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Immunology Graduate Program Handbook

Welcome to the Department of Immunology at the University of Colorado Denver. This handbook provides information about the Integrated Department of Immunology Graduate Program and is designed to complement the Graduate School Student Handbook. Please refer to your Graduate School Handbook (www.uchsc.edu/gs/gs/handbook.htm) for the specific Graduate School policies and procedures. The material contained within this handbook is as current as possible and describes Immunology Graduate Program specific policies and procedures that supersede those of the Graduate School Handbook. Please be aware that our program continues to evolve and policies altered, thus, this material may not always be current.

This handbook, which includes policies and procedures for the Immunology Graduate Program, is provided by the Integrated Department of Immunology to serve as firm guidelines rather than absolute rules, and exceptions may be made on the basis of an extenuating circumstance. Thus, the Handbook does not constitute a contract with the Immunology Department or the University of Colorado Denver Graduate School, either expressed or implied. The Integrated Department of Immunology 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.

Important Notices:

Before the first day of class, a student should:

Attend the University of Colorado Denver Graduate School Orientation. Part of this orientation will include how to register for courses. Registration forms for first year students must be approved by Dr. Raul Torres, Director of the Graduate Program.

Begin to establish residency as directed by the Graduate School staff at their orientation, including obtaining a Colorado's driver's license or resident identification card, and registering to vote. To qualify for resident tuition, one must be a Colorado resident for a full year, so the earlier this is established, the better. If you have any questions about the process, call the Graduate School Admissions office at 303-724-2915 or visit http://www.uchsc.edu/student/tuition07.pdf.

Contact the Program Office, K830 (Amy Scoby, Immunology Program Administrator 303-270-2593, scobya@NJHealth.org) with any questions.

The Immunology Student Handbook may be downloaded as a PDF file, or viewed using the navigation menu on the left.

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Program Requirements

REGISTERING FOR CLASSES

•First year students: A rotation lab must be chosen before registering for classes.

•Second year students: The Preliminary Examination must be passed, a thesis laboratory chosen, continuation approved by the Graduate Program Committee, and an NIH termination notice completed prior to registering for Fall Semester; the Comprehensive Examination Committee must be chosen prior to registering for Spring Semester; and a Thesis Committee meeting held and the Comprehensive Exam passed prior to registering for Summer Semester.

•Third year students and beyond: Students must be current with Thesis Committee meetings prior to registering each semester. (Thesis Committee meetings for students in the 3rd year and beyond must be held every six months unless another time frame is specified by their Committee Chair.)

COURSES

The Program Curriculum and Graduation requirements are 30 semester credit hours of coursework and 30 semester credit hours of thesis credits. All required course work should be completed before the end of the second year. Changes in the overall structure of the program may occur. This summary reflects the current requirements.

Required Courses:

FIRST YEAR

Course	Credits	Semester	Title
IDPT 7811	2	Fall	Biomedical Sciences Core Course I
IDPT 7812	2.5	Fall	Biomedical Sciences Core Course II
IDPT 7813	2.5	Fall	Biomedical Sciences Core Course III
IDPT 7814	1.5	Fall	Biomedical Sciences Core Course IV
IDPT 7815	1.5	Fall	Biomedical Sciences Core Course V
IMMU 7650	1	Fall	Research in Immunology (OV1)
IMMU 7650	1	Fall	Research in Immunology (OV2)
IMMU 7662	6	Spring	Immunology
IMMU 7650	1	Spring	Research in Immunology (OV3)
IMMU 7650	1	Summer	Research in Immunology (OV4)

SECOND YEAR

Course	Credits	Semester	Title
IMMU 7607	1	Fall	Science as a Profession
IMMU 7650	4	Fall	Research in Immunology
IMMU 7602	1	Spring	Special Topics in Tumor Immunology
IMMU 7604	1	Spring	Special Topics in Clinical Immunology
IMMU 7604	1	Spring	Special Topics in Signal Transduction in the Immune System
MICRO 7704	2	Spring	Host Response to Infectious Disease
*IMMU 8990	Variable	Summer	Doctoral Thesis

*Only required if the comprehensive exam is completed before the end of Fall semester.

THIRD - FIFTH YEARS

Course	Credits	Semester	Title
IMMU 8990	5	Fall/Spring	Doctoral Thesis
IMMU 8990	1 (5 if defending)	Summer	Doctoral Thesis

II. Elective Courses:

The courses in this group may change from year to year. Students completing the required courses will have accumulated the necessary 30 semester hours of course work and will not need to complete additional course work. However, the following list of electives are available but must be approved by the thesis advisor and should be approved by the written permission of the Graduate Program Steering Committee.

Course	Credits	Semester	Title
BIOS 6606*	3	Fall/Spring	Statistics for the Basic Sciences
BMST 7350 **	2	Fall	Protein Chemistry
BMST 7354***	2	Fall	Structural Analysis of Biomolecules
IDPT 7200	2	Spring	Scientific Writing for Biomedical PhD Students
IDPT 7646	3		Tissue Biology and Disease Mechanisms
MICB 7701	3	Spring	Molecular Virology and Pathogenesis
MICB 7702	2	Spring	Molecular Mechanisms of Bacterial Disease

NRSC 7600	3	Fall	Cellular and Molecular Neurbiology
NRSC 7615	2	Spring	Developmental Neurobiology
PHCL 7606	3	Spring	Receptors and Cell Signaling
PHCL 7611	4	Spring	Bioinformatics
PHSC 7530	2	Spring	Cancer: Experimental and Medical Aspects

*Cross-listed as BIOI 7606
**Cross-listed as PHSC 7350
***Cross-listed as PHSC 7354

III. Doctoral Thesis Credits:

Course	Credits	Title
IMMU 8990	5	Thesis Credits

All students must be continually registered upon completion of the Comprehensive exam. For Fall and Spring Semesters students need to register for 5 Thesis Credits; for Summer Semesters students need to register for only 1 Thesis Credit unless defending. Non-registration for two consecutive semesters is not allowed.

**Students transferring to Immunology from the Biomedical Sciences (BSP) or Medical Scientist Training (MSTP) programs may have different credit/course requirements. 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 Immunology Program depends on an Immunology faculty member agreeing to accept the student into her/his lab for their thesis work.

**Students may request to transfer credit of previous graduate work into the Program, upon satisfactory completion of at least one semester in the Graduate School at UC Denver as a regular degree student. Grades in the courses requested for transfer must be no lower than B. Please contact the Program Office for additional requirements/policies. The Graduate Program Committee will not consider transfer of credit for the required core Immunology sequence.

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Laboratory Rotations

Students must complete three rotations in three different laboratories within the first year. Each rotation is one credit hour and your work in this rotation is evaluated and graded. To arrange a rotation, each student should discuss potential projects first with the prospective advisor(s) and the student and advisor should come to a mutual decision. Because these rotations are the primary means for each student to become acquainted with the range of techniques, scientific interests, administrative styles, and personalities of each lab, the selection of a rotation lab each semester should be a systematic process. One of the purposes of the rotation is to enable a student to select their thesis lab. Therefore a student may only perform rotations with faculty who have appointments in the UC Denver Graduate School. Rotations with faculty who are not members of the Department of Immunology "In" Faculty* must be approved by the Program Director. (See attached list of “IN” Faculty) Students are strongly encouraged to seek the advice of the Program Director, Dr. Raul Torres and other faculty members when considering potential laboratory rotations.

Students must inform Amy Scoby (Program Administrator – scobya@njhealth.org) of the lab in which rotations will be conducted at the beginning of each rotation as part of the registration process.

The Graduate School's Calendar Lists:
Rotation 1 Aug. 25-Nov. 14
Rotation 2 Nov. 17-Feb. 20
Rotation 3 Feb. 23-May 15

The other purpose of the rotation is so that faculty can assess and gauge the student's ability and enthusiasm for research. Thus, these rotations provide information to the faculty to enable them to determine whether they would accept the student into their laboratory for thesis work. **NOTE: IT IS THE STUDENT’S RESPONSIBILITY TO PERFORM WELL DURING THESE ROTATIONS SO THAT THEY CAN NOT ONLY IDENTIFY LABORATORIES THAT THEY ARE INTERESTED IN, BUT ALSO IMPRESS FACULTY SUFFICIENTLY SO THAT THE FACULTY MEMBER IS WILLING TO SERVE AS THEIR MENTOR. IT IS THE STUDENT’S RESPONSIBILITY TO FIND A THESIS LAB AND FACULTY ADVISOR.** At the completion of each rotation, each student should present a short talk in a lab meeting format, summarizing the experimental problem addressed, the techniques used to approach it, and data obtained during the rotation. The rotation advisor must complete a written evaluation of the student's performance after the rotation and should discuss the evaluation with the student. The written evaluation will be submitted to the Program Office and becomes part of the student's academic record.

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Immunology Graduate Program Training Faculty:

Rafeul Alam, MD/PhD
Donald Bellgrau, PhD
Willi Born, PhD
John Cambier, PhD
J. John Cohen, MD/PhD
George Eisenbarth, MD/PhD
Laurent Gapin, PhD
Ronald G. Gill, PhD
Douglas Graham, PhD
James Hagman, PhD
Kathryn Haskins, PhD
Peter Henson, PhD
V. Michael Holers, MD
Hua Huang, MD/PhD
John Kappler, PhD
Ross Kedl, PhD
Laurel Lenz, PhD
Philippa Marrack, PhD
Jaime Modiano, DVM/PhD
Rebecca O'Brien, PhD
Roberta Pelanda, PhD
Anne-Laure Perraud, PhD
Terence Potter, PhD
Yosef Refaeli, PhD
Nicole Reisdorph, PhD
David Riches, PhD
John Routes, MD
Hong-Bing Shu, PhD
Jill Siansky, PhD
David Schwartz, MD/MPH
Raul Torres, PhD
Kenneth Tyler, MD
Cara Wilson, MD
Lawrence Wysocki, PhD
Gongyi Zhang, PhD
*Inclusion on this list does not certify that the faculty member has a current Graduate Faculty appointment.

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Preliminary Exams

- A preliminary exam is given at the end of the first year in the program. The purpose of this exam is to test a broad understanding of immunology and immunological concepts derived primarily from the graduate immunology course, IMMU7662.
- Students must complete all of the required first year courses prior to taking the preliminary exam.
- The exam will be given mid-June and will consist of approximately 40 short-answer (~1 paragraph) essay questions on topics in basic immunology. A 4-hour exam is anticipated, but the time limit will be left to the discretion of the preliminary exam committee.
- Late exams will be granted only in cases of dire emergency! Students will be informed of the test date about two months in advance, to minimize conflicts.
- The questions will be selected by members of the Graduate Program Steering committee. The test questions will be written by Immunology faculty members and each question writer will be asked to provide the answers to his/her own questions. Tests will be graded by members of the Graduate Program Steering committee and grading will be blinded with respect to the test taker.
- The exam will be given in a classroom, and will be overseen by a test administrator, who will remain in the room while the students complete their exams.
- The exam will be closed-book and closed-notes.
- The test administrator will distribute the completed exams, collate them when graded, and calculate overall scores. Exam results should be available within about 2 weeks following the exam.
- Students failing the preliminary exam will be asked to take a second special exam, by the end of August.
- Students are expected to prepare for the exam by reviewing course notes, textbooks, and course-assigned reading. No reading lists or outlines will be prepared as studying guidelines. In general, all areas of basic immunology could be included, even if some of these were covered only cursorily in the graduate immunology course.

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Application to Candidacy

Completing the required courses for the program does not automatically admit a student to candidacy for the degree. Each student must complete the Application for Admission to Candidacy form available on Graduate School's Website, (http://www.uchsc.edu/gs/gs/student_services.htm). This application for candidacy must be completed, reviewed and signed by the Program Director, Raul Torres, and approved by the Graduate School prior to scheduling of the Comprehensive Examination. This application requires a clear listing of the courses completed (printed report from the Program Administrator) that fulfill the 30 semester hour requirement (see below).

Once the Graduate School approves candidacy, the student will be sent notification by email. If the completed form is received in the program office 3 weeks prior to the exam, the staff will make sure that it is properly reviewed, signed and submitted to the Graduate School. To apply for candidacy, students must have completed, or be currently registered to complete, 30 semester hours of course work. For Immunology Program students, this means that an application to candidacy can only be submitted after registering for the Spring Semester Special Topics courses (IMMU 7602, 7603, 7604, and MICRO 7704). Again, **a student should have completed all required courses prior to Admission to Candidacy.**

Please refer to the Graduate School Handbook for specific details for Application to Candidacy.

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Comprehensive Exams

GENERAL INFORMATION

Purpose

A formal exam of the student by the program to ensure that there are no concerns that would preclude the student from formal Admission to Candidacy for a Ph.D. at UC Denver. After successful completion of the comprehensive exam, the student focuses on the laboratory component of their thesis research.

A "teaching exercise" that exposes the student to the process of writing an "NIH-style" proposal.

Other Info

As this is a formal UC Denver exam the student must be registered for the semester in which they take the exam.

The student must complete necessary paperwork through the Graduate School **AT LEAST 2 WEEKS** before the exam.

TIMELINE FOR COMPLETION

1. By the first week of September students must submit a 1/2 page abstract describing the hypothesis and Specific Aims.

2. By mid-September a chair-person will be assigned. This is based on selection of the abstract by those faculty who have volunteered to be chair-persons. The abstracts are provided to the faculty without the students name attached.

3. After a chairperson has been assigned to the student, they should meet ASAP to decide upon a timetable for submission of the first draft (and subsequent drafts) to the chairperson. This should be done in a timely fashion so that the chair has adequate time to provide feedback on the multiple drafts such that the completed proposal can be submitted on time.

4. By mid-November the completed proposals should be submitted. At the discretion of the chair, this date can be delayed to give the student more time to further revise the proposal.

5. The formal defense of the proposal should occur before January 31.

6. The student should give a printed copy of the proposal to each committee member at least 2 weeks before the scheduled exam. Faculty are encouraged to adhere to this guideline.

7. The student should plan on spending a MAXIMUM of 6 WEEKS away from laboratory writing the proposal during the fall quarter. After 6 weeks the student should return to the lab and continue any remaining work on their proposal at nights and weekends (or times that are outside their conventional work schedule).

PROPOSALS

Eligible Topics

The intent of the exam is that material is based on an "Original" Hypothesis developed by the student. The topic of the exam will be chosen each year by the Graduate Steering Committee from previous NIH R21 request for applications (RFAs). This provides a general topic sufficiently broad such that each student should find a sub-topic suitable for developing an appropriate hypothesis to test.

Preparation of the Proposal

1. The student will work with their chairperson in preparing the written portion of the comprehensive exam. The chairperson will offer suggestions about the structure of the proposal, the material covered in the Background and Significance, the feasibility and design of experiments, etc. The chair may also offer input as to the grammar and sentence construction should they feel so inclined.
2. The general format is that prescribed for an NIH NRSA application. Students may read proposals from previous students however they should be aware that they must follow the format prescribed by the program for the current year.
3. Students may get advice on techniques from others, but besides the chairperson no one should read the proposal without the recommendation and approval of the chairperson.
4. Any issues that arise should be discussed and resolved with the chairperson.
5. The particular format and page guidelines may change from year to year. In 2003 the format mandates that the written document is a MAXIMUM 15 pages (single spaced, 12 pt, Arial font, 1 inch margins) with an additional 2 pages for figures (if needed to draw a model, Constructs, experimental design etc) and an additional 1/2 page abstract. The reference list is excluded from this page calculation.

6. The written document should include a 1/2 page Abstract; and 3 sections: A. Specific Aims; B. Background and Significance; C. Experimental Design. A summary is also recommended. (An outline of what each section should contain is provided below).

FORMAT AND STRUCTURE

The proposal should be organized into the following sections: Specific Aims, Background and Significance, Research Design and Methods. While page restrictions are not imposed on the specific sections, the Research Design and Methods section should constitute about 2/3 of your proposal. In addition, an Abstract (typed the same way on a separate page) must be provided. The Abstract includes an outline of the specific aims and the experiments used towards them and should be about 1/2 -2/3 of a page. Do not feel compelled to use all 15 pages. Sometimes proposals that are shorter are more focused often than proposals that utilize the entire 15 pages.

1. Appearance and legibility are very important. Incorporation of figures is also very useful.
2. The Specific Aims section (A) should include a testable hypothesis, based on experimental evidence already existing in the field. The specific aims are the approaches that you will adopt to address the general hypothesis. An Aim is not necessarily a single experiment, but is often a series of experiments designed to accomplish one goal. Comprehensive exam proposals typically have 2-3 specific aims.
3. The Background section (B) should contain enough information to make the proposal readable and understandable by immunologists. "Significance" means you should answer the question of why this research is important. This is a very important component of the proposal as you are trying to convince the reader that they would want to know the answer to your experiments (for example they would actually want to read the paper(s) when this work is published).
4. Preliminary Studies may be eliminated. It could also include very closely related research done by others, but in a real grant, this represents your recent work relevant to the experiments you have proposed.
5. Research Design and Methods. We recommend that you write out the experiments you propose for each specific aim one-by-one, and for each aim, include a section that covers the following:

    - ***Rationale*** - Why is this a logical experiment to do? Why is the approach that you have selected the best way of approaching the experiment? This may also

include a discussion of your interpretations of conflicting data in the literature, or could include very specific data not given in the background section.

- ***Experimental Design*** - define exactly what experiments you would do. You may include methods here or list them after. The experimental details should be very clear: for example how many mice will you inject? What will you inject? When will you sacrifice the mice and analyze them? What will you assay for? Describing methods with which most investigators in the field would be expected to be familiar with is not necessary or desirable, but the specifics should be addressed. For instance, if you're doing a Southern blot, what is your probe? What restriction enzymes will you use? How will you interpret your results? Or, if you're doing flow cytometry, what antibodies will you use? How will they be labeled? Etc. If appropriate you should define what statistical analysis you would perform on the data?
- It is extremely important that the proposed experiments be realistic and feasible. Many experimental ideas are great in theory, but once the experimental details are described potential limitations become evident.
- ***Interpretations and Limitations*** - What will the data look like if your hypothesis is correct? How would interpret alternate outcomes? How would you interpret partial phenotypes (eg. results that are 50% of wildtype levels). What things might be expected to go wrong? Have you made any assumptions that could turn out to be pitfalls? What will you do if this happens? Can any of this be avoided? Note - in the past, some students have designed specific aims that were mutually dependent, e.g. Aim 2 could not be undertaken if Aim 1 did not turn out as expected. This should not be! Mutually dependent experiments within an aim are okay, but you must point out that this is the case, and discuss alternatives if the outcome is not what you expect it to be.

EXAMINATION

1. The student has the responsibility of scheduling the exam and the room, completing the paperwork with the graduate school, and arranging any audio visual equipment.
2. All members of the committee must be present for the examination. One member, but not the chairperson or the student, may participate by interactive video. Although the mentor is not required to be present, the program encourages the mentor to attend so that they may gain some valuable insight into the "strengths and weaknesses" of their student. Only the exam committee, the student and the mentor(s)

are allowed to attend any part of this exam. Any exception to this must be approved by ALL members of the committee.

3. The chairperson will bring the student's file to the exam. The format of the exam is the following:

- The student and the mentor (if present) are asked to leave the room and the chairperson will present to the committee a synopsis of the student's credentials (ie. their undergraduate record, interviews, rotation evaluations, performance in the core class and the Immunology courses, preliminary exams etc.). If any member of the committee has any concerns about the student's academic performance they should be raised at this time. This discussion is typically very brief (5 minutes or less). If the committee considers it appropriate, the mentor may be invited back into the room without the student for further discussion.
- After such issues are discussed, the student returns to the room and gives a brief presentation outlining the proposal. THIS SHOULD BE A MAXIMUM OF 15 MINUTES. Suggestions for this presentation could include: 1-2 slides of background, 1 slide of significance followed by (perhaps) 4 slides for each experimental Aim that: outlines the rationale for the Aim; outlines the experimental approach; outlines what the data may show (eg in a Table with + or - for expected results); outlines the limitations of this approach. It should be noted that this material should be included in the written proposal that all the members of the exam committee will have read prior to the exam, therefore this presentation is not intended to be as detailed as the proposal itself.
- Each member of the committee will then ask the student questions about the presented material. The questions should primarily focus on the proposal (rationale, significance, experimental design and interpretation of data), however the student should also be prepared to answer questions relating to background material.
- After each member of the committee has asked any questions that they may have (together with the student's presentation, the whole exam typically lasts 2-2 and 1/2 hours), the student and the mentor are asked to leave the room and to remain outside the exam room while the committee discusses the student's performance. If the committee considers it useful they may ask the mentor to return to offer additional insight about the student.
- After the committee reaches its decision about the outcome of the exam (Pass, Fail or Pass with conditions) the student and mentor are invited back into the room and advised of this decision. The examination form is signed by the committee and returned to the Graduate School Office. According to the rules of the

UCD graduate school, if a student passes the examination with conditions, those conditions must be stated on the examination form and satisfied within six months. In considering any conditions attached to a conditional pass, the committee should consider and evaluate the potential learning experience of any requirements. The committee chair is responsible for monitoring the conditions and reporting their outcome to the Graduate School. Failure to satisfy these conditions will result in failure of the examination.

4. A failed examination is discussed by the Graduate Steering Committee and is based on the student's proposal and a written summary of the exam by the chair. Thus, the outcome of this meeting will be determined on a case-by-case basis. A student who fails the examination is subject to immediate dismissal from the Graduate School upon the recommendation of the program and concurrence of the Dean. However, at the discretion of the Immunology Program Steering Committee and the recommendation of the comprehensive exam committee, a student who fails the examination may retake it once. The retake will be in the form designated by the Immunology Program Steering Committee and must be completed within six months. The original examination form noting the failure is signed by the committee and returned to the Graduate School office. New examination forms will be generated when the examination is rescheduled. Students will be required to meet registration requirements and be registered during the term in which the repeated exam is taken.
5. The committee is encouraged to provide written feedback to the student regarding the written proposal, the presentation and their performance in answering questions. This can be done by email communications coordinated by the chairperson. If this is done, a copy should be sent to the Program Administrator for inclusion into the student's file.

Thesis Research and Requirements

Students must register for thesis credits in the semester following successful completion of the Comprehensive Exam. The student must continue to register for IMMU 8990 (from 1-5 credits) in Fall, Spring and Summer semesters each year.

ADVISORS

Students should select a thesis advisor by the end of the Spring Semester of the first year. Thesis advisors are selected by mutual consent of the student and the faculty member. In

general, no laboratory should admit more than one thesis student in a given academic year. Exceptions may be granted by the Graduate Program Director.

A student's placement in a thesis lab must be approved by the Program Director. Once a student and faculty member have reached an agreement on a thesis lab, the faculty member should send his/her curriculum vitae, including funding information and faculty appointment status, with a short cover letter to the Department Administrator. The Department office will inform both the student and advisor when the placement is accepted.

COMMITTEES

Early in the Spring Semester of the second year, the student should choose a thesis committee, in consultation with his/her advisor.

1. The Committee should consist of five members. At least one member (but not more than two members) must be "outside" the Department, i.e., his/her primary graduate faculty affiliation must be other than in Immunology. (It is recommended that you consider a sixth member should you encounter insurmountable scheduling problems; a sixth committee member could also be added after the first meeting to provide insight into a particular scientific area). For a current list of "In" members contact the Progam Administrator.
2. All Committee members must have Graduate School faculty status. If a faculty member does not have Graduate School faculty status, please ask him/her to contact the Program Director for approval. It takes several months for the Graduate School to approve a faculty member for Graduate Faculty status. Should a member not be approved at the time of your defense, your defense could be voided.
3. The student's thesis advisor may not be a voting member of the thesis committee.
4. A list of faculty and their primary academic appointments is available for reference on Graduate School website.
5. The student must provide the Program Administrator with the names of his/her Thesis Committee members and have their first committee meeting **within six month of their comprehensive exam and no later than the end of the Spring Semester of the second year.**

The minimum time between your first committee meeting and your defense is two years.

1. One week prior to the first Thesis Committee meeting the student will distribute a short (approx. 2-5 page) written proposal to the members of the Committee. This proposal, which will be written in close consultation with the

dissertation advisor, will outline the thesis project and will include a timetable for completion of key phases/experiments.

2. The student will present and discuss the proposed thesis in significant detail at the first meeting.
3. **Unless otherwise authorized by the Committee Chair and approved by the Program Director, the Thesis Committee must meet at least every six months.**
4. Organizing thesis committee meetings (arranging a meeting place, contacting committee members, etc.) is the student's responsibility.
5. Prior to each meeting, the student must complete a "Thesis Committee Report" form (see Appendix), including a description of the work to be presented. After the first meeting, this description can be a brief outline of the progress that has been made since the last committee meeting and suggestions for possible future experiments that the committee will discuss during the meeting. The student should also provide to the committee chair any information so that the committee chair can prepare an outline of tasks/goals to be accomplished prior to the next meeting. The student is responsible for ensuring that the committee chair forwards the completed report of the meeting to the Program Administrator.
6. Students must be current with thesis committee meetings and reports to register for classes. Any financial consequence of not registering (including tuition payment) will be the student's responsibility. (Any exceptions to this, or any other program policy, require approval by the Graduate Program Steering Committee.)

WRITING AND DEFENDING

The Graduate School requires a specific format to be followed when writing the dissertation which is provided in a style and policy manual for writing theses and dissertations. You may obtain one of these manuals from the Graduate School Office. In addition, the Graduate School conducts semi-annual seminars on thesis preparation; you are strongly encouraged to attend one of these sessions.

Your thesis must be approved by your Committee Chair before you schedule a defense date. The manuscript must be publication-quality, i.e., in final form except for printing on quality paper; words must be spelled correctly, figures and tables must be labeled correctly, the manuscript must be readable, Graduate School format must be followed, the Table of Contents must be completed, etc. Examples of what is unacceptable include cut and pasted graphs, more than 10 typos, and incomplete references.

As in the Comprehensive Exam Guidelines, the student is responsible for coordinating and scheduling the defense, including preparation and posting of seminar notices. (The office staff can assist you by printing a standard notice, but you must supply the details.)

Also, a Thesis Defense packet is available from the Graduate School with more detailed instructions and a checklist. Arrangements for the thesis defense must be made in the Graduate School Office at least two weeks prior to the scheduled defense. The defense must be given not later than three weeks prior to the date on which the degree is to be conferred. You must be registered at the time of the defense.

GRADUATION

30 semester hours of graded course work (includes laboratory rotations)
30 semester hours of thesis credits
A "pass" grade for the preliminary and comprehensive examinations
Completed and approved thesis

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Finances

All incoming Graduate Students are offered a financial aid package from the Department that includes an annual stipend of $24,500 (approved for Academic Year 2008-2009), tuition costs, and payment of individual Student Health insurance and activity fees. Financial support is dependent upon satisfactory academic progress as defined in the Graduate School and Program policies.

One of the unique aspects of the Department of Immunology at UC Denver is that it encompasses the facilities of three outstanding institutions: The School of Medicine, The Barbara Davis Center for Childhood Diabetes and National Jewish Health. The geographical diversity also presents unique administrative logistics of which students must be aware. Students are funded from a variety of sources of funds awarded to each institution: NIH Training Grants, Cancer Research Institute Training grant, Howard Hughes Graduate Education Fund, NIH Research Funds, and industrial fellowships, to name just a few. Each source (Federal or Non-Federal, Institutional or Individual) has its own set of guidelines when awarding funds to an institution and, each institution has administrative policies to which it must adhere for the dissemination of those funds. The source of funds and the awarded institution dictate the policies for payment. It is advised that students become familiar with the sources of their support and the guidelines that apply. The Department will make every effort to ensure that students are supported throughout their program. However, students are encouraged to apply for the many alternative sources of individual funding. Check with the Program Office for eligibility requirements and guidelines.

FEES

A $200 incoming student deposit is required from all graduate students that is refunded after graduation or withdrawal.

As a new policy students are now charged $65 for a background check prior to matriculation and that is paid directly to the Graduate School. An approval form is sent from the Graduate School with the acceptance material and should be returned with a check for the background check.

There is a one-time nonrefundable matriculation fee of $140 for any student new to the University of Colorado that is assessed at the time of initial registration.

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Stipend and Tuition

STIPENDS

Incoming student stipends are paid monthly on the last working day of the month. The payment schedule of students in subsequent years is dependent upon the source of support funds.

TUITION

Tuition is paid by the Department for first year students and by the student's thesis advisor in subsequent years. Tuition payment is subject to the following limitations:

- Tuition will be paid only at in-state tuition rates after the first year for U.S. and permanent residents. Any additional tuition will be the responsibility of the student. (See Establishing Residency) 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.
- The University of Colorado Denver has implemented an official E-Bill (electronic billing) program. Beginning with the Fall 2008 term, UC Denver no longer mails paper billing statements to students. All registered students must access their student account bill through the CU Access portal. Please see the Bursar's Office website for more information. (The student is responsible for any late fees incurred.)
- The Department will NOT pay tuition for retroactive registration (administrative registration done after the completion of a semester).

Health Insurance

Student Health insurance is part of the financial package offered to incoming Graduate Students. The Health Insurance invoice is included with your tuition invoice. Information regarding student health insurance is at http://www.uchsc.edu/studentinsurance/.

Health Insurance Waiver

If you are covered by another source of insurance, you may request a Waiver of Insurance. National Jewish employed students are encouraged to submit this waiver.

Dependent Options

If you have dependents that you wish to include on your Health Insurance, contact the Health Services Office for enrollment information. The student is responsible for any extra charge for each dependent.

All students are required to have an initial health screening. It is best to sign up for this as soon as possible at the Student Health Services. Further information will be provided at the Graduate School Orientation.

Students working in NJC labs will be subjected to a health screen and orientation there as well.

Travel

A limited amount of funds are designated to assist first year students to attend a meeting or conference. These funds can be used to assist with the costs of accommodations, meals, travel, and registration expenses. Use of these funds must be requested in writing and approved by the Department Chair and Administrator. Funding for travel is more likely to be approved if the student has submitted an abstract that has been accepted. Upon approval, the Department Office will assist you with your travel arrangements and completing all University required forms.

The University requires completion of a Travel Authorization form prior to all student travel. This requirement is in addition to the above described Department policy. The Office staff can assist you with this.

Travel Advances may be issued to cover authorized travel expenses. Travel advances may be issued at a minimum of $50.00 and a maximum of $400.

It is important that you retain all pertinent receipts of expenditures. **Original receipts will be required for reimbursement.**

Upon return from your trip, it is important that you report your travel expenses and return any unused portion of your travel advance. The Department Office will assist you with preparing the required forms.

5/27/2009

General Information

Student Resources

Bookstore

The UC Denver Bookstore is located on the first floor of Building 500 on the Anschutz campus in Aurora, phone: 303-724-2665. Special bookstore charge accounts are attainable; students should request information at the front registers. The bookstore accepts VISA, MasterCard, American Express, and personal checks with appropriate identification. Bookstore hours are extended during the first week of each semester.

Events/Bulletin Boards

An electronic Event Calendar is posted on the Immunology Department Website. Graduate student information bulletin boards also are located at National Jewish Health on the fifth and eigth floors by the elevators.

Computers

A limited number of computers are available for student use on the 8th floor of the Goodman building, NJH Tucker Library on the NJH campus as well as at the Health Sciences Library at the Anschutz Medical Campus. You may sign up for specific times to use the Library computers.

E-Mail

Most communications from the Department office will be via e-mail; all Immunology Department graduate students are expected to have e-mail access. The Department will pay the fee for establishing an e-mail account for first year students. Please contact UC Denver I.T. Services at: http://administration.ucdenver.edu/admin/its/

Library Services

<u>UCD Anschutz Medical Campus Health Sciences Library (Information 303-724-2152).</u>
The Health Sciences Library is located on the Anschutz Medical Campus. A library card may be obtained from the front desk by presenting a current student identification card (also covered at the orientation meeting). Hours change seasonally and are posted in the front lobby of the library. Tours are available. The Bibliographical searches available include Medline, CINAHL, Cancerlit, Health, AIDsline, and PsychInfo. Classes are also available free of charge. Contact Information for details.

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National Jewish Tucker Medical Library

The National Jewish Health Tucker Medical Library is located on the first floor of the Goodman Building.

Transcripts

Official transcripts may be obtained from the Univeristy of Colorado Admissions and Records. http://www.uchsc.edu/student/instructions.htm

Emergency transcripts are available from CU-Boulder for a $3.00/copy fee, cash only, and must be picked up in Boulder. For further information call 303-492-9457.

Department Seminars

Journal Club

Journal club is a weekly seminar on current literature presented by students. Once a month a faculty member hosts a "Pillars in Immunology" journal club that centers on a classic immunology paper. First year students will be asked to sign up to present an article sometime following the first semester. A journal club should be attended by all students each week.

Seminars

Numerous scientific seminars are conducted throughout the year. All students are expected to attend the Department of Immunology seminars, held at NJ Health. A seminar schedule is posted on the Immunology Department Website under "Event Calendar."

In addition, there is a weekly Lung Cell Biology Research Forum and Pulmonary Research in Progress that students are welcome to attend.

Residency for US Citizens and Permanent Residents

The rules for establishing residency can be obtained from the Graduate School. It is very important that you begin to establish residency upon your arrival in Colorado, including obtaining a Colorado's driver's license or resident identification card, and registering to vote. Students who fail to establish residency must pay the (substantial) difference in tuition rates. http://www.uchsc.edu/student/tuition07.pdf