be found here.

The student portfolio is a version of Curriculum Vitae (CV) that documents scholarly accomplishments and professional activities throughout Ph.D. training. While the student portfolio is optional, M&I students are highly encouraged to create and periodically update this document. In addition to promoting the sense of accomplishment, a CV is typically required by a majority of Ph.D. employers including potential post-doctoral advisors. Timely and detailed updates of all the educational and professional activities in the student portfolio will go a long way during the transition to a post Ph.D. career step. Student Portfolio form is provided within this handbook (see below).

Biosketch is another widely used tool and represents an abbreviated version of the CV with a specific focus on scholarly activities and honors. It is the biosketch and not the CV that is required for any predoctoral fellowship and other grant applications, particularly from NIH. M&I students are expected to have an up-to-date biosketch. Please contact Crystal James for the most recent NIH Biosketch form.

#### I. Grant and Budget Support

Writing graduate fellowships and other grants is an important part of your graduate training. In addition to developing your writing and grantsmanship skills, a successful predoctoral fellowship application offers an unbiased evaluation of your standing as compared to your peers nationwide and is a critical milestone to support your competition for the next career step.

Departmental administrative support is crucial for both grant submission and the spending and documenting of spending grant awards. Crystal James (crjames@mcw.edu) leads all processes associated with fellowship applications and award administration in Microbiology and Immunology department. Over the past years Crystal has developed a number of tools, including checklists, that facilitate fellowship application submission. **Please contact Crystal at least 45 days before the fellowship deadline** to assure that the application can be successfully submitted. Most of the fellowships (and all NIH applications) require a program statement that is individually crafted for each predoctoral applicant by the M&I directors. **Please contact both Michelle and Vera** <u>at least 45 days before the fellowship deadline</u>. If this timeline is not met, the directors and department grant specialist may not be able to complete the required steps and paperwork prior to the application deadline.

#### **Pre-award support**

Despite all the wonderful resources and support provided by Crystal, as a Principal Investigator on the fellowship application it is ultimately <u>your responsibility</u> to assure accuracy of all grant components, timely submission for the internal MCW review (Grants and Contract Office) and ensuring that your application is received by the granting agency (e.g. NIH) by the specified deadline. The administrative staff member responsible for pre-award support (Crystal James) will conduct an annual workshop for those submitting F31 applications. As a M&I PhD student, you will also participate in the grant writing course taught by Dr. Barbieri.

#### **Post-award Support**

When a grant is awarded you will receive administrative support to assure accurate, allowable spending within the budget allocated. Again, ultimately this is your responsibility, but administrative support will be provided and you will receive monthly updates on the available grant balance and any costs incurred.

#### J. Professional Development

Throughout your graduate career you will have many opportunities to engage in activities aimed at your professional development.

- learning to give presentations to a diversity of audiences including the layperson.
- engaging with bacteriologists, virologists and immunologists who visit campus to give seminars—each seminar speaker attends a trainee lunch.
- participating in journal clubs
- hosting a seminar speaker
- honing skills in professional communication
- presenting to a broad audience through GSA and other institutionally sponsored forums.

While participation is not required, investment in your professional development will be helpful throughout your career.

### Section 2. Training Expectations

#### A. Expectations of the student

Prior to PhD degree conferral you are expected to reach competitive skill levels in the following areas:

- Scientific presentation
- Scientific writing (manuscripts and grant proposals at a minimum)
- Critical and analytical thinking
- Evaluation and synthesis of relevant published research findings
- Leadership and ownership of your thesis research project
- Collegiality and teamwork
- Participation and contribution to the professional activities of your scientific community, both local and global

You are expected to engage and demonstrate intellectual curiosity within departmental courses, seminars, and scientific interactions within and outside the Microbiology and Immunology community. You are expected to be aware of course and exam requirements and to complete all necessary milestones and associated paperwork by specified deadlines for your entry program. Regardless of the entry program, once you are officially a Microbiology and Immunology student, you are expected to facilitate scheduling of bi-annual committee meetings and providing the necessary paperwork and updates before and after the meeting.

#### B. Expectations of the mentor and the thesis committee

By accepting the Ph.D. student into one's group, <u>the mentor</u> is expected to be fully committed to creating and upholding the training environment that will meet the individual student's specific career needs and facilitate a competitive transition to the next training/career step. As a part of this process, mentors will provide clear expectations and frequent feedback to student regarding progress towards degree and training completion. As specified in the skill set outlined in the student's expectations above, conferring of a PhD degree requires an individual PhD student maturing to the point of project ownership including idea generation, experimental design and troubleshooting, data collection, analysis, and data presentation.

By agreeing to become a part of the <u>student's thesis committee</u>, the faculty are expected to support the student in all general and unique aspects of their training and transition to the next step of their training/career. The faculty are expected to be strong student advocates in addition to providing their scientific expertise. The thesis committee members, mentor, and student are expected to participate in thesis committee meetings every 6 months as scheduled by the PhD student. Thesis committee meetings will include a written report authored by the student, signed by all committee members and submitted to Microbiology and Immunology program directors and responsible administrative staff.

#### C. Expectations of the program directors

The primary function of the program directors is to oversee activities and processes that support successful training of Ph.D. students in the Microbiology and Immunology program. The primary purpose of the program directors is to serve as student advocates. The program directors will also serve as liaisons between the trainees, Microbiology and Immunology faculty, and the Department Chair and facilitate involvement of all parties in major decisions regarding the Microbiology and Immunology training program.

#### Ver August 14 2023 Section 3. Training Milestones

#### A. Identification of a PhD Mentor (route of entry specific)

**IDP/NDP/MSTP** -- After completion of lab rotations, students who enter M&I via the IDP, the NDP, or the MSTP will have identified a dissertation mentor who has either a primary or secondary appointment in the Department of Microbiology and Immunology and is a faculty of the MCW Graduate School.

**M&I Department Admission program**- After completion of lab rotations in Microbiology and Immunology primary faculty laboratories, students who enter through the M&I Department Admission program will have identified a mentor who has a primary appointment in the M&I Department.

A list of primary M&I faculty can be found <u>here</u>. A list of secondary M&I faculty can be found <u>here</u>.

#### B. Engagement with your dissertation committee

In addition to your PhD mentor, your dissertation committee will provide mentoring, scientific guidance, and support throughout your graduate career. Your dissertation committee should be formed in close consultation with your PhD mentor and must be approved by the M&I graduate program directors, the Chair of M&I, and the Dean of the graduate school using the <u>Committee</u> <u>Approval form</u>. Meeting with your PhD thesis committee twice per year is a great opportunity to gather a group of scientists (including yourself) together to critically think, share ideas, approaches, and previous experiences. It is an opportunity to network, learn, teach and practice selling your science and the logic behind it. Rather than thinking of this as an onerous, check the box requirement, consider it as a part of your professional development portfolio and capitalize on the individuals engaged in your scientific training.

**IDP/NDP** – Your dissertation committee should be formed prior to the qualifying exam, it is highly recommended that the committee is formed by September 1st.

**MSTP-** Your dissertation committee should be formed by February 1 (Discovery) or July 1<sup>st</sup> (Fusion) of your GS1 year .

**M&I Department Admission students.** Your dissertation committee should be formed by June 1st of your first academic year in graduate school.

Your committee must consist of <u>5 or more members</u> each of whom has a PhD, MD or equivalent degree and <u>is a faculty of the MCW Graduate School</u>. In addition to the criteria below, the cultural, gender, and ethnic diversity of the committee should be raised to a high priority level.

The committee should include:

**Your mentor.** All M&I students have a mentor who is a primary or secondary faculty member within M&I. The mentor will serve as the chair your Dissertation Committee and will provide guidance when identifying other committee members.

# At least 2 members with an appointment in the Department of Microbiology and Immunology.

- One of these is your mentor who serves as the committee chairperson
- At least one of committee members must have primary appointment in M&I. If your mentor has a secondary appointment in M&I, you must recruit at least one more M&I faculty with a primary M&I appointment to your thesis committee.

#### At least 1 member who is not affiliated with M&I.

- Can be from any other MCW basic science or clinical department
- Can be from an outside institution

Any of the committee members (except the primary mentor) will agree to serve as a Wellness Advocate, as selected by the student. This individual will be responsible for documenting discussion of the mentor-mentee interactions at each thesis committee meeting and will be the point of contact between the student and the program directors, if needed (also see below in logistics).

It is the student's responsibility to meet with, discuss and invite faculty to serve on their dissertation committee, including selection of the Wellness Advocate. It is important that students carefully consider committee members both in terms of their scientific expertise as well as their role as students advocates. Students are encouraged to include committee members they feel comfortable talking to not only about scientific plans, but about future plans, work/life integration and to address issues with should they arise.

Changes to the dissertation committee can occur for various reasons and at any time of training. These changes must be documented by submitting a <u>Committee Change Approval Form</u> which has been approved by the PhD mentor, graduate program director(s) or department chair. Only the name(s) of the individual(s) removed or added needs to be provided. Once all signatures are obtained, the student must submit this form to the Graduate School of Biomedical Sciences and transmit a copy of this form to the M&I Graduate Program Directors and Program Administrator.

#### C. Expectations of Dissertation Committee Members:

- Mentor the student in course selection
- Participate in the Qualifying Examination
- Aid the student in addressing deficiencies noted in the student's education by the Qualifying Examination Committee
- Oversee the student's emerging dissertation research and consult in the preparation of the Dissertation Research Proposal
- Oversee the Dissertation Proposal defense
- Attend <u>two committee meetings per year</u> (one associated with a RIP presentation, if possible)

<u>It is the responsibility of the Dissertation Committee</u> to determine when the student has completed a sufficient body of original research to write a doctoral dissertation. The committee

will read and evaluate the dissertation and attend and evaluate the doctoral dissertation defense. The committee has the authority to recommend dismissal of a student who does not qualify for a PhD based on the committee's evaluation of all components of the student's performance in the M&I graduate program.

#### Logistics of the committee meeting

It is the directors' strong belief that frequent interaction between the students and thesis committee faculty are key for the student's success. Live (as opposed to asynchronous) committee meetings <u>have to occur every 6 months regardless of the training stage</u>. A student is allowed a 4 week extension with prior approval of the M&I Directors. <u>If the meeting does not occur during any six month period without extenuating circumstances, the Ph.D student will be assigned an "Unsatisfactory" grade by the M&I directors and will be placed on probation</u>

While the focus of the committee meeting will be on scientific progress and plans for the future, <u>at the beginning</u> of each committee meeting the student will be asked to leave the room which will give time for the mentor to privately raise any concerns, issues or other items they would like feedback on from the thesis committee. <u>At the end of each committee meeting</u>, the mentor will be asked to leave the room and the student will be asked to discuss the mentor/mentee relationship with the dissertation committee and raise concerns/solicit feedback, if necessary. Each committee report should include a statement that the mentor/mentee relationship was discussed and it will be thesis committee's decision (minus the mentor) if issues raised need to be brought to the attention of the program directors by the designated Wellness Advocate.

# D. Dissertation Committee Meeting Summary Document (attached at the end of this student handbook).

The student is responsible for completion of a committee report which is signed by all committee members and delivered to the M&I program within 2 weeks of the committee meeting. The meeting summary should include a statement that the mentee-mentor interactions were discussed. The Summary Document should be submitted to either M&I director for the signature and the administrative support staff (Mrs. Coyhis). Either paper and/or electronic version is acceptable.

#### Interactions with the program directors.

The directors will hold several group meetings throughout the academic year with the entire student body of the M&I program. These group meetings will be a venue for students to provide feedback about their experience, mentor their more junior colleagues in the progression through the program, and introduce new initiatives/interact with the director(s).

In addition to committee meetings, Microbiology and Immunology Graduate Program students are welcome to bring issues to the program directors and solicit an individual confidential meeting, as needed. Whether individual meetings with the directors have occurred or not, biannually, each student will be sent a confidential email solicitation asking if they would like to meet with a program director or not. These meetings are entirely optional and anything discussed would be kept confidential, with access to the information limited to the program directors and a single administrative coordinator, unless explicitly authorized by the student. If a student opts in, a meeting will be scheduled at the earliest possible convenience. If a student opts out, they will be contacted 6 months later.

#### E. Credit Hour Requirements and Opportunities to Earn Credits

Training within M&I involves didactic courses, laboratory research, seminars, and other venues to develop scientific reasoning skills. According to the MCW Graduate School, a minimum of 60 total credit hours accumulated over the Ph.D. training are required for graduation. Of these total credit hours required for graduation, at least 9 credit hours should be fulfilled by courses approved by the directors of the M&I graduate program. Selection of courses that fulfill the 9 credit hour didactic requirement should be done in close consultation with the PhD mentor and the Dissertation Committee. *The only exception is the MSTP track* that has its own coursework requirement that is determined by the MSTP program.

Further, MCW Graduate school mandates that in order to maintain the required full-time status, students must register for a total of 9 credit hours in both fall and spring semesters and 6 credit hours in the summer. These credit hours are filled by a combination of M&I approved coursework and Readings and Research up to 9 or 6 total credit hours, depending on the semester.

Information regarding logistics and deadlines for course registration can be found at the registrar's <u>website</u>. It is the student's responsibility to register for classes by the Graduate School specified deadlines to maintain their full-time status in the program. Failure to register for the full-time credit hour load by the MCW Graduate School deadline results in the dismissal from the program, unless an official leave of absence has been approved by the MCW Graduate School and M&I Graduate Program.

#### F. Course Summary

Course Requirements:

1. IDP/NDP students who enter the M&I Graduate Program are required to take:

16270	Integrated Microbiology and Immunology – 3cr (M&I approved course, coupts towards 9 credits)
16-292	Writing a Scientific Paper– 1cr (IDP course, does NOT count toward 9 credits)
16-293	Writing an Individual Fellowship -2cr (IDP course, does NOT count toward 9 credits)
25-300	<i>Microbiology and Molecular Genetics Seminar</i> – 1cr (M&I approved course, counts towards 9 credits)
10-222B	Ethics and Integrity in Science (no credit hours)
10-444A	Research Ethics Discussion (no credit hours) Additional coursework totaling at least five credits (see below)

- **2. MSTP** students who enter the M&I Graduate Program after successful completion of the first two years of the Medical School curricula are <u>required</u> to take:
  - 16-242 Techniques in Molecular and Cell Biology 2cr

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16-217	Foundations of Biomedical Science III – 3cr
25-300	Microbiology and Molecular Genetics Seminar 1cr (does NOT
	count towards 6 credits in the MSTP track)
10-222B	Ethics and Integrity in Science
10-444A	Research Ethics Discussion
25-295	Readings and Research
	Additional coursework totaling at least one credit (see below)

**3. M&I Department Admission students.** Students will take a combination of courses that are best suited for their research interest and their advanced educational/research background in microbiology and immunology. The selection of particular courses is guided by the requirements below, M&I Department Faculty committee (represented by an Immunology, Virology, and Bacteriology faculty), and, ultimately, thesis research mentor once the thesis laboratory is identified. In addition to the list of M&I Graduate Program approved courses (see below), M&I Department Admission students may take and receive M&I advanced courses credit for the individual Foundations of Biomedical Science courses offered through the IDP track. Participation in select FBS courses is at the discretion of the M&I Department Faculty committee and/or thesis mentor, if such courses are deemed to be beneficial for the student's training.

#### Required courses for the M&I Department Admission students:

16-242	Techniques in Molecular and Cell Biology – 2cr (counts toward 9 credits)
16-293	<i>Writing an Individual Fellowship</i> -2cr ( <b>does NOT count</b> toward 9 credits)
16270	Integrated Microbiology and Immunology – 3cr maximum (M&I approved course, counts towards 9 credits). For this course, the students will take appropriate sections that complement their advanced prior training (i.e. students with prior bacteriology training will take Immunology and Virology sections of the course, etc)
25-300	<i>Microbiology and Molecular Genetics Seminar</i> – 1cr (M&I approved course, counts towards 9 credits)
10-222B	Ethics and Integrity in Science (no credit hours)
10-444A	Research Ethics Discussion (no credit hours)

M&I Graduate program

approved courses:

25-230	Current Topics in Microbiology and Immunology 3cr
25-251	Advanced Molecular Genetics 3cr
25-259	Mucosal Immunity 1cr
25-260	Mucosal Pathogenesis 1cr
25-261	Bacterial Toxin-Mucosal Cell Interactions 1cr
25-262	Tumor Immunology 1cr
25-263	Signaling in the Immune System 1cr
25-264	Developmental Immunology 1cr
25-265	Immunological Tolerance 1cr

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25-266	Clinical Immunology 1cr
25-269	Advanced Bacterial Physiology 1cr
25-271	Membranes and Organelles 1cr
25-298	Classical Papers in Microbiology and Immunology 1cr
25-280	Immunology Journal Club 1cr
25-289	Career Internships in the Biomedical Sciences Syllabus 0 cr
One Health pending	approval, to start Fall 2024 (Dr. Coburn is the course director)

Students can take advanced courses offered by other MCW departments to acquire unique knowledge base necessary for their project. In order for these courses to count towards the M&I 9 credit hour coursework requirement the student must obtain approval of the non-M&I course from the program directors and mentor prior to registering for such course. All graduate students are expected to maintain a cumulative grade point average  $\geq$  3.0 and a Good or better evaluation in Readings and Research (25-295) (also see below).

# Section 4. Evaluation of Students following successful fulfillment of required M&I specific courses and advancement to candidacy.

#### A. Responsible Conduct in Research (RCR)

According to NIH, "The scientific community and the community at large rightly expect adherence to exemplary standards of intellectual honesty in the formation, conduct and reporting of scientific research". To reach this goal, students are required to participate in RCR sessions that occur twice per year. These workshops provide a total of 4 hours of refresher RCR training per year to help trainees remain eligible for training grants and to gain greater appreciation of the issues surrounding responsible conduct of research. The RCR sessions are required for NIH predoctoral fellowship applications.

#### **B. Dissertation Committee Summary Document**

As specified above, following a committee meeting a "Dissertation Committee Meeting Summary Form" should be completed, signed by all committee members, including the statement from the Wellness Advocate, and given to the director(s) and the department administrative personnel (Mrs. Coyhis) within 2 weeks of the committee meeting. The signed form can be submitted in paper and/or electronic format.

#### C. Readings and Research

To quality as a full-time student, graduate students should register for Readings and Research (25-295) each semester until they successfully defend their dissertation research. Performance in *Readings and Research* is evaluated by the primary mentor and is assigned a grade of E (excellent), G (good), S (substandard) and U (unsatisfactory). Note S means substandard not satisfactory. Due to the varying nature of the research experience across the different labs in the department, fixed criteria for grading students in Readings and Research cannot be established. Mentors will consider the following skill development areas when assigning grades:

- Independence and continuing progress in research projects
- Tractable progression towards graduation
- Scientific writing (manuscripts and grant proposals)

- Scientific presentation
- Evaluation and synthesis of published research findings
- Collegiality and teamwork

<u>A grade of S (substandard)</u> in Readings and Research requires immediate committee meeting evaluating the deficiencies that led to the substandard grade and a written plan of action to remedy these deficiencies developed by the student, mentor, and the thesis committee. The grade of S along with the remediation plan is communicated to the program directors.

(U)nsatisfactory evaluation in Readings and Research is associated with placement of the student on probation. Two "U" grades in any two semesters trigger recommendation for student's dismissal from the M&I Graduate Program and MCW Graduate School. <u>Prior to assigning the Unsatisfactory grade</u>, the mentor will call a committee meeting where they will consult with members of the dissertation committee and the M&I program directors if an evaluation of Unsatisfactory in Readings and Research is contemplated. If there is consensus that the student performance is evaluated as Unsatisfactory, a letter explaining the basis for the grade and detailed corrective measures and strategies shall be submitted to the program directors and to the Dean of the Graduate School in Biomedical Sciences.

#### D. Research in Progress (RIP).

Research in Progress is an annual activity that is a requirement of the M&I program. During RIP students will be given 30 minutes (first and second year presentations) or 60 minutes (third year and on) to present the progress made within their thesis project(s). Ideally, RIPs should be temporally coupled to one of the two semiannual committee meetings, although this is not a strict requirement.

Attending RIPs and engaging with the speaker's presentation is a required professional activity of the M&I program. All M&I students are highly encouraged to attend at least 75% of the RIPs in person. Zoom links will be reserved for committee members that are not physically on campus at the time of presentation and will not be available publicly.

Dates of RIP presentations will be assigned by the program directors. Students who have gotten their mentor's and committee's permission to defend Ph.D. thesis in the next 12 months are not required to deliver RIP, <u>as long as the student's mentor communicates</u> the upcoming Ph.D. defense to the M&I program directors. In the absence of direct communication from the mentor to the directors, the student will be added to the RIP schedule at the beginning of the academic year.

#### Section 5. Checkpoint Exam(s)

Please see the timeline that corresponds to your track at the end of the handbook to determine the deadline for your exams.

#### A. Qualifying Examination.

All doctoral students in the Graduate School of Biomedical Sciences must successfully complete a qualifying examination regardless of their route of entry. In addition to the qualifying exam, M&I program requires successful completion of the dissertation proposal defense in order to advance to candidacy.

<u>MSTP track and M&I Department Admission students</u> have a single exam that combines the qualifying exam and the dissertation proposal defense into a single entity. <u>IDP and NDP track</u> <u>M&I students</u> have one of two choices. First, they can take qualifying exam and dissertation proposal defense as two separate entities, within 6-7 months of each other, following the timelines for their specific track. In a second option that is similar to that required for the MSTP student, the qualifying exam and the dissertation proposal defense can be combined into a single entity and *taken at a time when the qualifying exam is usually administered for their track*.

The choice of option 1 vs. 2 for the IDP and NDP track M&I students is determined by the collaborative decision of the student and the advisor and is limited to students with a previous Master's degree or with extensive (> 2 years) prior research experience *in the same or a highly related field*. If the student, in collaboration with PhD mentor, determines they are ready to combine the qualifying exam with the dissertation proposal defense, *student should inform and obtain permission from every member of their Dissertation Committee and M&I program directors at a minimum of two weeks before the exam/defense date.* 

#### 1. Qualifying exam.

Qualifying exam is a formal evaluation of the foundational knowledge and scientific approaches acquired during the first 11-16 months (depending on the track) of the Ph.D. education and from prior research and didactic experience. The exam will consist of a written NIH F31-style grant proposal focused on the student's research, an oral presentation of the written proposal, and an extensive oral examination that assesses student's broad biomedical sciences foundational knowledge. Foundational knowledge consists of curricular material presented in the first year of Ph.D. training in addition to student-led analysis of published literature directly applicable to their research project. The qualifying exam will be overseen by the student's Dissertation Committee. For IDP track students, additional and temporary member of the qualifying exam committee will include a representative from the IDP Executive Evaluation Committee (EEC). For the NDP track, an NDP representation is added to the exam committee. For the IDP and NDP tracks, the EEC or NDP representative, respectively, will chair the qualifying examination. For other tracks, any committee member other than the student's mentor may chair the committee, as long as they hold faculty appointment in the Microbiology and Immunology department. The student's dissertation mentor will participate in the oral exam, but will not vote on the outcome of the qualifying exam.

A) <u>Written proposal</u>. The proposal should be based on the student's research and should loosely follow the format for the NIH F30/F31 grant (1 page for specific aims, up to 3 pages for introduction, preliminary data, and research model to be tested, and up to 3 pages for the experimental approaches, separated into aims; bibliography does not count within the page limit). The qualifying exam written proposal CANNOT be reused for the thesis defense written proposal, as much higher evaluation standards are applied for the latter exam (unless the two exams are combined, in which case the highest evaluation criteria for the written

proposal applies, see dissertation proposal guidelines below). The proposal is expected to be designed and written by the student and guided by the mentor.

- B) <u>Oral presentation</u>. The written proposal should be organized as an oral presentation that includes background information supporting the proposed studies, preliminary data, significance and innovation, working model and hypothesis to be tested, experimental design, and expected and alternative outcomes. For the alternative outcomes, both biological (results opposite of those hypothesized) and technical (additional experimental design to probe the same question) should be presented. <u>Use of fabricated data that was not derived from the actual experiment or publication as an expected outcome constitutes an automatic fail of the qualifying exam.</u> Oral presentation has to be limited to 20 minutes uninterrupted. It is at the discretion of each committee whether the interruptions to the oral presentation are made.
- C) Oral examination. The main objective of the in-person exam is to define the breadth of the foundational biomedical science knowledge and the depth of the student's knowledge of the field(s) directly relevant to their own research. The foundational knowledge is defined by that acquired through the formal classwork during the initial stages of the Ph.D program (along with the relevant medical school classwork for the MSTP track). The field-specific knowledge is expected to result from student-driven synthesis of published literature directly relevant to their field of study.

There are three possible outcomes of the qualifying examination: (1) Unconditional Pass, (2) Conditional Pass, and (3) Fail. Students receiving a conditional pass may be required to complete some remedial work, which should be completed to committee's satisfaction within the time frame set by the committee, but no longer than 4 weeks following the exam. If the performance of the student is deemed unsatisfactory (i.e. the outcome is a fail), then the student will be required to redo or retake one or more components of the qualifying examination within three months of the original exam date. The <u>Unsatisfactory Examination Evaluation Form</u> must also be completed. The particular deficiencies and mechanisms to remedy those are at the discretion of the exam committee. If the second examination is not passed, the student will be ineligible to continue in the program.

<u>It is the committee chair's responsibility</u> to make the final decision (based on evaluations from all of the committee members) regarding the student's level of performance. <u>It is the student's responsibility</u> to ensure that that the appropriate <u>forms</u> in the paper format are provided for the committee at the time of exam. <u>It is the combined chair's and student's responsibility</u> to complete and submit the paperwork required to document the student's performance to MCW Graduate School and the M&I program.

#### B. Dissertation proposal defense

The dissertation proposal defense is a Ph.D. candidacy exam that aims to determine whether the student has developed sufficient skills as a scientist to successfully complete requirements for a Ph.D degree within the next 2-3 years. The most important skills to be evaluated include critical thinking, literature analysis and synthesis, ability to identify a biologically significant knowledge gap, ability to design and execute hypothesis-driven research (i.e. generation of working models, hypotheses, and experiments to directly test the above), ability to critically evaluate own data, ability to discuss expected and biologically

alternative results, and scientific presentation skills, both written and oral. Thus, the exam consists of a written (dissertation proposal) and an oral (proposal defense) portions.

The deadline to take the dissertation proposal defense as a separate exam is defined in the timelines for each track. <u>It is the student's responsibility to schedule the dissertation</u> <u>proposal defense prior to the deadline</u>. Any extension to the deadline has to be approved by the M&I Directors <u>prior to the deadline</u>. Students who fail to meet the dissertation proposal defense deadline for their track without approved extenuating circumstances will receive an Unsatisfactory (U) for Readings in Research for that semester. Please be aware that a "U" in Readings and Research automatically places a student on probation, and two "U" grades are grounds for dismissal from the program.

**a.** Written dissertation proposal. The Dissertation Research Proposal should strictly follow NIH guidelines for F30/31 proposal applications, with the development aided by the *Writing an Individual Fellowship* course (16-293). The scope of the proposed studies must be realistic and feasible and take into consideration the amount of experimental work that can be reasonably performed by a single individual over the span of 2-3 years.

The entire proposal document should be formatted as follows: 0.5-inch margins, all text 11-point Arial, single-spaced, no more than 6 lines per inch and no more than 15 characters per inch. Figure legends may utilize 9-point Arial. Figures and tables must be included within the body of sections A-D and all presented data and models count towards the page limit established below. Literature cited has no page limitations.

**1. Specific Aims (1 page).** In this section you will define your field of study, identify the knowledge gap that your studies will address and present your working model and hypothesis. A <u>concise</u> set of specific aims (not more than 3) will define sub-hypotheses and the key components of the experimental strategy that test the working model. A cartoon of the working model may be included here. The section should conclude with a short paragraph describing deliverables of your proposed research, i.e. how the completion of the proposed studies will advance the research field and address the existing knowledge gap.

#### 2. Research Strategy (6 pages)

**i. Background and Significance.** This section should succinctly present the background information that is <u>directly relevant</u> to the tested working model and proposed studies. The knowledge gap addressed by the proposal and significance and innovation of the proposed studies, both conceptual and technical, will be defined here.

**ii. Preliminary studies, working model, and research plan overview**. This section should focus on the preliminary data that support the proposed studies, expanded description of the working model and the rationale for the questions addressed in this proposal, and a big picture overview of the proposed research studies. Preliminary data are expected to be mostly generated by the student, particularly if the dissertation proposal defense is taken as a separate exam.

**iii. Approach/Specific Aims.** Here the student will remind their reviewers about the rationale for performing the proposed experiments and provide experimental design for the proposed studies, including controls. Rigor and reproducibility of the proposed experimental design should be addressed along with the proposed statistical analyses. Importantly, the approach section should include thorough and detailed discussion of the following aspects:

a) expected results, including how these accommodate the proposed working model and immediate follow-up studies that may be performed; b) alternative biological outcomes (as opposed to technical outcomes described subsequently) and how the unexpected results will be used to reevaluate the working model and design relevant follow-up experiments; c) alternative technical approaches, in case the feasibility of the proposed experimental system becomes inadequate.

- **b.** Literature Cited (no page limit). This section is <u>not</u> included in the six-page limit and should list all published information referred to in the preceding sections. The format shall follow established and published guidelines for a journal specific to the field of study.
- c. Preparation of the dissertation proposal. The Dissertation Research Proposal should be an <u>original document</u> that is written by the student and that represents the original thoughts and ideas of the student. Advice from the mentor, members of the committee, or other faculty is highly encouraged and should be sought by the student to assist in preparation of the proposal. The student should not copy components from the mentor's grant proposal, the use of any artificial intelligence-generated writing is prohibited for the purposes of this exam. If citation or art from published journal articles, reviews, textbooks, or Internet sources is used, this must be acknowledged and the published content clearly marked. Primary mentor and other faculty reviewers of the initial drafts may suggest changes that would improve the content of the proposal but should not edit or write any section of the proposal. The document should be prepared with the intent of submission to NIH for predoctoral funding.
- d. Evaluation and defense of the dissertation proposal. During the oral part of the exam the student will present an overview of the dissertation proposal in a format that will take at most 20 minutes of uninterrupted presentation time. Please see the rule regarding the fabrication of data in the qualifying exam that also applies here. The rest of the oral exam will be spent in a study section-like environment, where the student will be expected to demonstrate ownership of their project along with extensive knowledge and synthesis of relevant published literature.
- e. Advancement to Candidacy. Acceptance of the dissertation research proposal is an MCW Graduate School requirement for advancement to Candidacy for the Ph.D. degree. The dissertation committee will identify any potential problems or weaknesses with the written dissertation proposal or the oral portion of the exam. It is the responsibility of the committee to determine whether the student has the required skills to complete the dissertation research required for Ph.D. degree conferral. Following are the outcomes of the dissertation proposal defense:

1. Approve the Dissertation Research Proposal. Committee members and the mentor will indicate their acceptance of the final research proposal by completing and signing the <u>Thesis</u> <u>Proposal Approval Form</u>. It is the responsibility of the student to provide a complete set of forms to the committee at the initiation of the exam. These forms, and a copy of the research proposal will be submitted to the directors of the M&I Graduate program and the M&I Chair for approval and forwarded to the Dean of the Graduate School of Biomedical Sciences for final approval. Copies of the completed and signed documents should be forwarded to Ms. Coyhis. Upon

approval by the Graduate School of Biomedical Sciences, a student shall be admitted to Candidacy for the PhD degree.

2. Call for revision of the proposal. The committee will formulate a series of steps that will provide the student with an opportunity to revise the Dissertation Research Proposal, to discuss the revised version with the committee, and to be reevaluated by the committee within two (2) months of the original exam date.

3. Recommend for a MS degree. This occurs if the Directors of the M&I Graduate Program, the Department Chair, and Dean of the Graduate School decide that, based on combination of concerns related to the preparation and presentation of the dissertation proposal, the qualifying examination, academic record, and research performance, the student lacks the expected skills required for completion of the dissertation research and therefore is not qualified to be admitted to candidacy for the PhD degree. However, the student's skillset may be deemed acceptable to complete the requirements for a MS degree. Students advised to pursue the MS degree must meet the requirements for that degree, which includes completion of a research project and preparation of a thesis that is approved by the Thesis committee. Committee members will indicate that the student's performance on the Qualifying Examination was "Unsatisfactory" on the Qualifying-Examination-Report---PhD Form. The student's mentor will also complete the Unsatisfactory-Examination-Evaluation-Form and indicate that it was consensus of the Dissertation Committee that the student's performance was "Failed". These forms, and a copy of the completed research proposal / outline, will be submitted to the Directors of the M&I Graduate program and the Department Chair for approval and forwarded to the Dean of the Graduate School of Biomedical Sciences for final approval. Copies of the completed and signed documents should be forwarded to the Directors and Administrator of the MI Graduate Program for their records.

4. Recommend dismissal from the program. This occurs if the Director of the M&I Program, the Department Chair, and Dean of the Graduate School that, based on concerns with the preparation and presentation of the Dissertation Proposal, coupled with problems on the qualifying examination, academic record, and/or concerns of the mentor, the student lacks one or more skills required for completion of a graduate degree from the Department of Microbiology and Immunology. Under these circumstances, the committee will recommend that the student be dismissed from the graduate program. Students recommended for dismissal have the right to appeal the decision as described in the Graduate School Handbook.

#### C. Dissertation Defense

Ph.D. Thesis of the Microbiology and Immunology Graduate Program must present evidence of distinctive achievement in a scientific field of interest. First author publication(s) based on the student's research work, while not required, are highly encouraged, as such publications ensure a greater competitiveness of the student in their pursuit of the next step of their career/training. Thesis organization and formatting must follow all specific requirements dictated by the MCW Graduate School. A degree completion checklist can be found <u>here</u>. The Graduate School offers several approved thesis outlines, the choice of the particular one is dictated by the student and mentor. If first author publications have been generated during the student's Ph.D. training or are in the process of being submitted/revised, the student is encouraged to choose a

Graduate School-approved thesis formatting option that would facilitate direct transfer of published work into thesis chapters with minimal formatting necessary. Any collaborative components of the research (data from studies not performed by the student) must be identified and the contribution of others clearly delineated. Upon completion, the written Dissertation will be distributed to the members of the Dissertation Committee <u>two weeks prior to the Dissertation</u> <u>Defense</u>.

The Dissertation defense consists of a public defense in the form of a seminar, at the end of which the candidate entertains questions from the entire audience, including virtual attendees, if applicable. The student has an option to include virtual attendees in their public defense. The choice to accommodate both physical and virtual attendees has to be communicated to the Graduate School and Ms. Coyhis as soon as possible to ensure that the properly equipped room is reserved for the public defense. Following the public defense, the candidate will undergo private defense with the Dissertation Committee that will constitute the final checkpoint to ensure that the expected skills have been appropriately developed by the candidate. Upon a satisfactory defense and in accordance with the Graduate School, final copies of the dissertation, including any changes required by the Committee, must be submitted to the Dean of the Graduate School within two (2) weeks following the defense. The degree application will then be signed. Information on Application for Graduation and Degree Completion Deadlines can be found here. The Application-for-Graduation-Program-Approval.pdf (mcw.edu) form should be completed after a student applies for graduation and is submitted with Program Director approval to gradcompletion@mcw.edu prior to the beginning of the anticipated graduation term.

#### Ver August 14 2023 **The Appendix**

**a.1 Master's option other than an outcome of dissertation proposal defense**. Admission to the M&I Graduate Program demonstrates a student's commitment to complete the requirements for the Ph.D. degree. In rare circumstances, unforeseen personal and professional issues may trigger a change from the Ph.D. degree program to the M.S. degree program, a change that should be discussed with the student's mentor, thesis committee, and M&I program directors prior to any change in degree program. If a change in degree program is deemed appropriate by all parties, the student will complete a Request for Program Reassignment form. The form is available by request by e-mailing gradschool@mcw.edu. As the Master's degree has a committee requirement of 3 members, Committee-Approval form or a Committee-Change-Approval should also be completed. This 3 member committee should include the M.S. mentor, a primary faculty member in Microbiology and Immunology and a 3<sup>rd</sup> committee member who can be from within M&I, from another MCW department or from an outside institution. All committee members must hold a terminal degree in their field.

#### a.2 Signing of forms by Program Directors.

Forms that call for the program director's signature only need to be signed by one of the directors.

For non-confidential reports (i.e. travel award applications, committee approvals, etc), please leave your form with Mrs. Coyhis in the dedicated folder and it will be signed within a week of placement.

Confidential forms constitute any committee or exam report. Any other forms with the information that is deemed sensitive by the student are automatically considered confidential. All confidential forms are signed during the directors' office hours (see below), the directors will not be available to sign documents outside of office hours. Please make sure that forms with time sensitive deadlines are completed well ahead of the deadline, procrastination in getting the form ready for signatures does not constitute directors' emergency. Please send the signing director your intent to obtain their signature during the upcoming office hour. If no communication about the intent to obtain signature is received, the director's office hours are not available for that week.

<u>Office hours:</u> Monday, 8-9 am (Dr. Riehle) Friday 4-5 pm (Dr .Tarakanova)

## IDP / NDP Qualifying Exam / Dissertation Defense Timeline Microbiology and Immunology



## MSTP Qualifying Exam / Dissertation Defense Timeline Discovery Microbiology and Immunology

June 30, GS1

Aug 8, Nov 8, Apr 8 - GS2



Revised Proposal (if needed):

Submit F31 (if desired)

### Ph.D. Students coming from the IDP/NDP track timeline.

The students have to address requirements of either feeder program and the M&I graduate program until January of their second year in the Ph.D. program when the student becomes exclusively a part of the M&I graduate program.

## <u>Transition period: February of the first year to December of the second year in the Ph.D.</u> <u>program</u> (dual citizenship, for specific deadlines refer to the IDP/NDP students' handbook)

1 Committee assembled (by September 1st) Committee-Approval Form

- 2 Qualifying exam summaries submitted (early September)
- 3. Qualifying exam written proposal due (early November)

4 Oral qualifying exam (post-Thanksgiving to mid December) <u>Qualifying-Examination-Report</u> Form

4a If qualifying exam is combined with the thesis proposal exam, in addition to the qualifying exam IDP forms above also use MCW Graduate School <u>Dissertation-or-</u> <u>Thesis-Proposal-Approval Form</u> for the advancement to candidacy

#### January -June, second year of the Ph.D. program

Congratulations, you are now officially and exclusively a part of M&I graduate program

# If outcome of #4 is either a complete pass or a conditional pass that is addressed before January of the second Ph.D. year:

5a. Thesis proposal defense (written and oral parts have to be completed by June 15 of the second Ph.D year), retake, if necessary has to take place before September 30<sup>th</sup> of the third Ph.D year.

#### If 4a was executed successfully (qualifying exam plus thesis defense combination):

5b Conduct a thesis committee meeting before June 30<sup>th</sup> of the second Ph.D. year. *Communicate the date of your scheduled committee meeting to Mrs. Coyhis as soon as the committee meeting is scheduled*. Once the meeting occurs, completed Committee Meeting form (see below in this document) for this and every subsequent committee meeting has to be submitted to Mrs. Coyhis within two weeks of the meeting taking place.

If #4 or # 4a outcome is a Fail, please see guidelines in the student handbook for subsequent actions.

#### Third and subsequent years of the Ph.D. program:

6. Committee meetings have to occur every 6 months regardless of the training stage. A student is allowed a 4 week extension and only with approval of the M&I Directors. If the meeting does not occur within any six months without extenuating circumstances, the Ph.D student will be assigned an "Substandard" grade by the M&I directors.

#### Graduation prep:

7. For the last semester of your Ph.D. register for the Dissertation Research. <u>Registration for this course has to be approved by the mentor and the committee</u>, as this course can only be taken once and only during the semester when the actual defense takes place. Per MCW Graduate School rules, Ph.D. defense cannot occur earlier than <u>18 months after successful defense of the thesis proposal.</u>

8. Obtain the graduation checklist from the MCW graduate school and ensure all the checkpoints are addressed or will be addressed prior to the defense.

9. Schedule your thesis defense date. The date has to be approved by a) your mentor; b) your entire thesis committee; c) the MCW Graduate School; d) Mrs Coyhis who will ensure that your thesis does not conflict with other events in the department/M&I program to ensure optimal attendance. Work with the MCW Graduate School office to identify the location for both public and private portions of the defense (these locations are typically different). If a virtual attendance option is chosen in addition to in-person attendance for the public portion of defense, it is the student's responsibility to notify the Graduate School and Mrs. Coyhis ASAP as only certain locations on campus can effectively accommodate this arrangement and will need to be reserved. Public and private defenses happen consecutively on the same day, please allow a total of ~ 5 hours for the public and private portion (~1.5 hours for public and 3.5 hours for private).

10. A complete draft of your thesis must be submitted to the thesis committee <u>two weeks before</u> <u>the scheduled defense</u>. Follow the Ph.D. thesis guidelines provided by the MCW graduate school.

11. Ensure that you deliver the <u>Oral-Defense-Completion--Degree-Recommendation Form</u> and the PhD Signature Page available <u>here</u> to your committee for the private part of the thesis defense.

12. Follow the MCW Graduate school deadlines for submission of the final thesis version and signed forms.

#### Ver August 14 2023 Ph.D. Students coming from the MSTP track timeline.

The students have to address requirements of both MSTP and the M&I graduate program throughout their entire Ph.D. training. Affiliation with the M&I program starts when the student initiates full time research in their chosen thesis lab following the STEP1 exam.

1. Thesis committee assembled within 6 months of joining the lab (by February 1st for Discovery, July 1<sup>st</sup> for Fusion curriculum) <u>Committee-Approval form</u>

2. Qualifying/thesis proposal exam – to occur within the first 10 months of joining the lab (by May 1<sup>st</sup> for Discovery, by October 1<sup>st</sup> of Fusion curriculum) using <u>Qualifying-Examination-Report</u> Form. And the <u>Dissertation-or-Thesis-Proposal-Approval Form</u>. Written portion of the exam due to the thesis committee one week before the exam.

3. Committee meetings have to occur every 6 months regardless of the training stage. A student is allowed a 4 weeks extension and only with approval of the M&I Directors. If the meeting does not occur within any six months without extenuating circumstances, the student will be assigned a "Substandard" grade by the M&I directors.

4. For the last semester of your Ph.D. register for the Dissertation Research. <u>Registration for</u> this course has to be approved by the mentor and the committee, as this course can only be taken once. Per MCW Graduate School rules, Ph.D. defense cannot occur earlier than <u>18</u> months after successful defense of the thesis proposal.

5. Obtain the graduation checklist from the MCW graduate school and ensure all the checkpoints are addressed or will be addressed prior to the defense.

6. Schedule your thesis defense date. The date has to be approved by a) your mentor; b) your entire thesis committee; c) the MCW Graduate School; d) Ms Toyhis who will ensure that your thesis does not conflict with other events in the department/M&I program to ensure optimal attendance. Work with the MCW Graduate School office to identify the location for both public and private portions of the defense (these locations do not have to be the same). Public and private defense happen consecutively on the same day, please allow a total of ~ 5 hours for the public and private portion.

7. A complete draft of your thesis has to be submitted to the thesis committee <u>two weeks before</u> <u>the scheduled defense</u>. Follow the Ph.D. thesis guidelines provided by the MCW graduate school.

8. Ensure that you deliver the <u>Oral-Defense-Completion--Degree-Recommendation Form</u> and the PhD Signature Page available <u>here</u> to your committee for the private part of the thesis defense.

9. Follow the MCW Graduate school deadlines for submission of the final thesis version and signed forms. Follow the MSTP guidelines for transition to clinical training

#### Ph.D. Students admitted by the M&I Department timeline.

1. Incoming students must contact the M&I Department Faculty Committee and receive advice for the selection of Fall courses (first year of graduate school), with the course registration completed by June 30<sup>th</sup>.

2. Over the first Fall semester, students undergo 3 6-week rotations in laboratories of M&I primary faculty. The faculty hosting the rotations are identified by the student and, once confirmed, the choice of rotation laboratory is communicated to the M&I directors for each rotation. At the end of each rotation the student must produce a rotation report, in collaboration with the rotation mentor, and submit this report to the directors and Mrs. Coyhis.

3. The choice of the thesis laboratory must be communicated to the M&I directors by December 20<sup>th</sup>, with January 1<sup>st</sup> as the official start date for the thesis research. A fourth 6-week rotation, if necessary can take place starting January 1<sup>st</sup>.

4. Committee must be assembled by June 1<sup>st</sup> (end of first year of graduate school) <u>Committee-Approval Form</u>

5. First committee meeting must take place by September 15<sup>th</sup>. At this time the student will present completed specific aims page and general outline of thesis proposal to the committee. Please use the Dissertation Committee Meeting form (below in this document) for this meeting.

 6. The combined qualifying plus thesis proposal exam must take place by October 31<sup>st</sup>. Please present both forms to the committee: <u>Qualifying-Examination-Report Form</u> <u>Dissertation-or-Thesis-Proposal-Approval Form</u>

# If outcome of #6 is either a complete pass or a call for revised proposal that is addressed before January 1<sup>st</sup> of the second Ph.D. year:

7. Conduct a thesis committee meeting before April 30<sup>th</sup> of the second Ph.D. year. *Communicate the date of your scheduled committee meeting to Mrs. Coyhis as soon as the committee meeting is scheduled.* Once the meeting occurs, completed Committee Meeting form (see below in this document) for this and every subsequent committee meeting has to be submitted to Mrs. Coyhis within two weeks of the meeting taking place.

#### Subsequent years of the Ph.D. program:

8. Committee meetings have to occur every 6 months regardless of the training stage. A student is allowed a 4 week extension and only with approval of the M&I Directors. If the meeting does not occur within any six months without extenuating circumstances, the Ph.D student will be assigned an "Substandard" grade by the M&I directors.

#### Graduation prep:

9. For the last semester of your Ph.D. register for the Dissertation Research. <u>Registration for</u> this course has to be approved by the mentor and the committee, as this course can only be taken once and only during the semester when the actual defense takes place. Per MCW

Ver August 14 2023 Graduate School rules, Ph.D. defense cannot occur earlier than <u>18 months after successful</u> <u>defense of the thesis proposal.</u>

10. Obtain the graduation checklist from the MCW graduate school and ensure all the checkpoints are addressed or will be addressed prior to the defense.

11. Schedule your thesis defense date. The date has to be approved by a) your mentor; b) your entire thesis committee; c) the MCW Graduate School; d) Mrs Coyhis who will ensure that your thesis does not conflict with other events in the department/M&I program to ensure optimal attendance. Work with the MCW Graduate School office to identify the location for both public and private portions of the defense (these locations are typically different). If a virtual attendance option is chosen in addition to in-person attendance for the public portion of defense, it is the student's responsibility to notify the Graduate School and Mrs. Coyhis ASAP as only certain locations on campus can effectively accommodate this arrangement and will need to be reserved. Public and private defenses happen consecutively on the same day, please allow a total of ~ 5 hours for the public and private portion (~1.5 hours for public and 3.5 hours for private).

12. A complete draft of your thesis must be submitted to the thesis committee <u>two weeks before</u> <u>the scheduled defense</u>. Follow the Ph.D. thesis guidelines provided by the MCW graduate school.

13. Ensure that you deliver the <u>Oral-Defense-Completion--Degree-Recommendation Form</u> and the PhD Signature Page available <u>here</u> to your committee for the private part of the thesis defense.

14. Follow the MCW Graduate school deadlines for submission of the final thesis version and signed forms.

#### Microbiology and Immunology Graduate Program Medical College of Wisconsin

### **Dissertation Committee Meeting Summary**

#### Link to this form is on the M&I website/Graduate Program

<u>Instructions:</u> The **student** should complete the **Pre-Meeting Information Section** and provide to his/her thesis committee members prior to the meeting. Following the meeting, the **student** should complete the **Post-Meeting Information Section**. The completed document should then be circulated to committee members for comment/approval, and the final copy of the report should be signed by the student, the advisor, and the Program Director.

**Graduate Program:** 

Student:					
	Name	Signature		date	
<b>-</b>					
Dissertation Advisor:	Nomo	Signatura		data	
	name	Signature		uale	
Graduate Program Director:					
	Name	Signature		date	
Dissertation Committee Mem	Dissertation Committee Members (Name and Department)				
Member 1:			Signature:		
Marshan O					
Member 2:			Signature:		
Member 3:			Signature:		
Member 4:			Signature:		
			5		
Marshan C			O'rea thank		
iviemder 5:			Signature:		
is my student wellness advocate.					
My mentor/mentee relationship was discussed 🛛 (please check box to indicate)					

**Overall evaluation of student's effort - To be determined by committee members** (Has student: (i) provided information in a timely manner, and (ii) completed or made progress towards indicated goals).

□ Exceeded expectations

Met expectations

□ Below expectations

#### Pre-Meeting Information

1. Goals set at last committee meeting, Continued:

2. Research progress since last committee meeting: (Can attach a document or use this space)

**Post-Meeting Information:** 

3. Summary of Thesis Committee Meeting:

4. Goals established for next committee meeting:

5. Please list—(this information will be used to both recognize effort and to keep metrics for use in T32 type applications)

Fellowship and grant applications (submitted and awarded),

Meetings attended and presented at (for the latter please also provide information on your poster or talk title).

Papers published

Signed committee meeting reports are due within 2 weeks of the committee meeting.

# Microbiology and Immunology Graduate Program

Medical College of Wisconsin

### **Student Portfolio (SP)**

<u>Instructions:</u> The **student** is encouraged to start populating the SP following entrance into the Microbiology and Immunology Graduate Program. The document should be updated at least every 3 months for the student's benefit. It is helpful (but not necessary) for the thesis committee to view this document at least once per year.

1. Contact Information (Name, Address, Telephone, Email)

#### 2. Education:

**Institution attended** (Name of institution, Department or Program, Location, Degree, Date of attendance)

#### 3. Research Experience

Research Projects (Institution, Position, Dates, Description of Project)

Research Grants Awarded/Pending/Submitted (Title, Source, Role, Dates, Status, Funds Awarded)

#### 4. Peer-Reviewed Workshops/Presentations/Committee Meetings

**Meetings and Conferences Attended** (Name of conference, Title of abstract, Date, Indicate if poster or talk)

**Institution or Department Presentations** (Location, Title of talk or abstract, Date, Format of presentation)

MCW Graduate School Annual Poster Session (Title of poster, Date)

Thesis Committee Meetings (Date)

#### 5. Bibliography

**Papers** (Authors, Title, Journal, Volume, Pages, Year, PMID#)

Review Articles (Authors, Title, Journal, Volume, Pages, Year, PMID#)

Papers/Review Articles in Preparation (Authors, Title, Journal, Year)

Ver August 14 2023 <u>6. Academic Activities</u> Courses (Year, Semester, Course #, Course Name)

Coursework complete? Y\_\_\_\_ N\_\_\_\_

Individual Development Plan [MyIDP or equivalent] (Date completed, Date discussed with mentor)

Spotlight in Science Sessions Attended (Date, Topic of Session)

### Student Portfolio (SP) – Page 2

<u>6.</u> <u>Academic Activities, continued</u> Responsible Conduct in Research Sessions Attended (Date, Topic of Session)

Career choice Presentations Attended (Date, Topic of Session)

Other Professional Development Activities (Date, List activity)

7. <u>Teaching</u> Guest Lectures Delivered (Date, Course)

Community/Lay Public Presentations (Date, Event)

#### 8. Mentoring

Mentoring activity (Name of student, Title, Date, Capacity)

#### 9. <u>Memberships in Professional Societies</u>

Organization (Name of society, Role, Dates of membership)

#### 10. Leadership and Service

Committee service (Name of committee, Role, Dates of service)

Community Service Activities (Name of event, Role, Dates of service)

#### 11. Honors and Awards

Honors or awards (Name of Award or Honor, Date received)