Graduate Program in Microbiology

https://www.cuanschutz.edu/graduate-programs/microbiology/home

STUDENT HANDBOOK

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Program Guidelines Disclaimer

As a member of the Microbiology PhD Program, you are expected to adhere to all established policies and procedures of the University, the Office of Research Edcuation, the Graduate School and this PhD Program.

CU Anschutz – University Policies https://catalog.ucdenver.edu/cu-anschutz/university-policies/

Office of Research Education https://medschool.cuanschutz.edu/ore/forms-and-resources

Graduate School https://graduateschool.cuanschutz.edu/forms-resources/resources

For any policies, please make sure to review the Graduate School Policies and Procedures.

Program Overview

Welcome to the Microbiology Graduate Program at the University of Colorado Anschutz Medical Campus. This handbook provides information about our Graduate Program.

The material contained within this handbook is as current as possible and describes Microbiology Graduate Program specific policies. Please be aware that our program continues to evolve, and specific policies may be altered, thus, the information in this handbook may not always be current.

This handbook, which includes policies and procedures for the Graduate Program in Microbiology, is provided to serve as firm guidelines rather than absolute rules, and exceptions may be made on the basis of extenuating circumstances. Thus, the handbook does not constitute a contract with the Graduate Program in Microbiology, the Department of Immunology & Microbiology, or the University of Colorado Anschutz Office of Research Education, either expressed or implied. The Graduate Program in Microbiology reserves the right at any time to change, delete, or add to any of the provisions at its discretion. Any exceptions to the departmental policies contained herein require approval by the Director of the Graduate Program. Additional information can be found at the Microbiology Program website.

Students are responsible for knowing the procedures, policies and requirements outlined in this handbook, along with the above university policies and procedures.

Contact the Microbiology Program Administrator, with any questions.

Office of Research Education Contacts

Program Co-Director: Breck Duerkop, PhD

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Office of Research Education (located in the Fitzsimons Building, 5th Floor West, Suite W5107)

Angie Ribera: Associate Dean of Research Education, angie.ribera@cuanschutz.edu

- Point of contact for faculty, program, and organizational concerns and planning

Jodi Cropper: Business Services Program Director, jodi.cropper@cuanschutz.edu

- Point of contact for financial and organizational planning concerns and coordination

Morgan Texeira: Program Manager, morgan.texeira@cuanschutz.edu

- Point of contact for program specific concerns and additional point of contact for Program Administrators

Stephen Frazier: Business Service Professional, stephen.frazier@cuanschutz.edu

- Point of contact for ORE administrative concerns, organizational planning and ORE leadership availability

MSTP & BSP Requirements

Students transferring to Microbiology from the Biomedical Sciences (BSP) or Medical Scientist Training (MSTP) programs may have different credit/course requirements (see program handbook in Appendix 1). Applications for transfer will be evaluated based on thesis lab availability, transcripts, and performance on the preliminary exam and in rotation labs. It is important to understand that transfer from either program into the Microbiology PhD Program depends on a Microbiology training faculty member agreeing to accept the student into her/his lab for their thesis work.

MSTP Students joining Microbiology should enter a thesis lab with 27-33 graduate credits, including graduate core. They have also completed/will complete the MSTP Preliminary Course focused on grant writing in Spring term of their transfer year. This course covers F31 grants, but also F30 grants which are specific to dual-degree trainees. The MSTP administration will review student transcripts with the PhD Program Administrator at time of transfer and will confirm that all expected graduate credits have posted for program review and evaluation.

MSTP students have already selected and been accepted into a thesis lab within the selected PhD program. They will enter the program under this lab's support immediately upon transfer and should not incur charges to the PhD program at any point in training absent the need for gap funding/support. As such please consider this transfer to be equivalent to a second year PhD student. Time to degree is a very important metric for the NIH and the program's T32 grant. MSTPs are expected to complete their PhD training within four years of entering lab. Of course, mitigating circumstances can occur. The MSTP Administration should be alerted to any significant progress concerns which may impact a student's ability to graduate within the expected time frame. This can be accomplished by meeting, email, or committee meeting notes as appropriate.

- MSTP students should contact MSTP Administration to obtain the program specific lab mentor agreement to review lab mentor responsibilities, curriculum requirements and other expectations related to the research portion of training. **MSTP students must have thesis committee meetings every 6 months** regardless of their PhD program. Each MSTP student's thesis committee should have a faculty member representing MSTP. Students should discuss MSTP faculty representation with the Director or Associate Program Director to identify suitable candidates.
- Throughout the Thesis stage of training, MSTPs are required to register for the *Longitudinal Foundations of Doctoring* (FOD) course in 2 terms annually (Fall and Spring). They will enroll into the *Capstone Return-to-Clinics* course in their last year of thesis training, replacing FOD in the spring term. The MSTP mentor is responsible for covering the costs for these courses and agrees to this as part of the MSTP-specific mentor letter.

BSP Students joining Microbiology

Mentor Discussion - A Biomedical Sciences Program (BSP) student who completes a rotation in the lab of a Microbiology Graduate Program faculty member and wishes to work in that lab will discuss options with the faculty member. If the faculty member would like to have the student join the lab, then the student and faculty member will discuss which graduate program that the faculty member is associated with (e.g.,

Microbiology, Molecular Biology, etc.) would be most suitable for the student. One important factor is the formal course requirements.

Program Approval - If the faculty member and student decide that the student would ideally get his/her degree from the Microbiology Graduate Program, they must request approval by the Microbiology Graduate Program faculty. A majority vote of the Microbiology Steering Committee will decide whether or not to accept the student into the Program.

Time of Transfer - Students normally transfer from the BSP program into other programs on July 1.

Coursework - In order to take the Comprehensive Examination, all students in the Microbiology Graduate Program are required to have taken and passed with a grade of B or better at least 30 academic credits. This must include the core courses (8.5 credits), Science as a Profession (Ethics) (1 credits), 3 laboratory rotations (1 credit each) and at least 7.5 additional credit hours of approved elective courses. Microbiology students are required to take BMSC 7810-002, BMSC 7820, MICB 7701, MICB 7703, IMMU 6110, and IMMU 7605. BSP students that wish to join the Graduate Program in Microbiology are strongly encouraged to take these courses. The remaining credits may consist of research credits. To find acceptable courses to fulfill the Microbiology elective requirements, please reach out to the Program Director(s), senior program students, or rotation faculty mentors for guidance.

The BSP program allows BSP students to select from a wide range of electives offered by the Graduate School to satisfy their course requirements and preparation for the preliminary examination. BSP students who select the Graduate Program in Microbiology would typically do so at the end of the second semester of their first year, but they must decide which electives to take before the second semester or classes would need to be taken in their second year.

Preliminary and Comprehensive Exams follow Microbiology Program guidelines.

Direct Admit Students joining Microbiology see Appendix 2

Curriculum Overview

Registration Process

- Academic Calendars (see The Graduate School calendar)
- Register for Classes (see The Graduate School)
  - All basic science PhD students must register in a minimum of 5 credits (fall and spring semesters), 1 credit of 8990 (summer semester), and anything above the minimum credit level will need approval from faculty mentor.
  - First year students, BSP, and MSTP students should work with their program directors, program administrators, and faculty mentors as there will be additional credit requirements associated with their progress in the program.
- The paying of tuition, fees and student health insurance occurs the week following the deadline for the semester add/drop period, which can be found on the academic calendar. The Program Administrator will complete the process of submitting the appropriate form to the Bursar's Office. For those students receiving financial aid, please work with the Program Administrator to avoid any disruption in aid awarding.

Year 1

FALL SEMESTER		
Course Title	**Registration Information**	**Credits**
Foundations in Biomedical Science	BMSC 7806	6
Core Topics in Biomedical Sciences – A: **Microbiology Biomed Research** *(**Required** for all MICB students)*	BMSC 7810-2	2
Core Topics in Biomedical Sciences – B* **Student may select the topic of their choice*	BMSC 7810*	2
Statistics for Basic Scientists	BMSC 7820	3
Research in Microbiology - Rotation I	MICB 7650, sec 001	1
Research in Microbiology - Rotation II	MICB 7650, sec 002	1

SPRING SEMESTER		
Course Title	**Registration Information**	**Credits**
Molecular Mechanisms of Bacterial Disease	MICB 7703	3
Molecular Virology and Pathogenesis	MICB 7701	3
Research in Microbiology - Rotation III	MICB 7650, sec 001	1
SUMMER SEMESTER		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis	MICB 8990, sec 0V1	1
Research in Microbiology – *only if instructed to register*	MICB 7650, sec 001	3

FALL SEMESTER

Foundations of Biomedical Sciences *BMSC 7806* (6 credits)
A unified presentation of fundamental principles of biochemistry, cell biology, genetics and molecular biology. Designed for all first-year basic science graduate students.

CORE Topics in Biomedical Sciences: Topic A *BMSC 7810 sec 2* (2 credits)
Required – **Microbiology Biomed Research**

CORE Topics in Biomedical Sciences: Topic B *BMSC 7810* (2 credits)
Students may choose which elective to take

Statistics for Basic Scientists *BMSC 7820* (3 credits)
This course is designed to obtain a basic understanding of statistics and its applications in biological research, excluding analyses of big data (e.g., proteomics, genomics) which are covered in other courses.

Laboratory Rotation I. *MICB 7650, sec 001* (1 credit)
Laboratory Rotation II. *MICB 7650, sec 002* (1 credit)

SPRING SEMESTER

Molecular Virology and Pathogenesis *MICB 7701* (3 credits)
This 8-week course addresses the molecular biology of viruses and the host-virus interactions that influence pathogenic outcomes of virus infections. Topics include virus structure, virus receptors and entry into cells, genome organization and replication, viral gene expression, virus assembly, host responses to viral infection, emerging viral diseases, epidemiology, virus eradication, and virus evolution. Select medically important viruses will be covered including poliovirus, hepatitis viruses, influenza, HIV, herpesviruses, papillomaviruses and others. Course grades will be based on a mid-term and final exam, student presentations and participation in discussions.

Molecular Mechanisms of Bacterial Disease *MICB 7703* (3 credits)
MICB 7703 is an 8-week lecture and primary literature discussion course. The course covers pathogenic bacteria and an in-depth discussion of several paradigms of bacterial diseases that illustrate important concepts and molecular mechanisms of bacterial pathogens and evasion of host defenses.

Electives. To find acceptable courses to fulfill the Microbiology elective requirements, please reach out to the Program Director(s), senior program students, or rotation faculty mentors for guidance.

Laboratory Rotation III. *MICB 7650, sec 001* (1 credit)

Required Events

- **Rotations**
  - Each student is expected to complete three lab rotations in laboratories of Microbiology Graduate Program faculty members during the first two academic semesters. Each rotation will last approximately 11 weeks. The second rotation will begin 12 weeks into the
    Fall Semester and extend into the Spring Semester.
  - Information about the research being done in each faculty laboratory is available on the Microbiology faculty web page: https://www.cuanschutz.edu/graduate-programs/microbiology/faculty
  - **ORE Milestone Rotation** request form to be used when first year students have identified their rotation mentor. Please follow the Program specific guidelines, including the submission deadline. Three forms will be submitted throughout the academic year for each rotation.
  - If you need a **Fourth Rotation (with PD approval),** you must request approval from your Program Director (PD). The Program Administrator and Program Director will work with the Office of Research Education accordingly.

- **Pre-Comps Advisory Committee Meetings**
  - Will meet four times throughout the first year: during orientation, and at the end of each of the three rotations.
  - The Pre-Comps Advisory Committee will advise and oversee the academic progress of students until they begin meeting with their Thesis Committee after their comprehensive exam is completed.
  - At this meeting, the student and committee will review his/her academic background and goals. The committee will help the student make decisions regarding courses and rotations and help resolve any problems that may arise until their thesis committee is formed.
  - The Pre-Comps Advisory Committee will also meet individually with each student during each of the three rotations to discuss academic progress, rotation plans, and to plan future courses.
  - Students may call a meeting of the committee at any time by contacting the committee chair.

- **Research In Progress (RIP) Talks**
  - **Required** to attend in-person weekly seminars
  - Wednesdays, 10a-11a, Hensel Phelps West Auditorium
  - First year students do not present a RIP talk.
  - First year students will present a lab rotation talk at the end of each lab rotation.
- **Department of Immunology and Microbiology Friday Seminar Series**
  - Each graduate student is expected to attend (barring class conflicts)
  - https://medschool.cuanschutz.edu/immunology-and-microbiology/events-new
  - Fridays at 12 Noon in Hensel Phelps East
  - Students will have the opportunity to volunteer to have lunch with out-of-town speakers. This is an outstanding opportunity to network with invited speakers.
- **Infectious Disease Journal Club**
  - Students are encouraged to participate in discipline-specific journal clubs or works in progress to be selected in consultation with their advisors.
  - Thursdays at 12 Noon – 1 pm in RC1 N 9107
- **Preliminary Exam**
  - Due dates for written portion of Preliminary Exam: ~June 3
  - Last day to complete oral portion of Preliminary Exam: ~June 25
  - ***Dates are approximate. Time from May finals - end of June is reserved for Prelims until final dates are announced.***
  - **MSTP students** will have passed the MSTP Graduate Preliminary exam upon joining the MICB Graduate Program and therefore will not be expected to take the MICB preliminary exam.
  - **BSP students** strongly considering joining the MICB Graduate Program should take the MICB Preliminary exam as the MICB Program does not accept other PhD programs' preliminary exam results for entrance into MICB.
- **Transfer to Thesis Lab**
  - **Predoc Financial Support Agreement** for those faculty mentors who choose to take on a new predoctoral mentee. Due by July 1st.
- **Residency**
  - Per University policy, it is required that students begin the process of establishing their residency as soon as they accept their offer to join the PhD program. This process must be started promptly to ensure you meet the necessary deadlines by the end of your first year.
  - *For more information, please visit the University website* – **Residency**
  - The Fall Semester Application opens: ~May 15 according to the semester of the student's second year

Year 2

- Minimum registration requirement for full-time graduate students is 5 credits (each fall and spring semesters). Anything above 5 credits must be approved by faculty mentor.

FALL SEMESTER		
Course Title	**Registration Information**	**Credits**
Science As a Profession	IMMU 7607	1
Intro to Bioinformatics	IMMU 6110	3
Research (Pre-Comps)	MICB 7650, sec 0V3	1
SPRING SEMESTER		
Course Title	**Registration Information**	**Credits**
Workshop in Scientific Writing	IMMU 7605	1
Research (Pre-Comps)	MICB 7650, sec 0V3	4
SUMMER SEMESTER		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis	MICB 8990, sec 0V1	1

Required Events

- **Research In Progress (RIP) Talks**
  - **Required** to attend in-person weekly seminars
  - Wednesdays, 10a-11a, Hensel Phelps West Auditorium
  - Second year and above MICB program students will be scheduled according to cohort to present one RIP talk in the academic year calendar.
- **Department of Immunology and Microbiology Friday Seminar Series**
  - Required to attend in-person seminars (barring class conflicts)
  - Fridays, 12 Noon – 1pm, Hensel Phelps East Auditorium
  - https://medschool.cuanschutz.edu/immunology-and-microbiology/events-new
- **Comprehensive Exam**

  Students must have passed (or be registered in) at least 30 didactic credit hours by the time they apply to take their comp exam in the spring of their second academic year.
  - If you have any questions regarding the requirement of 30 didactic credit hours, reach out to the MICB Program Administrator.
  - **Required forms** to be completed using DocuSign one month prior to exam date.
    - Application for Candidacy form
    - Exam Request form
  - Students will work with Comprehensive Exam Committee Chairs to set a date and time, along with coordinating members of the comprehensive exam committee.
- **MSTP Specific:** Please work with MSTP Administration and the MICB Program Administration to complete the required mentorship agreement for transitioning into a thesis lab.

Years 3+

- Minimum registration requirement for full-time graduate students is 5 credits (each fall and spring semesters). Anything above 5 credits must be approved by faculty mentor.
- Students defending in the current semester must register for 5 credits of MICB 8990. If a student is defending between semesters as defined by the Academic Calendar, the student must register for 5 credits of MICB 8990, in the proceeding semester of the scheduled defense date.

FALL SEMESTER		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis	MICB 8990, sec 0V1	1-5 (variable)
Electives (if applicable)		Variable
SPRING SEMESTER		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis	MICB 8990, sec 0V1	1-5 (variable)
Electives (if applicable)		Variable
SUMMER SEMESTER		
Course Title	**Registration Information**	**Credits**
Doctoral Thesis	MICB 8990, sec 0V1	1

- **Research In Progress (RIP) Talks**
  - **Required** to attend in-person weekly seminars
  - Wednesdays, 10a-11a, Hensel Phelps West Auditorium
  - Third year and above MICB program students will be scheduled according to cohort to present one RIP talk in the academic year calendar.
- **Department of Immunology and Microbiology Friday Seminar Series**
  - Required to attend in-person seminars (barring class conflicts)
  - Fridays, 12 Noon – 1pm, Hensel Phelps East Auditorium
  - https://medschool.cuanschutz.edu/immunology-and-microbiology/events-new
- **Thesis Committee meetings**
  - An initial meeting must be conducted 6 months after the completion of the Comprehensive Exam. The student is responsible for scheduling a meeting of the committee (to include the entire committee or a majority of the committee members) every six months thereafter, or more often, if necessary, to review the student's plans and progress and make suggestions to facilitate the research. The committee will also mediate conflicts that may arise between the student and mentor. Individual committee members are available for consultation at any time.

Examinations and Evaluations

Preliminary Exam

- The Preliminary Exam is taken in early to mid-June of the first year. The prelim is a two-part exam. The first part is a written critical review of the literature on a specified topic. The second part is an oral exam based on the written document and will include general knowledge from the first-year coursework.
- Every first-year student takes the Preliminary Exam at the end of the first year of graduate school. BSP students that plan to join **MICB Graduate Program** will participate in the MICB preliminary exam as this program does not accept other PhD programs' prelim results for entrance into MICB Graduate Program.

- **Overview**
  - At the end of the second semester of the first year, each student who is not on academic probation is required to take a Preliminary Examination by the end of June. The Graduate Program in Microbiology uses a two-part exam. The exam will include a **critical** review of a defined microbiology subject chosen by the faculty and written by the student. Following the written document, an oral exam will be administered to test knowledge of the review subject and knowledge of the student's first-year coursework including fundamental questions in virology and bacteriology. This exam is designed to provide an opportunity for students to read a body of literature, distill the findings into a coherent summary, and write in the style of a scientific review. This exercise will help prepare the student to write the introduction section of their Comprehensive Exam in the following year.

- **Guidelines for Exam**
  - A subject that addresses issues that are topical in microbiology will be selected by the Prelim Exam Committee, consisting of three members of the faculty. The subject matter of the review will be a topic of special interest to the committee, and may include virology, bacteriology or both. The committee will select three to five papers which will form the basis of the review. Other papers relevant to the subject should be utilized by the student. The student will have two weeks to write 10 pages (not including figures) of a double-spaced, one-inch margin, review of the literature. It is recommended that students include a summary figure that encapsulates the review material. A future directions section should be included in which the student proposes possible avenues of future research based on the body of work described in the review. The student should also keep in mind that the exam is a critical review and thus, the student should attempt to make assessments of the relevant importance of findings to the big picture and not just restate findings and interpretations from the primary literature.
  - The Pre-Comps committee, during one-on-one meetings with current first years, can field questions about the exam and will discuss the requirements of the written and oral portions of the exam. Preliminary exam topics are typically announced at the end of the Spring semester in mid-May, followed by a two-week writing period.
  - After the written portion is turned in to the Preliminary Exam Committee the student will have at least one week to prepare for the oral portion of the exam, which will occur in early to mid-June. Students should be prepared to answer questions based on the specific exam subject including but not limited to the papers used to write the review. The student should also be keenly aware of

techniques used to establish the facts described in their review. Faculty will also ask questions that assess the student's knowledge of basic concepts of microbiology, molecular biology, and cell biology. Thus, students are advised to review first year coursework especially from microbiology courses. Students are also advised to form a study group to review course material.

- **Grading Exam**
  - The written and the oral portions of the Preliminary Exam will be graded as pass, pass with conditions or fail. Both written and the oral portions must receive a pass or pass with conditions grade. If a student does not pass both sections of the exam the Microbiology Graduate Program Faculty will decide whether to administer a second exam or disenroll the student. After the student passes the Preliminary Examination, the student begins research in their thesis laboratory.

- ***Direct Admit Students from the BSBT-MIM track***
  - Students who received their MS degree from the Biomedical Sciences and Biotechnology (BSBT) Microbiology and Immunology Masters (MIM) track at CU-Anschutz and enter the program as a direct admit into a thesis lab have the option of taking the preliminary exam in the summer preceding their fall matriculation into the program as a 1st year student. The written component of the prelim is waived for these students and their written BSBT-MIM MS thesis is accepted in its place. These students are required to take the oral component of the exam and are subject to the same requirements as a traditional 1st year student related to expectations for the oral exam. If a former BSBT-MIM student who is a direct admit wishes to follow this timeline, they must first consult with the program director and the preliminary exam committee members to determine eligibility and to ensure their inclusion in preliminary exam scheduling.
- **MSTP trainees** transferring into the program will complete an MSTP Graduate Preliminary exam prior to program transfer.

Comprehensive Exam

- **AI Policies for Comprehensive Examination is at the discretion** of the Comprehensive Exam Committee
  - AI general policy: The use of generative AI tools is allowed at the discretion of the course directors exam committee members for writing assignments, quizzes, group assignments, and final exams. Check with your specific instructor or committee members first. If permission is granted and you choose to use these tools, you must include a statement at the end of your graded materials stating which tools were used and what they were used for (word editing, help with research, etc.). Note that the CU Anschutz policy prohibits the use of ChatGPT for unpublished studies or ideas, as user inputs are used to train this system and are, therefore, in the public domain. Microsoft Co-Pilot should be used instead, which can be accessed using your CU Anschutz login information. If it is discovered that AI-generated text was used and not disclosed, you will receive a score of 0 for the assignment or relevant exam.

- **Eligibility and Dates**
  - Eligible students (2nd year students or former BSBT-MIM students in their 1st year who

are direct admits) All students must be in good academic standing and have passed the preliminary exam. Each student will write and orally defend an NIH F31-style research fellowship proposal (https://grants.nih.gov/grants/guide/pa-files/PA-23-272.html).

- The **Comprehensive Exam Committee** will consist of a minimum of five Microbiology Program Faculty members. Each year, the Comps Core Committee will consist of two Microbiology faculty members who will serve on all comprehensive exam committees that year, and who will serve as Chairs of the Comp Committees. The remaining three members of the Comprehensive Exam Committee must be Microbiology Program faculty members. The thesis mentor cannot serve on the Comps exam committee, (but will be present at the exam and serve as a member of the Thesis Committee). If one of the Core Committee members is the direct advisor of the student, the Program Director will serve as the Core Committee Member for that exam. Students should plan to spend no more than four weeks out of the laboratory researching, discussing, and writing the proposal. The written portion of the exam must be turned in to the Comprehensive Exam Committee two weeks prior to the oral exam date and the oral exam must be completed between January 1st and May 15th. The date of the oral examination should be scheduled by the student before April 1st.

- **Paperwork to Schedule the Exam**
  - YOU MUST BE REGISTERED FOR THE TERM IN WHICH THE COMPREHENSIVE EXAMINATION IS TAKEN.
  - If your examination occurs between terms, you will be required to register for the subsequent term.
- The **forms** to schedule this exam can be found on the Graduate School website at https://graduateschool.cuanschutz.edu/forms-resources/resources and then click on the Forms tab. The forms are now filled out, routed, and signed through DocuSign. Using DocuSign will be the only process for the forms to be completed and submitted. There is no longer a pdf download available. Once on the Graduate School website, under the Forms tab, you will see the two required forms, ***Exam Request*** and the ***Application for Candidacy forms.*** Both forms should be submitted at least **one month** prior to your expected examination date.
  - Completing the **"Application for Candidacy" form** as prompted through DocuSign
    - Form must include your preliminary exam date
    - When listing your committee members, list Microbiology as the program affiliation
    - Start by viewing a copy of your unofficial transcript
    - When completing the Application for Candidacy form
      - Courses should be **listed in chronological order**
      - **Do not list any courses** in which the grade is either IP or P, unless the course is for the current semester
      - **Do not list MICB 8990** as it does not count towards the 30 didactic hours required for comps
      - You will need to list the instructor's last name and initial. If there was more than one instructor, you are ok to list the lead instructor for the course
      - **For any 7650 courses, please list the program director** as the instructor and not your rotation faculty mentor
      - The whole course title must be readable

        - There must be one line for each course taken (didactic) as it appears on the transcript, not including the exceptions as noted above
    - Complete the **"Exam Request" form** as prompted through DocuSign.
        - Form must include your Thesis Advisor in the appropriate box
        - When listing your committee members, list Microbiology as the program affiliation
- Once the forms have been completed, signed, and submitted through DocuSign, the Graduate School will prepare and distribute the "Notice of Examination" to you, the academic program, and your committee members.
- Your committee chair will receive the "Comp Examination Notice" and all necessary forms to complete the examination.

- **Written Proposal**
    - The research proposal should be about your intended thesis research that has been developed through interactions with your mentor in the months preceding the comprehensive exam. You should propose 2-3 years of work. It is important that you craft a solid hypothesis and 2-3 specific aims that test your hypothesis. You will also need to demonstrate a significant depth and breadth of knowledge of the relevant background to the problem you propose to study. **The hypothesis, rationale, strategy, and experimental design in the written proposal should be the work of the student.** You may consult with: your PI, fellow graduate students, post-docs, other faculty, and the published literature. When you discuss your proposed research with others, you must inform them that you are discussing your comprehensive exam and indicate to them that your interactions are for the purpose of developing your ideas or discussing how certain experiments might work or be interpreted. However, faculty, other advisors, and other students should not edit the student's written proposal for style or content.
    - **Format guidelines***:* Your research proposal should contain no more than 6 pages single-spaced (excluding references), plus a separate page for Specific Aims. Margins are to be no less than 0.5 inches and the font should be Arial with no smaller than 11 pt. Use of figures and schematics is strongly encouraged. Proposals that fail to abide by format guidelines will be returned.

- **Organization of the Written Proposal**
    - Abstract/specific aims. *One separate page.* Write an abstract that succinctly describes your project. It should briefly introduce the problem and summarize the overall objectives and methods to be used. It should serve as a concise and accurate description of the work when separated from the proposal
    - Research plan. *6 pages.* The research plan is divided into the following sections: S*ignificance; Innovation; Approach.*
    - *Significance:*
        - Briefly describe the background leading to the present proposal, critically evaluate existing knowledge, and specifically identify the gaps the project is intended to fill. State concisely the significance- importance and health relevance of the research described in the proposal by relating the specific aims to the broad, long-term objectives.

- In other words:
  - Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses.
  - Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
- *Innovation*:
  - Point out inventive/original aspects of your proposed research, these may be conceptual or technical advances to the field.
  - Clearly state a hypothesis and summarize how the proposal will test that hypothesis. Most top-notch NIH grant applications are driven by well-focused and testable hypotheses. Generally, applications should ask questions that prove or disprove a hypothesis rather than search for a problem or simply collect information. Think of your hypothesis as the foundation of your application -- the conceptual underpinning on which the entire structure rests. Your experimental results will prove or disprove your hypothesis. Don't confuse your hypothesis with methods. Methods describe how you will perform your experiments. **Keep Your Hypothesis Focused.** Choose an important, testable, focused hypothesis that increases understanding of biologic processes, diseases, treatments, or preventions and is based on previous research. Hypotheses should naturally provoke questions. Answering these questions then becomes the goal of each of your specific aims.
  - *Preliminary studies:*
  - Describe the preliminary studies or data relevant to the proposal. This information can encompass published literature from your laboratory, as well as data you have generated since you have been in the laboratory. Figures and Tables should be annotated with citations that indicate who is credited with generating the data, especially when it is someone other than yourself. Figures and Tables are to be embedded within the document, not submitted as a separate section, and are included as part of the 6 page limit. Figures should be legible and should include a figure legend.
- *Approach:*
  - Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project. Describe the rationale for the proposed experiments and include sufficient detail for how the experimentation is to be completed. Include how the data will be collected, analyzed, and interpreted. Schematics, tables, and timelines can be very effective ways to present complex experiments and working models.
  - Discuss potential outcomes, problems and alternative strategies. Make sure that your proposed experiments generate interpretable results allowing you to answer the question you propose. When you have that answer, discuss what you will do next.
  - References. The written proposal should be well referenced. Proposals may use any standard citation style, but you must include the names of all authors (in the same sequence as the publication), article and journal title, book title, volume

number, page numbers, and year of publication. References are not included in the page limitations.

- **Oral Examination**
  - It is the responsibility of the student to schedule the oral defense. Examinations will take the form of an oral defense of the research proposal by the Comprehensive Exam committee. Your mentor will not participate in the examination, although he or she may attend. Plan to present a 10 to 15-minute overview of your proposal as a PowerPoint presentation. Summarize relevant background and preliminary data. Present your hypothesis and specific aims. Broadly review your experimental plan. You will be questioned about anything specifically and generally related to the proposal. It is wise for the student to review broadly before the examination. Students are advised to take one or more practice oral exams from other students and/or post-docs. Exams typically take 2-3 hours.

- **Outcomes**
  - ***Pass***
    - You must receive the affirmative votes of a majority of the members of the committee in order to pass. Student continues to doctoral candidacy.
  - ***Pass with revisions/conditions***
    - Revisions to the written proposal may be required by the examination committee. A pass with revisions will require the student to address the comments of the review committee and resubmit a revised written proposal or other assignment typically **within two weeks** of the oral examination. The revision will be reviewed by the committee, and a Pass/Fail determination will be made. Other requirements, such as additional coursework, directed reading, or in person reexamination may also be made by the committee. The terms for completion of these requirements will be determined by the committee at the end of the oral examination. In such cases, the committee, via the chair, will provide written instructions regarding the conditions that must be met by the student to receive a passing grade. You will be considered to have "passed" when these conditions are met to the satisfaction of the committee. Failure to meet the conditions in the time specified will result in failure of the examination.
  - ***Fail***
    - In the event that you fail the examination, you are subject to immediate dismissal from the Graduate School. At your program's discretion, you may be allowed to retake the examination once. The retake will be in a form designated by the committee and must be completed within six months. Failure of the second exam will result in automatic dismissal.

Thesis Defense

- Students are required to submit at least 1 first-author publication before defense.

➢ **Thesis Committee**

- This is a committee of five (four faculty members **plus** the faculty mentor) that will be formed during the second year after completion of the Comprehensive Exam. The mentor and student recommend appropriate members with consultation of the Graduate Program Director is needed. The committee must include at least one, but not more than two, faculty members outside the Microbiology Graduate Program Faculty. Any outside members should have expertise in the area of the student's research and be affiliated with a graduate program that is not the Microbiology Graduate Program.

- To ensure independent evaluation of students' progress and examinations, and provision of impartial advice and guidance, no member of the committee should have undue influence over another member of the committee or the student. Undue influence could include, but is not limited to, direct employment (e.g. a postdoc employed by a faculty member), familial, domestic or amorous relationships, financial relationships or significant scientific collaboration (e.g joint funding). Any potential conflicts must be disclosed by committee members to the student, the committee, and ORE. It is strongly encouraged that students and mentors consider familial, domestic or amorous relationships, perceived undue influence or other potential conflicts of interest, involving a prospective committee member and the Thesis Advisor(s), Committee Chair and/or Student prior to assembling the committee. In the case where an above-mentioned conflict may exist and the student and mentor both agree to the inclusion of this person on the committee, both the mentor and the affected committee member are not present during confidential discussions between the student and other committee members (i.e. discussions that are held at the beginning of each committee meeting).

- The Thesis Committee must be constituted, and an initial meeting must be conducted 6 months after the completion of the Comprehensive Exam. The student is responsible for scheduling a meeting of the committee (to include the entire committee or a majority of the committee members) every six months thereafter, or more often, if necessary, to review the student's plans and progress and make suggestions to facilitate the research. The committee will also mediate conflicts that may arise between the student and mentor. Individual committee members are available for consultation at any time.

- At least 48 hours before each meeting, the student should submit to each member of the committee a written summary of the progress since the last meeting and plans for the next six months or more. If the student is scheduled to give a research-in-progress seminar, it may be convenient to schedule the committee meeting immediately after the presentation to avoid repetition.

- After each committee meeting the committee chair should promptly write minutes of the meeting in the GAIA reporting system. The committee chair and other committee members should reach agreement on the document, after which each committee member, the student, the Graduate Program Director, and the Graduate School are provided a copy of the final report via GAIA.

- The Thesis Committee will help the student and mentor decide when enough original research and submission of high-quality manuscripts describing the research have been done to allow the student to write the dissertation. **The Thesis Committee will not agree to a thesis defense date until at least one first-author primary research article has been submitted to a peer-reviewed journal**. One submitted paper is a minimum requirement and not considered the norm for fulfilling sufficient research to earn a PhD.

- In the last six months, the student must comply with all the regulations of the Graduate School regarding writing and submission of the thesis and the graduation procedures and ceremonies. The Thesis Committee will read the dissertation and be responsible for the final examination in defense of the dissertation. **Students must allow at least 14 days after submitting the dissertation to the thesis committee before the date of the thesis defense.**

➢ **Dissertation**

- The dissertation is written by the student according to UCD guidelines and based on the student's original research. The mentor will provide primary guidance on the scientific writing, and the student may also consult with other faculty, in particular the Chairman of the Student's Thesis Committee. The Assistant Dean of the Graduate School offers lectures throughout the year describing the required format of the dissertation. It is advised that you attend this lecture. Examples of previous successful dissertations are available in the Immunology and Microbiology Department. The student and mentor are responsible for providing high quality illustrations for the dissertation and making copies of the final dissertation for the Thesis Committee.

- **AI policy**: The use of generative AI tools is allowed at the discretion of the course directors exam committee members for writing assignments, quizzes, group assignments, and final exams. Check with your specific instructor or committee members first. If permission is granted and you choose to use these tools, you must include a statement at the end of your graded materials stating which tools were used and what they were used for (word editing, help with research, etc.). Note that the CU Anschutz policy prohibits the use of ChatGPT for unpublished studies or ideas, as user inputs are used to train this system and are, therefore, in the public domain. Microsoft Co-Pilot should be used instead, which can be accessed using your CU Anschutz login information. If it is discovered that AI-generated text was used and not disclosed, you will receive a score of 0 for the assignment or relevant exam.

- The student must provide the completed dissertation to the thesis committee at least two weeks prior to the public oral presentation of the student's dissertation research. The written dissertation is expected to be in final form. The student is primarily responsible for the form of the dissertation. Detailed instructions can be found on the Graduate School Resources tab under 'Format Guide for Theses and Dissertations' here: https://graduateschool.cuanschutz.edu/forms-resources/resources

- The student's mentor should carefully read and edit the dissertation prior to submission to the thesis committee. If the written document is found to be poor by the thesis committee, the oral presentation and defense of the thesis may be delayed.
- The student is responsible for scheduling the date and location of the public oral presentation of the dissertation research to the UCD community. On the scheduled date, the student will present a public seminar on the dissertation research, followed by questions from the audience. The student will then immediately take an oral Final Examination in Defense of the Dissertation administered by the Student's Thesis Committee. The Committee may suggest changes needed for the dissertation to be acceptable as well as examining the student on the content of the research. Each member of the Examination Committee must sign approval or disapprove of the dissertation and the Oral Defense for submission to the Graduate School. A simple majority vote of the committee determines the outcome of the deliberations.
- Once the dissertation defense is passed and all the requirements for completion of the dissertation have been accomplished and approved, the student should provide a bound copy of the final version of the dissertation with figures to the UCD library, the Immunology and Microbiology Department, and the mentor. The specific requirements for the written document are available from the Graduate School. A copy of the dissertation abstract must be submitted for microfilming.
- The student is now eligible to receive the PhD degree. This degree can be awarded at the May or December graduation ceremonies, or in August without a ceremony. Consult the Graduate School office for current rules regarding when requirements must be met and completed in order to participate in graduation ceremonies.

➢ **Requirements for Thesis Defense Seminar, Examination Forms, and Dissertation Submission using ProQuest**

- After scheduling your thesis defense date and time, you will need to reserve two rooms for that day, 1) for your thesis defense seminar and 2) for your thesis exam defense with committee. You may book these yourself and inform your Program Administrator (PA) once confirmed **or** ask your Program Administrator to assist with booking them for you.

Forms and requirements for your thesis defense:

- Graduate School required forms to be submitted **BEFORE** your defense date:
  - **Exam request form** – due to the Graduate School one month before thesis defense date
  - **Biosketch form** (not NIH bio sketch) – due to the Graduate School one month before thesis defense date
  - Both forms can be found at https://graduateschool.ucdenver.edu/forms-resources/resources
    - Forms are listed under the forms tab and utilize DocuSign for signature, completion and submission.
  - Make sure to include your Faculty Mentor as a member of your thesis committee.
  - Make sure that each of your committee members has a Graduate Faculty Appointment from the Graduate School https://gs.ucdenver.edu/graduate-faculty-directory/

○ Graduate School forms to be submitted **AFTER** your defense date:

- **Thesis Defense Report** – student's chair will have this form from the Graduate School and will route the form for committee's signatures through DocuSign.
- (Written) **Thesis Approval form** - student will initiate this form for signature routing and completion using DocuSign.
- Both forms can be found at https://graduateschool.ucdenver.edu/forms-resources/resources
    - Forms are listed under the forms tab and utilize DocuSign for signature, completion and submission.

Submitting your written thesis to **ProQuest**:

- Student will initiate this step when the Thesis Approval form has been submitted to the Graduate School.
- There are some helpful links re: ProQuest submission embedded in the 'Graduation Deadlines Thesis 2024-2025, Anschutz' page found under the Deadlines tab on the Graduate School resources page, https://graduateschool.cuanschutz.edu/forms-resources/resources

Tips when starting to think about a defense date:

- Student should start talking with their Faculty Mentor about the last day of work that will coincide with the last day to be paid/stipend
- Pay attention to the end dates associated with the student health insurance (https://www.cuanschutz.edu/student/health-wellness/student-health-insurance)
- View the date deadlines for each semester on the 'Graduation Deadlines Thesis 2025-2026, Anschutz' page found under the Deadlines tab on the Graduate School resources page, https://graduateschool.cuanschutz.edu/forms-resources/resources
- If defending between semesters, students must register for 5 credits of 8990 in the proceeding semester.

➢ **AI policy**: The use of generative AI tools is allowed at the discretion of the course directors and exam committee members for writing assignments, quizzes, group assignments, and final exams. Check with your specific instructor or committee members first. If permission is granted and you choose to use these tools, you must include a statement at the end of your graded materials stating which tools were used and what they were used for (word editing, help with research, etc.). Note that the CU Anschutz policy prohibits the use of ChatGPT for unpublished studies or ideas, as user inputs are used to train this system and are, therefore, in the public domain. Microsoft Co-Pilot should be used instead, which can be accessed using your CU Anschutz login information. If it is discovered that AI-generated text was used and not disclosed, you will receive a score of 0 for the assignment or relevant exam.

Changing Advisors or Dismissal from Thesis Lab

While it is always the goal that a student who chooses a thesis faculty mentor is able to complete the PhD thesis with this faculty mentor, this relationship does not always work out. While the Microbiology Program does not have the authority to dictate whether or not a student continues in a particular thesis lab, the Program does suggest certain guidelines in the interest of fairness to both student and faculty mentor. Still, in the end, it is at the discretion of both the student and faculty mentor as to whether a student continues in the chosen thesis lab.

Guidelines:

1) If a student is having trouble in the lab, such as in the form of conflicts with the mentor or lack of mentoring, then the student should consult with the Microbiology Graduate Program Director, the Chair of their Thesis Committee, or the Office of Research Education. This action should be taken as soon as problems arise. A written summary of the meeting and issue should be documented.
2) If a mentor is unhappy with the performance, lab citizenship, work ethic, or intellectual engagement of a student (or any other problem), then the mentor should meet with the student expressing these concerns. Consultation with the Graduate Program Director and/or the Chair of the student's thesis committee, in addition to the Office of Research Education, is also recommended. A written summary of the meeting and issue should be documented.
3) In either of the cases above, the advisor and the student should then work out a plan of remediation. This plan should be in writing, and it is advised that the plan be forwarded to the Microbiology Graduate Program Director and the Chair of the student's Thesis Committee. Regular meetings between the student and advisor should be held, and satisfactory or unsatisfactory improvements documented (copied to the Director and Committee Chair).
4) Should a conflict reach the point where either the student or mentor decides that the mentor-student relationship should end, then the student has several choices. The student can find another mentor within the Program, transfer to another lab in a different graduate program, choose to leave the Program with a Master's degree (subject to the rules of the Graduate School and approval by the Thesis Committee), or choose to leave the Program. Events in these cases need to be coordinated with the Office of Research Education.

The Ombuds office is also available to students and mentors to help resolve conflicts and misunderstandings. They are experts in problem resolution and are completely confidential. Please refer to the website to find out more about their offerings https://www.ucdenver.edu/offices/ombudsoffice

Policies and Procedures

Office of Research Education - Office of Research Education

- Example of resources pertaining to:
  - Anschutz Email address communication
  - Conflict of Interest (reference to Comps and Thesis committees)
  - Financial Aid for Graduate Students
  - Graduate Student External Employment
  - Honor Code and Committee Procedures
  - Individual Development Plans
  - Medical Leave of Absence Form and Request Procedure
  - Personal Leave of Absence Form and Request Procedure
  - Tuition, fees and stipend
    - All incoming Graduate Students are offered a financial aid package from the Graduate School that includes an annual stipend of **$41,912** (approved for 2025-2026 Academic Year), tuition costs, and payment of individual student health insurance and activity fees. The Stipend is evaluated on an annual basis for the cost of living. Please note that this support covers the period July 1, through June 30 for continuing PhD students, and August 15, through June 30 for first year PhD students. Payment of annual stipend, along with tuition costs, fees and individual health insurance is dependent upon satisfactory academic progress as defined in the Graduate School and Program policies.
    - **Tuition will be paid only at in-state tuition rates after the first year. Any additional tuition will be the responsibility of the student. Thus, it is imperative that out-of-state students establish in-state residency within the first year as to avoid paying the difference in out-of-state versus in-state tuition (See In-state Residency Status section).** This is not the case for foreign students who do not qualify for in-state residency. For such students, the thesis advisor will be responsible for tuition payments.
    - Please make every effort to register before the Add/Drop published deadline. (The student is responsible for any late fees incurred.) **Not registering and paying a tuition bill by the deadlines set by the Registrar and Bursar's Offices will result in a $60.00 late fee. Students are personally responsible for paying all late fees and fines.**
    - Neither the Department nor the Program will pay tuition for retroactive registration.

Program Events and Activities

Research in Progress (RIP)

Each student is expected to attend the weekly student and post-doc Research in Progress series (with exceptions for conflicts with required coursework), which are held on Wednesdays at 10:00 am in Hensel Phelps West Auditorium.

THE PURPOSE:

The purpose of the Immunology & Microbiology RIP seminar series is to allow graduate students and postdocs in and associated with the department to gain experience organizing and presenting their research in front of an audience. These presentations are meant to be a sharing of current

research. There is no need to postpone a presentation due to lack of new information, this is meant to be research IN PROGRESS.

THE RULES OF ENGAGEMENT:

- This series will be year-round with graduate students taking priority during the academic year (September – June).
- All presentations will be held at CU-Anschutz in Hensel Phelps or NJH in Heitler Hall. The meeting will be broadcast in Hensel Phelps or in Heitler Hall when presentations occur at the opposite campus.
- Students are placed into specific time blocks based on year in the program. Students may switch ONLY with those in the same time block if the date given to them does not work with them and/or their Mentor's schedule.
- No 2 people from the same lab will present on the same date.
- If possible, 1 presenter will be from an Immunology lab and 1 will be from a Microbiology lab.

THE RESPONSIBILITIES FOR GRADUATE STUDENTS:

- Inform your PI and the chair/members of your thesis committee of your date and make sure they can attend if needed
- **IT IS YOUR RESPONSIBILITY TO FIND SOMEONE TO TRADE WITH (within your student cohort) IF YOU NEED TO CHANGE YOUR PRESENTATION DATE.**
- Have your title ready about a week before your presentation so you can provide it for announcements when asked.
- Show up and present on your presentation date.
  If you need to cancel your presentation date, you must email your PI, your committee chairman, the chair of the department, the graduate program administrator, and the schedule administrator with an explanation of why you need to cancel.
-

WARNING:

This series is considered a public forum in that anyone who reads the announcement may attend. Therefore, **if you have Intellectual Property that you are not ready to share with the public, please save it for a less public setting**.

IMMU/MICB Departmental Friday Seminars

Each graduate student is expected to attend the weekly Friday Seminars, which are held at noon in Hensel Phelps East Auditorium. Students will have the opportunity to volunteer to have lunch with out-of-town speakers. This is an outstanding opportunity to network with invited speakers.

Annual Colorado Immunology and Microbiology Conference

In late August each year students are invited to attend the CIMC which is routinely held at a mountain destination in Colorado. The Graduate Program in Microbiology will cover the registration fee for all students who wish to attend. Coverage of lodging and other incidentals are at the discretion of the

student's PhD mentor and are expected to come from laboratory funds. For first year students who do not yet have a PhD thesis lab, the program will cover all expenses to attend the conference.

MPID Symposium - https://medschool.cuanschutz.edu/immunology-and-microbiology/events-new/2025-mpid-symposium

Student Activities

- Microbiology Student Governance

The Microbiology Program also has its own Student Council which elects a faculty liaison/President to represent the Microbiology student body to the faculty, an Admissions and Recruitment Committee member to assist in selecting new student candidates, a Graduate Student Retreat Committee Chair to organize the upcoming year's retreat, a student representative to the Enrichment Activities and Funds committee, and a journal club coordinator for the Infectious Disease Journal Club (IDJC).

- Recruitment of New Students for the Graduate Program in Microbiology

Applications for admission open on September 1st. The deadline for applications is December 1st. The Admissions Committee, composed of faculty and two student representatives, will review written applications and recommend students to be interviewed. Candidates will be invited to interview with faculty and graduate students.

Students in the Microbiology Program are expected to help host the applicants at meals or social events, interview them if requested, present posters on their own research, and provide tours of the campus. Students with insight into an applicant's qualifications are requested to submit comments to the Admissions Committee. Students in the Microbiology Graduate Program will play an important role in welcoming new graduate students, orienting them to campus, and mentoring them during the first year of the graduate program.

- Other Activities

Social activities are available campus wide, including a welcome Graduate Student Picnic, and other graduate program and departmental functions.

Fellowship Applications

All graduate students are urged to apply for individual graduate student fellowships. The Graduate School maintains a database of funding opportunities here: https://www.cuanschutz.edu/offices/career-development/funding-resources Students can apply for NSF and Howard Hughes Medical Institute fellowships soon after arriving, as these fellowships are only available to students in the early stages of training. Other fellowships available based on research interest, gender, race, prior military experience, etc., are indicated on the website. The faculty and the Immunology and Microbiology Department Grants Specialist will be glad to help with applications.

The Microbiology Graduate Program Administrator and Director will assist in preparing portions of applications regarding training and program opportunities. Copies of the fellowship applications, as well as eventual outcomes, should be submitted to the Microbiology Graduate Program Administrator.

Resources and Support

Students can access a variety of campus services through the links provided below. The Office of Student Affairs is committed to supporting CU Anschutz students by offering guidance and assistance in navigating campus resources. For detailed information about available services or to schedule an appointment, please visit the Office of Student Affairs webpages. For additional questions or support, you may contact the office via email at StudentAffairs@cuanschutz.edu.

- Office of Student Affairs
  - Campus Life
  - Student Support
  - Health & Wellness
  - Student Resources
  - Student Services
- Students Resource Directory
  - Includes all campus resources
- Academic Calendar
- Residency
- Badging Office
- Student Parking & Transportation
  - Eco Pass
  - Campus Circulator (Transportation service)
  - Medical Campus Rail Shuttle
- Office of Information Technology
- Student Health Insurance
- Office of Research Education – Concern Reporting Form (Maxient)
- CU Anschutz Student Outreach and Support Referral
- CU Anschutz Student Request for Medical Leave of Absence
- Graduation Deadlines Thesis, Anschutz
- Thesis & Dissertation/ProQuest Format & Guidelines

Appendices

Appendix 1

- **Medical Scientist Training Program**
  - 2025 2026 HANDBOOK
- **Biomedical Sciences PhD Program**
  - 2025 2026 HANDBOOK

Appendix 2

- ***Direct Admit Students from the BSBT-MIM track***

- Students who received their MS degree from the Biomedical Sciences and Biotechnology (BSBT) Microbiology and Immunology Masters (MIM) track at CU-Anschutz and enter the program as a direct admit into a thesis lab have the option of taking the preliminary exam in the summer preceding their fall matriculation into the program as a 1st year student. The written component of the prelim is waived for these students and their written BSBT-MIM MS thesis is accepted in its place. These students are required to take the oral component of the exam and are subject to the same requirements as a traditional 1st year student related to expectations for the oral exam. If a former BSBT-MIM student who is a direct admit wishes to follow this timeline, they must first consult with the program director and the preliminary exam committee members to determine eligibility and to ensure their inclusion in preliminary exam scheduling.