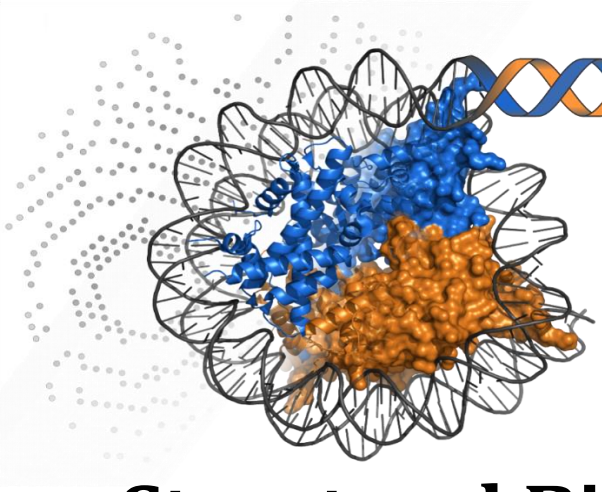

The Program in

Structural Biology & Biochemistry

2020-2021 Student Handbook

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Anschutz Medical Campus Graduate School
Fitzsimons Bldg. (Building 500) | W5121
303-724-2911
http://www.ucdenver.edu/graduateschool

Information contained in this handbook is subject to change at any point without prior notice.

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http://www.ucdenver.edu/anschutz/studentresources/Registrar/Documents/AcademicCalendars/2017-2018/AcademicCalendar-GradSchool-2017-2018.pdf ..... Error! Bookmark not defined.

Note—All UCD-AMC Graduate students receive 2 weeks leave in total. And all leave must be approved by your mentor prior to making travel arrangements. Students do not receive automatic time off inbeween semesters nor at spring break. UCD-AMC receive both common holiday dates as well as AMC dates however students often will come in on holidays to take care of necessary experiments in the lab. ..... Error! Bookmark not defined.

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The Structural Biology and Biochemistry program teaches five lecture-based courses of which students are required to take 5 credit hours of the available lecture bases coursework. Students must take a minimum of 30 semester credit hours of required/elective didactic coursework and a minimum of 30 semester credit hours of doctoral thesis research. 14

Gain an in depth understanding of the underlying principles of an NMR experiment, so that student can turn NMR theory into NMR practice for their research. **15**

Understand the theory and practice of structural determination using x-ray crystallography. **15**

The purpose of this course is to provide students with a concise understanding of biological mass spectrometry and it application to study and characterize various classes of biomolecules in state of the art research. **15**

Seminar series provides a forum for the presentation of scientific experiments and information in structural biology by external and internal faculty, postdoctoral fellows and graduate students. **15**
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Program Directory

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Brad Bendiak, Ph.D. Assoc. Prof, Dept. of Cell & Developmental Biology	Brad.Bendiak@CUAnschutz.edu	RC1-S, 12113	303-724-3453
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Genetics			
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Staff	Email	Office Location	Phone
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STRUCTURAL BIOLOGY AND BIOCHEMISTRY MISSION

- Foster scientific excellence and innovation in the field of bimolecular structure and function.
- Develop and advance expertise and technology to support cutting-edge research in biomedical sciences
- Provide training and career development for outstanding scientists
- Identify and characterize molecular targets and develop innovative therapeutics and diagnostic tools
- Exploit discoveries and intellectual properties through strategic partnerships with the industry.

Faculty Program Committees

Steering Committee

This committee will meet at least once a year to oversee the direction of the program and its operation. The Graduate Training Committee will make recommendations to the Steering Committee regarding changes to the operation of the Program for approval by the Steering Committee. The Steering Committee, through the Program Director, will make recommendations to the Dean of the Graduate School. The Director of the Program represents the program on the Graduate School Executive Committee.

Mair Churchill, Director of the Program
Mark Johnston, Chair of Biochemistry & Molecular Genetics
Andrew Thorburn, Chair of Pharmacology
David Ross, Chair of Pharmaceutical Sciences
Robert Hodges, Professor, Biochemistry & Molecular Genetics
Robert Murphy, Distinguished Professor, Pharmacology
Cara Wilson, Professor, Director MSTP Program

Graduate Training Committee

The Director of the Program in Structural Biology and Biochemistry will form a Graduate Training Committee that coordinates the day-to-day activities of the program. This committee will be appointed annually by the Program Director and will include the Chairs of each of the other committees. This Committee will meet monthly to oversee the direction of the Program and its operation.

Mair Churchill, Director of the Program
David Jones, Chair, Student Admissions and Recruitment Committee
Kirk Hansen and Jeff Kieft, Chairs, Strategic Planning Committee
David Pollock, Chair, Faculty Membership and Recruitment Committee
Carlos Catalano, Chair, Student Advisory Committee
John Bankston, Chair, Retreat Planning Committee
Beat Vogeli, Chair, Curriculum Committee
Francisco Asturias, Chair, Seminar Committee

Student Admission and Recruitment Committee

The primary focus of the Program in Structural Biology and Biochemistry is student education. The Student Admissions and Recruitment Committee is charged with making policy proposals to the Graduate Training Committee and the faculty, as well as implementing the approved policies to enable recruitment of the top students in the country that seek graduate education in the diverse structure-oriented fields represented by our "training faculty" (see Program Membership). The committee is charged with devising strategies for "promoting the program," for informing prospective applicants and advisors of the advantages of our program, for actively pursuing qualified students who express an interest in structural biology and biochemistry, for collecting application materials, coordinating student interview visits, informing faculty and students of the purpose of these visits in order to maximize their recruiting utility, for making admissions decisions, and for conducting post-admissions surveys to allow our recruiting to improve in the future. The committee should coordinate efforts with the Student Advisory Committee so that special conditions, deficiencies, etc. can be recognized and rectified or accommodated. Membership to this committee is restricted to training faculty and student representatives.

Faculty Membership and Recruitment Committee

Maintaining a faculty who are committed to graduate education and who effectively conduct imaginative research programs is critical to the health of the program. The Membership and Recruitment Committee is charged with reviewing members' credentials as part of the two and five year reviews and advising the Graduate Training Committee. The committee serves as a resource for the departments to help them attract researchers interested in structural biology and biochemistry to the University of Colorado Denver | Anschutz Medical Campus. The committee also serves as the initial contact regarding inquiries for membership, advises potential applicants of the program requirements and criteria for membership and makes recommendations to the Graduate Training

Committee regarding the suitability of an applicant for consideration by the general membership. Membership to this committee is open to general members, training faculty and student representatives.

Student Advisory Committee
Membership on this committee is open to training faculty and students. The Student Advisory Committee (consists of one to three members) advises students on and approves their individual curricula, explains program and graduate school regulations and meets with the students regularly to discuss their progress, problems, questions, concerns and suggestions.

Seminar Committee
Membership on this committee is open to all members of the program. The structural biology and biochemistry seminar series is a key element that bonds the program on a regular basis. It should be organized to maximize participation and be an enjoyable, scientifically stimulating experience for the speakers and the audience. This committee is charged with soliciting suggestions from students and participating faculty regarding potential seminar speakers, formulating policy recommendations regarding the seminar program, selecting quality outside speakers that will give the audience a balanced and interesting seminar series.

Curriculum Committee
Membership on this committee is open to training faculty. The curriculum offered to our students should provide them with a foundation in basic knowledge and an opportunity to develop the skills necessary to continue their education throughout their careers. Coursework should provide students with skills necessary to critically evaluate the literature. With beginning students, these skills will need to be further developed with the assistance of their respective advisors and Thesis Advisory Committees. Course work should provide a firm foundation to enable this development. The Curriculum Committee is charged with making recommendations to the Graduate Training Committee (and the faculty) regarding course offerings for trainees. The committee should annually evaluate the quality of our current courses, make specific recommendations to the course directors and instructors and evaluate proposals for new courses. The committee should evaluate the curriculum and make recommendations for improvement. The committee's responsibilities also include running the annual structural biology and biochemistry mini-course or one-day symposium, including coordinating student participation, registration and timely announcements regarding the course or symposium. The committee should solicit input from faculty, students and graduates in evaluating our didactic accomplishments and needs.

Student Activities Committee
All second year and above students. 3rd Year students are expected to assist in the planning of the program retreat. 4th year students are expected to plan the symposium.

The Graduate School
Directory

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Kenton Owsley, Manager of Academic Operations
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Webpage
http://www.ucdenver.edu/graduateschool

Rules
Ph.D. Comprehensive Examination Packet information:
After completing or registering for all program-required non-dissertation coursework, and concurrently with applying for admission to candidacy for the Ph.D., students must take a comprehensive examination in their respective disciplines. This examination (written or oral or both) will test a student's mastery of a broad field of knowledge, not merely the formal coursework which he/she has completed. This examination must be completed no later than the end of the student's third year. Individual programs may establish an earlier deadline. Instructions and deadlines for completion of the forms are provided on the graduate school website.

Ph.D. Thesis Defense Packet information:
Once a student has completed his or her dissertation and before the degree is conferred, a final examination on the dissertation and related topics is conducted in two parts, an oral presentation of the dissertation research that is

open to the public, and a closed examination conducted by the examining committee. Instructions and deadlines for completion of the forms are provided on the graduate school website. As an additional requirement of the STBB program students must submit a final draft of the written thesis to their committee 3 weeks in advance of their defense date.

Policies

Academic policies and procedures can be found in the Graduate School handbook, located on their website. http://www.ucdenver.edu/academics/colleges/Graduate-School/student-services/academic-resources/Pages/PhDEdDResources.aspx

Other Important Numbers

AMC Student Assistance Office .....Education 2 North, Room 3123, 303-724-2866
Student Life Handbook http://www.ucdenver.edu/life/services/student-assistance/Documents/U%20of%20CO%20Denver%202012.pdf

Student Health Insurance/Services.....Education 2 North, Room 3208, 303 724 7674
studentlife.healthinsurance@CUAnschutz.edu

Registrar's Office.....Education 2 North, Room 3123, 303 724 8059
student.services@CUAnschutz.edu

Ombudsman's Office.....Building 500, Room C7005, 303 724 2950
melissa.connell@CUAnschutz.edu and lisa.neale@CUAnschutz.edu

Keeping In Touch

Email

Instructions for obtaining an account in the system, workstation hardware requirements, and accessing the system are available. In addition to remote access, computer workstations are located at the University of Colorado Strauss Health Sciences Library, Anschutz Medical Campus in the Learning Resources Center. https://library.cuanschutz.edu/

Information regarding setting up your email account is included in Appendix D.

Email is the primary method of communication on campus and students are expected to check their email daily and respond within a 24-hour period.

Email Listserves

After receiving your firstname.lastname@CUAnschutz.edu email account, you will be added to the STBB mailing list with the Program Administrator. This list will inform students of pertinent program information.

Department Website

https://www.ucdenver.edu/academics/colleges/Graduate-School/academic-programs/biomol/Pages/home.aspx

Mailing Address

Your Name
University of Colorado School of Medicine
Structural Biology & Biochemistry Program

MS 8300
12800 East 19th Avenue
Aurora, CO 80045
(This address is particularly useful in your first year prior to final selection of a lab.)

Weekly Program Seminar

Students are required to attend seminar, scheduled every Wednesday at 12pm via Zoom for the foreseeable future. Students must also register for STBB 7660 in both Fall and Spring semesters to receive academic credit for seminar during your first two years. Your grade is based on attendance.

Student Presentation in Seminar – students are required to choose a laboratory for thesis research by the summer semester of the first year and will begin work in this laboratory under the mentorship of the laboratory's Principal Investigator (PI). Starting with the second year, students will give a 45-minute presentation on their research work followed by a 10 to 15 minute question and answer period. An informal guideline provided by the Graduate School is below. This seminar will be scheduled preferably in late April or early May at the end of spring semester. Students will present a seminar at the end of each year thereafter. Students should also meet with their Thesis Advisory committee after their seminar (see below).

Public Seminar Guidelines

Although public presentations are not separately "graded", there are certain things that the faculty who attend will be looking for and will influence their assessment of how well you did. The following is a list of things that they may consider.

1. Were the project background and rationale adequately presented?
2. Was the hypothesis clearly stated?
3. Was the experimental approach adequately explained?
4. Were the data analyzed appropriately?
5. Were conclusions rationally drawn from data presented?
6. Were slides displaying data clear and easy to understand?
7. In general, were slides well organized and simple?
8. Did you add value to the slides rather than reading them?
9. Were your voice, volume, and mannerisms appropriate?
10. Did you respond appropriately to comments and questions from the audience?

Travel

HIRS Travel Fellowship

A major gift to the Graduate School at the Anschutz Medical Campus has allowed the establishment of an endowed award for graduate students in the basic biomedical sciences at the Anschutz Medical Campus. The C. Werner and Kitty Hirs Graduate Student Enrichment Fund Awards may be used for any one of the following three specific purposes:

1. Travel awards to supplement support for Ph.D. students to attend national meetings,
2. Travel awards to facilitate Ph.D. students learning new techniques either through a visit to an out-of-state laboratory or by signing up for a hands-on technique course, such as the MBL course, and
3. Merit scholarships to aid in recruiting the "best and the brightest" Ph.D. students into the basic sciences at the HSC.

The travel awards can be made for up to $500 each. In accordance with Dr. Kitty Hirs' expressed wishes, the travel award for meeting attendance will be divided into two parts: $400 to be applied to travel expenses (e.g., registration, lodging, travel) and $100 directly to the student for personal expenses at the meeting (e.g., making it possible for the student to attend extra-meeting social events in which science is part of the conversation). Up to 20 "meeting" awards will be made each academic year. The travel awards for visiting another laboratory or attending a techniques course are to be applied only to travel expenses (e.g., travel and lodging). Up to 10 "techniques" awards will be made each academic year.

Tutoring
Tutoring is available on an individual basis. Dr. Jeff Kieft should be contacted immediately if you need assistance with any course work, English, or writing. Depending upon your needs, some tutoring may be paid by the Graduate School or program to help ensure your success.

Advising
Dr. Carlos Catalano & Maia Evans do general academic advising. Be sure to meet with them prior to registration and before completion of program milestones (prelims, comps, etc.) to ensure you are adhering to the graduate school rules. Once students have passed their comprehensive exam, they are admitted to candidacy for their Ph.D. At this point, the thesis advisor advises students.

Priorites in the first few weeks
Orientation
All new students must review and complete the online orientation per Graduate School rules.

ID Badge
Every person on campus must carry a UCD picture ID. This ID serves many purposes, including enabling students to access the laboratory areas on the Anschutz Medical Campus, the library, to obtain parking, and to attend special University functions. After arriving on campus, student identification photographs will be taken. If you arrive prior to orientation, the Department badging official and/or the Program Administrator will assist you in arranging an appointment with the ID Access Office.

Payroll
It is important to establish a checking account as soon as possible. The University issues all paychecks, including student fellowship and stipends, as direct deposits. Students should be sure to have a voided check available when filling out payroll forms. Each student is required to produce a driver's license (or state ID) and a social security card for payroll purposes. https://www.cu.edu/employee-services/payroll/student-employee/payroll

Taxes
Students are encouraged to stay informed as to their tax liability based on their funding source. For more information visit the Payroll and Benefits website at: https://www.cu.edu/employee-services/student-employee-taxes

Establishing Residency
(The following pertains only to out-of-state/US Permanent Residents) Additional information/forms are included in Appendix D.

New non-resident students must immediately obtain documentation to support the Petition for State Residency. First-year students must make collecting this documentation a priority. Funding will be available, assuming satisfactory academic progress, only if the student qualifies as an in-state resident after the first year of study. To be awarded in-state tuition status at the beginning of your second year you must establish that you have resided in the state for a year and established several kinds of "connections" to the state. It is important that these connections be established as soon as you arrive in Colorado in order to show the one-year history required by state law.

Prior to the start of your second academic year you must fill out and have notarized the Petition for In-State Tuition Classification and submit this along with your supporting documentation to the office of Admissions. Petition forms are available in the Admissions office. Notaries can be found in the Financial Aid Office, and the Chancellor's office.

Failure to complete the in-state tuition classification process could jeopardize your continued financial support in the Structural Biology & Biochemistry program.

For driver's license offices, license plate offices and voter registration please consult the local city phone book. For complete directions on establishing Colorado in-state residency for tuition purposes please consult the Registrar's website at: http://www.ucdenver.edu/student-services/resources/registrar/Documents/RegistrarForms/AMC/tuition07.pdf

Get Connected

Log into the UCD Access Portal –Register for Classes

The Student Center is the central location for you to view personalized information about things like grades, class schedules, and financial aid. You can use the Student Center to register for classes, post payments, see your class schedule, check the status of your financial account, view and update your contact information, find information on your advisors, and view admissions information. The portal uses the same credentials you established for your university email account. Log in at https://portal.prod.cu.edu/UCDAccessFedAuthLogin.html.

Enroll in Student Health Insurance

All degree and specific, approved, certificate-seeking students enrolled in five or more credit hours must take the School of Medicine's Student Health Insurance (SHI) Plan unless they can prove enrollment in other comparable insurance. As a fully supported PhD student, the University pays for the cost of your health insurance. You must however annually complete the plan selection form by the September 1. Additional information can be found: http://www.ucdenver.edu/life/services/studentlife/healthandrecreation/HealthInsurance/Pages/default.aspx

Student Financial Support

As a Ph.D. student in the Structural Biology and Biochemistry Program you are provided full tuition, health and dental insurance, and a **stipend of $31,000 for living expenses** (for the academic year 2020-2021). All future funding is dependent on satisfactory academic progress in the program and the selection of thesis advisor at the end of the first-year. Once accepted into a thesis laboratory, your advisor will fund your tuition, stipend, and benefits. It is very important that you successfully complete the required research rotations during the first year in order to maintain funding. Students are encouraged to rotate only with faculty who are able to provide future funding to the student.

Each student is responsible for books, housing, and any other expenses not specifically mentioned above. The Program Administrator will obtain a copy of the students' bills following registration for the current semester. The Program Administrator will ensure that all appropriate charges on the student bills are paid. It is only necessary to deliver a copy of your bill to the Program Administrator if there is a problem or question. Each student is personally responsible for late fees and fines, so it is critical that students register on time.

Please note that students registering after the semester registration deadline set by the Office of Admissions & Records are assessed a $60 late registration fee, which is the student's responsibility to pay pursuant to Graduate School policy.

Student expenses, including the stipend, will be paid until graduation as long as the following conditions are met:

1. Student maintains satisfactory academic progress
2. Student becomes eligible for in-state tuition after the first year.
    a. Students who fail to qualify for in-state residency will be responsible for the difference between in-state and out-of-state/international tuition.
2. Student passes the Preliminary Examination at the end of the first year.
3. Student completes the University Comprehensive Examination by the end of the second academic year.
4. Student's chosen dissertation advisor is able to provide support during the research phase of the program.
    a. If the advisor can no longer fund the student, it is the student's responsibility to make other arrangements. The program staff will assist in this effort to the best of their ability.
5. Student schedules the Dissertation Defense within approximately five years of entering the program.

Academic Calendar

https://www.ucdenver.edu/anschutz/studentresources/Registrar/CourseListings/Pages/AcademicCalendar.aspx

Academic Leave Policy

Graduate school is a privilege; working in the biomedical research/academic field, whether as a graduate student, a postdoctoral fellow, or an independent investigator, is a time-honored and challenging profession that requires a high level of commitment and responsibility. Students who receive full-support stipends from the University of Colorado Denver | Anschutz Medical Campus Ph.D. programs are required to pursue their training on a full-time basis, devoting each day of the normal work week, plus any additional time required by their research projects and academic courses. Additionally, for a student to maintain full-time student status, the following guidelines for vacation and leave time have been established by the Graduate School. These represent the leave to which a graduate student is entitled; however, research demands and commitment to graduate studies often result in students using less than the allotted leave. Individual graduate programs might not have a formalized system for accounting for vacation and sick leave; if so, vacation and leave monitoring falls under the honor system and is the responsibility of the student.

- Vacation and Holidays. Graduate students shall receive all University holidays and no more than 14 calendar days (counting all days Monday through Sunday) of vacation per annum, with no year-to-year accrual. Students shall continue to receive stipends during vacations and holidays. In the Graduate School at the University of Colorado Denver | Anschutz Medical Campus, the times between academic terms and the summers are considered active parts of the training period and are not necessarily free times. However, students taking courses are expected to attend all classes and take all exams as scheduled. They should not take vacations when classes or exams are scheduled. For advanced students, vacation time should be arranged with the dissertation advisor.
- ***Sick Leave and Other Leave***. Graduate students may continue to receive stipends for up to 15 calendar days (counting all days Monday through Sunday) of sick leave per annum, with no year-to-year accrual. Under exceptional circumstances, additional sick days may be granted following a written request and approval by the student's program director. Sick leave may be used for the *medical* conditions related to pregnancy and childbirth.
- ***Parental Leave*** – Graduate students may also receive stipends for up to 60 calendar days (counting all days Monday through Sunday) of parental leave per annum for the adoption or the birth of a child. Either parent is eligible for parental leave. Parental leave must be approved by the student's program director. Sick leave may not be used to supplement parental leave, except as noted above.
- ***Unpaid Leave*** – Individuals requiring more than 15 calendar days of sick leave or more than 60 calendar days of parental leave, must seek approval from their program for an unpaid leave of absence. Approval for a leave of absence must be requested in advance by the student and approved by the program. The leave

period and conditions must be documented, both at the time of leave and at the time of re-entry into the program. A copy of this agreement must be submitted to the Graduate School.

- ***Termination*** – Upon graduation or termination a graduate student forfeits all unused annual and sick leave; payment may not be made from grant funds (training grants or research grants) for leave not taken.

Degree Requirements and Coursework

Required Courses

The "required" credit hours in the Structural Biology and Biochemistry Program, which must be completed at UCD-AMC, include a minimum of 30 semester credit hours of required courses and 30 semester hours of doctoral thesis research. Students may transfer up to 20 semester hours from prior institutions.

Biomedical Sciences "Core" Courses

Biomedical Sciences Core Course	Course Information	Credits
Foundations in Biomedical Sciences IDPT 7806	Foundations in Biomedical Sciences	6
*Structural Biology and Biophysics Core Course II STBB 7807	Structural Biology and Biophysics Core Course II	2
Core Topics A in Biomedical Sciences IDPT 7810 (then appropriate section)	Held for 3 weeks-starting in November	1 to 2
Core Topics B in Biomedical Sciences IDPT 7810 (the appropriate section)	Held last 3 weeks of the semester starting after Thanksgiving	1 to 2

This is a set of interdisciplinary courses required for first year graduate students enrolled in basic science Ph.D. programs at UCD|AMC. The objective of the courses is to provide the basic science information and introduction to the skills required for a successful research career in all disciplines of modern biomedical sciences. Topics cover the fundamentals of biochemistry, molecular biology, cell biology, developmental biology, molecular genetics and biomolecular structure. Specialty topics required by individual programs are taken usually during the spring semester of the first year, and in some cases in the second year to round out the curriculum.

*In years that STBB 7807 is not offered (2020-2021), students MUST take "Discovering Protein Structure and Function with Rui Zhao in the CORE TOPICS A section. Topic B is student choice.

* *STBB 7807—Structural Biology and Biophysics Core Course II 2 Credit Hours*

Provide first year students enrolled in the core course the opportunity to obtain or review background material in the fields of structural biology and biophysics.

Required Program Specific Courses

The Structural Biology and Biochemistry program teaches five lecture-based courses of which students are required to take 5 credit hours of the available lecture bases coursework. Students must take a minimum of 30 semester credit hours of required/elective didactic coursework and a minimum of 30 semester credit hours of doctoral thesis research.

STBB 7608—Molecular Interactions 3 Credit Hours

Provide chemical/physical basis for protein structure, folding, function and stability. Presents methods/principles of protein/peptide purification and enzyme catalysis including electron transfer and mutagenesis. The role of molecular dynamics and use of molecular simulations in the investigations of protein-ligand/protein-protein interactions.

STBB 7609—Biophysics & Spectroscopy 3 Credit Hours

The Biophysics and Spectroscopy course will teach fundamentals of modern molecular spectroscopies and biophysical techniques as applied to biomolecules and the structural/dynamic information they afford.

STBB 7631—Molecular Structure A (NMR) 1.5 Credit Hours

Gain an in depth understanding of the underlying principles of an NMR experiment, so that student can turn NMR theory into NMR practice for their research.

STBB 7632—Molecular Structure B (X-ray Crystallography) 1.5 Credit Hours

Understand the theory and practice of structural determination using x-ray crystallography.

STBB 7633—Molecular Structure C (Mass Spectrometry) 1.5 Credit Hours

The purpose of this course is to provide students with a concise understanding of biological mass spectrometry and it application to study and characterize various classes of biomolecules in state of the art research.

STBB 7650—Research in Structural Biology & Biochemistry 1-10 variable Credit Hours

Research work in Structural Biology and Biochemistry.

STBB 7660—Structure Seminar 1 Credit Hour

Seminar series provides a forum for the presentation of scientific experiments and information in structural biology by external and internal faculty, postdoctoral fellows and graduate students.

STBB 7807—Structural Biology and Biophysics Core Course II 2 Credit Hours

Provide first year students enrolled in the core course the opportunity to obtain or review background material in the fields of structural biology and biophysics.

STBB 8990—Doctoral Thesis 1-10 variable Credit Hours

Doctoral thesis work in Structural Biology and Biochemistry.

Elective Courses

Course must be approved by the Student Advisory Committee and the Student's Thesis Advisor

- Any STBB didactic course in addition to the 5 credit hours required
- Any HMGP, IMMU, MICB, MOLB, PHCL, of School of Pharmacy course.

Specific Structural Elective Courses are as follows:

STBB 7620—Advanced Genome Analysis 2 Credit Hours

An introduction to the theory and practice of genomics. Topics include sequencing and mapping overview of genomes, transcriptomes, bioinformatics and statistics, population-level variation, ethics, evolutionary genomics, epigenomics, proteomics, metagenomics, and function genomics.

STBB 7670—Independent Study in Structural Biology 1-3 Variable Credit Hour(s)

This course is listed for the benefit of the advanced student who desires to pursue one or more topics in Structural Biology & Biochemistry in considerable depth. Supervision by a full-time faculty member is necessary.

Students must receive a B or higher in all STBB and required coursework. If a minimum grade is not received, then the student must discuss with the program director how this low grade would be resolved. A B minus is not an acceptable grade.

Academic Planning

1st Year Curriculum & Milestones				
Fall 2020	**Course**	**Title**	**Credits**	**Total**
	IDPT 7806	IDPT 7806 Foundations in Biomedical Sciences	6	
	IDPT 7810	IDPT 7810 Core Topics in Biomedical Sciences A Discovering Protein Structure and function	2	
	IDPT 7810	IDPT 7810 Core Topics in Biomedical Sciences B	1 or 2	
	STBB 7650	Research in Structural Biology and Biochemistry (Rotation #1)	1	
	STBB 7650	Research in Structural Biology and Biochemistry (Rotation #2)	1	
	STBB 7660	Structural Seminar	1	
				14/15
Spring 2021	**Course**	**Title**	**Credits**	**Total**
	STBB 7608/09	Molecular Interactions or Biophysics & Spectroscopy	3	
	STBB 7650	Research in Structural Biology and Biochemistry (Rotation #3)	1	
	STBB 7660	Structural Seminar	1	
	Dept. Varies	Elective Course	1-2	
				6-8
Milestone - Preliminary Examination (Date TBA—Typically Early June)				
Summer 2021	**Enroll in STBB 8990 1 credit hour--** Milestone - Enter thesis laboratory			

2nd Year Curriculum & Milestones				
Fall 2020	**Course**	**Title**	**Credits**	**Total**
	STBB 763 (123) A B C	Choose 2 of 3 Molecular Structure courses A,B or C	3	
	STBB 7660	Structural Seminar	1	
	PHCL 7605	Ethics in Research	1	
				5
Spring 2021	**Course**	**Title**	**Credits**	**Total**
	STBB 7608/09	Molecular Interactions or Biophysics and Spectroscopy	3	
	STBB 7650	Research in Biochemistry & Molecular Genetics	2-3	
	STBB 7660	Structural Seminar	1	
	Dept. Varies	Elective Course	1-2	
				7-8

Comprehensive Exam (must be completed by the end of the Fall semester of the 3rd year)
Do not take more than 10 STBB 8990 Thesis credits before taking the Comprehensive exam.

Years 3-5 Curriculum & Milestones			
	STBB 8990	Doctoral Thesis** (5 credits in the fall & spring, 1 credit in the summer)	11 credits/year
Dissertation Committee meeting and Dissertation update talk – 2 per year each at ~ 6 month intervals			
Dissertation Defense (You must complete 30 credits of STBB 8990 before or in the semester you defend)			

Total Credits = 60 (30 from coursework and 30 Doctoral Thesis)

- At least 5 credit hours of the following STBB courses are required to be taken for the Structural Biology & Biochemistry Program:
  - STBB 7608 Molecular Interactions (3 credit hours)
  - STBB 7609 Biophysics and Spectroscopy (3 credit hours)
  - STBB 7631 Molecular Structure A [NMR] (1.5 credit hours)
  - STBB 7632 Molecular Structure B [X-Ray Crystallography] (1.5 credit hours)
  - STBB 7633 Molecular Structure C [Mass Spectrometry] (1.5 credit hours)

Research Rotations

STBB 7650 Research in Structural Biology and Biochemistry: Directed laboratory research in an area selected by the faculty. Students are required complete three 1-credit rotations lasting one academic "quarter" each, starting in the fall semester of their first year.

Research rotations are designed to introduce students to research methodologies, to teach approaches to scientific problem solving, and to provide the opportunity to explore various laboratories as potential homes for thesis research. Students should approach the research rotations with the primary goal of identifying their future thesis advisors. Research rotations also provide students with the opportunity to accumulate a variety of different research experiences.

The Pre-rotation Laboratory Proposal, a two-page formally written paper, must be submitted to the Graduate Training Committee at least two weeks prior to the start of the rotation to insure that the proposal is appropriate *(see Appendix A)***.** An individual faculty member cannot have more than one Structural Biology & Biochemistry student doing a research rotation in his or her laboratory at any given time.

There are several considerations, which a student should keep in mind when choosing a rotation advisor. Rotations must be performed with a member of the program faculty *(see p.5)*. It is the student's responsibility to take the initiative to contact a rotation advisor and arrive at an agreement with the advisor in a timely manner.

At the completion of each required rotation, students must present a post-rotational seminar. This seminar will be presented on a predetermined Wednesday during the regular Seminar Series. The actual dates of the post-rotational seminar series for any given year are available from the Program Administrator. In the post-rotational seminar, the student presents the rationale, methods, and results obtained from the rotation project, as well as an interpretation and a discussion of the rotation project results. The post-rotational presentation usually lasts fifteen to twenty minutes, with the last five minutes customarily devoted to questions from the audience.

Rotation training:

This needs to be done virtually if at all possible. If you have a procedure that needs to be done in person, OLAR provides the following guidance:

The default should be that individuals are working separately to the greatest extent possible so that we can minimize the chance of exposure. However, there are cases when a procedure requires two people to work in close proximity. The goal should be to keep contact less than 15 minutes and more than 6 feet. Make sure this is a true need (not just convenience or to get a procedure done faster) and then follow these guidelines:

1. Limit the time when 2 people need to be working together to only when absolutely necessary (i.e., only one person should set up and clean up even if it takes longer)

2. Individuals should physical distance (i.e., at least 6 feet separation) to the greatest extent possible when performing procedures. Coming closer than 6 feet only during times when it is necessary and separating again after that part of the procedure is completed.

3. When sharing the space, surgical masks (or higher-level masks if available, i.e., N95) should be worn, rather than cloth face coverings. This is because surgical masks have documented standards and cloth masks will vary.

4. When sharing the space, if possible, wear eye protection. OLAR does not requiring them but we are recommending their use when physical distancing is not possible or occupancy in an area is higher than what is typical/allowed.

Rotation Grades

Each rotation is assigned a letter grade and formally evaluated (see *Appendix A*). The rotation advisor assigns the initial grade following the post-rotational seminar. Based upon subsequent faculty input, the grade for the seminar may be adjusted up or down by one-half grade.

Each student must complete at least three research rotations by the end of the first year in the program. Failure to do so will result in dismissal from the program. The possibility of a fourth rotation during the summer between first and second year will be considered for students unable to decide upon a thesis advisor after three rotations.

NSF Proposals—1st Year Students Submission Required
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6201&org=NSF

Students must write a proposal and submit to the program director for review. Students with approved proposals can formally submit to NSF for funding. Students who plan to formally submit their proposals should see Kenton Owsley for routing through the graduate school.

Preliminary Exam

The general format for the Preliminary Exam administered by the Structural Biology and Biochemistry program is an oral examination designed to test the general knowledge base of the student, with particular emphasis on areas deemed necessary to pursue studies in structural biology and biochemistry. The knowledge level expected is that appropriate for a first year student.

At least two months prior to the exam, students will be presented with a set of 4-5 broad topics that they will be expected to discuss during the examination. In general, these topics will be gleaned from the learning objectives of the coursework the student completed during their first two semesters in the Program.

A committee consisting of three faculty members from the program will administer the oral exam to all students in a given year. During the exam, the student will be asked to answer questions and explain concepts based on the topics previously presented to the student. The membership of this committee will rotate annually.

The exam is designed to test concepts and approaches important for the structural biologist or biochemist. The emphasis will not be on memorization, although basic facts important to the field (e.g. the structures of the amino acids or nucleotides) may also be the subject of questions.

Students will be graded on a Pass, Pass with Conditions, or Fail basis.

If a student fails, he/she will have the option to re-take the exam in the next 1-3 months. The examination committee may choose to reexamine only a single area of concern, or may choose to reexamine the student more generally. The committee may choose to request a written review of a particular area in which the student's knowledge level was weak (in lieu of another oral examination). The expectations of the committee will be clearly communicated to the student in written form.

Comprehensive Exam

The University-based Comprehensive Examination is an orally defended grant proposal taken at or near the end of the second year. It is generally based on the student's thesis proposal, but can include other areas of study as well. This exam typically takes the format of presenting the problem, defending its innovation and demonstrating a workable knowledge of the field of study to assure that independent work is eminent.

The student's comprehensive exam committee judges the quality of the examination and makes recommendations for further academic advancement.

This examination must be completed no later than the end of Fall semester of your 3rd year. Under extenuating circumstances, and with the recommendation of the Program Director and concurrence of the Dean, the examination may be taken during spring of third year. A student cannot take the comprehensive examination with less than a 3.00 G.P.A. or before the Graduate School application is submitted and approved. The complete policy and procedure for taking the comprehensive exam is listed on the Graduate School website at www.ucdenver.edu/academics/colleges/Graduate-School under the Students Services, Academic Resources, Ph.D. Resources *page*.

You must be registered for at least one doctoral thesis credit hour (STBB 8990) during the semester in which the examination is taken.

The Comprehensive Exam contains three major components:

1. The written grant proposal

2. The grant proposal presentation
3. The oral defense of the proposal

General Guidelines for University Comprehensive Examination

The necessary steps to schedule and take the comprehensive exam are as follows:

1. Form a Comprehensive Exam Committee & Thesis Advisory Committee (TAC)
   Shortly after selecting a thesis advisor, you, in collaboration with your mentor and student advisor, shall recommend a Comprehensive Examination Committee, which is subject to the approval of the Graduate Training Committee and your Program Director. The examination committee shall consist of a minimum of five (5) Graduate Faculty members. At least one of the members must be outside your program's core training faculty. The majority of the members, including the chair, must be from your program's core training faculty. The student's dissertation advisor/mentor may not chair the examination committee. The student will hold a pre-comps meeting of the full committee plus their mentor where a specific aims page will be discussed and approved. Once approved a date of the exam can be set. Note: the TAC is typically formed from members of the Comprehensive Examination Committee, but the two committees need not be identical.

   The TAC will serve as an advisory function to you and your mentor, and shall also monitor your progress in generating and/or collecting data to be used in the writing of the doctoral thesis. The TAC will give you formal permission to write the thesis once sufficient data have been collected and analyzed. The TAC shall meet at least once each year, usually during the students thesis update talk. Records of the meetings and of your progress will be kept in your file in the Program Administrators office. If you fail to have a TAC meeting in the preceding 12 months, you will not be permitted to register for Spring Semester, or for subsequent academic terms. Once you are in compliance with this rule, you will be permitted to register.

2. Submit a Written Doctoral Thesis Proposal
   Before taking the Comprehensive Examination, you must submit a doctoral thesis proposal to the Program Director and to the TAC at least two weeks prior to the scheduled examination date. A doctoral thesis (written presentation of novel research) is based on original investigations and showing innovation in Structural Biology and Biochemistry methodology. The doctoral thesis proposal should be in a format comparable to a National Institutes of Health (NIH) R01 grant submission (http://grants.nih.gov/grants/funding/r01.htm).

3. Complete the Graduate School Comprehensive Examination Forms
   The Graduate School requires three forms be submitted in order to take the University Comprehensive Exam. All forms and information are located on their website at http://www.ucdenver.edu/academics/colleges/Graduate-School/current/Pages/resources.aspx

   The following must be submitted to the graduate school at least 2-weeks prior to your exam
   1. Application for admission to candidacy
   2. Request for scheduling exam
   3. Transfer of credit (if applicable)

Proposal

The student will be expected to write an original research proposal in an NIH R01 grant format to contain the following sections; specific aims, background and significance, preliminary data, experimental design and approach and a supporting bibliography. The written document produced must be solely the writing of the student. Students

should consult with NIH guidelines for how to structure the written portion of the exam. The student then defends the proposal orally at the examination.

Specifications for Written Document

1. Page length maximum 15 pages including figures and table, excluding reference list and title page.
2. 12-point font for text (single space).
3. 10 point font for figure legends (single space)
4. Margins ½" all around (Mimic the NIH Requirements)
5. Suggested sections and page length:
    - Specific Aims (1 page maximum)
    - Background and Significance (5 pages)
    - Preliminary Results (3 pages)
    - Research Design and Methods (6 pages)

    Total pages: 15 plus references

Presentation

The presentation format is generally a thirty-minute formal summary of the students' proposal. This presentation also provides an opportunity for the candidate to clarify any changes in thinking between submission of the proposal and the actual defense. At the end of the presentation, the candidate will accept questions from the audience in attendance. Following this public question and answer session, the general audience will be dismissed, and the candidate will be examined by the Comprehensive Exam Committee members.

Oral Defense

During the oral defense portion of the exam, faculty members will test the candidate's knowledge not only regarding the proposal topic, but with respect to structural biology & biochemistry as a whole. Good performance on this section of the exam is critical to the successful outcome of the exam. The student should be prepared for broad-ranging questions covering any topic. Among the several purposes of the exam will be to probe the depth of the candidate's knowledge as well as the student's ability to "think on his or her feet."

At the conclusion of oral defense, the candidate will be excused, and the committee will deliberate to determine the result of the examination.

Clarification of Graduate School Rule for Examination Results

(Subject to change)

Pass

You must receive the affirmative votes of a majority of the members of the committee in order to pass.

- You will need to pay attention to the rules regarding registration for the correct number of thesis hours in the semester during which you will take the comprehensive exam in order to be eligible for it.

Pass with Conditions

The committee may feel that, although you have passed the examination, you should complete additional work. This may be in the form of rewriting submitted work, additional coursework, etc. These conditions must be satisfied within six months. You will be considered to have "passed" when these conditions are met. Failure to meet the conditions will result in failure of the examination.

- You should register for thesis hours as if you had passed without conditions (see the notes under PASS above).

Fail

In the event that you fail the examination, you are subject to immediate dismissal from the Graduate School. At the discretion of your program, you may be allowed to retake the examination once. The remedial exam will be in a form designated by the committee and must be completed within six months.

You will be required to meet registration requirements for the new examination.

Entering a Thesis Laboratory

Selecting a Mentor

The selection of a thesis advisor is one of the most important decisions a student will make during the course of his or her graduate career. Each student must select a thesis advisor from among the Program Faculty (see p. 5). The first year of the training program is designed to provide each student with an opportunity to interact with the faculty so that he or she feels familiar with the faculty members and their respective research interests. The student should know which laboratory he or she wishes to enter on or about the date of the Preliminary Examination; however, a thesis advisor may be selected at any time during the first year. Selection of advisors is on a first-come-first-served basis. In the unlikely event that a student is unable to select a thesis advisor prior to the beginning of the fall semester of the second year of graduate training the program reserves the right to dismiss the student from the program.

Seminar – 2nd Year Students and Update Seminars

No more than 12 months after entering a thesis laboratory, each student will schedule a Thesis Proposal Seminar outlining the rationale for and method of approach to the student's proposed thesis research project. The student's Thesis Advisory Committee (TAC) and members of the faculty, student body and staff attend this seminar. The open attendance provides both the student and the advisor with an opportunity to receive ideas and criticism from a broad spectrum of individuals, ensuring that the proposed project is both suitable and achievable.

Thesis proposal seminars are followed by thesis update seminars on an annual. Update seminars provide a good opportunity for the student's TAC to review the student's progress and to invite input from the faculty as a whole, as well as afford the student opportunities to polish presentation skills. A student in consultation with his or her advisor, and with the approval of the Chairman of the GTC, should select an outside committee member (see below) by the date of the first thesis update (i.e., on or around one year in thesis laboratory). Following each committee meeting, the student and TAC chair will complete the Thesis Advisory Committee Meeting Summary we form (see above).

Prior to scheduling a final defense, each graduate student must publish (or at least submit for publication) one primary, or first-author, major publication. This requirement does not include a technique paper or an invited review.

Thesis Advisory Committee (TAC) Meetings

After completion of the comprehensive exam, the TAC meets at least once each year with the student and his or her thesis advisor to monitor progress of the project and to provide additional input and suggestions. The student must take the initiative in scheduling TAC meetings. After each committee meeting, the student will complete the Thesis Advisory Committee Meeting Summary with his or her TAC chairman. This web form must be no later the two weeks following the TAC meeting. If the TAC meeting is accompanied by an annual presentation, then both the presentation and the meeting forms must be completed at http://predocprogress.ucdenver.edu. If you fail to have a TAC meeting in the preceding 12 months, you will not be permitted to register for Spring Semester, or for subsequent academic terms. Once you are in compliance with this rule, you will be permitted to register.

The Thesis Defense

As per Graduate School rules, the Thesis Examination Committee shall consist in a minimum of five Graduate Faculty members. At least one of the members must be outside the program's core training faculty. The majority of the members, including the committee chair, must be from the core-training faculty of the degree-granting program.

Structural Biology and Biochemistry students must present a complete draft to their mentor no later than 3 weeks prior to the defense date. At that time the mentor is to quickly review the document and determine if it is ready to be passed along to the full committee. If the document is given the approval by the mentor, the student will send the draft to the full committee no later than two weeks prior to the defense date.

Per Graduate School rules, the Program Director must approve the student's final Thesis Examination Committee membership and the examination schedule. The Graduate School must be notified, using the appropriate forms, at least two weeks before the exam. Forms are included in the Ph.D. graduation packet (available on the Graduate School website). The Graduate School will send announcements of the examination to the appropriate faculty members and the signature form will be sent to the Program Administrator's Office to be placed in the student's file for use at the examination. The Graduate School and the Program Administrator will also post the notice of the examination.

For the defense, the student presents at least a thirty-minute seminar highlighting the contributions made to the understanding of a particular scientific problem by his or her dissertation work. The seminar is open to the public and a brief period for questions will follow. Thereafter, everyone attending the public seminar that is not on the student's Thesis Examination Committee will be dismissed. The Committee will then examine the student about the thesis work. In order to pass the examination, the student must receive affirmative votes from the majority of the members of the Thesis Examination Committee. Thesis Examination Committee members, as with the University Comprehensive Examination committees, may impose conditions before conferring a passing evaluation, or may require a more extensive remedies before considering passing the student.

All members of the committee must be present for the examination. One member, but not the chairman nor the student, may participate by interactive video if absolutely necessary. The examination form is signed by each member of the Thesis Examination Committee and returned to the Program Administrator. The student must receive votes from the majority of the Examination Committee for one of the following outcomes:

1. Pass
2. Pass with stated conditions
3. Fail

If a student passes the examination with conditions, those conditions must be satisfied within sixty days of the defense. The special conditions must be stated on the examination form and subsequently monitored by the committee chair in order to ensure that the conditions can be completed within the sixty days allotted. If a student fails the examination outright, he or she will be, at the discretion of the examination committee, dismissed from the program effective immediately.

Disciplinary Actions

The University of Colorado Anschutz Medical Campus, consistent with most other educational institutions, has a student honor code. The Structural Biology & Biochemistry Program endorses and enforces this honor code. A student who violates the honor code will be called before the Program Director and Student Advisor who may assign disciplinary action, up to and including dismissal from the program.

Each student is expected to maintain satisfactory academic progress. A student whose grade point average drops below a 3.0 is placed on academic probation. To be removed from academic probation, a student must achieve a GPA of 3.0 or above for the academic semester following the semester for which the student was placed on probation, and must achieve a cumulative GPA of 3.0 or above within two semesters of being placed on probation. A student who fails to be removed from academic probation within two semesters will be dismissed from the program.

Doctoral students are expected to complete all degree requirements within seven years of matriculation. Students who fail to complete the degree in this seven-year period are subject to termination from the Graduate School upon the recommendation of the Program Director and concurrence of the Dean. For a student to continue beyond the time limit, the Program Director must petition the Graduate School and include 1) reasons why the program faculty believe the student should be allowed to continue in the program and 2) an anticipated timeline for completion of the degree. Students who cannot complete requirements in the 7-year period will be required to retake a second comprehensive examination. The Graduate School may approve extensions for up to one year.

The student requirements described in this handbook must be met by the deadlines stated. The Program Administrator & Director monitor the progress of each student. If they conclude that a student is not meeting the program's requirements in a timely manner, they may request a meeting with that student. After review, the Program Administrator & Director may take any actions deemed appropriate, including placing conditions on the student's continuance in the program or dismissing the student from the program. If a student is in jeopardy of missing a deadline or believes he or she is not achieving acceptable progress, the student should contact the Program Director immediately. Failure to notify the Program Director of problems in completing requirements can result in dismissal from the program.

Campus Resources

AMC Bookstore

https://cuanschutz.bncollege.com/webapp/wcs/stores/servlet/BNCBHomePage?storeId=87741&catalogId=10001&langId=-1

The Anschutz Medical Center Bookstore provides the most complete inventory of Medical and Scientific books in the Rocky Mountain area. Over 3,000 titles are available for immediate shipment including an extensive selection of Medical titles in CD-ROM and PDA formats. Software is available at discounted education prices for faculty and students. Special orders for books and software are available for titles not in stock. The bookstore carries all books and products necessary for course work at the University Of Colorado Denver Anschutz Medical Center.

Location:

Anschutz Medical Campus
13121 East 17th Avenue
Education 2 South Bldg.,
Aurora, CO. 80045
303-724-2665 (4-BOOK)
The AMC Bookstore is located on the 1st floor of the Education 2. When you enter Ed 2, the bookstore is on the right from the lobby entrance.

Hours:

Mon 08:30am-3:30pm
Tue 08:30am-3:30pm
Wed 8:30am-3:30pm
Thu 8:30am-3:30pm
Fri 9am-3pm
Sat CLOSED
Sun CLOSED

Health Sciences Library

http://hslibrary.ucdenver.edu/

The UC Denver Health Sciences Library links people, reliable health sciences knowledge, and technology in support of effective learning, quality health care, vital research, and community service. The staff of the library strives for the highest quality services as they enhance access to the knowledge base of the health sciences, instruct users in information retrieval and management techniques, and acquire and organize a specialized collection of electronic, print and other resources in a cost-effective manner.

Location:

Health Sciences Library | University of Colorado Denver
Mail Stop A003
12950 E. Montview Blvd.
Aurora, CO 80045 | USA
Phone: 303-724-2152

Hours:

Monday - Thursday	7:00 am – 12:00 Midnight
Friday	7:00 am – 6:00 pm
Saturday	10:00 am – 6:00 pm
Sunday	10:00 am – 12:00 Midnight

Exceptions are posted on their website.

Recreation

Lounge 500, in Building 500 is a lounge for all Anschutz Medical Campus students – it is accessible 24/7 with your student ID (which you will receive during your school/program orientation). The lounge includes billiards, ping pong, foosball, seating, and privacy rooms which can be used for breastfeeding, prayer, naps (!), etc. Check out the space – it is right next to the Bookstore/ Food Court area on the first floor of Building 500. There are a few quadrangle areas which are good gathering places for volleyball, frisbee, football and other outdoor activities. You may checkout volleyball net sets, frisbees, etc., from the Student Assistance Office. 303-724-7686.

The Fitzsimons Golf Course is available for everyone to use. Call (303) 397-1818 for a tee time. Visit their web site at https://www.auroragov.org/ThingsToDo/Golf/GolfCourses/Fitzsimons/index.htm.

Intramural Sports

Flag Football - Fall – Commissioned by AMC Campus
Volleyball - Fall and Winter – AHEC
Basketball - Fall and Winter - AHEC
Flag Football is commissioned by AMC students.
Basketball and volleyball utilize the services of the Auraria Campus.

Fees for team sports at Auraria are typically $30/student player on a team. $50/guest (spouse, friend, roommate, etc.). Watch the www.ucdenver.edu/studentassistance website, as well as your @CUAnschutz.edu email for upcoming sports announcements.

Anschutz Medical Campus students are able to use the Recreation Facilities at the Downtown Campus of UC Denver. The Recreation Center is actually the property of Metropolitan State College of Denver, but all of Auraria and Anschutz Medical Campus students are able to use the facilities. You need to have your Anschutz Medical Campus ID (that means you can participate AFTER orientation). Go to http://www.msudenver.edu/campusrec/# for more information.

Other facilities and parks close to the Anschutz Medical campus include:

Moorhead Recreation Center
2390 Havana Street, Aurora, CO 80010 (303) 366 1718

Parklane Pool
3200 Tucson Street, Aurora, CO 80011 (303) 341-2650

Aurora Parks and Recreation:
General's Park (at the corner of Colfax and Peoria) Cottonwood Park, Sand Creek Park, Moorhead Park, Spencer Garrett Park, and Havana Park.

AMC Student Health Insurance Office

http://www.ucdenver.edu/life/services/student-health

The Anschutz Medical Campus at the University of Colorado provides varied student needs in the area of health. The Student Health Insurance (SHI) Plan is designed to provide students with health care coverage offering a PPO accident and sickness health plan.

All degree and specific approved, certificate-seeking students enrolled in five or more credit hours must take the School of Medicine's Student Health Insurance Plan unless they can prove enrollment in other comparable insurance. Forms are located online at http://www.ucdenver.edu/life/services/student-health/Documents/AMC_StudentEnrollWaiver.pdf.

The Student Insurance Office is available to all students at the School of Medicine to assist with selecting or waiving the Student Insurance Plan. The Student Health Insurance Coordinator can help you evaluate your insurance needs

so you choose the best plan available. If you are having problems understanding a bill, or you think an error has been made, don't hesitate to contact the Student Insurance Office. One of the functions of the Student Insurance Office is to help you resolve billing issues.

Location:

Student Health Insurance Office | University of Colorado Denver
Mail Stop A035, Education II, North Room #3208
Aurora, CO 80045
Phone: 303-724-7674

E-mail: studentlife.healthinsurance@CUAnschutz.edu

Hours

Monday through Friday
8:00am-5:00pm (Friday open until 3:00pm)

Parking and Transportation

The parking office is in Building 500 on the 1st Floor (west side of the Food Court seating area). Parking permit are available for the student rate. They also have maps and information on where to park, bike rack/bike locker locations, maps to get there, and other commuting options http://www.ucdenver.edu/life/getting-to-campus/Pages/ParkingandMaps.aspx.

Public Transportation

The RTD College Pass is available to all active (enrolled) Anschutz Medical Campus degree seeking students (including the Dental ISP Program). A mandatory, student use fee per semester supports the pass. This fee is covered by the program along with tuition and other fees.

The AMC RTD College Pass INCLUDES all regular fixed route service, including bus (local, express, regional), light rail, call-n-Ride, and skyRide service (free to AMC students with RTD College Pass). Services NOT included in the RTD College Pass program are: access-a-Ride, BroncosRide, RockiesRide and other special event services.

For any term in which the degree-seeking student enrolls for academic credit at Anschutz Campus, the fee will be assessed. Waivers out of the College Pass Program will be allowed only for individual students who meet specific criteria, which are outlined in the Fee Waiver Application form. Detailed information about the Waiver process may be found on the Student Assistance website. For degree seeking students new to campus, the College Pass will not be available until the student their AMC ID Badge. For new students, the College Pass will be distributed by the Badging / Security Office during matriculation.

UC Denver Shuttle Service

The University offers a bus service to the Faculty, Staff and Students that runs between the Anschutz Medical Campus (AMC) and the Lawrence Street Center Building downtown (LSC). There are two designated BUS STOPS for pick up and drop off:

- In front of Building 500 on the Anschutz Medical Campus (south side)
- In front of the main entrance to the Lawrence Street Center Building downtown

This service is free to UC Denver faculty, staff and students with University ID.

For more information & updates visit their website—also see additional information in Appendix D.
http://www.ucdenver.edu/about/departments/FacilitiesManagement/ParkingMaps/Pages/ShuttleService.aspx.

Student Assistance Office
http://www.ucdenver.edu/life/services/student-assistance

The Student Assistance Office's mission is to enhance student life at the Anschutz Medical Campus of the University of Colorado Denver by providing excellence in specific non-academic and academic student services.

Students who have been admitted into their respective school/program or who are currently enrolled can utilize the Student Assistance Office's many services during their tenure at the Anschutz Medical Campus. All students may utilize the services of this office.

Location:

Anschutz Medical Campus
Education II North
3rd Floor #3123
Aurora, CO 80045
303-724-7686

Hours:

Monday through Friday
8:00 a.m. - 5:00 p.m.

The Student Service Suite includes several offices -

- Bursar/Cashier
- Diversity and Inclusion
- Financial Aid
- Registrar
- Student Assistance
- Student Health Services/Student Health Insurance

These offices are centrally located on the 3rd floor of Ed II North. The Student Assistance Office is responsible for maintaining smooth access to the variety of services utilized by students. In addition, the Student Assistance Office offers a variety of programming and services to all students at the Anschutz Medical Campus.

The **Student Life Handbook** contains a wealth of information about the services within the suite, as well as general information about other campus departments and services. Hard copies are available in the Student Assistance Office, or you can download a copy from their website.
http://www.ucdenver.edu/life/services/student-assistance/Documents/U%20of%20CO%20Denver%202012.pdf.

University Policies

Honor Code

The Structural Biology & Biochemistry Program, while housed in the School of Medicine is governed by the Graduate School, and follows guidelines, policies and calendars for the Basic Science departments. For clarification on specific policy questions you can contact the Graduate School by phone 303-724-2911, email Graduate.School@CUAnschutz.edu or in the office (Academic Office 1 building, Room 1506).

The student academic honor and conduct code and forms are located online at
http://ucdenver.edu/academics/colleges/Graduate-School/student-services/Documents/HonorCode.pdf

Vacation and Holiday Policy

Students who receive full support stipends from the Structural Biology & Biochemistry Program are required to pursue their training on a fulltime basis, devoting each day of the normal work week, plus any additional time required by their research projects and academic courses. Additionally, for a student to maintain fulltime student

status, the Graduate School has established the following guidelines for vacation and leave time. These represent the leave to which a graduate student is entitled; However, research demands and commitment to graduate studies often results in students using less than the allotted leave. The program does not have a formalized system for accounting for vacation and sick leave; Therefore monitoring falls under the honor system and is the responsibility of the student.

Vacation and Holidays Reporting
Graduate students shall receive all University holidays and no more than 14 calendar days (counting all days Monday through Sunday) of vacation per annum, with no year-to-year accrual. Students shall continue to receive stipends during vacations and holidays. The times between academic terms, spring break, and the summers are considered active parts of the training period and do not count as free times. Vacation days must be taken for all dates away from campus outside of holiday dates. Students taking courses should not take vacations when classes or exams are scheduled. Vacation time must be arranged with the dissertation advisor or program advisor ahead of time.

Sick and Other Leave Reporting
Graduate students may continue to receive stipends for up to 15 calendar days (counting all days Monday through Sunday) of sick leave per annum, with no year-to-year accrual. Under exceptional circumstances, additional sick days may be granted following a written request and approval by the student's program director. Sick leave may be used for the medical conditions related to pregnancy and childbirth.

Disclaimer
This handbook, which includes parts of the Graduate School Rules, does not constitute a contract with the University of Colorado Denver | Anschutz Medical Campus Graduate School nor with the Structural Biology and Biochemistry Program, either expressed or implied. Both the Graduate School and the Structural Biology and Biochemistry Program reserve the right at any time to change, delete, or add to any of the provisions or contents at their sole discretion. Furthermore, the provisions of this document are designed to serve as firm guidelines rather than absolute rules and exceptions may be made on the basis of extenuating circumstances.

Appendix A

Pre-Rotation Laboratory Proposal

Rotation Evaluation

Thesis Committee Report

University of Colorado Anschutz Medical Campus
Structural Biology & Biochemistry Program
Pre-Rotation Laboratory Proposal

Student Name_____

Signature _____

Advisor _____

Signature _____

Date _____

Project Title_____

_____

_____

1) Background

_____

_____

_____

_____

_____

_____

_____

_____

_____

2) Hypothesis to be tested

_____

_____

_____

_____

_____

_____

3) Specific Aims

4) Approach to the Problems

Graduate Training Program Director

University of Colorado Anschutz Medical Campus
Structural Biology & Biochemistry Program
Rotation Evaluation

Faculty Advisor: _____ **Student:** _____
Rotation Number _____ **Year** _____

Rate the Student's performance in the following areas using a 0-10 (0 poor; 10 outstanding) scale:

1. Commitment and enthusiasm for the project. _____
2. Appropriate time commitment to the rotation. _____
3. Understanding of the project. _____
4. Ability to design and interpret experiments. _____
5. Ability to communicate about the project, including post-rotation talk. _____
6. Positive response to feedback. _____
7. Maintenance of lab notebook/write-up of experiments. _____
8. Professional behavior. _____

Please expand on your answers where necessary.
Who was responsible for the day-to-day supervision of the student (you, a postdoc, a student, a technician, or no-one)?

How effectively was the student's time used in the laboratory?

Did the student include the correct controls in their experiments?

Did the student generate interpretable data?

Did the student actively participate (*e.g.*, ask questions) during lab meetings?

When appropriate, did the student seek assistance from, and work well with, other lab members?

When given feedback, did the student actively incorporate suggestions into future experiments?

If the student presented their results at lab meeting, how effective was the presentation?

Would you take this student in your lab for a thesis project?

Overall grade (Outstanding A, average B, poor C; can also use +/-, except there is no A+) _____

Signatures:

_____ _____
Faculty Member (P.I.) Student

University of Colorado Anschutz Medical Campus
Structural Biology & Biochemistry Program
Thesis Committee Report

Student: _____ **Date of Meeting:** _____

Faculty Advisor: _____ **Committee Chair:** _____

Committee Members in Attendance: _____

_____

(Student's summary of their project to be attached)

---

1. Has the student made satisfactory progress since the last meeting?

   Which of the specific experiments and/or goals set forth at the last meeting were accomplished?

   Which of the specific experiments and/or goals set forth at the last meeting were NOT accomplished? Why were they NOT accomplished?

2. Is there evidence that the student the student is sufficiently committed to the research?

3. Does the student have sufficient knowledge of the current literature? Does the student actively seek advice/help, as needed, from the mentor and other faculty? From others in the laboratory?

4. Has the student communicated the data clearly in committee meetings and RIP?

5. What are the specific concerns of the committee related to the project/ student?

6. The committee recommends the following experiments and/or goals that should be accomplished by the next meeting:

7. Have the student and mentor been made aware of the concerns, the expectations or the recommendations of the committee? _____

   Are there any disagreements within the committee; or between the committee, the student and the mentor? If so what are they?

8. Date by which next meeting should be held?_____

Scoring Matrix

Rate the Student's performance in the following areas using a 0-10 (0 poor; 10 outstanding) scale:

1. Does the student exhibit an appropriate level of knowledge of the project? _____
2. Does the student demonstrate an ability to analyze experimental results? _____
3. Were the results presented in a clear and concise fashion; were the data convincing? _____
4. Are future experiments proposed by the student well designed and address the hypothesis? _____

TOTAL _____

Appendix B

Specialty Tracks

Molecular Biology
Pharmacology

Molecular Biology Program track in Structural Biology and Biochemistry

Graduate students entering the Program in Molecular Biology will have the opportunity to train in a specialty track in "Structural Biology and Biochemistry". This track provides additional course work in advanced protein chemistry and structural analysis of biomolecules and the opportunity to conduct thesis research in laboratories that have expertise in the application of NMR spectroscopy, X-ray crystallography, mass spectrometry, computational biochemistry and biophysical biochemistry to problems of structure/function of biomolecules. Students will receive their Ph.D. degrees from the Molecular Biology Program. The Molecular Biology Program will have the responsibility and complete control of monitoring and administering the progress of students. The minimum requirements established by the Molecular Biology Program will apply; that is, a B or better in the Core course and all required courses. A curriculum will be designed that strikes a balance between meeting requirements of both Programs without overburdening students with having to participate in every course and activity of both Programs.

The Molecular Biology and Structural Biology and Biochemistry programs may recruit first-year students jointly or independently who meet the requirements and standards established between the two programs.

Course requirements:

- Ethics Course PHCL 7605 (Fall 1 credit)
- Biomedical Sciences Core Course IDPT 7811-7815 (Fall 10 credits)
- Mol Biology 7800 Advanced Topics (Spring, 4 credits)
- At least 5 credit hours of the of the 5 courses offered by the Structural Biology & Biochemistry Program:
    - STBB 7608 Molecular Interactions (3 credit hours)
    - STBB 7609 Biophysics and Spectroscopy (3 credit hours)
    - STBB 7631 Molecular Structure A [NMR] (1.5 credit hours)
    - STBB 7632 Molecular Structure B [X-Ray Crystallography] (1.5 credit hours)
    - STBB 7633 Molecular Structure C [Mass Spectrometry] (1.5 credit hours)
- Elective courses to complete credit hours required for Ph.D. candidacy are the choice of the student. Electives may include remaining courses offered by Biomolecular Structure.

Program Activities:

- Students in the first year will do three laboratory rotations for 1 hr. of credit each. Faculty in both Molecular Biology and Structural Biology and Biochemistry are eligible to mentor lab rotations.
- Lab rotation seminars will be required and given along with other Molecular Biology Students. Faculty from both Programs will be invited and encouraged to attend rotation seminars.
- Weekly seminars. Students will have the choice of attending the weekly seminar series of either Program, but will not be expected to attend both in any given week. Students will be required to attend at least one of the two seminar series each week.
- Mini-course and Retreat. Students will be required to participate in the annual mini-course and retreat sponsored by the Molecular Biology Program. The Molecular Biology Program will cover the student expense for these annual activities.
- Student seminars. After the first year, students will be required to give an annual research seminar on the progress of their work. This seminar will be given on alternate years in the Molecular Biology and Structural Biology and Biochemistry seminar series. Faculty from both Programs will be invited and encouraged to attend these student seminars.

Thesis laboratory and mentor:

- Students will select and enter a thesis laboratory on July 1st after successful completion of the first year requirements including courses, laboratory rotations and preliminary examination. The criteria established by the Molecular Biology Program will apply for students to pass on to the second year and to enter a thesis laboratory.
- Thesis mentor. A student must select a faculty member from the Program in Structural Biology and Biochemistry as his/her thesis advisor or co-advisor.

Exam/thesis committees:

- Comprehensive examination and thesis committees will have at least 5 faculty members with the majority from Molecular Biology, (at least 3) and the remainder from Structural Biology and Biochemistry. The chair of the committee will be the choice of the student (can be faculty from either Program). Thesis committees will meet at least annually and will file written reports of each meeting according to Molecular Biology guidelines.
- Thesis requirements regarding the written and oral portions of the examination will be according to Molecular Biology guidelines.

Financial responsibilities:

- Graduate School will absorb the cost of funding students in their first year, including recruitment, stipend, tuition, fees and health insurance.

After entering the thesis laboratory on July 1 of the second year, financial responsibility is solely that of the thesis mentor.

Pharmacology Program track in Structural Biology and Biochemistry

Graduate students entering the Pharmacology program will have the opportunity to train in a specialty track in "Structural Biology and Biochemistry". This track provides additional course work in advanced protein chemistry and structural analysis of biomolecules and the opportunity to conduct thesis research in laboratories that have expertise in the application of NMR spectroscopy, X-ray crystallography, mass spectrometry, computational biochemistry and biophysical biochemistry to problems of structure/ function of biomolecules. A student will receive his/her Ph.D. degree from the Pharmacology program. The Pharmacology program will have responsibility and complete control of monitoring and administering the progress of students. The minimum requirements established by the Pharmacology program will apply; that is a B or better in the Core course and all required courses.

A curriculum will be designed that strikes a balance between meeting requirements of both Programs without overburdening students with having to participate in every course and activity of both Programs. The Pharmacology and Structural Biology and Biochemistry programs may recruit first-year students jointly or independently who meet the requirements and standards established between the two programs.

Course requirements:

- Biomedical Sciences Core Course IDPT 7811-7815 (Fall 10 credits)
- Graduate Pharmacology-PHCL 7620 (Spring 6 credits)
- Receptors and Cell Signaling-PHCL 7606 (Spring 3 credits)
- Frontiers in Pharmacology-7600 (Fall 1 credit)
- At least 5 credit hours of the 5 courses offered by the Structural Biology & Biochemistry Program:
    - STBB 7608 Molecular Interactions (3 credit hours)
    - STBB 7609 Biophysics and Spectroscopy (3 credit hours)
    - STBB 7631 Molecular Structure A [NMR] (1.5 credit hours)
    - STBB 7632 Molecular Structure B [X-Ray Crystallography] (1.5 credit hours)
    - STBB 7633 Molecular Structure C [Mass Spectrometry] (1.5 credit hours)
- Statistical Methods in Pharmacology PHCL 7610 (Spring 2 credits)
- Ethics in Research-PHCL 7605 (Fall 1 credit)
- Elective courses to complete credit hours required for Ph.D. candidacy are the choice of the student. Electives may be remaining courses offered by Biomolecular Structure.

Program Activities:

- Students in the first year will do three laboratory rotations for 1 hr. of credit each. Faculty in both Pharmacology and Structural Biology and Biochemistry are eligible to mentor lab rotations.
- Lab rotation seminars will be required and given along with other Pharmacology Students. Faculty from both Programs will be invited and encouraged to attend rotation seminars.
- Weekly seminars. Students will have the choice of attending the weekly seminar series of either Pharmacology or the Program in Structural Biology and Biochemistry, but will not be expected to attend both in any given week. Students will be required to attend at least one of the two seminar series each week.
- Journal Club
- Students will be required to participate in the retreat sponsored by the Pharmacology program. The Pharmacology program will cover the student expense for these annual activities.

Thesis laboratory and mentor:

- Students will select and enter a thesis laboratory after successful completion of the first year requirements including courses, laboratory rotations and preliminary examination. The criteria established by the Department of Pharmacology will apply for students to pass on to the second year and to enter a thesis laboratory.
- Thesis mentor. A student must select a faculty member from the Program in Structural Biology and Biochemistry, who is also a member of the Pharmacology training faculty, as his/her thesis advisor or co-advisor.

Major seminar:

- During the second year students will present a seminar to the Department and a Major seminar committee. The topic will be an area of contemporary scientific investigation based on 2-3 research articles.

Comprehensive Exam:

- During the second year students will prepare their comprehensive exam to the Department and committee. Comprehensive examination committees will have at least 5 faculty with the majority from Pharmacology (at least 3) and the remainder from Structural Biology and Biochemistry. The chair of the committee will be the choice of the student (can be faculty from either the Department or Program).
- Thesis requirements regarding the written and oral portions of the examination will be according to Pharmacology guidelines.

Thesis proposal and evaluation:

- During the second year students will present their thesis proposal to the Department and thesis committee. Thesis committees will have at least 5 faculty with the majority from Pharmacology (at least 3) and the remainder from Structural Biology and Biochemistry. The chair of the committee will be the choice of the student (can be faculty from either Program). Thesis committees will meet biannually and will file written reports of each meeting according to Pharmacology guidelines.

Financial responsibilities:

- Graduate School will absorb the cost of funding students in their first year, including recruitment, stipend, tuition, fees and health insurance.

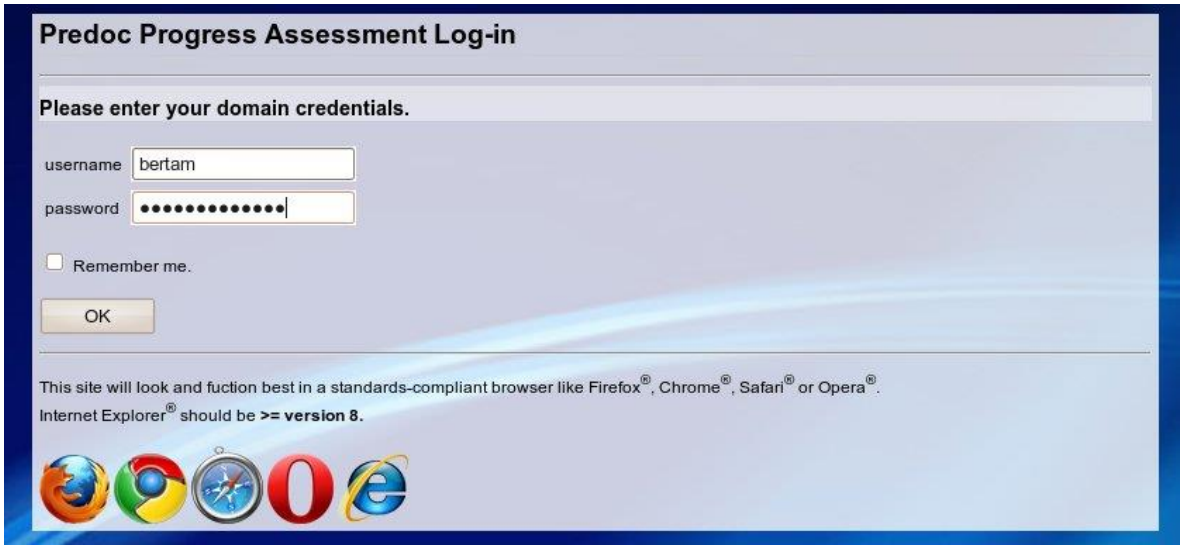
After entering the thesis laboratory on July 1 of the second year, financial responsibility is solely that of the thesis mentor.

Appendix C

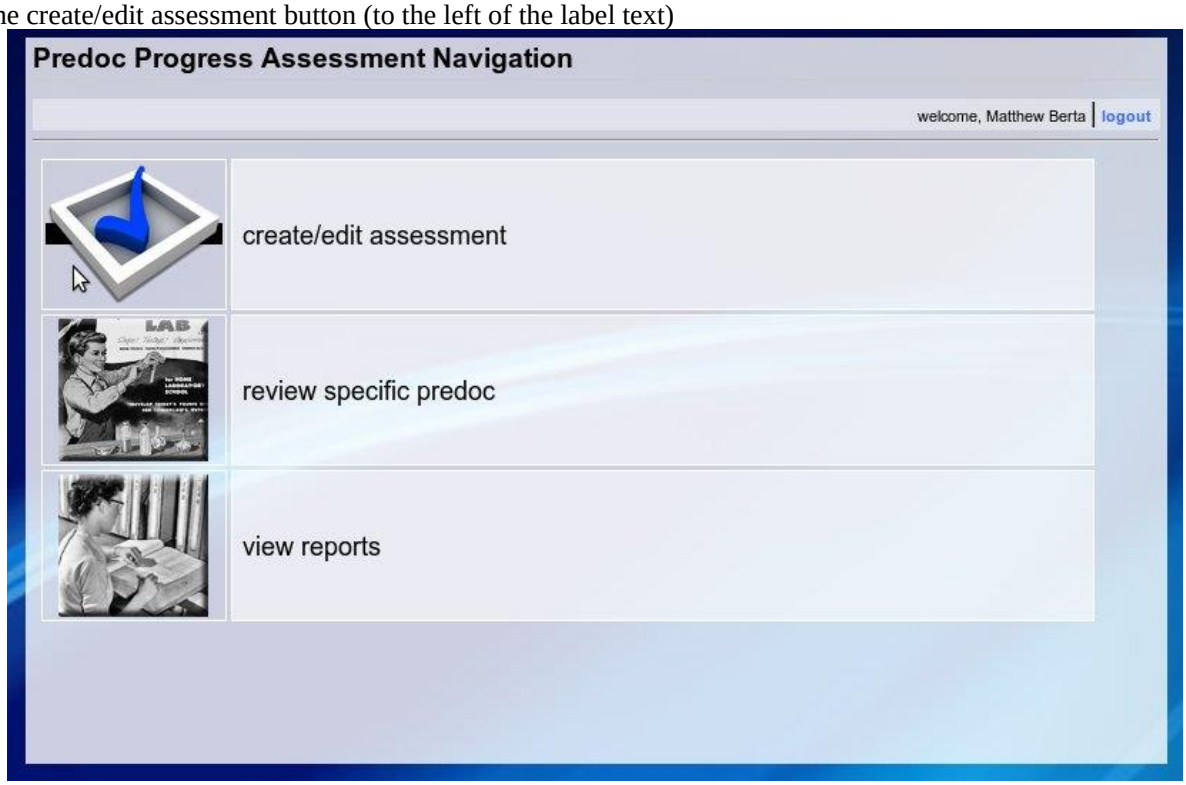
Online Assessment

Predoc Progress Evaluation Directions
Rotation Work
Rotation Presentation
2nd year Seminar (Major Seminar)
Comp Exam
Thesis Presentation
Thesis Meeting
Thesis Defense

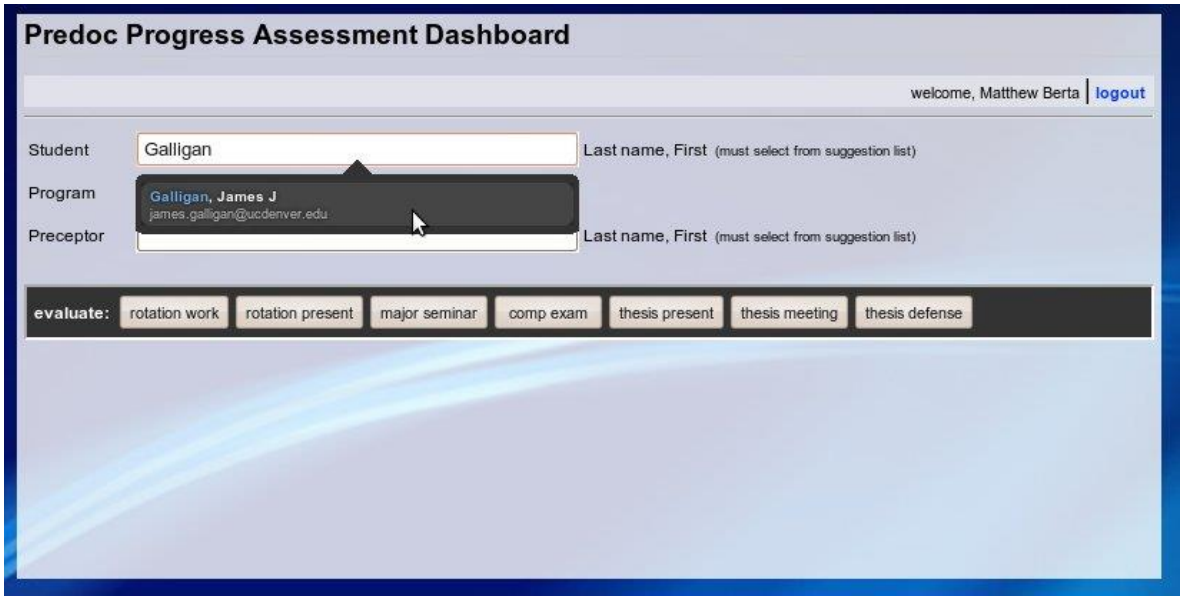
Navigate to http://predocprogress.ucdenver.edu, where you'll be prompted to log in with your UNIVERSITY credentials.



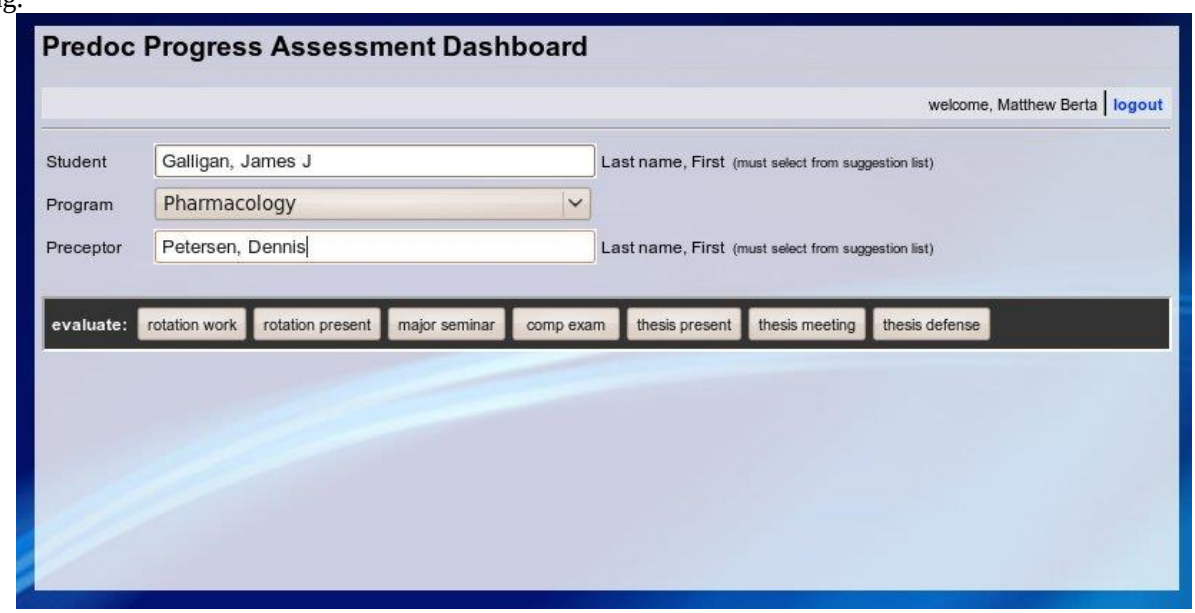
Click the create/edit assessment button (to the left of the label text)



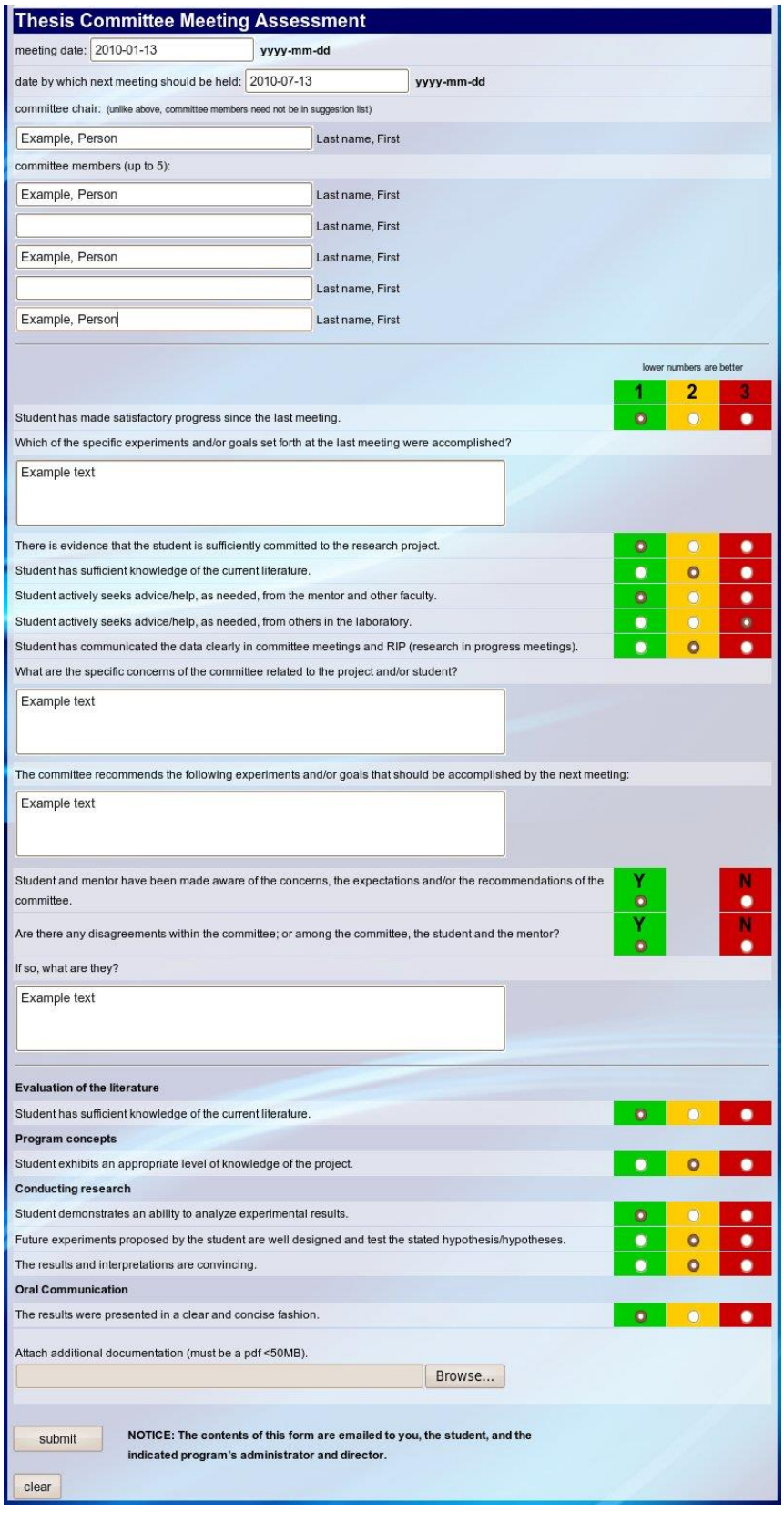
When entering the Student and Preceptor name, a list of valid people will appear. You must select the appropriate people from this list.



After selecting the Program from the drop down list, and selecting the Student and Preceptor from the pop-up list, choose what type of evaluation you'd like to submit by clicking on the appropriate button. In this case, I chose thesis meeting.



You will now be presented with the evaluation. Make sure the dates are correct, enter the committee member names., and proceed with the evaluation by clicking the rating buttons (1 is the best rating). Additional documentation in pdf form can be attached if necessary by clicking the Browse button. Otherwise, once the evaluation is complete, click the submit button.



Thesis Committee Meeting Assessment

meeting date: 2010-01-13 yyyy-mm-dd

date by which next meeting should be held: 2010-07-13 yyyy-mm-dd

committee chair: (unlike above, committee members need not be in suggestion list)

Example, Person — Last name, First

committee members (up to 5):

Example, Person — Last name, First

Last name, First

Example, Person — Last name, First

Last name, First

Example, Person — Last name, First

lower numbers are better

	1	2	3
Student has made satisfactory progress since the last meeting.	●	○	○

Which of the specific experiments and/or goals set forth at the last meeting were accomplished?

Example text

There is evidence that the student is sufficiently committed to the research project.	●	○	○
Student has sufficient knowledge of the current literature.	○	●	○
Student actively seeks advice/help, as needed, from the mentor and other faculty.	●	○	○
Student actively seeks advice/help, as needed, from others in the laboratory.	○	○	●
Student has communicated the data clearly in committee meetings and RIP (research in progress meetings).	○	●	○

What are the specific concerns of the committee related to the project and/or student?

Example text

The committee recommends the following experiments and/or goals that should be accomplished by the next meeting:

Example text

	Y	N
Student and mentor have been made aware of the concerns, the expectations and/or the recommendations of the committee.	●	○
Are there any disagreements within the committee; or among the committee, the student and the mentor?	●	○

If so, what are they?

Example text

Evaluation of the literature			
Student has sufficient knowledge of the current literature.	●	○	○
Program concepts			
Student exhibits an appropriate level of knowledge of the project.	○	●	○
Conducting research			
Student demonstrates an ability to analyze experimental results.	●	○	○
Future experiments proposed by the student are well designed and test the stated hypothesis/hypotheses.	○	●	○
The results and interpretations are convincing.	○	●	○
Oral Communication			
The results were presented in a clear and concise fashion.	●	○	○

Attach additional documentation (must be a pdf <50MB).

Browse...

submit

NOTICE: The contents of this form are emailed to you, the student, and the indicated program's administrator and director.

clear

Predoc Progress Assessment Database Dashboard http://predocprogress.ucdenver.edu/predocProgress.php

Predoc Progress Assessment Dashboard

main menu

welcome, Jim Finster | logout

Student [ ] Last name, First
(You MUST CLICK on a selection from the drop-down list)

Program [Pull down to select ↓]

Mentor [ ] Last name, First
(You MUST CLICK on a selection from the drop-down list)

evaluate:

year 1		year 2		>=year 3		
rotation work	rotation present	major seminar	comp exam	thesis present	thesis meeting	thesis defense

Rotation Lab Work Assessment

rotation number: [Pull down ↓] year: [2012] yyyy

rotation advisor: (unlike above, advisor need not be in suggestion list)

[ ] Last name, First

lower numbers are better

	1	2	3
Evaluating Literature			
Understanding of the assigned reading related to the project	○	○	○
Program Topics			
Understanding of the project	○	○	○
Conducting Research			
Ability to design and interpret experiments	○	○	○
Maintenance of lab notebook/write-up of experiments	○	○	○
Oral Communication			
Ability to communicate in general on a day-to-day basis about the project	○	○	○
Performance in rotation (or lab meeting) presentation	○	○	○
Who was responsible for the day-to-day supervision of the student? [Pull down ↓]			
Overall impression of the student			
Student demonstrated commitment to, and enthusiasm for, the project.	○	○	○
Student devoted the appropriate time commitment to the rotation.	○	○	○
Student responded positively to feedback.	○	○	○
Student exhibited professional behavior.	○	○	○
Student used time effectively in the laboratory.	○	○	○
Student included the correct controls in experiments.	○	○	○
Student generated interpretable data.	○	○	○
Student actively participated (i.e., asked questions) during lab meetings	○	○	○
When appropriate, the student sought assistance from, and worked well with, other lab members.	○	○	○
When given feedback, the student actively incorporated suggestions into future experiments.	○	○	○

If the student presented results at lab meeting, the presentation was effective.

You would take this student into your lab for a thesis project.

comments:

Attach additional documentation (must be a pdf <50MB).

Browse...

submit

NOTICE: The contents of this form are emailed to you, the student, and the indicated program's administrator and director.

clear

Predoc Progress Assessment Dashboard

main menu

welcome, Jim Finster | logout

Student [ ] Last name, First
(You MUST CLICK on a selection from the drop-down list)

Program [Pull down to select ↓]

Mentor [ ] Last name, First
(You MUST CLICK on a selection from the drop-down list)

evaluate:

year 1		year 2		>=year 3		
rotation work	rotation present	major seminar	comp exam	thesis present	thesis meeting	thesis defense

Rotation Presentation Assessment

rotation number: [Pull down ↓] year: [2012] **yyyy**

rotation advisor: (unlike above, advisor need not be in suggestion list)

[ ] Last name, First

lower numbers are better

	1	2	3
Knowledge of Project Concepts			
Project background and rationale were adequately presented.	○	○	○
Ability to Conduct Research Project			
Hypothesis was clearly stated.	○	○	○
Experimental approach was adequately explained.	○	○	○
Quality of data.	○	○	○
Data were analyzed appropriately.	○	○	○
Conclusions were drawn logically from data presented.	○	○	○
Oral Communication			
Slides displaying data were clear and easy to understand.	○	○	○
In general, slides were well organized and simple.	○	○	○
Student's comments added value to the slides rather than merely reading them.	○	○	○
Voice, speaking volume, and mannerisms of the student were appropriate.	○	○	○
Student responded appropriately to comments and questions from the audience.	○	○	○

Overall Grade

A ○	B+ ○	B- ○
A- ○	B ○	C ○

comments:

[ ]

Attach additional documentation (must be a pdf <50MB).

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Student Last name, First

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Program Pull down to select ↓

Mentor Last name, First

(You MUST CLICK on a selection from the drop-down list)

evaluate:

year 1		year 2		>=year 3		
rotation work	rotation present	major seminar	comp exam	thesis present	thesis meeting	thesis defense

Major Seminar Assessment

exam date: 2012-08-15 yyyy-mm-dd

seminar title:

seminar advisor: (unlike above, committee members need not be in suggestion list)

Last name, First

lower numbers are better

	1	2	3
Insight demonstrated in review of the scientific literature	○	○	○
Ability effectively to answer questions raised	○	○	○
Quality of presentation	○	○	○
Independence in preparation of the seminar	○	○	○

Disposition	PASS	FAIL
	○	○

comments:

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Mentor [ ] Last name, First
(You MUST CLICK on a selection from the drop-down list)

evaluate:

year 1		year 2		>=year 3		
rotation work	rotation present	major seminar	comp exam	thesis present	thesis meeting	thesis defense

Comprehensive Exam Assessment

exam date: 2012-08-15 **yyyy-mm-dd**

presentation title: [ ]

committee chair: (unlike above, committee members need not be in suggestion list)

[ ] Last name, First

committee members (up to 5):

[ ] Last name, First
[ ] Last name, First
[ ] Last name, First
[ ] Last name, First
[ ] Last name, First

lower numbers are better

	1	2	3
Knowledge of Program concepts/Quality of ideas	○	○	○
Quality of writing in proposal	○	○	○
Ability to communicate in the format of a NIH grant proposal	○	○	○

comments:

[ ]

Attach additional documentation (must be a pdf <50MB).

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Program [Pull down to select ↓]

Mentor [ ] Last name, First
(You MUST CLICK on a selection from the drop-down list)

evaluate:

year 1		year 2		>=year 3		
rotation work	rotation present	major seminar	comp exam	thesis present	thesis meeting	thesis defense

Thesis Research Presentation Assessment

presentation date: 2012-08-15 **yyyy-mm-dd**

presentation title: [ ]

committee chair: (unlike above, committee members need not be in suggestion list)

[ ] Last name, First

committee members (up to 5):

[ ] Last name, First

[ ] Last name, First

[ ] Last name, First

[ ] Last name, First

[ ] Last name, First

lower numbers are better

	1	2	3
Knowledge of Project Concepts			
Project background and rationale were adequately presented.	○	○	○
Ability to Conduct Research Project			
The hypothesis was clearly stated.	○	○	○
Experimental approach was adequately explained.	○	○	○
Quality of data.	○	○	○
Data were analyzed appropriately.	○	○	○
Conclusions were drawn logically from data presented.	○	○	○
Oral Communication			
Slides displaying data were clear and easy to understand.	○	○	○
In general, slides were well organized and simple.	○	○	○
Student's comments added value to the slides rather than merely reading them.	○	○	○
Voice, speaking volume, and mannerisms of the student were appropriate.	○	○	○

Student responded appropriately to comments and questions from the audience.

comments:

Attach additional documentation (must be a pdf <50MB).

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Program [Pull down to select ↓]

Mentor [ ] Last name, First
(You MUST CLICK on a selection from the drop-down list)

evaluate:

year 1		year 2		>=year 3		
rotation work	rotation present	major seminar	comp exam	thesis present	thesis meeting	thesis defense

Thesis Committee Meeting Assessment

meeting date: 2012-08-15 **yyyy-mm-dd**

date by which next meeting should be held: 2013-02-15 **yyyy-mm-dd**

committee chair: (unlike above, committee members need not be in suggestion list)

[ ] Last name, First

committee members (up to 5):

[ ] Last name, First

[ ] Last name, First

[ ] Last name, First

[ ] Last name, First

[ ] Last name, First

lower numbers are better

	1st mtg	1	2	3
Student has made satisfactory progress since the last meeting.	○	○	○	○

Which of the specific experiments and/or goals set forth at the last meeting were accomplished?

[ ]

There is evidence that the student is sufficiently committed to the research project.	○	○	○
Student has sufficient knowledge of the current literature.	○	○	○
Student actively seeks advice/help, as needed, from the mentor and other faculty.	○	○	○
Student actively seeks advice/help, as needed, from others in the laboratory.	○	○	○
Student has communicated the data clearly in committee meetings and RIP (research in progress meetings).	○	○	○

What are the specific concerns of the committee related to the project and/or student?

The committee recommends the following experiments and/or goals that should be accomplished by the next meeting:

Student and mentor have been made aware of the concerns, the expectations and/or the recommendations of the committee. Y N

Are there any disagreements within the committee; or among the committee, the student and the mentor? Y N

If so, what are they?

Evaluation of the literature

Student has sufficient knowledge of the current literature.

Program concepts

Student exhibits an appropriate level of knowledge of the project.

Conducting research

Student demonstrates an ability to analyze experimental results.

Future experiments proposed by the student are well designed and test the stated hypothesis/hypotheses.

The results and interpretations are convincing.

Attach additional documentation (must be a pdf <50MB).

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Program [Pull down to select ↓]

Mentor [ ] Last name, First
(You MUST CLICK on a selection from the drop-down list)

evaluate:

year 1		year 2		>=year 3		
rotation work	rotation present	major seminar	comp exam	thesis present	thesis meeting	thesis defense

Thesis Defense Exam Assessment

exam date: 2012-08-15 **yyyy-mm-dd**

committee chair: (unlike above, committee members need not be in suggestion list)

[ ] Last name, First

committee members (up to 5):

[ ] Last name, First
[ ] Last name, First
[ ] Last name, First
[ ] Last name, First
[ ] Last name, First

lower numbers are better

	1	2	3
Knowledge of Program concepts/Quality of ideas	○	○	○
Ability to conduct research	○	○	○
Quality of writing in dissertation	○	○	○
Ability orally to present and defend ideas	○	○	○

comments:

Attach additional documentation (must be a pdf <50MB).
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Appendix D

Forms and Additional Information

CORONAVIRUS (COVID-19) UNIVERSITY RESOURCES AND GUIDELINES

CORONAVIRUS (COVID-19) UNIVERSITY RESOURCES AND GUIDELINES

The most up-to-date resources from the University can be found using the following link: cuanschutz.edu/coronavirus. Please bookmark this page in order to stay apprised of the latest University updates, resources and guidelines, throughout this pandemic.
Please note that all of guidelines, information, and links provided below, were resourced from various webpages from the University, as well as the CDC.

COVID-19 SYMPTOMS

Per the CDC, people with the following symptoms, may have COVID-19:

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

These symptoms may appear 2-14 days after exposure to the virus. The CDC will continue to update the symptoms on their website. We would advise that you bookmark their webpage in order to stay informed on the latest information.

SELF-REPORTING

Per the following University guidelines, it is required that you complete the online self-report, if you fall in any of the following groups below:

- You have had prolonged contact of 10 or more minutes, in close proximity of 6 feet or less, with someone who has a confirmed case of COVID-19.
- You are under quarantine by direction of a public health agency or medical provider, and/or awaiting test results for COVID-19.
- You have been informed by a public health agency or a medical provider that you have tested positive or are presumptively positive for COVID-19.
- You believe you are experiencing coronavirus symptoms.

If you fall into any of the above groups, then we are asking that you follow the three steps below:

1. Let your professor or mentor know
2. Follow the recommendations of the public health agency or medical provider.
    - You must follow CDPHE guidance and self-quarantine for 2 weeks if you have had prolonged contact of 10 or more minutes, in close proximity of 6 feet or less, with someone who has a confirmed case of COVID-19.
3. Submit your self-report

CAMPUS SAFETY MEASURES AND PROTOCOLS

At this time, the University has implemented the following safety measures, to all students, faculty and staff whom have been invited and approved to return to campus. Any updates to these measures can be found on the following webpage.

How to Return to Campus

Before Returning:

- Be invited and approved to return by leadership
- Take the required, one-time Skillsoft training "CU: COVID-19 Return to Campus - CU Denver | Anschutz"

3 Daily Steps Once Approved to Return:

1. Complete the health questionnaire before arriving on campus, and bring your confirmation email to a designated check-in point
    - Access the questionnaire through this new, easy-access link daily prior to arrival on campus
    - Or scan the QR code posted at check-in locations to access
2. Bring & wear your CU Anschutz badge and a face covering at all times, indoors and outdoors
    - Only exception if working alone in a closed workspace
3. At the designated check-in point (listed below):
    - Show your confirmation email
    - Get your temperature taken
    - Pick up your wristband in a specific color for each day

How to Stay Safe

- From the check-in point, go directly to your workspace
- Follow donning and doffing protocols for scrubs, uniforms and PPE in healthcare settings
- Stay 6 feet away from others at all times
- Do not gather, meet or congregate at any time, inside or outside
- Follow all posted signage, floor markings and schedules
- Disinfect your workspace and practice hand hygiene
- Use only the closest restrooms or break rooms during the day
- Hold all meetings remotely rather than in person
- Direct questions to your COVID official or supervisor/unit head. Research COVID officials listed here. Officials for education, administration, and other areas to be identified.
- Leave campus immediately if you feel sick, inform your supervisor and self-report

LEARNING REMOTELY

Students should plan and prepare for remote learning, for most of their courses, throughout Fall semester of 2020 and tentatively throughout the Spring semester of 2021. Below are some helpful resources on how to prepare for remote learning and how to be successful while learning remotely.

REMOTE LEARNING: https://www1.ucdenver.edu/offices/office-of-information-technology/get-help/learning-remotely

NAVIGATING CANVAS: https://www1.ucdenver.edu/offices/office-of-information-technology/get-help/learning-remotely/accessing-course-content

SUCCESS AS A REMOTE LEARNER: https://www1.ucdenver.edu/offices/office-of-information-technology/get-help/learning-remotely/how-to-succeed-as-a-remote-learner

STUDENT SUPPORT

Student Resources: https://www.cuanschutz.edu/education/student-resources
The University encourages any student experiencing stress, anxiety and fear to contact the Campus Health Center (303-724-4716) for a free and brief consult regarding the coronavirus pandemic.