

# **CELL and MOLECULAR BIOLOGY** Graduate Program

Student Handbook  
2019 - 2020

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## **Welcome!**

This handbook has been designed to assist students as they progress through their academic career the Cell and Molecular Biology (CMB) Graduate Program at the University of Texas. We have made every effort to include all pertinent information, but for further information please utilize the resources listed below. The CMB Student Handbook is made available to CMB students to explain the more important policies of the CMB Graduate Program. The Graduate Catalog is the official record of this University's graduate policies and requirements. This handbook contains guidelines applicable to the class entering in Fall 2019. Students who have entered the program at other times should consult the version of the handbook relevant to their entering class. .

### ***Responsibilities of a CMB Graduate Student***

Students are responsible for understanding the rules and policies that govern their academic degree. Students should use all resources available to them and plan well in advance to meet necessary deadlines. The Graduate Advisors and Graduate Coordinators are available to answer questions.

The [Graduate School website](#) is an excellent resource for extensive information on the requirements of graduate degrees at the University. The policies and requirements governing a student's graduate career are dynamic. Students are well advised to stay in frequent contact with the Graduate Coordinator and ask questions.

Two University catalogs are essential references: The General Information Catalog and The Graduate Catalog. These catalogs are available online at <http://catalog.utexas.edu/graduate/>.

### ***The Graduate School***

CMB students are admitted to both the CMB Graduate Program and the Graduate School of The University of Texas at Austin. All graduate degrees are the responsibility of the Graduate School.

The Graduate School includes the Vice President and Dean of the Graduate School and staff, plus about 100 Graduate Studies Committees. The Graduate School can be reached at (512) 471-4511.

Each department or field of study offering a graduate degree has a Graduate Studies Committee (GSC) composed of active assistant professors, associate professors, and full professors (tenured and tenure-track faculty). Each GSC sets policy and supervises its graduate program.

Approximately 30 faculty members from various GSCs, plus six graduate students, serve as representatives in the Graduate Assembly, the legislative body of the Graduate School.

There is also a student organization concerned with issues related to graduate study, called the [Graduate Student Assembly](#) (GSA). Any graduate student is welcome as a member.

### ***The College of Natural Sciences (CNS)***

Dr. Paul Goldbart is the Dean of the [College of Natural Sciences](#). The Dean's office is located in W.C. Hogg 3.134 and can be reached at (512) 471-3285.

The College of Natural Sciences consists of 34 Organized Research Units, including the departments of Astronomy, Chemistry, Computer Sciences, Human Ecology, Integrative Biology, Marine Science, Mathematics, Molecular Biosciences, Neuroscience, Physics and Statistics and Scientific Computation. There are also several research institutes including the Institute for Cellular and Molecular Biology (ICMB).

## ***The Institute for Cellular and Molecular Biology (ICMB)***

The [Institute for Cellular and Molecular Biology](#) (ICMB) is a university-wide unit that supports the Cell and Molecular Biology (CMB), Biochemistry (BCH) and Microbiology (MICRO) Graduate Programs. ICMB faculty members are from seven departments within the College of Natural Sciences (Molecular Biosciences, Integrative Biology, Neuroscience, Computer Science, Nutrition, Physics, Chemistry), the College of Engineering, College of Pharmacy, College of Liberal Arts, and the Dell Medical School. The Institute Director is Dr. Jon Huibregtse and the Associate Director is Dr. Alan Lloyd.

ICMB administrative offices are currently located in NHB 2.606

US mailing address:

The University of Texas at Austin  
The Institute for Cellular and Molecular Biology  
100 E. 24<sup>th</sup> St.  
Austin, TX 78712

Campus mailing address:

ICMB, Mail Code A5000

Phone number: (512) 471-2150

## **The Cell and Molecular Biology Graduate Program (CMB)**

The [CMB Graduate Program](#) is part of the Institute for Cellular and Molecular Biology (ICMB). The graduate program can be reached at (512) 471-2150.

Campus mailing address:

CMB Graduate Program, A5000

US mailing address:

The University of Texas at Austin  
Cell and Molecular Biology Graduate Program  
100 E. 24<sup>th</sup> St.  
Austin, TX 78712

### ***Cell and Molecular Biology (CMB) – Graduate Program Administration***

The CMB Graduate Program is administered through an executive committee that represents the 130 faculty members of the CMB Graduate Studies Committee (GSC). These members are drawn from diverse departments, with faculty primarily from Molecular Biosciences, Chemistry, Neuroscience, Nutritional Sciences, Pharmacy, Physics, Biomedical Engineering and Chemical Engineering, and the Dell Medical School.

<b>Rick Russell, Ph.D.</b> Graduate Studies Committee Chair	rick_russell@cm.utexas.edu	(512) 471-1514 MBB 2.212
<b>Jessie Zhang</b> Graduate Program Advisor (for continuing students; <i>i.e.</i> after the first year)	jzhang@cm.utexas.edu	(512) 471-8645 NHB 5.122
<b>Steve Vokes</b> Graduate Program Advisor (for first year students)	svokes@austin.utexas.edu	(512) 232-8359 MBB 1.312
<b>Jolie Cota Flink</b> Graduate Program Coordinator	icmbgradcoordinator@austin.utexas.edu	(512) 471-2150 NHB 2.618
<b>Tom Atchity</b> Graduate Program Recruitment Coordinator	cmbprogram@austin.utexas.edu	(512) 471-0934 NHB 2.622

### Graduate Studies Committee Chair (Rick Russell)

The GSC Chair oversees the Graduate Studies Committee, which is a committee of all CMB faculty members. The GSC Chair also chairs the CMB Executive Committee, which generally consists of 16 CMB GSC faculty members. The Executive Committee sets policies concerning academics and requirements for the graduate program.

### Graduate Program Advisors (Jessie Zhang and Steve Vokes)

The Graduate Advisors are members of the CMB GSC who are appointed by the Dean of the Graduate School to advise CMB graduate students, maintain student records, and represent the Graduate School in matters relating to graduate students. Questions about degree requirements and academic policies should be directed to the appropriate Graduate Advisor.

### Graduate Program Coordinator (Jolie Flink)

The Graduate Program Coordinator keeps student records and ensures forms are processed in a correct and timely manner. Questions concerning routine procedures and day-to-day operations should be addressed to the Graduate Program Coordinator.

### First Year Graduate Program Coordinator and Recruitment Coordinator (Tom Atchity)

The Graduate Recruitment Coordinator is also responsible for onboarding for the incoming cohort, and supporting the administrative needs of new students throughout their first year until they matriculate into a permanent lab. The Graduate Recruitment Coordinator oversees the recruitment and admission of applicants to the CMB Graduate Program and serves as a back up to the CMB Graduate Coordinator.

### Admission to CMB from Biochemistry (BCH) or Microbiology (MICRO) Graduate Programs

The Graduate Programs administered by the ICMB are set up to have maximum flexibility for students to move between them. The GSC Chair and the Graduate Program Advisor must approve transfers to the CMB program from BCH or MICRO. Approval is on a case-by-case basis and dependent on academic and research performance prior to the transfer request. Transfers for first-year students are typically performed at the end of the summer, upon completion of a full year in the original program. If students are considering changing programs, they should first consult with the Graduate Advisor and the Graduate Coordinator to ensure that a change is warranted.

## **CMB Track Information**

As the faculty of the CMB Graduate Program has a wide range of research interests, the CMB Graduate Program is organized into seven specialized “tracks”:

- Bioinformatics and Computational Biology (BCB)
- Biomolecular Structure and Function (BSF)
- Cell and Developmental Biology (CDB)
- Chemical Biology and Drug Discovery (CBDD)
- Molecular Genetics (MG)
- Neurobiology (N)
- Plant Molecular Biology (PMB)

Tracks in the CMB program are a way to organize a highly diverse program into smaller groups. The purpose of each track is also to designate track specific course requirements and electives. Students typically become a member of one track to which their supervising advisor (commonly referred to as Primary Investigator or “PI”) belongs, although they are not required to do so. Many PIs only belong to one track, so this is the default track for a student in that lab. All PI’s belong to one primary track, while some are cross-listed in affiliated tracks. If a student’s PI belongs to multiple tracks, the student should consult with their PI on which track aligns best with their research interests. Regardless of the track that is joined, the conferred degree will be in Cell and Molecular Biology.

A track may also specify the courses that are taken as electives. If a student desires to take a course that is not either a CMB core course or one of the approved electives listed for their track, they must get prior, written approval from their PI and Graduate Advisor, or Track Representative.

More detailed information on the tracks, including track membership and track-specific course requirements, can be found on the CMB website ([icmb.utexas.edu/cmb](http://icmb.utexas.edu/cmb)) under “Program Requirements” listed under the “Current Students” tab.

### ***Laboratory Rotations***

During the first nine months in the program, students perform rotation projects in the laboratories of three ICMB faculty. These rotations broaden laboratory experience and will help students find the research area and permanent laboratory that best suits them. Students are required to spend at least 20 hours per week working in their rotation lab. The second rotation overlaps with the winter break, and students should not take additional holiday besides staff winter holidays (12/24 – 1/1) unless they have made previous arrangements with their rotation supervisor. At the end of each rotation, the faculty member completes a rotation evaluation of the student’s performance. These evaluations determine whether the student receives credit that semester for research hours.

#### **2019/2020 Laboratory Rotation Schedule**

- |                         |                                      |
|-------------------------|--------------------------------------|
| • Early Summer Rotation | June 3 – August 23, 2019             |
| • First Rotation        | September 6 – November 8, 2019       |
| • Second Rotation       | November 11, 2019 – January 31, 2020 |
| • Third Rotation        | February 3 – April 24, 2020          |

Rotations are arranged through mutual agreement between the student and the faculty member (Principal Investigator or ‘PI’) of the lab in which the rotation is arranged. Students should start this process early to ensure rotation through the labs that they are interested in.

Faculty members must be part of the CMB, BCH or MIC GSCs in order to accept a CMB student for rotation. Changes in an assigned rotation may be made only with permission of the Graduate Program Advisor.

Students should discuss funding with PIs when a rotation is being negotiated. It is crucial that students understand how they will be funded should they pursue their Ph.D. in that lab.

### ***Permanent Laboratories***

At the end of a student’s third rotation, they will choose which laboratory to work in on a permanent basis. This is done after careful consideration and consultation with the PI of the lab. First-year students who start their first rotation in June will be required to join a lab by the end of their third rotation, which will be in the beginning of February, 2020. All other students who start their first rotation in September will join a permanent lab after their third rotation ends, at the beginning of May, 2020. ICMB support ends on 5/31/2020 for all students. Subsequent support is the responsibility of the permanent lab (starting on 6/1/2020). It is program policy that 1<sup>st</sup> year students may not TA, therefore, PIs are expected to support their 1<sup>st</sup> year CMB student as a GRA in the summer of 2020.

If students have not made arrangements for a permanent lab by the end of the first nine months in the program, they will be notified that the next six weeks constitute their last in the program. If students find a permanent lab before the end of the six-week period, that PI must petition the Graduate Advisor to approve the student to continue in the Ph.D. program. Students may not be eligible for financial support during this six-week period.

Once in a permanent laboratory, students may change to another laboratory; however, any change must be discussed with and approved by the Graduate Advisor and GSC Chair. The new PI must be a member in good standing of the CMB GSC.

If, for any reason, a student ends their association with their permanent laboratory before arranging for a new laboratory, they will be allowed two months to find another laboratory. While a student is without a laboratory, they may not continue to work toward the Ph.D. and may not have financial support unless through a TA position. The new PI must be a member in good standing of the CMB GSC and must petition the Graduate Advisor asking that the student be allowed to continue in the Ph.D. program.

## **Core Courses**

The default Core Courses are:

MOL 395G Structure and Function of Proteins and Membranes

MOL 395J Genes, Genomes, and Gene Expression

MOL 395F Genetics, Genomics and Epigenetics

MOL 395H Cellular Systems: From Biology to Disease and Back Again

All students take MOL 395G and MOL 395J during the fall semester of their 1<sup>st</sup> year in the CMB program. Prior to the Spring semester, students will self-affiliate with CMB program track that is most relevant to their research interests. Each of these tracks has suggested or required courses for the spring semester. In the absence of student input, MOL 395F and MOL 395H are the default courses for the spring semester. Students who wish to take courses other than these default Spring courses should discuss this with the 1<sup>st</sup> Year Advisor and the Graduate Coordinator prior to registration.

If a student earns less than a B in any of their first year courses, they will need to retake the course unless they choose to change their affiliation to a track that does not require that course. If it is necessary to repeat a course, it must be taken at the very next opportunity that the course is offered. The core courses may not be taken more than twice. Note that the Graduate School requires a cumulative GPA of 3.0 to remain in good standing. Failure to pass a core course that is being re-taken for the second time and/or failure to maintain a GPA of 3.0 or higher will result in dismissal from the program.

## **Basic Core Course Descriptions**

### FALL CORE COURSES

#### **BCH 395J Genes, Genomes, and Gene Expression**

Explore how genomes are maintained, propagated, and converted to functional RNAs and proteins. Understand the primary literature that has led to key advances in these research areas and the experimental approaches that are currently being used to forge new advances. Appreciate the current frontiers in these areas and explore the boundaries; what questions have known or hypothesized answers, and what questions remain to be answered by the next group of researchers and students.

#### **BCH 395G Structure and Function of Proteins and Membranes**

BIO 395J requires graduate students to develop novel approaches to problems, especially translation and entrepreneurial approaches. It focuses on providing insights into recent work, especially from UT faculty, that has the opportunity to play out in larger contexts, and challenges them to figure out what could be done to realize these greater innovations. It is primarily a course about biotechnology, but is largely student-led. Assignments focus on multiple in-class presentations and numerous short writing pieces.

### SPRING DEFAULT CORE COURSES

#### **MOL 395F Genetics, Genomics and Epigenetics**

Basic principles of Mendelian and molecular genetics, and an exploration of the genetic toolbox using examples of analytic methods and modern manipulations; focus on the genetic analysis of model organisms.

#### **MOL 395H Cellular Systems: From Biology to Disease and Back Again**

Mechanisms of growth control, cell regulation, mitosis, cell signaling, protein targeting, and the integration of these processes in various cellular processes.

## ***Additional Required Coursework***

### **BIO 391: Grant Writing and Presentation Skills**

In preparation for the qualifying exam, 2<sup>nd</sup> Year students are required to take BIO391 Grant Writing & Presentation Skills. BIO391 is a writing-intensive course for 2nd year Ph.D. student in the fall semester that involves writing of an NIH-style grant proposal on their own research, presentation of the proposal to the class, and practice in identifying specific aims in research areas outside their primary area. The class is taken by students in the Microbiology, Biochemistry, and Cell and Molecular Biology Programs.

## ***Track Specific Core Courses that May Be Taken in the Spring***

Students in the following tracks may substitute track-specific courses for Cellular Systems: From Biology to Disease and Back Again (MOL 395H) or Genetics, Genomics and Epigenetics, (MOL 395F), or both in the spring semester of the first year. Please note that the approved track core course lists are constantly changing and students should consult with both the 1<sup>st</sup> year Graduate Advisor and the student's potential Track Representative if they wish to substitute a track-specific course for one of the spring core courses. Students not in the following tracks may still be able to substitute a track core course in consultation with their supervisor and Track Representative.

### **SPRING:**

#### **Bioinformatics and Computational Biology (BCB)**

BIO 382K - Biology for Data Science

BIO 384K 27-Python Programming for BIO

BIO 394P Systems Biology and Bioinformatics

CSE 383M Stat/Discrete Methods Sci Comput

SSC 394C Parallel Comput for Sci & Engr

SDS 385 Computational Bio & Bioinformatics

CS 395T Parallel Algors Scientfc Comp

#### **Biomolecular Structure & Function**

BCH 394 Structure & function of proteins and nucleic acids

BCH 387D Phys Mthd in Biochem/Molec Bio

#### **Chemical Biology & Drug Discovery**

BCH 394 Structure & function of proteins and nucleic acids

PGS 397M Drug Design and Synthetic Strategy

CHE 381Q Quantitative Molecular And Cellular Biology

#### **Neurobiology**

NEU382T Principles Of Neuroscience I

NEU 383C Functional Neuroanatomy

NEU 380E Vision Systems

NEU 383T Principles Of Neuroscience II (this course does not require completion of Neuroscience I)

NEU 381N Basic Processes Of Nerve Cells

NEU 385L 9-Synap Phys/Plasticity In Cns

NEU 394P 3-Neurobiol Of Learning/Memory

NEU 396D Clinical Psychopharmacology

NEU 384C Bootstrap Statistics

NEU 385L Topics in Neuroscience Topic 3 Addiction Biology

NEU 380U Brain, Behavior, and Evolution

NEU 385L Topic 13 Neurobiology of Disease

NEU 386G also called NEU 486G. Functional and Synaptic Neuroanatomy.

NEU 391N. Learning and Memory.

NEU 394P Introduction to Sensory-Motor Systems

NEU 394P Perceptual Systems



Plant Molecular Biology  
BIO 388E Plant Growth and Development

Tracks reserve the right to modify and change track-specific requirements and will inform students of any such changes. For more information on track requirements and course listings, go to the CMB website [icmb.utexas.edu/cmb](http://icmb.utexas.edu/cmb) under "Program Requirements."

### ***CMB Track Requirements***

Below are track requirements and some courses that may be taken for an elective requirement. If students desire to take a course that is not a CMB core course or one of the electives listed under their track, they must get prior, written approval from their PI and Track Representative. Due to the constant changes in available classes, CMB encourages students to suggest alternative classes with the approval of their PI and Track Representative.

#### Bioinformatics and Computational Biology (BCB) Track Requirements

Track Representative: Robin Gutell

Revised: August 2017

While computational analysis is now widely used in the vast majority of cellular and molecular biology, students in the Bioinformatics and Computational Biology Track will have an increased emphasis on the computational aspect. What constitutes significant computation is dependent on the lab and project, with an allowance for a significant amount of diversity in scope. And while all of the computational projects must address a topic in cellular and molecular biology, the definition of computation is broad. Programming languages can vary from Java, C++, and Python, to R, SQL, and matlab. And while the balance between pure programming vs. data analysis can vary, the thesis projects should have a significant amount of both, e.g. 80:20; 50:50; 20:80. Projects can have an emphasis on the development of a new algorithm (e.g. protein folding), data processing with Python for statistical analysis, use of sophisticated database management systems for big data applications to name just a few.

1. All BCB students should take one class from the list below. In addition, these track-specific courses may be substituted for the default spring 1st year course (MOL 395H Cell Biology or MOL 395F Genetics). Students who opt to substitute one of the below courses for a spring core course are still required to take one additional BCB elective that may be chosen from the pre-approved list below, or in consultation with their PI and Graduate Advisor or Track Representative.

A partial list of these courses include:

FALL:

CSE 380 - Tools/Techniqs Computatnl Sci

SPRING:

BIO 382K - Biology for Data Science

BIO 384K 27-Python Programming for BIO

BCH 394P – Systems Biology and Bioinformatics

CSE 383M - Stat/Discrete Methods Sci Comput

SSC 394C - Parallel Comput for Sci & Engr

CS 392 - Parallel Algors Scientfc Comp

SDS 385 Computational Biology and Bioinformatics

In addition to the 4 core courses taken in the first year, students must meet the following track requirements:

2. Demonstrate competence in computer programming. It is expected that all BCB Track students can program in at least one language (e.g. Python or other scripting languages, Java, SQL, R, Matlab, etc.). No one language is specified since the language of choice varies across different research applications. This competency can be demonstrated through coursework or through practical experience. Contact the

Track Representative and the student's PI with any questions or to request for a variance.

3. Demonstrate competence in the fundamentals of Biostatistics and/or Data Science (e.g. sequence analysis). It is expected that BCB Track students can interpret and perform basic statistical analyses and/or rigorous data analysis and communicate effectively with a statistician and/or domain scientist for more sophisticated analyses. This competency can be demonstrated through coursework or through practical experience.

#### Biomolecular Structure and Function (BSF) Track Requirements

Track Representative: Kenneth Johnson

Revised: May 2019

The BSF Track covers research involving the determination of structures of macromolecules and studies to define their functions which provides the basis of all biological function. Students in this track are required to take BCH 394 Structure and Function of Protein and Nucleic Acids (offered every spring) Other courses can be substituted with the approval of the Track Representative. A partial list of possible substitutions is listed below:

FALL:

CH 391 Macromolecular Structure and Determination

SPRING:

BCH 387D Physical Methods In Biochemistry And Molecular Biology

BCH 394P Systems Biology and Bioinformatics

BCH 387D Adv Physical Methods For Biochem and Molec Bio

PGS 384L Biochemical and Molecular Toxicology

Acceptable courses that may not be consistently offered:

BCH 391L Macromolecular Structure Determination

BIO 393 Microbial Functional Genomics

CH 391L Synthetic Biology

PGS 388C Introductory Bioorganic Chemistry

#### Chemical Biology and Drug Discovery (CBDD) Track Requirements

Track Representative: Jessie Zhang

Revised: August 2017

Track-specific core courses that may be substituted for the default spring 1<sup>st</sup> year courses (MOL 395H Cell Biology and/or MOL 395F Genetics):

BCH 394 Structure and Function of Proteins and Nucleic Acids (spring)

PGS 397M Drug Design and Synthetic Strategy (spring)

CHE 381Q Quantitative Molecular And Cellular Biology

Track-specific elective course list – a minimum of one course from the following or from courses listed above (or as determined by supervising professor):

PGS 396M Advanced Medicinal Chemistry (spring)

PGS 384K Fundamentals of Toxicology (fall)

PGS 388K Molecular Mechanisms and Methods in Nutrition and Cancer (spring)

PGS 384L Biochemical and Molecular Toxicology (spring)

#### Cell and Developmental Biology (CDB) Track Requirements

Track Representative: David Stein

Revised: August 2017

The CDB Track is for graduate students interested in the mechanisms controlling fundamental eukaryotic cell processes and development. Within these broad and interrelated disciplines the individual

laboratories affiliated with the CDB track focus on understanding the molecular and cellular basis of cell division, growth, differentiation, and movement; spatial patterning and morphogenesis of developing embryos; and the evolution of developmental mechanisms. CDB researchers utilize both plant and animal model organisms along with state-of-the-art methods in molecular biology, biochemistry, proteomics, genetics, and genomics. There is also a strong emphasis on microscopy, especially time-lapse microscopy of cellular and subcellular processes in live cells and embryos. The primary goal of the CDB track faculty is to support and mentor the next generation of outstanding cell and developmental biologists.

Students that join the CDB track must successfully complete the following three CMB core courses: Genes, Genomes and Gene Expression (MOL395J); Structure and Function of Proteins and Membranes (MOL395G); and Grant Writing and Presentation Skills (BIO391). In addition, CDB track students must take two of the following three courses: Genetics, Genomics and Epigenetics (MOL395F); and Cell Biology (MOL 395H), or Developmental Biology (BIO383K, Stein – taught every other year: Fall 2020, Fall 2022). It is possible that in future years, Plant Growth and Development may be offered and can substitute the Developmental Biology course. In addition, students who choose the CDB track will take one graduate-level elective, selected in consultation with the student's faculty advisor and the CDB track representative. This elective can be the third of the three choices listed above or one of the courses on the pre-approved list shown below or another appropriate course offering. Courses that have not been pre-approved require the approval of the CDB track representative. Electives should be completed by the end of the third year.

#### Developmental Biology Courses

Developmental Biology (BIO383K, Stein) – taught every other year (Fall 2020, Fall 2022)

Plant Growth and Development (BIO388E, Huq) – not scheduled to be taught in the next several years.

#### Pre-approved Thesis-Oriented Electives

1-Advanced Immunology (BIO394M, Ehrlich) – Fall

Cellular and Molecular Bases of Neural Development (BIO381K, Agarwala) – Spring

Plant Molecular Biology (BIO388M, Herrin) – Fall

Advanced Plant Physiology (BIO381P, Roux) – Spring

Computational Biology Lab (BIO384K, Gutell) – Spring

Advanced Virology (BIO391P, Sullivan) – Fall

Pre-approved Thesis-Oriented Electives that may not be consistently offered:

Current Topics in Cell Biology (BIO383K, De Lozanne)

Evolution (BIO385K, Juenger, Kirkpatrick, Linder, Mueller)

Membrane Traffic in Health and Disease (BIO383K, O'Halloran)

Computational Biology and Bioinformatics (SDS385, Wilke)

Signal Transduction in Microorganisms (BIO393M, Harshey)

#### Molecular Genetics (MG) Track Specific Requirements

Track Representative: Arlen Johnson

Revised: September 2017

MG track is tailored to students interested in the molecular mechanisms of gene expression and genome structure and maintenance. Students in the MG track must successfully complete all four CMB core courses: Genes, Genomes and Gene Expression (MOL395J); Structure and Function of Proteins and Membranes (MOL395G); Genetics, Genomics and Epigenetics (MOL395F; Microbial Genetics BIO 395M may be substituted with consent of the Graduate Advisor) and Cell Biology (MOL 395H); and Grant Writing and Presentation Skills (BIO391). In addition, students must take 1 elective in consultation with the PI and the track representative. Suggestions for electives include:

FALL:

BIO 391P Advanced Virology

BIO 394M 1-Advanced Immunology

BIO 394M Tumor Biology  
SDS 328M Biostatistics

SPRING:

BIO 388M Plant Molecular Biology  
BIO 394M Genomics  
BIO 382K Intro to Biology for Data Science  
BCH 394P Systems Biology and Bioinformatics  
BIO 394M Human Infectious Diseases  
BIO393M Signal Transduction in Microorganisms  
SDS 385 Computational Biology and Bioinformatics

Neurobiology (NB) Track Requirements

Track Representative: Nigel Atkinson

Revised: August 15, 2019

Neurobiology students are required to take NEU 382T (Principles Of Neuroscience I) and one class from the list below. Either or both of these track-specific courses may be substituted for the default spring 1st year courses (MOL 395H Cell Biology and MOL 395F Genetics) – *this policy is effective for the 2019-20 cohort*. Alternatively, the track-specific courses may be taken as electives in years 2 or beyond.

NEU 383C Functional Neuroanatomy  
NEU 380E Vision Systems  
NEU 383T Principles Of Neuroscience II (this course does not require completion of Neuroscience I)  
NEU 381N Basic Processes Of Nerve Cells  
NEU 385L 9-Synap Phys/Plasticity In Cns  
NEU 394P 3-Neurobiol Of Learning/Memory  
NEU 396D Clinical Psychopharmacology  
NEU 385L 12-Quantifying Brain Structure – Fall  
NEU 384C Bootstrap Statistics  
NEU 385L Topics in Neuroscience Topic 3 Addiction Biology  
NEU 380U Brain, Behavior, and Evolution  
NEU 385L Topic 13 Neurobiology of Disease  
NEU 386G also called NEU 486G. Functional and Synaptic Neuroanatomy.  
NEU 391N. Learning and Memory.  
NEU 394P Introduction to Sensory-Motor Systems  
NEU 394P Perceptual Systems

Beginning in their 3rd year of graduate training, students must enroll and actively participate in the presentation and discussion of the current scientific literature in neuroscience. A list of appropriate journal clubs is available from the track representative. As faculty, we strongly recommend (and students PIs may require) that students serve as a teaching assistant in a graduate or undergraduate course in neuroscience, neurobiology, or neuropharmacology at least once in their graduate career.

Plant Biology (PB) Track Requirements

Track Representative: Mona Mehdy

Revised: August 2019

Students in the Plant Biology track are required to take one elective course in addition to four first-year courses and the grant-writing class (BIO 391). The elective course may be selected from the list below or may be another suitable graduate course as determined by student's supervisor and committee and approved by the graduate advisor. First-year students may substitute 388E for either of the default spring

1st year courses (MOL 395H Cell Biology or MOL 395F Genetics). However, the requirement for an additional elective course will still be in effect.

SPRING:  
BIO 388E Plant Growth And Development (Huq)

FALL:  
BIO 388M Plant Molecular Biology (Herrin)  
BIO 381P Advanced Plant Physiology (Clark)

### ***Track Elective Courses***

One or two additional track specific elective courses are required that may be taken in the second or third year and completed no later than the fourth year. **Students must consult their PI, Track Representative and the CMB website ([icmb.utexas.edu/cmb](http://icmb.utexas.edu/cmb)) about the requirements for their specific track.** These courses are listed on the CMB website under “Program Requirements”, and should be selected in consultation with the student’s PI and Track Representative. Journal club courses are NOT suitable as electives, although note that some tracks may have additional journal club or seminar course requirements.

### ***Required Grade Point Average***

The Graduate School requires all graduate students to maintain a cumulative graduate GPA of at least 3.0. If a student’s cumulative GPA falls below 3.0, the Graduate School will place them on academic probation. The student will have one semester to raise their cumulative GPA above 3.0. Failure to do so will result in dismissal from the program.

### **Degrees Offered**

The CMB Graduate Program is designed for students seeking a Ph.D.; however, under certain rare circumstances with the consent of the supervisor and Graduate Advisor, a Master of Arts with Thesis may be allowed. Dual degrees are generally not allowed and only under certain circumstances must be approved by the PI, Graduate Advisor and GSC Chair.

### ***Doctor of Philosophy***

The Ph.D. program prepares students for a career in research by emphasizing scholarship and original research. By the submission of a dissertation, students demonstrate a mature knowledge of the field and that they can design and execute original research.

### ***Academic Requirements for a Ph.D. in the CMB Graduate Program***

- Cumulative GPA of 3.0 or higher
- Completion of all courses required for a specific track with a grade of at least a B or above
- Completion of Grant Writing Course in the fall of second year
- 1 or 2 additional electives required by track or PI
- Continuous membership in a permanent lab (after 1<sup>st</sup> year rotations)
- One semester as a Teaching Assistant (TA) (preferably completed by the end of the 4<sup>th</sup> year)  
NOTE: In order to TA, students must have attended a TA workshop offered at the beginning of each fall and spring semester. Students who have not fulfilled this requirement cannot TA.
- International Students - successful completion of ITA English exam and workshop (spring, 1<sup>st</sup> year)
- Successful completion of Qualifying Exam and admission to candidacy (spring/summer, 2<sup>nd</sup> year)
- Concurrent enrollment in Dissertation Hours after admittance to candidacy until graduation
- Annual Committee Meetings with Dissertation Committee (3<sup>rd</sup> year and beyond)
- Successful completion of dissertation and final defense

The UT Graduate School has set up a web-based system of Milestones that should be achieved during the Ph.D. It is a Graduate School requirement for students to update their Milestones. The site for this system is at [this link](#).

### **Qualifying Examination**

The Qualifying Exam, often called the “qual” or “prelim”, is a major milestone in the Ph.D. program. The purpose of the Qualifying Examination is to evaluate a graduate student’s aptitude to perform original and independent research and to write a doctoral dissertation. The examination provides a means for a faculty committee to assess the student’s mastery of concepts and methodological approaches by evaluating the student’s general knowledge and fundamental understanding of cellular and molecular biology and the student’s ability to design, articulate, explain and defend the proposed aims and research approach of their dissertation research. The ultimate goal of the Qualifying Examination is to ensure that the student has achieved a sufficiently high level of knowledge and skills necessary for successful completion of a Ph.D. dissertation.

In order to proceed with the Qualifying Exam, a CMB graduate student must:

- Have a cumulative GPA of at least 3.0
- Have completed all courses required for candidacy for a specific track with a grade of at least a B or above
- Be assigned to a permanent laboratory
- If an international student, be ITA certified as eligible for employment “with student contact”

### **Qualifying Examination Timeline and Procedures**

1. All graduate students in their second year who have passed the appropriate number of required courses will take the Qualifying Exam to advance to candidacy. If a student has not passed all the core courses with a grade of B or above, or, if they are an international student and are not yet “certified for employment with student contact,” the Qualifying Exam will be delayed to within 3 months of completing these requirements. The Qualifying Exam is normally taken in the spring semester of a student’s second year. (Students who have not taken the Qualifying Exam by the end of their second year must write an explanatory letter of appeal to the GSC Chair and will be assigned a probationary status until further notice).
2. A Qualifying Exam informational meeting for second-year students will take place in November each year. At this meeting, students will hear about the timetable and guidelines of the Qualifying Exam as well as the expectations and exam process, as outlined below:
3. At the beginning of the spring semester (usually in January), exam-eligible graduate students will submit to the CMB Graduate Coordinator a one-page pdf document with (i) a one-paragraph summary (100-200 words) of their intended research proposal (abstract), and (ii) a ranked list of four CMB GSC faculty members who might be appropriate to serve on their examination committee. This list should be developed in consultation with the student’s faculty advisor. It is OK to include collaborators in this list. However, you must indicate that the faculty member is a collaborator and include a statement regarding the nature and extent of the collaboration. The GSC will use this information to form the student’s Qualifying Exam Committee.
4. The student will be notified of the composition of their Qualifying Exam Committee within 30 days after submission of their abstract. Upon learning the members of their exam committee, the student is responsible for scheduling their Qualifying Examination, which involves polling the committee members and their PI for their availability for a two-hour timeslot. Upon finding a time when all members can attend, the student must reserve a room for the exam and notify the CMB Graduate Coordinator and their exam committee members of the date, time and location of the exam. If the student’s PI cannot attend the exam, they will be required to provide the committee chair with a short statement on the student’s progress. The deadline for the written portion of the exam is relative to each student’s exam date (see #5 below); **students are responsible for meeting their individual deadlines**. The Graduate Coordinator will provide the committee chair with the student’s file, containing the Qualifying Exam results form and their transcript, which will need to be brought to the exam.

5. The Qualifying Exam consists of **written** and **oral** components. The written component is submitted two weeks prior to the Qualifying Exam and will form a large basis of the oral exam.

### **Written Proposal**

The **Written Proposal**, based on a topic of choice but usually aligned to the student's dissertation research, must be submitted to the CMB Graduate Coordinator and distributed to faculty members of the examination committee **no less than 14 days** before the Qualifying Exam. The Written Proposal should be modeled on and follow the format of a NIH F31 pre-doctoral fellowship application. As a guide, the general format of the Written Proposal is listed below but students should download the F31 application guide to obtain additional information about the contents and formatting of these applications.

The proposal will consist of the following sections. (Note that the margins on all sides cannot be less than ½", and the allowable fonts no smaller than Times 12, or Georgia or Arial 11. All information presented in figures and tables must be legible and easily readable by all committee members. For formatting compatibility, the proposal should be submitted as a pdf document.)

1. The Specific Aims page should describe concisely the Specific Aims of the proposal, including broad, long-term objectives and the specific goals of the proposed research to test a stated hypothesis. A Specific Aims page often includes one or two introductory paragraphs followed by the objective and description of each of three aims, which together form the basis of the research undertaken in the proposal. One aim or sub-aim must be an independent idea, and should be indicated as such with an asterisk. This is limited to **1 page**.
2. The Research Strategy section, including all tables, graphs, figures, diagrams, and charts, is limited to **6 pages**. This section should address the **significance** of the proposed studies, including the background leading to the proposed research projects; and the **approach** (including preliminary results, if any) will be used to provide experimental support of the proposed hypothesis. The precise format of this section can vary, but students should include the rationale of each proposed project, a discussion of the experimental or methodological approach, expected/anticipated results, interpretations, conclusions and significance, potential pitfalls, and alternative approaches.
3. A Literature Cited section (no explicit page limit) must be included in the Written Proposal, and students are expected to have read each of the papers listed in this section.

It is expected that the thesis project will be developed by the student and the PI. While it is acceptable for a large fraction of the proposed work to reflect ideas of the PI or others, an identifiable portion of at least one aim should reflect the ideas of the student. The student should be able to state to the committee which part of the proposal was developed independently.

**WHEREAS STUDENTS MAY SEEK INPUT ON THEIR WRITTEN PROPOSAL, THE STUDENT MUST WRITE THE ENTIRE DOCUMENT. THE STUDENT IS RESPONSIBLE FOR BEING KNOWLEDGEABLE ABOUT AND DEFENDING THE ENTIRE CONTENTS OF THE WRITTEN PROPOSAL. FACULTY ADVISORS, AND OTHER FACULTY MEMBERS, MAY READ, DISCUSS, AND MAKE COMMENTS ON THE WRITTEN PROPOSAL BUT MAY NOT WRITE OR IN ANY WAY DIRECTLY PREPARE A STUDENT'S MATERIALS. FACULTY AND PEERS MAY PROVIDE EDITS FOR GRAMMAR, CLARITY, STYLE, AND SPELLING, BUT THEY CANNOT WRITE DE NOVO ANY PART OF THE DOCUMENT.**

### **Oral Exam**

The oral component of the Qualifying Exam should be scheduled to last 2 hours. Students are not allowed to bring refreshments for their exam committee to the Qualifying Exam. At the beginning of the meeting, the student will be excused and the exam committee will briefly discuss the written proposal, the specific exam format, and questioning procedures. Additionally, the committee will discuss the student's academic standing and progress, and the student's faculty advisor should be asked for input about these issues. **If the faculty advisor cannot attend the exam, he/she will be asked to submit written comments to the committee chair, which should be shared with the committee at this time.** The student will re-enter to begin the oral presentation of the proposal. The committee will ask questions throughout the presentation. At the completion of the presentation, and after all questions have been addressed, the student will again exit and the committee will discuss the outcome of the exam; the committee should ask the PI again for input. Following this input, the committee may also ask the PI to leave the room for the remainder of the deliberation period. Students will receive outcomes for both the

written and oral portions of the exam.

The student should prepare a 20-minute presentation, with a maximum of 20 slides. The brief presentation will introduce the background material, and the proposed research goals and project. The presentation should include an introduction that states the broad research question(s), an overview of the present state of knowledge, and the background work leading to the proposed project, questions and hypotheses. This should be followed by a description of each of the specific aims, the experimental approach and anticipated results. **Students may practice their presentation in front of any audience they choose.**

During and after the presentation, the examiners will question the student in order to assess the student's depth of knowledge in the topic area and understanding of the experimental approaches. The committee will ask general questions as well as questions pertaining to the specific topic area. Students may be asked to draw or explain concepts using the whiteboard. One purpose of the exam is to probe a student's breadth and depth of knowledge, so the committee may spend more time on areas where it is not clear whether the student has extensive knowledge, and correspondingly less time on areas where the student demonstrates expertise.

**Questions are likely to be on topics including (but not limited to):**

- Previous published work from the same lab and other labs that relates to the proposed work
- Unpublished work from the same lab that relates to the proposed work
- All methods that are planned for use in the proposed work
- Alternative methods that may be used if necessary
- Alternative models that may emerge from the expected results or unexpected results
- Additional research that could distinguish between alternative models
- Potential future directions of the research plan

**Composition of the Qualifying Examination Committee:** The Qualifying Exam Committee will be comprised of three faculty members. Ideally, two of these faculty will be members of the "Committee of 15" (a select group of CMB GSC faculty, also referred to as "Q15") and one faculty member (not a member of the Committee of 15) will be selected from the list of four submitted by the student and who has expertise in the general area covered in the student's Written Proposal. One of the Q15 committee members will be assigned the role of Chair. If it is not possible to have two members of the Q15 on a committee, the committee will consist of one Q15 member, one faculty from the student's list of four if possible, and one additional faculty member with appropriate expertise appointed by the GSC chair (who may or may not be on the student's list of four). In this case the Q15 committee member will be the chair. The student's faculty advisor is encouraged to attend the Qualifying Exam but is not obliged to do so. **If the faculty advisor cannot attend the exam, he/she will be asked to submit written comments to the committee chair, which will be shared with the committee at the exam.** If in attendance, the faculty advisor is expected to be a silent observer and may speak only by permission of members of the exam committee.

**Qualifying Exam Outcomes and Consequences:** At the conclusion of the examination (usually when committee members have no further questions), the student will again be asked to leave the room and the committee will deliberate. The committee will then call the student back into the room to convey its decision. Possible outcomes are (1) Pass; (2) Conditional Pass (with conditions specified by the exam committee); (3) Re-examination of one or more parts of the Qualifying Exam at a later date; (4) Termination of work toward the Ph.D. As conditions in a conditional pass, the committee may ask for revisions of the written proposal or for the student to take additional coursework. **(Serving as a TA for a course in an area that the student was deemed deficient cannot be a requirement for a conditional pass.)**

**Re-examination Rules and Procedure**

In the event of a failing performance, and at the discretion of the Qualifying Exam Committee, the student will be advised of deficiencies and may be allowed to retake the Qualifying Exam.

- A student given the option to repeat the Qualifying Exam must do so by within three to four months of the original exam, except in exceptional circumstances requiring exemption by the CMB GSC



Chair. At least one member of the student's original Qualifying Exam Committee must agree to serve on the subsequent exam committee. All three members may re-serve. The PI may request to the CMB GSC Chair that one or two members of the committee be replaced. A student who fails to pass the examination a second time must leave the graduate program by the end of the following long semester.

- A student who is not offered the option of re-examination must terminate work towards a Ph.D. and may not re-register in the CMB Program.
- A student advised to take a terminal Master's degree may register only for those courses counted toward the Master's degree and must complete the courses within a year.

### ***Admission to Candidacy***

Once a student successfully completes their Qualifying Exam, they will apply for, and be admitted to candidacy. From this point on, students no longer register for Research Problems but instead must be registered for Dissertation Hours every long semester. Candidacy students must enroll in Dissertation Hours with a course number ending with a "W" (e.g. MOL 399W, MOL 699W, or MOL 999W) all subsequent semesters until graduation.

Admission to Ph.D. candidacy has four requirements:

- Grade of B or above in each of the CMB core courses
- Cumulative GPA of 3.0 or higher
- Successful completion of the Qualifying Exam
- Submission and final approval of a Candidacy Application [here](#).

Students may retain Qualifying Exam Committee members as members of their Dissertation Committee, but this is not a requirement. Students should consult with their PI and Graduate Program Advisor to form a suitable permanent Dissertation Committee. Students should explicitly confirm with proposed committee members that they agree to serve on the Dissertation Committee. Any changes in committee membership must be made prior to application for candidacy. Once students are admitted to candidacy, they must meet with their Dissertation Committee annually, beginning in the long semester following their Qualifying Exam, until their final defense. These Annual Committee Meetings are documented and made official by a form provided by the Graduate Coordinator.

CMB Dissertation Committees are typically comprised of five UT GSC members total, including the student's supervising professor (PI). The student's PI chairs the committee, and at least one of the additional four CMB GSC members must be outside of the student's primary track or department. The University permits a committee of four members if one member is completely outside of the CMB GSC. Nevertheless, the policy of the CMB Program is for each committee to include five members, regardless of whether one member is outside of the GSC.

It is sometimes necessary to change the membership of the Dissertation Committee prior to completion of the dissertation. The Graduate Advisor and the Graduate Dean must approve the "Petition for A Change to the Doctoral Committee" form found on the Graduate School website. Changes for the sole purpose of constituting a more compliant committee will not be approved. Changes in the committee must be completed well in advance of scheduling the dissertation defense.

If a student elects to have a scholar from off-campus serve on the Dissertation Committee, they must be appropriately credentialed to serve on a Dissertation Committee. The Graduate Advisor and Graduate Dean will approve an addition of such a committee member only under exceptional circumstances, and only if the expertise he/she offers cannot be provided by a faculty member on campus. Students should consult with the Graduate Advisor for approval prior to contacting faculty members outside of UT Austin.

### ***Annual Meetings with Dissertation Committee***

The Dissertation Committee has three primary responsibilities:

- For General supervision of the student's research,
- To Monitor progress toward degree,
- To Certify to the Graduate Dean that an acceptable dissertation has been submitted.

Once a student has passed their Qualifying Exam and has been admitted to candidacy, their first committee meeting should be held within six months. They are required to hold a meeting with their Dissertation Committee annually thereafter to review their progress. Following this meeting, the committee will prepare a written summary of recommendations that emerged from the meeting, the chair of the committee will indicate approval by endorsing the summary, and the final document will be submitted to the Graduate Coordinator and will become a part of the student's file.

If a student has not completed the dissertation within three years of admission to candidacy, the results of the annual review will be presented with recommendations to the GSC Executive Committee. The Executive Committee will decide what actions are required.

Although the supervising professor provides day-to-day guidance, all members of the committee are expected to be available for consultation and students should feel free to ask for advice from them or any faculty member.

### ***Ph.D. Thesis and Final Oral Exam/Dissertation Defense***

The written thesis (dissertation) is expected to be a document covering the body of work produced by the student. Students are encouraged include an introductory chapter, which serves as a starting point to consider the research. The introductory chapter should lay out the relevant knowledge in the field, which is typically accumulated from prior work from the student's lab and others. It also may include a brief map of the student's work and main conclusions. The introductory chapter will be followed by one or more chapters describing the Ph.D. research. Students are also encouraged to include a chapter, typically at the end of the dissertation, that provides a new view of the field (conclusions) and a direction for future research (prospectus).

The final form of the dissertation must be circulated to the Dissertation Committee at least four weeks prior to the anticipated date of the final oral exam. When each member of the committee has had an opportunity to read the draft and agrees that it is ready to defend, as indicated by signing the petition to schedule the defense, students may schedule the final oral exam. The request is submitted to the Graduate School **at least three weeks** prior to the exam, as stated in the [Graduate School graduation procedures](#).

The defense consists of two parts. The first is a public seminar that is open to all faculty and students. The seminar is expected to be approximately one hour in total length, including the introduction and questions from the public audience. Immediately following the seminar, students meet privately with the Dissertation Committee to respond to questions from the committee members.

If all members of the committee approve, the committee signs the Degree Certification Form (also referred to as the "gold sheet"). The Chair of the CMB GSC committee must also sign the Degree Certification form. This is the **only** document that notifies the Graduate Dean of successful completion of the exam and is necessary for graduation.

### ***Timeline of the Ph.D. Degree***

(This is a typical plan, but there can be variation)

#### *First Year*

##### Fall semester

RCR training (on-line)  
Core Courses (395G, 395J)  
Laboratory Rotations

##### Spring Semester

Core Courses (395F, 395H or track specific core courses)  
Laboratory rotations  
Choose a permanent laboratory by May 10  
End of May: financial support from ICMB ends  
First of June: newly assigned permanent laboratory assumes financial responsibility of student  
May: join a CMB track  
End of August: TA workshop (if TA-ing for the first time in the second fall)

International students must be ITA certified

### *Second Year*

#### Fall semester

BIO 391 Grant Writing and Presentation Skills course  
Track Specific Elective Requirement(s)

#### Spring semester

Qualifying Exam  
Track Specific Elective Requirement(s)  
Apply for Candidacy (end of spring/summer semester, once all requirements are complete)

### *Third Year*

#### Fall semester

Track Specific Elective Requirement(s)  
Dissertation Hours 399W, 699W or 999W  
First Annual Committee Meeting with Dissertation Committee (must be conducted within 6 months of passing the Qualifying Exam)

#### Spring semester

Track Specific Elective Requirement(s)  
Concurrent enrollment in Dissertation Hours until Graduation

### *Fourth Year and Beyond*

Track Specific Elective Requirement(s)  
Dissertation Hours  
Completion of TA requirement (may be completed anytime after the student's first year)  
Annual meetings

### **Final semester**

Apply to graduate – the deadline is early in the semester  
Schedule final defense with committee  
Complete all forms and graduation procedures  
Meet all deadlines required by Graduate School

## ***Master of Arts with Thesis***

The Master of Arts with Thesis involves original research carried out under the supervision of a member of the Cell and Molecular Biology GSC. This option is allowed only under certain circumstances and requires the permission of the student's PI and the Graduate Advisor.

### ***Academic Requirements of the Master of Arts with Thesis***

- Completion of the Core Courses with a grade of at least a B and an overall GPA of 3.0 or higher.
- A total of 30 semester hours of course work with the following requirements:
  - 21 hours must be graduate-level course work,
  - 18 hours must be in the major area,
  - 6 must be in supporting work, (non-core biology/chemistry graduate or upper division course).
- All work for a MA must have been initiated no earlier than six years before date of degree.
- Once a student has 30 hours of graded coursework, they may then have up to 6 hours of CR/NC.
- Approval of the Graduate Advisor is required prior to registration for a credit/no credit course.
- No course counted toward any other degree may be counted towards a Master's degree.
- Completion of the MOL 698A and 698B thesis courses; Must be enrolled in the 698B course the same semester as graduation.

## ***Master of Arts Committee***

The student's PI and one other CMB GSC member will serve as readers of the MA thesis. It is the student's responsibility to arrange for the second reader. Any faculty member asked to be a reader should have an interest in the topic.

The readers must be allowed at least two weeks to read the thesis and return it to the student. Since revisions are often necessary, it is pertinent that the student gets their thesis turned into the two readers with ample time to make revisions so that they may turn in their thesis to the Graduate School by the deadline.

## **Financial Support**

### ***Policy for Graduate Student Stipends***

Entering graduate students are supported for the first 9 months (Sept-May) by the ICMB as graduate research assistants (GRA) or by university fellowships, which include tuition and insurance, as long as they are in laboratory rotations. Continued financial support becomes the responsibility of the permanent laboratory starting June 1. When selecting laboratories, students should inquire as to the availability of summer support from grants as TA positions are very limited during the summer. The primary means of support for continuing CMB students is through appointment as a teaching assistant (TA), graduate research assistant (GRA), receipt of a University Fellowship or external fellowship (NIH, NSF, etc.).

The CMB program and CNS policies requires that students be paid, at least at the level of their 1<sup>st</sup> Year Student stipend for the duration of their Ph.D (2019/2020 support is 30K plus benefits and in-state tuition). It is CMB's preference that PIs choose to raise the stipend of students in line with the 1<sup>st</sup> Year Student stipend of incoming students. Certain fellowships and grants may supply students with higher stipends. It is customary for PIs to discuss stipend levels with students and what their stipend will be before accepting a student into their laboratory. It is the student's responsibility to discuss this issue with a potential PI prior to joining the lab.

CNS policy indicates that the minimum stipend should be no less than the TA stipend for that fiscal year or the 1<sup>st</sup> Year Student stipend, whichever is higher, and must include tuition and fees as stipulated by the Graduate School and Vice-President for Research. To remain in line with CMB policy, if a student serves as a TA, CMB requires that the PI supplement the student's stipend so that it is in line with the 1<sup>st</sup> Year Student stipend of their entering class. [CNS policies on graduate student employment and stipends can be found here.](#)

### ***Graduate Research Assistants (GRA)***

Most faculty members have research grants that allow them to appoint students as graduate research assistants. Students should be in communications with their PI concerning the availability of continued grant support.

### ***Teaching Assistants (TA)***

CNS policy states that CMB graduate students entering in Fall, 2019 may TA for a maximum of 3 semesters throughout their graduate studies. Exceptions to this rule would require approval in advance by the CNS Associate Dean for Graduate Education.

The CMB program does not directly control any TA positions; the Biology Instructional Office assigns CMB students TA positions. Requests for TA positions must be made by the **supervisor** (not the student) directly to the CMB Graduate Program Coordinator.

The CMB Graduate Program has a one semester teaching requirement, and all students must TA for at least one semester, by no later than their 4<sup>th</sup> year. In order to TA for the first time, students must have attended the TA Workshop that is offered before each fall and spring semester.

## ***Teaching Requirement***

The CMB Graduate Program has a one semester teaching requirement. Students may complete this requirement during the fall or spring semester of the second year and preferably no later than the end of the 4<sup>th</sup> year in the program. All TAs need to complete the two-day TA workshop offered twice a year in August and January prior to the semester that they will fulfill their TA-ship.

## ***English Certification for International Students***

UT Austin conducts English Certification for TAs whose first language is not English. The CMB Graduate Program requires this certification of all international students, regardless of whether they serve as Teaching Assistants.

All international students admitted to the CMB graduate program are anticipated to unconditionally pass the Oral English Proficiency Assessment and be “certified with student contact.” Students must be certified to be employed “with student contact” before being admitted to candidacy.

## ***Re-appointments***

Re-appointment as a TA or RA is contingent on satisfactory progress towards the degree. This includes compliance with the schedule set by the graduate program and demonstrated effectiveness as a TA or RA.

## ***Limit on the Number of Hours of an Appointment Per Semester***

Graduate students may not be appointed as a TA, GRA, or grader, alone or in combination, for more than 20 hours during the first 2 long-session semesters of graduate study. In the 3rd semester of graduate study or beyond, a graduate student may not be appointed to these titles, alone or in combination, for more than 30 hours. International students on F-1 or J-1 visas may not be appointed for more than 20 hours during any fall or spring semester unless approved by the program advisor and International Student Services Office.

## ***University Fellowships***

Each year the Graduate School accepts nominations from each graduate program for University Fellowships. These provide year-long stipends and some are quite lucrative. Your supervising professor will nominate you based on research accomplishments and promise of research excellence. The Graduate Advisor determines whose name(s) will be sent forward to the Graduate School. Nominees for these awards are selected based on the strength of their applications and on their records of performance.

## ***Competitive National Fellowships***

Each year the Graduate Advisor sends out information on various competitive national fellowship programs (e.g., NSF or NIH Pre-doctoral Fellowships). Students are strongly urged to apply for external fellowships during the second year of Graduate School. These fellowships are prestigious and will support recipients for several years of graduate education. Students are also encouraged to explore and apply to fellowship programs on their own for which they may be uniquely qualified.

(<http://www.nsf.gov/funding/>, <http://grants.nih.gov/grants/index.cfm>)

## ***Other Aid***

The Office of Student Financial Services (512-475-6282, [www.finaid.utexas.edu/](http://www.finaid.utexas.edu/)) administers several long-term loan programs, the College Work-Study Program (for which graduate students are eligible),

and a short-term loan program for registration and other emergency needs. Assistance with part-time or full-time job placement is also offered for students or student spouses. Student Accounts Receivable can provide information about institutional tuition/emergency loans and tuition and fee rates as well as information regarding fee payment and deadlines, loans, tax credits, etc. The Graduate Coordinator will email notices of fellowships that become available throughout the year.

### ***Outside Employment***

CMB students are not allowed to have outside employment such as part-time positions in restaurants, retail, etc. or any type of job that interferes with class work or research. Students may have up to 5 hours of employment that is related to their role as graduate students such as tutoring or grading. These situations should be discussed with the student's PI prior to beginning any outside work and to make sure this is compatible with visa requirements .

## **General Information**

### ***Contact Information***

#### Mailboxes

All student's mailboxes correspond with their lab's mailbox. First-year students will need to routinely update their directory information to reflect what lab they are rotating in so that they receive mail. All MBS labs' mailboxes are located in the mailroom of NHB 2.606.

#### Change of Address and Phone Number

It is important that all directory information be kept up to date; it can be updated via UT Direct. Students must list a phone number where voice mail messages may be left.

#### Email Information

The CMB Graduate Program and the University of Texas uses e-mail as the primary method of communication with students. If e-mail addresses given are not accepting mail (full mailbox) or if students are not checking e-mail often, students may miss important correspondence.

The CMB Graduate Program will correspond with students using a UT email account only. CMB students must have a UT email account at all times. Apply for one [here](#).

Please notify the Graduate Coordinator of any changes in email addresses immediately and only make changes in UT Direct to receive email from Canvas courses and groups.

### ***Required Student Training***

The University of Texas requires safety training for laboratory employees, which includes all CMB graduate students. Students are required to be in compliance with these safety classes prior to being assigned a rotation. Some labs will require additional training beyond these courses. The required safety courses are:

- OH 101 Hazard Communication
- OH 201 Laboratory Safety
- OH 202 Hazardous Waste Management
- OH 207 Biological Safety

You can find all above courses at this link: <http://ehs.utexas.edu/training/training-courses.php>

Fire Extinguisher Use, Animal Use Training, and Radiological Health are on-campus classes and are offered during the orientation period.

[The Environmental Health and Safety Office](#): 471-3511.

The Fire Prevention Services Office sponsors the [Fire Extinguisher Use course](#).

All of the above requirements must be satisfied within the first 30 days of the fall semester.

### ***Academic Integrity***

Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, and falsifying academic work, research, or records. The CMB graduate program has a zero tolerance policy regarding academic dishonesty. Any student caught participating in academic dishonesty including, but not limited to plagiarism, falsifying academic work, research or records, will face immediate dismissal from the program.

Responsible Conduct of Research Online Training is required at the beginning of the 1<sup>st</sup> year. The Graduate Coordinator will notify students of when the in-person training is scheduled.

### ***Incomplete Grades:***

If a student does not complete all the assignments in a course before the end of the course, the instructor may report the symbol X (incomplete) to the registrar in place of a grade. The student must then complete the course requirements by the last class day in his or her next long-session semester of enrollment. The instructor must report a final grade by the end of the grade-reporting period in that semester. If these deadlines are not met, the symbol X is converted to the symbol I (permanent incomplete). If the student is not enrolled during a long-session semester for twenty-four months following the end of the semester in which the X is reported and the instructor does not report a final grade, then the symbol X is converted to the symbol I. The symbol I cannot be converted to a grade. When the symbol I is recorded, the symbol X also remains on the student's record.

The period for completion of course requirements may be extended only under unusual circumstances beyond the student's control and only upon the recommendation of the instructor and the approval of the Graduate Dean. The instructor of record must make requests for an extension of X to the Graduate Dean through the submission of a completed "Update to Student Academic Record" form. This request must provide reasons why the student was unable to complete the course work by the last class day in his or her next long-session semester of enrollment after receiving the X.

***Note: TAs and GRAs may acquire no more than one temporary incomplete grade (X) and one permanent incomplete grade (I), or two temporary incompletes (X).***

### ***Holiday Schedules***

Graduate students do not have the same break schedules as undergraduates. All CMB graduate students are paid continuously through the winter and spring breaks, and thus, have the same work schedule and holiday schedule (<http://www.utexas.edu/hr/holiday/>) as university staff. The quietness of campus during the winter and spring breaks is very conducive to research progress in the laboratory.

### ***Second Degrees***

CMB students are not allowed to work toward or obtain a second degree outside of the CMB program (e.g., a Master's degree in a separate graduate program) without the written consent of their PI and the Graduate Advisor.

### ***Progress Towards Degree***

All students are expected to make reasonable progress toward the degree. Among other situations, any of the following could be cause for being dropped from the CMB Program due to failure to progress:

- Core courses not successfully completed by May of 2<sup>nd</sup> year

- Qualifying Exam not completed by spring of 2<sup>nd</sup> year
- Admission to Candidacy not initiated by start of 3<sup>rd</sup> year
- Annual Meetings not conducted annually
- Dissertation not completed within three years of admission to candidacy

## **Registration**

### Continuous Registration

CMB graduate students in Ph.D. candidacy must be continuously registered for dissertation hours for all long semesters (spring and fall) until the completion of their degree. (A student applies for candidacy after their Qualifying Exam).

Students with a break in attendance of one long semester or more (such as a leave of absence) must apply for readmission. The Application for Readmission form should be submitted as soon as a leave of absence is granted. In order to fulfill the continuous registration requirement, an official leave of absence must be secured, otherwise, the student will be required to retroactively register and pay for any missed semesters.

### Registration for Dissertation Hours

Once admitted to candidacy, students must register for Dissertation Hours every long semester until graduation. Students will no longer register for Research Problems but instead register for Dissertation Hours: 399W, 699W, or 999W.

After students' first semester in candidacy, they will register for a dissertation course ending with a 'W' for every semester thereafter until graduation. Registration for MOL 999W fulfills the 9-hour credit requirement for TAs, GRAs, or fellowship holders.

### Late Registration

If students miss the regular registration periods, they may be able to register late, but they will be responsible for paying the late fee, which ranges between \$25 and \$200. All late registrations require the approval of the Graduate Advisor and Graduate Dean.

Late registration takes place during the first four class days of each long semester and during the first two class days of each summer session. Check the Course Schedule for late registration procedures.

### Registration for the Master's Degree

The last two semesters before graduation, thesis students must be registered in thesis courses MOL 698A and MOL 698B. MOL 698A may only be taken once and must be taken before MOL 698B. Students must be registered for 698B the semester in which the thesis is submitted.

### Early Withdrawal from CMB Program

Early withdrawal from the program in the first year could result in a requirement to pay tuition for that semester. Students should consult with 1<sup>st</sup> Year Graduate Advisor if they are considering leaving the program during the first year.

### Withdrawal from CMB Program

Withdrawal from the university before the last class day of a semester will result in a requirement to personally pay the tuition for that semester. Withdrawals during a semester cancel most UT payments of tuition and tuition waivers. These cancelations result in a large balance due which UT Austin will bill to the student. This information does not apply to medical withdrawals.

## **Out-of-State Tuition Waivers**

Students who UT Austin does not consider to be Texas residents, and who are employed as TAs or GRAs, are eligible for out-of-state tuition waivers. These are very important as they remove the out-of-state portion of the tuition bill. The out-of-state tuition waiver is accessed through UT Direct and **must be completed each semester before registration**. It may also be found at the [Student Accounts Receivable website](#).



Recipients of a Pre-Emptive University Fellowship should **not** complete this form, as the Graduate Coordinator will request waivers for these students.

### ***International Insurance Waivers***

If you are an international student and will be appointed as a TA or RA, you will have health insurance provided to you. Therefore, you must request a waiver of the student international health insurance that is automatically added to your fee bill. You can get this charge removed from your bill by requesting this waiver. You will need to do this each semester that you are appointed as an RA or TA. This request must be done before your tuition bill is paid and you confirm your registration. Claim the waiver [here](#).

### ***Student Records***

The Graduate Coordinator maintains the official records of graduate students. It is the student's responsibility to ensure that records are current. Members of the CMB GSC, any person appointed to the student's Dissertation Committee, and the Graduate Coordinators have access to all student's files. No other person has access without the student's written permission unless the Graduate Advisor authorizes him or her. Those authorized by the Graduate Advisor are staff members whose assistance is necessary to carry out administrative responsibilities.

CMB student files may contain:

- [Rotation Evaluations](#)
- [Permanent Laboratory Form](#)
- [Qualifying Exam results](#)
- [Safety Certificates](#): Hazard Communication, Radiological Health, Laboratory Safety and Fire Extinguisher Use etc.
- [Curriculum Vitae](#)
- [Admission Documents](#)
- [TA Evaluations](#)

Each time that students assist in a course, the faculty instructor fills out an evaluation of the student's performance. One copy of the evaluation goes into the student's file. Students may request that copies of student evaluations be placed in the file. If students choose, they may prepare a statement that will be appended to the evaluation and become part of the file.

- [Annual Committee Meeting of Dissertation Committee Forms](#)  
It is imperative each Annual Committee Meeting is documented with an Annual Meeting Form, which will be kept in the student's file.
- [Other items](#) that provide a record of the student's activities and progress:
- [Reprints](#) of any published articles
- [Information](#) on awards, prizes, grants, etc.

### ***Disability Services***

The University of Texas at Austin is committed to providing every necessary resource to students with disabilities. If you are a person with a disability and have special academic circumstances – whether permanent or temporary – please visit the Services for Students with Disabilities web site at [this link](#).

### ***Parental Accommodation Policy***

In the cases of childbirth or adoption, graduate students in the College of Natural Sciences are allowed a 1-semester extension in the completion of academic responsibilities required for their degree. Academic responsibilities include course work, qualifying exams, committee meetings, presentations, or any other required academic milestones. These responsibilities may be postponed either during or immediately following the semester in which the student's child is born or adopted. The full policy and faculty contacts in each department can be found [here](#).

### ***Where To Go When Problems Arise***

The University provides several support services for graduate students:

The [Office of the Student Ombuds](#) provides a neutral, impartial and confidential environment for students to express concerns related to life at the University of Texas at Austin. The office can assist graduate students with university related difficulties, and help identify pathways and options for conflict resolution.

The [UT Counseling and Mental Health Center](#) provides services for graduate students, including a 24 hour telephone counseling service – 512-471-2255.

The [International Student & Scholar Services](#) (ISSS) Office provides advice, programs, information, and services to the international community, including incoming graduate students.

### ***Campus Safety***

The Office of [Campus Safety & Security](#) oversees Emergency Preparedness, Environmental Health and Safety, Fire Prevention Services, Parking and Transportation, and the University of Texas at Austin Police Department. Students should explore their web site to learn more about safety and security on campus.

For emergencies, the University also has a dedicated phone number, 512-232-9999, and [website](#). You can also sign up for text message alerts for emergencies.

### ***Other Contacts & Support***

[The Office of the Dean of Students](#) provides a variety of student support services along with opportunities for leadership experience, diverse student work environments, engaging programming and specialized resources.

Below are quick links to some of these resources and services.

University Health Services: (512) 471-4955  
Student Emergency Services: 512-471-5017  
Behavioral Concern Advice Line (BCAL): 512-232-5050  
24/7 (anonymous) crisis hotline: 512-471-2255  
[Title IX Office](#)

The CNS [Office of Graduate Education](#) also provides a variety of support and resources for Graduate Students.