Duke Biochemistry
Duke University School of Medicine

2023-24
Graduate Student Handbook

DISCLAIMER: THIS HANDBOOK IS FOR INFORMATIONAL PURPOSES ONLY AND IS NONBINDING

2023-24: V1

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WELCOME TO THE DUKE BIOCHEMISTRY DEPARTMENT!

The Duke Department of Biochemistry has a rich history of accomplishments at the cutting-edges of biological and chemical research. We also contribute to Duke's broad educational mission of training and teaching undergraduate, graduate, and medical students. Currently, the Department includes 17 primary and 12 secondary faculty members, 7 active emeritus faculty, 4 adjunct members, ~45 graduate students and ~30 postdoctoral researchers and staff scientists. We occupy approximately 42,000 square feet of the Nanaline Duke Building and 5,000 square feet of the adjacent Sands Building.

Mission Statement

The mission of the Duke University Biochemistry Graduate program is to educate and mentor students from diverse backgrounds in the fundamentals of biochemical principles and practice through courses and research by (1) guiding students in their thesis research project, and (2) preparing them for a career in research, education, or other disciplines. The program promotes a commitment to excellence in research scholarship and fosters a spirit of creativity, service, and respect within an environment that is ethical, inclusive, and diverse.

Department of Biochemistry Ph.D. Program Goals

Graduates from our program will have the necessary knowledge, research skills, and career guidance in the field of biochemistry to succeed in a research and/or scientific career. Specific program aims are:

- Coursework: Graduates will be trained in a broad understanding of cellular structure and function at a molecular level; with deep knowledge in specific disciplines such as nucleic acid biochemistry, molecular genetics, biophysical methods, mechanistic enzymology, glycobiology, and membrane biogenesis, dynamics, transport, and receptor biology; and critical scientific thinking skills.
- Research: Develop student skills a) in the laboratory and/or with computational research in order to reveal new biological principles; b) to perform in-depth analysis, interpretation, and presentation of research results; and c) to conduct ethical and responsible research.
- Career Development: Prepare graduates for careers in interdisciplinary biochemical fields through training in scientific research, responsibility and ethics, teaching, and science communication.

Faculty Expectations for Completion of a Ph.D. Degree

To earn their Ph.D. degree in Biochemistry, the Department Faculty expect each graduate student to produce an **independent body of original, high-quality scientific work.** Though circumstances vary, this work should generally result in the student's authorship on typically two peer-reviewed publications, including at least one on which the student is first author, prior to or soon after graduation.

DEPARTMENT CONTACTS

Biochemistry Graduate Studies Office

The DGS and DGSA serve as advocates for graduate students and should be the first point of contact for any school-related and/or personal concerns. Issues discussed with them will remain confidential according to university policy guidelines. Students may meet with the DGS and/or DGSA during their regular office hours or can schedule an appointment.

Director of Graduate Studies (DGS) – The DGS is the official departmental or program administrator of the rules and regulations of the Graduate School, the designated advocate of the needs of the graduate program and graduate students within the department and the University, and the advisor for all matriculating graduate students in their first year prior to their affiliation with a research group.

DGS: Meta Kuehn, PhD
Office: Room 220A Nanaline Duke
Phone: 919-684-2545
Email: kuehn@duke.edu

Director of Graduate Studies Assistant (DGSA) – The DGSA provides assistance with all graduate issues outside of the actual study of Biochemistry. These include registration, payroll, financial aid, visa services, health insurance, parking, program requirements, exam scheduling, room reservations, counseling, etc.

DGSA: Peggy Wilkison
Office: Room 251 Nanaline Duke
Phone: 919-681-8770
Email: pwilkison@biochem.duke.edu

Biochemistry Department Administrative Office:

Biochemistry Chair – The Biochemistry Chair is the official link between the department and the dean. The Chair leads the department in planning, recommends allocation of space, and is responsible for budget preparation, annual faculty evaluations including promotion and tenure, assignment of academic and nonacademic staff, assignment of teaching loads and student advising, and adherence to departmental bylaws.

BCH Chair: Dick Brennan, PhD
Office: Room 242A Nanaline Duke
Phone: 919-684-9471
Email: richard.brennan@duke.edu

Administrative Assistant to the BCH Chair: Chelsey Gobert
Office: Room 255 Nanaline Duke
Phone: 919-681-8804
Email: chelsey.gobert@duke.edu

CAMPUS-WIDE RESOURCES

Duke Graduate School

This resource has a wealth of up-to-date information on topics including Graduate Student living, Wellness, Finances, Academic Policies, and Career Development and should be one of the first locations explored when looking for specific answers regarding graduate school policies at Duke.

Duke Student Affairs

The Student Affairs Office is involved in all aspects of students' lives and collaborates with students, faculty, staff, alumni, parents, and many others in the delivery of key services and support. Student Affairs provides programs and services that supports the growth of Duke students by enhancing their intellectual, social, cultural, and physical development. These resources complement Duke's academic mission by providing opportunities for students to experience education and explore interests beyond the classroom.

Office of Biomedical Graduate Education (OBGE)

The office of Biomedical Graduate Education in the Duke School of Medicine coordinates activities that impact all School of Medicine graduate students. They coordinate the RCR (Responsible Conduct of Research) Fall courses for new students and implement policies within the biomedical graduate programs. OBGR is the administrative home for the IDEALS Office (**I**nclusion, **D**iversity, **E**quity, **A**dvancement, and **L**eadership in the **S**ciences), provides career and professional development, and is the administrative home for several interdisciplinary biomedical programs.

IDEALS (Inclusion, Diversity, Equity, Advancement, and Leadership in the Sciences)

The IDEALS Office contributes to the diverse scientific climate within the Biomedical Graduate Programs in the School of Medicine. The office works to bring talented underrepresented graduate students and postdoctoral scholars to the Duke University School of Medicine and to enrich their experiences over the course of their training and studies.

BioCoRE (Biosciences Collaborative for Research Engagement)

Under IDEALS, The Duke BioCoRE Program builds a supportive community of scientists and provides opportunities for student research and career development. BioCoRE boasts a wide variety of scientific programs, including community-building activities, paid research opportunities, conference travel, symposia, and seminars. BioCoRE is open to all members of the Duke Biosciences community, and both undergraduate and graduate scholars are selected on a competitive basis.

BioCoRE benefits include **Early Start (**Full stipend for August, beginning your research project, and community building activities). In addition, the program offers enhanced advising and specialized mentoring, a scientific conference travel fund, scientific and career development programs, social events, and synergy with PhD Graduate Programs.

Individuals with Disabilities

The Duke Biochemistry Department is committed to providing reasonable accommodations for qualified individuals with disabilities in compliance with Section 504 of the Federal Rehabilitation Act of 1973, the Americans with Disabilities Act (ADA) of 1990 and the ADA Amendments Act of 2008, as well as applicable state regulation and federal and state privacy laws.

Student Disability Access Office (SDAO): The SDAO explores possible coverage and reasonable student accommodations that comply with the Americans with Disabilities Act (ADA) and the Rehabilitation Act. Qualified students are provided resources and accommodations, support services, and auxiliary aids. If you believe you may need and qualify for accommodations, please visit Duke's Disability Management System. Phone: 919-668-1267

Cultural, Personal and Academic Assistance

Below is an alphabetical listing of resources available at Duke to assist you in solving a problem, concern, or conflict. Contact the main DukeReach line at (919-681-2455) or the Dean of Students Office at (919-668-3853) to speak with someone during regular business hours. For after-hours emergencies contact the Dean on Call pager (919-970-4169) or Duke Police (919-684-2444).

The Academic Resource Center assists students with time management, provides peer tutoring, and special services for students with ADD or ADHD. It is located on the second floor of the Academic Advising Center on East Campus. Phone: 919-684-5917

The Career Center provides services related to all aspects of a students' career development and life planning including information about internships, Career Week, choosing a major, life after graduation, job search and career counseling. Phone: 919-660-1050

The Center for Multicultural Affairs (CMA) supports students of color and cultural communities and provides programs, services and resources for the Duke community. Phone: 919-684-6756

The Center for Sexual and Gender Diversity provides advocacy, education, and resources for faculty, staff, students, and alumni. If you know a student who is struggling with sexual identity or experiencing conflict because of homophobia or sexual orientation, the Center can help. The Center also provides programs and resources for the entire community. Phone: 919-684-6607

Discrimination and Harassment Student Resource Tool This Tool helps graduate students with the options and the processes for reporting harassment, discrimination, and other concerns.

Gender Violence Services are offered through the Office of Gender Violence Prevention and Intervention in the Women's Center. If you are a student at Duke University (of any gender) who is a victim/survivor of gender violence, and it is a non-emergency issue, contact them: website, 919-684-3897, WCHelp@duke.edu, or walk in—no appointment necessary. After hours, on weekends, or holidays, page the Women's Center staff at 919-970-2108 or email WCHelp@duke.edu. If this is an emergency or you feel you are in danger, call 911 or Duke Police at 919-684-2444.

Housing, Dining & Residence Life (HDRL) provides on-campus housing for undergraduates and some graduate students. Phone: 919-684-4304

International House (IHouse) provides educational services and advocacy to Duke's international population and to the Durham community. IHouse offers extensive cross-cultural programming and information to enhance the global mission of the university. Phone: 919-684-3585

Jewish Life at Duke strives to enrich the lives of Jewish students through social, educational, religious, cultural, social-action, and community-service activities. They provide programs, Shabbat and holiday services, and student resources. Phone: 919-684-6422

Mary Lou Williams Center for Black Culture has programs and resources for faculty, students, and staff that foster consciousness of the significance of Black experiences. Phone: 919-684- 3814

The Office of Institutional Equity sits under the auspices of the President and provides institutional leadership in sustaining a respectful and inclusive environment. It provides information on Diversity & Equity, EEO/Affirmative Action, Harassment Prevention, Policies, and Resources. Phone: 919-684-8222

Ombudsperson
Phone: 919-684-5917

- Provides a neutral, safe, and confidential environment to talk
- Listens to concerns and complaints and discusses appropriate options
- Helps to evaluate those options
- Assists students in resolving problems
- Mediates conflicts, convenes meetings, engages in "shuttle diplomacy"
- Refers students to appropriate campus resources
- Provides information about university resources

Religious Life is part of Duke Chapel and provides resources and connections to over 25 campus ministries affiliated with Duke University. It also runs the Pathways program to help college students engage in their spiritual development. Phone: 919-684-2909

The Women's Center fosters diverse learning and living environments that are safe and empowering for all Duke women and men through education outreach, and advocacy. The staff is committed to a campus culture that provides access, fosters agency and self-determination for all, and creates transformative experiences to understand and resist patriarchal oppression. Phone: 919-684-3897. (After hours pager: 919-970-2108)

DUKE ID, BUILDING ACCESS, ROOM RESERVATIONS, MAIL AND EMAIL

DukeID Card

Please see the DGSA prior to getting your DukeCard. Visit the DukeCard website for more information and office locations. You will need to get a DukeCard with a Proxchip. Once you have your Duke ID card, please bring it to the DGSA and they will request after-hours access to the appropriate Medical Center Buildings.

Email: Before you arrive on campus for Orientation, you should have received your official Duke NetID email log-in and password. We encourage you to use this email account, but should you change your email address, please notify the DGSA immediately. You will also use your NetID log-in to register for classes each semester.

Mail: All mail sent to the faculty, staff, department, DGS, DGSA, or Administrative Office that is sent through the regular US Post Office mail must include "Box 3711 Biochemistry" to guarantee delivery. For FedEx or UPS deliveries to the Nanaline Duke Building, a building address of 307 Research Dr. must be used. The zip code for both is 27710.

Computers/Printers/Photocopiers/Fax: Computers and printers are located in 252 Nanaline Duke (Biochemistry Student Lounge). The password for these computers is: *nd251bc.* The departmental copier requires a pass code. To use the color copier in the main hallway on the 2nd floor of Nanaline Duke, please use code 44120. The fax machine is in the BCH Administration Office (255 Nanaline Duke) and is available during office hours. The fax # is 919-684-8885. If you have a long-distance fax, you will need a fax code that can be obtained from your lab manager/staff assistant.

Room Reservations: To schedule conference room reservations for your committee meetings, contact Patricia Bunn (patricia.bunn@duke.edu), Chelsey Gobert (chelsey.gobert@duke.edu) or Margot Wuebbens (wuebb001@duke.edu).

FINANCES, STIPENDS, VACATIONS & HEALTH INSURANCE

The Duke University Graduate School and the Biochemistry program offer a wide array of financial support from annual awards funds, instruction, endowed fellowships, foundations, and other private support, as well as federal research and training grants.

Financial Support Summary and Disbursement

Financial support for continuing Ph.D. graduate students in the Department of Biochemistry is paid at the end of each month . You can find yearly financial support dollar amounts on the Graduate school website. Annual support letters for the upcoming year will be sent to you at the end of August.

Recreation Fee

The student recreation fee is paid by the Graduate School for use of the campus facilities.

Research Assistantship Stipend Payment Schedule:

Beginning in G2, graduate students will be supported by their PI's grants & funding and their stipend will be paid through the monthly faculty/staff payroll in 12 equal monthly payments on the 25th day of each month.

Students should regularly review their Bursar's Office statements and quickly resolve any problems or questions. For questions about bursar accounts, contact the DGSA, the Bursar's Office, or the Graduate School Office of Budgets and Finance.

Students must be enrolled in the Graduate School to receive fellowship or assistantship support. Our department works cooperatively with the Graduate School and School of Medicine to ensure financial support for six consecutive, 12-month academic years, provided the student has made continued satisfactory progress in our graduate program.

As a member of an outstanding graduate community, we also strongly encourage students to apply for both Duke institutional as well as outside fellowships such as those from the NIH, NSF, and private foundations. Awards of this type add distinction to your graduate record and enhance our ability to support additional highly qualified students in graduate programs at Duke. Biochemistry graduate students who are awarded qualifying fellowships (e.g. covering stipend, tuition and fees) will be eligible to receive a cash supplement at the end of each year of the fellowship. Please ask the Chair or DGSA to determine if your award qualifies.

Taxes

Under the Tax Reform Act of 1986, both fellowship & assistantship stipends are taxable and are reportable as income with the exclusion of tuition, fees, books, and equipment required for educational support. While the university has no reporting or withholding requirements on fellowships, you may choose to have taxes withheld by completing a W4 form with the payroll office. We encourage you to read the IRS' publication concerning Tax Benefits of Education and the taxation of scholarships and fellowships, or to consult with your tax advisor concerning the taxability of your financial aid package.

For U.S. citizens, fellowship stipends may be reduced, for tax purposes, by the amounts paid for tuition, fees, and required books, supplies, and equipment. For general information about the taxability of scholarships and fellowships see IRS publication 970.

For international citizens, stipend payments are subject to withholding of federal and state income taxes based on existing tax treaties between the student's home country and the USA. In addition, there is an IRS requirement that tuition payments for foreign students must be reported to the federal government.

Please Note: *Each student's tax situation is unique, and the Payroll Office at Duke helps enrolled students regarding withholding requirements.*

Tax and payroll forms and HR Information updating

In general, for students in their second year and beyond, paid on the 25th of each month, you may access your pay statements through the on-line Duke@Work system on the Duke HR website. You can also use Duke@Work to do the following:

- View current and past pay statements.
- Change your home address.
- Update your work address (physical location).
- Set-up or change bank accounts for direct deposit.
- Change Federal and North Carolina tax withholding amounts (if required).

Please Note: *The Duke Payroll system and the Duke graduate student Hub system are NOT connected. A change in information submitted in one system will not automatically change the same information in the other. If you make a home address, phone number, or name change in Duke@Work, you will need to make the same change in Duke Hub*.

Duke Corporate Payroll

Graduate student stipend payments are distributed from the Duke Corporate Payroll office. Corporate Payroll operates a customer service center which provides the following services: issuing payments for salaries and corresponding benefits, as well as voluntary and involuntary deductions; fellowship and scholarship payments to Duke students; distributing annual tax forms (IRS Forms W-2, 1042S and 1099 forms); and providing wage verification requests for mortgage companies or governmental agencies. Email corporate Payroll or call 919-684-2642.

Graduate Student Vacation & Sick Leave Policy

The Duke graduate student vacation policy ensures that all Ph.D. graduate students are allowed a minimum amount of paid time off each year. For Graduate students in the SOM, the following generally applies:

I. Graduate students who are funded by research projects on a twelve-month stipend schedule are allowed, at minimum, twelve working days of vacation each year. Students who wish to take vacation must apprise their advisor of their intentions at least two weeks before the planned absence.

II. Students wishing to take additional periods of time off, paid or unpaid, must receive the approval of their advisor. If payroll changes are necessary, the advisor will notify the department or program business office prior to the payroll deadline for the affected pay period of any such arrangements. Approval for additional periods of paid time off may be subject to funding agency restrictions.

III. University observed holidays and time away for professional activities (conferences, workshops, interviews) do not count against the twelve vacation days. Graduate student holidays will follow the Holiday Schedule for University Staff Holiday Schedule for University Staff.

Please Note: *The Graduate School policy on religious holidays corresponds broadly to that of Trinity College. Students who wish to observe religious holidays must inform their advisor in advance, must plan to make up any missed work, and cannot be required to take the religious holiday as a vacation day.*

IV. Unclaimed vacation cannot be carried over to a subsequent year nor will any unclaimed vacations days be paid out if not used by the year-end or upon termination of the research position. The annual cycle for determining available vacation will be August 1 to July 31 of the following year.

Sick Leave Policy: Graduate students are allowed a minimum of 12 working days off per year for medical reasons. Students needing to take additional sick leave, paid or unpaid, must receive approval from their advisor.

The Graduate School strongly supports graduate students using their allotted time off. Students who have concerns about their adviser, PI, or assistantship supervisor not being supportive in this matter should address the issue in the following sequence:

1. *First raise it with their program's director of graduate studies (DGS).*
2. *Escalate to the department chair if the DGS cannot address the issue satisfactorily .*
3. *If the concern still remains after intervention by the department chair, discuss it with the person overseeing graduate education in the school in which the program is based, if there is such a position (e.g., the Graduate Dean for Trinity College of Arts and Sciences, the associate deans who oversee Ph.D., etc).*
4. *If the steps above do not resolve the issue, contact The Graduate School's senior associate dean for academic affairs and senior associate dean for finance and administration.*

This process mirrors The Graduate School's general student grievance procedure.

Health and Dental Insurance & Health Fees

All Duke students are required to maintain adequate medical insurance while enrolled at Duke. As such, they must either enroll in Duke's Student Medical Insurance Plan (SMIP) or waive the SMIP if they meet the waiver criteria. The Graduate School covers the cost of premiums for the SMIP for Ph.D. students in their first six years of study. Duke's student medical insurance plan (Duke SMIP), the Graduate School will cover the premium cost which also includes dental insurance for services at the on-campus dental clinic.

While domestic students may choose not to enroll in the Duke plan, those who do not enroll must meet the waiver criteria and provide proof of comparable alternative insurance coverage. If you have a US-based medical insurance plan, it is important to review your policy to assure proper coverage. Always have your insurance card and prescription drug card with you when seeking health care to facilitate filing insurance claims. If you do meet the waiver criteria, the Graduate School will provide a $600 stipend supplement that will be included in your October paycheck.

International students (those holding F-1 or J-1 visas) must enroll in the Duke SMIP.

Health Fee: Biochemistry graduate students have their health fee paid by the University and/or their faculty advisor. The health fee is separate from comprehensive health insurance and covers most services at the Student Health Center (SHC), if medically indicated and rendered by a Student Health Provider.

Effects of Leave of Absence, Graduation, and Termination on Insurance Coverage: Students who terminate from the Ph.D. program, take a personal leave of absence (LOA), or complete their degree/graduate will have the option to continue their health insurance coverage for the remainder of the plan year at their own pro-rated expense. Otherwise, the Graduate School premium payment continues through the last day of the month in which the student graduates (see more detailed info on page 11). If a student chooses to maintain Duke medical insurance coverage, the student is expected to pay the balance of the plan term premium through their Bursar's account. If the student wishes to terminate their Duke insurance plan, they must complete the Petition to Terminate Coverage form and submit it to the Student Health Insurance Manager in the Student Health Center.

For questions concerning enrollment and termination, email Duke SMIP, call 684-1481, or contact the Duke Student Health Center at (919) 681-WELL.

RESOURCES FOR INTERNATIONAL STUDENTS

International House

The IHouse mission is to provide educational services and advocacy to the international population at Duke as well as outreach to the Durham community. They offer extensive cross-cultural programming and information to enhance the global mission of the University.

Visa Service Offices

Visa Services is a nexus for monitoring and shaping legislation, regulations, and policies at the federal, state, and local levels that affect international educational exchange, and for interpreting and applying those directives and controls in the Duke environment in support of the teaching, research, patient care, and community service goals of the university, medical center, health system and affiliated institutions.

Department liaisons work primarily with international students, staff and faculty for university, medical center, health system and affiliated institutions.

English For International Students (EIS)

EIS provides resources to:

- Help students succeed in their academic programs
- Help students build a community that actively seeks the intellectual and cultural contributions of international students and scholars
- Help students and scholars fully participate in the Duke academic community and become global ambassadors for Duke

EIS Placement Exams: *All international graduate students whose native language is not English are* ***required*** *to take writing and oral/speaking exams through the EIS program per the Graduate School and the Department. If additional English course are required, the Graduate School's policy is for students to take them early in their academic careers for maximum benefit*.

Writing Studio: Students can make appointments for both face-to-face and e-tutoring. Several tutors have ESL experience and all tutors have had some training in working with international students.

Oral Skills Coaching: Students may make appointments with an experienced ESL speaking coach to develop and rehearse various types of oral presentations, practice discussing their field and research, or practice specific speaking skills. Download this PDF for more information,

LIVING IN DURHAM WHILE AT DUKE

Useful Links:

General: Discover Durham, Life in Durham, Student Affairs

Dining: Locations (including menus, food trucks, mobile ordering, and Merchant On Points), Shabbat Dinners

Getting Around: Campus Map, Duke Buses, Enterprise CarShare, Triangle Region Transportation & Routes

Important Student Information Resources: Graduate Student Affairs, Graduate and Professional Student Government (GPSG)

Engaging in the Community: Duke Groups, The Hub, Bikes, Duke Intramurals, Jazz at the Mary Lou

Safety and Conduct: Duke Community Standard, Safety & Security at Duke, Incident Reporting, Conflict Mediation, Duke Vans

Help Resources: Managing Stress Workshop, Counseling & Psychological Services, DukeReach, Gender Violence Prevention and Intervention, Substance Abuse Prevention, Center for Sexual and Gender Diversity, Duke Police, Duke EMS

The Duke Student Survival Guide

Any Duke student can post or access useful information about life at Duke and Durham on this wiki resource. You'll find info on everything from parking on-campus to coffee shops around town. Duke NetID and password are required for access.

Housing

Housing, Dining, & Residence Life (HDRL) is a campus resource for students to find rental housing in the Durham area. Most graduate students rent off-campus housing. For those seeking off-campus accommodations, Duke has resources to find and advertise rental-housing options in the area. These listings are not comprehensive and do not screen landlords or guarantee quality.

- For Rent Near Duke
- The Chronical: Near Duke
- Apartment Finder

Subsidized Housing:

Parking at Duke

Most graduate students commute to Duke and parking for their vehicles is provided in commuter lots throughout campus. Visit the Duke University Parking and Transportation Services for information on how to acquire a permit for campus parking, as well as bus stops and routes that serve apartment communities.

GRADUATE STUDENT REPRESENTATION

Biochemistry Graduate Student Council (BGSC)

The Biochemistry Graduate Student Council (BGSC) is composed of five members who are elected by an annual, student-wide election. Four members serve as core BGSC representatives, while the fifth serves as the Biochemistry representative on the Graduate and Professional Student Council (GPSC).

During monthly meetings, the BGSC and interested students discuss upcoming events hosted by the BGSC including science-oriented volunteer activities, social events and Duke student life activities. The BGSC also helps identify and solve issues related to graduate student life by communicating with the department administration and with the Graduate School.

For more information on how to participate in the BGSC and information on upcoming and past events hosted by the BGSC, visit their Instagram account. Contact the BGSC with ideas for events, concerns, or questions.

Graduate and Professional Student Government (GPSG)

The Graduate and Professional Student Government of Duke University is the umbrella government organization for Duke's nine graduate and professional schools. The GPSG advocates on behalf of all graduate and professional students and works to support all individuals and groups by releasing written statements of support in response to events and legislation related to the well-being of the student population.

STUDENT HEALTH AND MENTAL WELLNESS

Duke Student Health

It is important to take responsibility for your health and wellness. The friendly and knowledgeable staff at the Duke Student Health Center can help with all health-related needs while at Duke.

Quick Information:

Student Health Center

Location: 305 Towerview, next to Penn Pavilion.

Regular appointments: Call 919-681-WELL (9355) Option #1 or book online through Duke MyChart

Same Day / Urgent Care Visits: If you have an urgent medical concern and need to be seen the same day, please call the triage line at 919-681-9355, Option #2.

Duke University Student Health Services (SHS) is the primary source for a variety of services, many of which are covered by the Student Health Fee. The Center's mission is to provide comprehensive, first-class health care and patient education in a manner that is respectful of diversity.

Since medical issues can arise at any time, Student Health's urgent care services allow students to see a healthcare provider and receive treatment in a timely fashion—usually same day or within 24 hours—depending on availability. Students needing urgent care will be given priority. For non-urgent health concerns or chronic medical problems, students should make a regular appointment.

Medical Services are provided by board-certified faculty physicians, physician assistants, nurse practitioners, and resident physicians under faculty supervision. Students are encouraged to use the Student Health Center as their medical home and to access other health resources as needed, including the specialty clinics at Duke University Medical Center. This will help with coordinating and providing cost-effective healthcare.

Student Health Services offers general medical care, nutritional counseling, laboratory services, immunization and allergy clinics, sexual health counseling, and a variety of other services.

- Allergy Clinic
- Campus Center Pharmacy
- Dental Care
- Immunizations
- International Travel Clinic
- Laboratory
- Physical Therapy
- Primary Care

Duke Student Mental Health Services

OBGE Student Wellness and Professional Development Coaching

Coaches address concerns that get in the way of achieving optimal well-being.

Counseling & Psychological Services (CAPS)

CAPS helps Duke students successfully live, grow, and learn in their personal and academic lives. They offer services including brief individual counseling/psychotherapy, consultation, couples and group counseling, assistance with referrals and more. CAPS staff also provide outreach education programs to student groups, particularly for at-risk populations.

DukeReach

DukeReach directs students, faculty, staff, parents, and others to the resources that help students in need. Located in the Dean of Students office, it works with departments and groups across campus and in the community, including Housing, CAPS, Student Health, community health providers, the Academic Resource Center, and more.

DuWell

Works with Duke students and administration to promote good decision making around health issues, alcohol, and substance use. They run campus-wide discussions and programs with faculty and staff emphasizing the impact that high-risk substance use/abuse has on a community. Additionally, the Center links students to programs and services. Check out the center's Moments of Mindfulness activities. Phone: 919-681-8421

Blue Devils Care

Provides 24/7 mental telehealth support to all Duke students at no cost.

Prescription for Persistence

Provides tips to help you succeed in grad school.

CAREER DEVELOPMENT RESOURCES & CERTIFICATES

Professional Development Series

This series includes individual workshops, talks, and presentations that help students prepare for the professional doors their graduate degree will open. Programs broaden the student's career options and develop competencies in communication, self-awareness, professional adaptability, and leadership. Questions or suggestions? Contact Dr. Melissa Bostrom, Assistant Dean for Graduate Student Professional Development.

Curriculum Enhancement Programming

Certificate in College Teaching (CCT) is an approximate one-
that prepares PhD students to teach. Students receive formal documentation upon
program's completion, which
helps make them more competitive when applying for faculty positions. (*See **Appendix III**).*

Emerging Leader Institute is open to Graduate School students and postdocs and helps them develop communication, self-awareness, professional adaptability, interdisciplinary teamwork, and leadership skills.

Preparing Future Faculty (PFF) is a year-long program that provides graduate students and postdocs with workshops and mentors to prepare them for the multiple roles they may play as faculty members at their academic institutions.

Bass Instructional Fellowship Program provides endowed fellowships for graduate students to gain high-quality teaching experience as instructors of record, instructional teaching assistants, and online apprentices.

For a list of the Professional Development Series workshops and events, visit the Graduate School's professional development events calendar. Check back frequently during the semester!

The Graduate School Scientific Writing Resource

Provides online course material that teaches how to write effectively. The material is not about grammar or punctuation but about communicating to the reader. It can be used either in a science class or by individuals and is intended for science students at the graduate level.

WISE (Women in Science and Engineering)

Serves as a liaison between women science and engineering students and the administration. They sponsor events for women faculty members and students in science and engineering to come together and share experiences and ideas for change.

Student Affairs Center

The center provides services, programs, events, online tools, and resources for undergraduates, graduate students, and alumni up to four years after graduation from Trinity College, Duke's Pratt School of Engineering, and the Graduate School.

BIOCHEMISTRY DEPARTMENT ACADEMIC & SOCIAL EVENTS

Weekly Biochemistry Department Seminars

Seminars are scheduled on Fridays at 12:00 noon in conference room 147, Nanaline Duke Bldg. unless otherwise noted. Coffee is served in the lobby at 11:45 am.

Monthly Biochemistry Department Research Forums

These Friday seminar presentations highlight recent research accomplishments and ongoing research activities of faculty and their research groups.

Annual Nozaki Distinguished Lecture:
A Biochemistry graduate student committee solicits nominations from the students then selects, invites, and hosts a distinguished speaker to visit the department and present a seminar. Supported by the Dr. & Mrs. Yasuhiko Nozaki Lectures Fund of the Triangle Community Foundation.

Annual Department Retreat
Members of the department, including faculty, students, post-docs, and technicians come together at a location at the North Carolina beach or mountains. The weekend is full of poster sessions, lab presentations, karaoke, and fun.

Annual Student Recruitment Visits
Early in the spring semester, the department hosts potential graduate students to visit the Biochemistry Department. Current and prospective students meet, talk about the department's research opportunities, and tour Duke and Durham's unique culture and community. Current students can volunteer to help with recruitment events by contacting the DGSA.

Annual Duke Basketball Ticket Lottery
All graduate students can participate in the annual lottery for Duke Basketball Season Tickets. Interested graduate and professional students can apply for an opportunity to purchase season basketball tickets.

Monthly Biochemistry Happy Hour
The first Friday of each month, socialize with your fellow department members! Happy Hour happens at 4 pm on the Nanaline Duke Patio (weather permitting) or in the 1st floor lobby of Nanaline Duke. Everyone is welcome for beverages and snacks.

Annual Holiday Party
In early December, the Biochemistry department hosts an annual pot-luck for the department and their families. If you enjoy cooking, it's a great chance to share your favorite dish. Along with food, there is dancing, fun, and door prizes!

Annual Biochemistry Department Night at the Durham Bulls
This family-friendly event in late spring/early summer includes seats to watch the baseball game in a reserved party deck plus dinner, beverages, and fireworks after the game.

SUMMARY OF ANNUAL TIMELINES FOR BIOCHEMISTRY STUDENTS

2023-24 Important Dates for 1ST Year Biochemistry Students (G1)	
Aug. 21– 25	New Student Orientation & Advising, Research Talks, Course Registration
Aug. 21	BIOTRAIN 750 (4 RCR Credits) all day
Aug. 28	Fall Semester begins. Required courses: BCH 790S, BCH 745S, BCH 593
Sep. 5 – Oct. 20	1st Rotation – Lab Rotation choice is due in T3 by August 30th
Oct. 23 – Dec.15	2nd Rotation – Lab Rotation choice is due in T3 by October 19th
Early Nov.	Spring BCH Course Open House/Biochemistry Advisory Meetings/Spring Registration Begins
Jan. 10	Spring Semester begins; Required classes: BIOTRAIN 751 (4 RCR Credits), BCH 746S, BCH 593
Jan. 8 – March 1	3rd Rotation – Lab Rotation choice is due in T3 by January 4th
March 4– Apr. 26	4th Rotation (optional)– Lab Rotation forms are due in T3 by March 1st
March 8	Advisor/Lab Choice due to the DGSA *or* Discuss further rotations with DGS. Lab choices are approved by the DGS. Financial Support Forms are given to students to be signed by Advisor(s) & Department representatives.

2023-24 Important Dates for 2nd Year Biochemistry Students (G2)	
During Year 2 or 3	BIOTRAIN 753 (2 RCR Credits): Students complete a self-paced online course via Duke LMS
Aug. 28	Fall Semester begins; Required courses: BCH 745S, BCH 593
Before Dec. 15th	Student submits a Committee Nomination Form to the DGSA with recommended faculty for Supervisory Committee.
Jan. 10	Spring Semester begins; Required courses: BCH 746S, BCH 593
mid-January	DGS approves the Committee and assigns one Biochemistry faculty from each student's Prelim Committee to be their Prelim Chair
Feb. – May	Student schedules their Initial Committee Meeting (Pre-prelim), and informs the DGSA of the date/location. DGSA enters that information into T3.
At least 1 week prior to Initial Meeting:	Student submits 2-3 page written document that includes an Introduction to the Thesis Area and Preliminary Aims to all committee members in T3.
Before May 31st	Student holds Initial Committee Meeting 1 hour (max).

2023-24 Important Dates for 3rd Year Biochemistry Students (G3)

During Year 2 or 3	BIOTRAIN 753 (2 RCR Credits): Students complete a self-paced online course via Duke LMS
Aug. 28	Fall Semester begins; Required course: BCH 745S
No later than Sep. 5th	Student schedules oral preliminary exam and informs DGSA of the date, location, and time; the DGSA enters information into T3.
At least 6 weeks prior to exam:	Student submits written prelim exam proposal to DGSA for format check.
At least 4 weeks prior to exam:	Student submits the format-approved Written Proposal to all Committee Members in T3.
1 week after initial proposal submission:	Student requests feedback from the Prelim Committee Chair to ask whether the Written Proposal is Accepted or Needs Revision.
At least 1 week prior to exam:	Student submits revised Written Proposal in T3 and to all Committee Members (if necessary). Student sends a reminder to all Committee members informing them of the Date/Time/Place of the Exam.
Before Dec. 15th	Supervisory Committee administers the Preliminary Exam.
Jan. 10	Spring Semester begins; Required course: BCH 746S
Before May 3rd	Graduate School requires all G3 students complete preliminary exams by the end of the Spring semester unless approved by the Dean. Prelim retakes must be completed by this date.

2023-24 Important Dates for 4th Year Biochemistry Students (G4)

Before May 3rd	Student schedules and completes the Annual Progress Meeting with their Ph.D. Supervisory Committee. DGSA must be notified of meeting date/location/time to enter into T3. Student updates their IDP. Student submits 2-3-page written summary and updated CV to all committee members by email and in T3 at least 1 week prior to meeting.
Jan. 10	Spring Semester begins; Required course: BIOTRAIN 754 (4 RCR Credits)

2023-24 Important Dates for 5th Year Biochemistry Students (G5+)

5th+ Years	RCR Elective Forum (2 RCR Credits)
Before May 3rd	Student schedules and completes the Annual Progress Meeting with their Ph.D. Supervisory Committee. DGSA must be notified of meeting date/location/time to enter into T3. Student updates their IDP. Student submits 2-3-page written summary and updated CV to all committee members by email and in T3 at least 1 week prior to meeting.

2023-24 IMPORTANT DATES FOR THE DISSERTATION & DEFENSE*

Graduation Date	Submission of **Intention to receive degree**[1]	Submission of **Initial Electronic Dissertation**[2]	Final Day to hold **Oral Defense**[3]	Final Submission of **Dissertation** into UMI/T3 [3]
Sep. 2023	Jun. 15	Jul. 5	Jul. 19	Aug. 2
Dec. 2023	Oct. 15	Nov. 13	Nov. 27	Dec. 11
May 2024	**Feb. 1**	**Mar. 20**	**April 3**	**Apr. 17**

[1] ***Submission of the Intention to receive degree***

Student must file an intention to receive degree on-line: Log-in to Duke Hub and click on the "Forms and Requests" tab. Then click the "Apply for Graduate" button. **The student's advisor must Initiate Defense Milestone in T3 at least 4 weeks ahead of the defense.**

[2] ***Initial Electronic Submission of the Dissertation Defense***

At least two weeks before your defense, but prior to the ***initial submission deadlines*** for each semester, submit your dissertation to UMI/ProQuest

[3] ***Dissertation Defense Date/Final Submission of the Dissertation***

Final submission of your corrected dissertation must occur within 30 days of your defense; however, if you defend within 30 days of the semester deadline of your graduation date, you must adhere to the semester deadline and do not have 30 days to complete your final submission. Final version of the dissertation is due to UMI/ProQuest by 3:00 pm on the Due Date. T3 is due by 5:00 pm on the Due Date.

***Deadlines subject to change:** You can download a PDF of the deadlines or visit the Duke Graduate School for deadlines.*

THE FIRST YEAR (G1)

There are three main elements involved in the first year of graduate study in the Department of Biochemistry:

- ***Required Courses: BCH790S Topics, BCH745S/746S Seminar, BCH593 Ind study, and BIOTRAIN 701/750/751 (12 RCR Credits)***
- ***3 Lab rotations (optional additional rotations - see DGS)***
- ***Choosing a research advisor***

2023-24 Important Dates for 1ST Year Biochemistry Students (G1)	
Aug. 21– 25	New Student Orientation & Advising, Research Talks, Course Registration
Aug. 21	BIOTRAIN 750
Aug. 28	Fall Semester begins; Required courses: BCH 790S, BCH 745S, BCH 593, BIOTRAIN 701
Sep. 4 – Oct. 20	1st Rotation – Lab Rotation choice is due in T3 by August 30th
Oct. 23– Dec.15	2nd Rotation – Lab Rotation choice is due in T3 by October 19th
Early Nov.	Spring BCH Course Open House/Biochemistry Advisory Meetings/Spring Registration Begins
Jan. 10	Spring Semester begins; Required classes: BIOTRAIN 751, BCH 746S, BCH 593
Jan. 8 – March 1	3rd Rotation – Lab Rotation choice is due in T3 by January 4th
March 4 – April 26	4th Rotation (optional)– Lab Rotation choice is due in T3 by Feb 28th
March 8	Advisor/Lab Choice due to the DGSA *or* Discuss further rotations with DGS. Lab choices are approved by the Chair. Financial Support Forms are given to students to be signed by Advisor(s) & Department representatives.

Coursework & Registration

In the **first 2 years of study, students must complete at least 30 hours coursework** (of which at least 24 hours is Graded)* and complete the required Responsible Conduct of Research (at minimum, RCR courses BIOTRAIN 701, 751, 752).

Required Courses in the Biochemistry Program:

- **BCH790S** Topics (Graded, Fall semester G1) for 2 units total
- **BCH745S/746S** Seminar (Graded, Fall and Spring, G1, G2, and G3) for 6 units total
- **BCH593** Research Independent Study (Graded, Fall and Spring, G1 and G2) for 8 units total
- **BIOTRAIN 701, 751, 752** etc. RCR Training (Ungraded) for 18 contact hours total through graduate school (*See **Appendix II** for specific details*)

**Students coming into the program from the MSTP or matriculating with an MA/MS degree may be exempt from the full graded coursework requirement. These students should see DGS for guidance.*

Typically, graduate Biochemistry students take 3-4 classes plus two seminar courses each semester. (*See **Appendix I**).* These core courses are designed to develop the student's ability to critically read and analyze literature; orally present literature and analysis; demonstrate a firm grasp of conceptual foundations of modern biochemistry; and complete written reports, oral presentations, and/or exams. Students customize their plan of study with help from faculty advisors and their research mentors, choosing from a broad list of available courses in the biomedical science graduate curriculum.

During Orientation Week, incoming students will be advised regarding registration for required and recommended Fall courses. A Course Open House will be scheduled in early November when students can learn about Spring semester courses. Spring Registration instructions will be sent by the DGSA in November. Get instructions on registering for courses on Duke Hub. Additional DukeHub Portal Navigation & "How to" Documentation can be found at this website.

Lab Rotations

G1 Biochemistry graduate students complete at least 3 laboratory rotations across the Fall and Spring semesters of their first year. During orientation week, Biochemistry faculty will give brief research presentations that help students choose the labs for their rotation projects. We encourage students to choose lab rotations in diverse research areas to sample the variety of scientific research and methodology available in the department. G1 students will present their rotation project background and results to their graduate student peers in a brief oral presentation as part of BCH745S/746S.

Trainee Tracking Tool (T3)

T3 is used to track progress and assess student learning, milestones, and development throughout the graduate training experience. T3 includes the OBGE Faculty Research Series, a repository of SOM graduate faculty research profiles that provides students with easy access to faculty research, training program affiliations, mentoring philosophies, and rotation availability. First-year students should use the instructions below to register each lab rotation via T3. Access T3 here.

- Sign in with NetID and password
- Navigate to Resource Library in the left-hand menu
- Select "Registering a Rotation in T3 – Student Quick Guide"
- Follow steps in "Quick Guide" to register rotation information

Choosing a Research Advisor

After completing at least 3 lab rotations, students will choose their thesis lab and graduate research advisor. Students should consult with professors they intend to, or have rotated with, to determine whether they will have a position available. Students may wish to contact the Chair and/or the DGS before making this decision. The thesis advisor choice form should be submitted to the DGSA in early March, after completion of the 3rd rotation. Approval of the thesis research advisors will be made by the Chair no earlier than March 8th, regardless of lab choice submission date. If you are doing more than 3 rotations, submit your thesis advisor choice form to the DGSA upon completion of your final rotation.

Statement of Financial Support Form: If a research advisor is chosen whose primary faculty appointment is outside the Biochemistry Department, the Statement of Financial Support Form is required by the School of Medicine and will be emailed by the DGSA. Each form must be signed by the following: 1) Advisor, 2) DGS of the PhD-Granting Department, and 3) the Advisor's Primary Department Chair and Business Office. Names of the required signees will be listed on the forms.

THE SECOND YEAR (G2)

These principal events occur during the second year of Biochemistry graduate study:

- ***Required Courses: BCH745S/746S, BCH593; BIOTRAIN 753 (2 RCR Credits) in G2 or G3***
- ***Teaching Assistant requirement (Fall, Spring, or Summer Semester)***
- ***Supervisory committee selection, Prelim Exam Chair assigned***
- ***Initial committee meeting (also called the "Pre-Prelim")***

2023-24 Important Dates for 2nd Year Biochemistry Students (G2)	
During Year 2 or 3	BIOTRAIN 753 (2 RCR Credits): Students complete a self-paced online course via Duke LMS
Aug. 28	Fall Semester begins; Required courses: BCH 745S, BCH 593
Before Dec. 15th	Student submits a Committee Nomination Form to the DGSA with recommended faculty for Supervisory Committee.
Jan. 10	Spring Semester begins; Required courses: BCH 746S, BCH 593
mid-January	DGS approves the Committee and assigns one Biochemistry faculty from each student's Prelim Committee to be the Prelim Chair
Feb. – May	Student schedules the Initial Committee Meeting and informs the DGSA of the date.
At least 1 week prior to Initial Meeting:	Student submits 2-3 page written document which includes an Introduction to the Thesis Area and Preliminary Aims to all committee members.
Before May 31st	Student holds Initial Committee Meeting (Pre-prelim), 1 hour (max).

Teaching Assistant Requirement

The Biochemistry department requires that all graduate students serve as a teaching assistant (TA) for at least one semester, usually during the second year of study. The department currently provides TAs for the following undergraduate courses: BIOCHEM 301 and 302 (Introduction to Biochemistry I and II) and BIOCHEM 658 and 659 (Structural Biochemistry I & II). TA positions are assigned by the DGS prior to the start of G2.

Supervisory Committee Selection

By December 15th, each student, after consultation with her/his mentor and each proposed committee member, provides the DGSA with a Committee Nomination Form with a list of faculty members they would like to join their Supervisory Committee.

- The Committee should **consist of five members (including their advisor) that meet the following requirements**
  - at least three graduate faculty members with expertise in the major field of study
  - at least one graduate faculty member from a minor area from outside the degree program or from a clearly differentiated subfield within the Biochemistry Department This is the Minor Area Representative or MAR*.
  - At least two members of the committee, including the Advisor, must be faculty with a primary or secondary appointment in the Biochemistry Department.

- Students with co-advisors should check in with the DGS to ensure compliance with their Prelim exam committee composition; co-advisors generally cannot take part in the Oral exam.
- Interdisciplinary program students should also pay attention to any program-specific committee member requirements.
- Adjunct professors cannot be the committee Chair, but they can be a Co-chair and/or Advisor on a committee.

***MAR Justification requirement**: On the Supervisory Committee Nomination Form, include 1-2 sentences describing how this faculty's expertise is appropriate but lies *outside* of the main research topic.

IMPORTANT: Students are responsible for ensuring that all faculty members nominated for a prelim/dissertation committee are members of the **Graduate Faculty**. Students can verify membership using the following website. If a professor is requested to be on the committee who is not a member of the Duke Graduate Faculty (as are most faculty members from another university), their current CV must be submitted to the DGSA along with the committee nomination form. The DGSA will then submit a "Nomination Form for Term Membership on the Graduate Faculty" to the Graduate School for approval. This takes time, so think ahead!

The Chair of the Pre-Prelim meeting and the Preliminary Examination Committee **cannot be the student's research advisor (or co-advisor)**. The Chair will be a primary Biochemistry faculty designated from the remaining members of the student's Committee by the DGS in consultation with the department Advisory Committee as needed.

Committee member nominations are reviewed by the DGS, in consultation with the department Advisory Committee for departmental approval. If approved, the DGSA will submit a Committee Nomination Form to the Graduate School for the Associate Dean's approval ***(no later than 30 days before the Preliminary Examination date)***. If one or more members nominated by the student are not approved, the student will be informed by the DGS and asked to submit additional nominations.

The Initial Committee Meeting ("Pre-Prelim")

The initial meeting takes place before ***May 31st*** of the student's second year. Many students and faculty like to use the When2Meet website to determine a consensus date and time for the pre-prelim. The overall purpose of the pre-prelim is to acquaint the faculty members with the student and the student's proposed research project in both a written and oral format. It is not an exam. The meeting Chair is an assigned member of the student's committee who will also serve as the Chair for the Prelim exam. Although preferred, the entire Committee does not have to be present at this meeting. However, students should schedule 1-on-1 meetings with any absent faculty to discuss their plans.

Setting up the meeting in T3: The student is responsible for scheduling the meeting (usually 1 hour), reserving the meeting space (see page 10 for available rooms & contacts), or setting up the virtual meeting and **informing the Committee *and the DGSA* of the meeting date, time, and place. Once the location and/or virtual link are established, the DGSA will be able to set up the meeting in T3.**

Written Summary (~2 pages): For the pre-prelim, students prepare and present a brief (~2 page) summary to all Committee members **in T3 and by email** at least 1 week prior to the meeting date. This summary includes an Introduction to the research area, the potential Preliminary Aims for the project, the Significance of the research, and Preliminary Data supporting the Aims (if available). This document should help subsequent development of the student's Prelim proposal and PhD research.

Oral Summary (~20 minutes) and Committee Discussion (~20 min): The student prepares a brief Oral Presentation to present the Background, Significance, Preliminary Data, and potential Preliminary Aims for their proposed doctoral research project. This is not an exam but is intended to elicit useful comments and feedback from the committee members regarding the student's proposed research topic, scope and goals and to help the student develop a successful Preliminary Exam proposal. The student should expect and can solicit oral and written suggestions from their committee regarding their proposed line of research and suggestions of topics they should master before their Preliminary Examination.

Initial Meeting Feedback for Students: T3 will be used for our Biochemistry initial committee meetings. At the conclusion of the meeting, the student and Thesis Advisor should discuss the Committee's feedback and comments.

Development of Initial Individual Development Plan (IDP)

In G2, the student should begin to develop an Individual Development Plan (IDP) with initial career goals and objectives. *(See **Appendix IV** for details about preparing an IDP.)* The student must complete an IDP by the end of the Spring of their G3 year but are encouraged to explore career development objectives earlier. Students should plan to discuss their IDP with a Career Planning Mentor (This could be any faculty member, although it is highly recommended that the Mentor is someone familiar with the student, such as their Research Advisor or a member of their committee.) IDP discussions can be 1-on-1 or as part of the student's annual committee meeting. The student informs the DGS of their choice of IDP faculty Mentor.

THE THIRD YEAR (G3)

Prior to or during the third year of graduate study, Biochemistry students complete the Preliminary Examination (the "Prelim"). By the end of G3, students are also required to have completed their Individual Development Plan (IDP). The following milestones and requirements occur in G3:

- ***Required Courses: BCH745S/746S; BIOTRAIN 753 (2 RCR Credits) in G2 or G3***
- ***The Prelim: Schedule Oral Exam; Submit Written Prelim; Approval by Committee or Revisions if necessary***; ***Oral Prelim Exam***
- ***Complete IDP***

2022-23 Important Dates for 3rd Year Biochemistry Students (G3)	
During Year 2 or 3	BIOTRAIN 753 (2 RCR Credits): Students complete a self-paced online course via Duke LMS
Aug. 28	Fall Semester begins; Required course: BCH 745S
No later than Sep. 5th	Student schedules oral preliminary exam and informs DGSA of the date.
At least 6 weeks prior to exam:	Student submits written prelim exam proposal to DGSA for format check.
At least 4 weeks prior to exam:	Student submits the format-approved Written Proposal to all Committee Members.
1 week after initial proposal submission:	Student requests feedback from the Prelim Committee Chair asking whether the Written Proposal is Accepted or Needs Revision.
At least 1 week prior to exam:	Student submits revised Written Proposal to all Committee Members (if necessary). Student sends a reminder to all Committee members informing them of the Date/Time/Place of the Exam.
Before Dec. 15th	Supervisory Committee administers the Preliminary Exam.
Jan. 10	Spring Semester begins; Required course: BCH 746S
Before May 3rd	Graduate School requires all G3 students complete their prelim exams by the end of the Spring semester unless approved by the Dean. Prelim retakes must be completed by this date.

Prelim Exam

Successful Prelim completion is a requirement of the Graduate School for "Advancement to Candidacy", the process by which a student is officially deemed a Candidate for a Ph.D. In the Department of Biochemistry, **the Prelim consists of two parts**: A Written Proposal describing the student's thesis research as well as an Oral Exam. The Preliminary Exam is a Milestone event administered by the student's Graduate School-approved Supervisory Committee.

Scheduling: Biochemistry students are expected to schedule their Oral Prelim Exam date before or during the Fall semester of G3. Many students and faculty like to use the When2Meet website to find a consensus date and time for the Prelim. Students must be registered during the term in which they take the Preliminary Exam. During the Fall & Spring terms, students are allowed to schedule a Preliminary Exam on a date when classes are not in session (e.g., Fall Break, Spring Break, etc.). In the Summer term, a Preliminary Exam may be scheduled only between the opening and closing dates of the summer session. To view the official Duke academic calendars, visit this website.

The student is responsible for scheduling the exam, reserving the meeting space, or setting up the virtual meeting (if appropriate), and informing the committee and the DGSA of the exam date so that the Preliminary Examination process can be initiated in T3. The Prelim Exam should take place no later than December 15th of G3.

IMPORTANT: ***All Committee members must be present to administer an Oral Exam.***

Changes to the Prelim Examination Committee: If a student requires a change to their Examination committee, the DGSA will need to be notified by email as soon as possible, but **at least 5 weeks prior to the Prelim Examination.** This email should include an updated Committee Nomination Form. Before any request is sent, the student should consult with her/his mentor and the faculty member(s) they are planning to remove/add. *All faculty on the committee must be current members of the* ***Graduate Faculty***. Students can verify membership using the following website.

If a last-minute emergency arises such that a Committee member is suddenly unable to attend, the Exam may proceed **pending the Expedited Approval of the revised Committee composition by the Graduate School Associate Dean**. Note that the Examination Committee at minimum **must still** consist of the Committee Chair (a primary Biochemistry faculty, who is not the Advisor) and the Thesis Advisor; and the committee must have at least 4 members, with two major area representatives and one minor area representative.

Extension of the Preliminary Exam deadline beyond the end of the Spring Term of G3: Extensions must be approved by both the DGS and Associate Dean for Academic Affairs (Dr. John Klingensmith). Students who have not completed their preliminary examination by the end of G4 will be withdrawn

Written Prelim Proposal Submission Details & Approval Checklist

☐ **At least 6 weeks prior to the exam**: **Written Proposal Format Check.**

- Students submit the written proposal as a PDF file to the DGSA for **format approval.**
- Once approved, the student will receive a copy of the **Prelim Exam Written Evaluation Sheet** for the Written Proposal.

Non-adherence to the formatting guidelines will require a revision before the document is approved for submission to the Prelim Committee.

☐ **At least 4 weeks prior to the scheduled exam and with approval of the written format from the DGSA: Written Proposal Submission to Committee.**

- Students must upload the following **into T3**:
  - Written Proposal
  - Evaluation Sheet
  - CV
  - Professional Development Activities
- Additionally, students should distribute their Written Proposal with Evaluation Sheet **by email** directly to their committee members. The DGSA has a template you can use for this email.

☐ **1 week after submission of the Written Proposal to the Committee: Student Receives Written Proposal Approval or Requests for Revision.**

- Students should ask Committee Chair for revision requests from committee members if they haven't received these already. Each Committee member either votes to Approve the document or Request Revisions.
- Approvals/Requests for Revisions will be assembled by the Prelim Committee Chair (see Written Evaluation Sheet), who will then contact the student with requested revisions.

☐ **At least 1 week prior to the Oral Exam**: **Revised Written Proposal Due to Committee.**

- If the proposal Requires Revisions: The student should confer with the Committee Chair regarding the Committee's specific revision requests and, depending on the number of revisions, either:
  - Complete minor revisions in 2 weeks and submit a Revised Proposal to all Committee Members **by email and submit in T3** at least 1 week prior to the Oral Exam.
  - Take more time to prepare a revised Proposal if the requested revisions are extensive. In this case, the Oral Exam can be delayed/rescheduled, but *must be completed by February 1st*

Written Prelim Exam Formatting and General Information:

The **goals** of the written portion of the prelim exam are as follows:

1) To demonstrate proficiency in the student's field of interest with respect to understanding pertinent literature, applying appropriate techniques, posing incisive questions or hypotheses, and designing experiments to address them.

2) To familiarize the student with preparing a formal, peer-reviewed research grant proposal.

Role of the Thesis Advisor: The Thesis Advisor is encouraged to participate in the preparation and editing of the Written Proposal. Students are urged to ask their Advisor to read the Proposal and make suggestions to improve the document's style, language, and clarity prior to distributing to the committee. The Advisor may also help assure that the Proposal conforms to the format and style guidelines. Such participation will increase the probability that the proposal will be acceptable to the committee and minimize revisions.

The following **guidelines and requirements** will help students to write a clear, well-supported proposal that highlights their ability to identify and explain important problems and design approaches to solve them.

- The wording of the proposal should **originate from the student** and should not come from previously written proposals or manuscripts.

- Students must submit the written proposal to the DGSA for a **format check at least 6 weeks prior to their Prelim Exam date** (2 weeks prior to distribution to the Committee). Non-adherence to formatting guidelines will require revisions *before* the document is approved for submission to the Prelim Committee.

- After submitting to the committee, the faculty are likely to request specific **revisions to the written Prelim document**. The student has ~2 weeks to make revisions prior to resubmitting the Final Revised Written Prelim. If extensive revisions are required, the student can delay their Oral Exam (as long as it is completed by Feb 1st of G3).

Written Prelim Exam Section Requirements

- Use 11-point *Arial, Georgia, Helvetica or Palatino Linotype font, single space with at least 0.50-inch margins on ALL sides*.
- Figures, charts, tables, figure legends, and footnotes may be smaller in size but must be legible. Figures must include explanatory legends.
- Page limits: **17 pages total, *excluding references***, with specific page limits for each of the subsections listed below.

Section 1 (Page 1): Title, Summary, Narrative

A) Descriptive Title (200 characters max, including spaces and punctuation)

B) Project Summary/Abstract (30 lines, max)

- This is a **succinct description** of the proposed work and should be able to stand on its own, separate from the application. This section should be informative to other persons working in the same or related fields and understandable to a scientifically literate reader. Avoid using the first person.
- State the broad, **long-term objectives** and **specific aims** of the project. Describe the general **research design** and **methods** for achieving the stated goals. Be sure that the project summary reflects the key focus of the proposed project.

C) Project Narrative (~3 sentences)

- Describe how, in the short or long term, the research **would contribute to fundamental knowledge** about the nature and behavior of living systems **and/or** the **application of that knowledge** to enhance health, lengthen life, and reduce illness and disability.

Section 2 (Page 2): Specific Aims

- Introduce the **background** and **importance** of the research area. State concisely the **goals** of the proposed research and summarize the expected **outcome(s),** including the **impact** that the proposed research results will have on the involved research field(s).
- Succinctly list the **basis** and **specific objectives** of the research proposed (e.g., to test a stated hypothesis, create a novel design, solve a specific problem, challenge an existing paradigm, address a critical barrier to progress in the field, or develop new technology).

Section 3 (Page 3): List of Abbreviations

- List all abbreviations used in the proposal.

Section 4 (Pages 4 – 17 max): Research Strategy

A) Background and Significance (4 pages, max)

- Describe the background and foundational studies for the proposed research in this field. Include preliminary results, if any, that are pertinent to presenting the background (data collected by others in the lab may be included with appropriate acknowledgement).

- Explain the importance of the problem, and/or critical barriers to progress that the proposed project addresses. Describe how the project will improve scientific understanding, clinical knowledge, and/or technical capability in one or more broad fields.
- Describe how the research proposal is innovative. Explain how concepts, methods, or technologies that drive this field will be changed if the proposed aims are achieved.

B) Approach (10 pages, max)

This section should include:

- An **overarching hypothesis or goal**
- A **hypothesis or goal for each Specific Aim**
- **Objectives/Sub-aims within each Specific Aim** that will be used to examine the hypothesis/hypotheses or accomplish specific scientific goals.
- A description of the **Methods, Approaches, and/or Techniques** to be used in each Aim. Include how the data will be collected, analyzed, and interpreted. Include **preliminary studies**, if any, that are pertinent to the feasibility and/or progress towards the objectives/aims (data collected by others in the lab may be included with appropriate acknowledgement). If the project is in the early stages of development, describe the strategy to **establish feasibility**, and address the **management of any high-risk aspects** of the proposed work. Briefly outline plans for the **statistical analyses** of the data (including power calculations prior to experimental design), whenever appropriate.
- A discussion for each Aim and **how the data/results will be interpreted, limitations of the approaches/methods**, **possible problems, and alternative approaches** that would be tried if the initial approaches do not work.

Section 5 (no page limit): References

- List **all** authors for each reference unless the number of authors exceeds 10, in which case "*et al.*" may be used. Include full **titles** in citations.
- While there is not a page limitation, it is important to be selective and only include the most **appropriate** and **current** literature references pertinent to the proposed research.

Oral Prelim Exam Format

After the committee has approved the Written Proposal portion of the Prelim Exam, or the student has submitted a Revised Proposal to the Committee, the student will meet with the committee for an Oral Examination. **The Student's Prelim Committee, Revised Prelim Proposal, Updated CV, Prelim Date, Time, and Location (including virtual link, if used) *must* be entered in T3 prior to this Oral Exam.**

Please Note: *To prepare for the Prelim, students are encouraged to arrange "mock" oral exams with members of their lab and other graduate students.*

Presentation and Examination Questions: During the first ~30 minutes of the exam, the student presents an uninterrupted presentation focusing primarily on their research background, project objectives and preliminary data supporting the project. The student's thesis advisor(s) will then be asked to leave, as they are not present during the second part of the exam. The student is then asked questions by the Prelim Committee. The range of questions in this Oral Exam are in the general area of biochemistry and are related to, but are not restricted to the student's proposal.

Recommendation by the Prelim Committee: At the end of the exam, the student will leave the room while the Committee discusses the results. The mentor may be asked to join the committee for consultation. At this time, each Committee member will evaluate the Prelim in T3 indicating whether the student Passes of Fails, generating the Final Preliminary Exam Evaluation document which will be approved by the DGS and forwarded to the Graduate School. The DGSA cannot submit the official Report of the Doctoral Preliminary Examination form to the DGS for his/her signature and transmission to the Graduate School until all evaluations are completed.

Evaluation: The student is informed of the Committee's decision and advice at the exam's conclusion. The T3 evaluation and comments should be discussed by the student and their research advisor.

Re-taking the Preliminary Exam

A student who fails their preliminary examination may apply, **with the consent of all the members of their Prelim Exam Committee and the Dean of the Graduate School,** for the privilege of a re-examination.

Graduate School Prelim Re-examination Requirements:

- ☐ Re-exam must occur no earlier than 3 months and no later than 6 months after the original exam date.
- ☐ Exam must be held by the end of the Spring Semester of G3 unless specifically requested and approved by the Dean.
- ☐ All members of the student's original Prelim Committee must serve on the re-examination committee.
- ☐ Successful completion of the second examination requires the affirmative vote of all Committee members. Failure on the second examination will render a student ineligible to continue pursuing their Ph.D. degree at Duke University.

THE FOURTH YEAR & BEYOND (G4+)

During the fourth year and subsequent years of graduate study in Biochemistry, students are primarily responsible for conducting their research. Students must arrange a meeting with their Dissertation Committee on an annual basis, beginning in the fourth year of study.

- **Annual Progress Meeting; Update T3 with: Annual Research Document, Professional Development Activities, and CV**
- **Required Course RCR (BIOTRAIN 754/ Elective Forum; 4(+) RCR Credits)**

2023-23 Important Dates for 4th Year Biochemistry Students (G4)

Before May 3rd	Student schedules and completes the Annual Progress Meeting with their Ph.D. Supervisory Committee. DGSA must be notified of meeting date. Student updates their IDP. Student submits 2-3-page written summary and updated CV to all committee members by email and T3 at least 1 week prior to meeting.
Jan. 10	Spring Semester begins; Required course: BIOTRAIN 754 (4 RCR Credits)

2022-23 Important Dates for 5th Year Biochemistry Students (G5+)

5th+ Years	RCR Elective Forum (2 RCR Credits)
Before May 3rd	Student schedules and completes the Annual Progress Meeting with their Ph.D. Supervisory Committee. DGSA should be notified of meeting date. Student updates their IDP. Student submits 2-3-page written summary and updated CV to all committee members by email and T3 at least 1 week prior to meeting.

Annual Progress Meetings

The Committee should use these meetings to note adequate progress, or to provide help and/or advice. Students must have an annual meeting **no later than the end of the Spring Semester**.

Complete the following for your annual committee meeting:

- ☐ **Schedule the meeting** with your committee faculty. Annual progress meetings are typically 1-1.5 hours (more extensive discussions can be held with faculty individually). The meeting may be held virtually or in-person or hybrid. Be sure to send all your committee members the meeting date and time to confirm, as well as a Zoom link for virtual meetings.
- ☐ **At least 3 weeks prior to the annual meeting:** Contact the DGSA with the date and time so that it can be uploaded into T3 in time to generate reminders and links for your committee. Be sure your committee members are listed correctly in T3.
- ☐ **At least one week prior to the meeting:** Log into T3 and upload:
  - Your annual progress meeting document (2-3-page summary)
  - Your current CV
  - Your updated Professional Development Activities (papers, talks, etc)

Your committee members will receive an automated email reminder via T3 both one week and one day prior to your meeting date that includes a link to your T3 record.

☐ **Prepare a ~30 min oral presentation** summarizing your research accomplishments in the past year, plans for the next year, and your professional development activities.

Agenda for Annual Progress Meetings:

1. Prior to the student's oral presentation, the student leaves the meeting and the Research Mentor takes a few minutes to discuss the student's progress.
2. The student presents an ~30 min oral summary of research accomplishments, plans and their professional development activities.
3. The Committee discusses progress and provides advice to the student.
4. The student meets with the Committee without their Research Mentor present.
5. Each Committee member will complete their evaluation forms in T3. The comments are automatically released to the student once **all** members have completed an evaluation.
6. The student and the mentor discuss the Committee evaluations. If you do not receive the email feedback, this means at least 1 committee member has not completed the evaluation yet. The student may prompt their Mentor/Chair to request faculty finish their evaluations.

Please Note: *For annual progress meetings, all your committee members do not need to be present, however* ***all*** *of your committee members still need to sign off in T3 to evaluate your annual progress. If a faculty member cannot attend the meeting, meet individually with that faculty within a week of your meeting.*

Changes to the Supervisory Committee

Check your supervisory committee listing in Duke Hub and T3 and make sure it matches the committee that will be present at your annual meeting. If a student requires a change to their Prelim/Dissertation supervisory committee, notify the DGSA by email as early as possible. This email should include an updated Committee Nomination Form which can be found on the Biochemistry website. Any changes made in committee membership must abide by the membership rules below and be approved by the DGS and the Dean.

The Committee must consist of at least four members of the graduate faculty including their advisor (a committee of five members is recommended). The committee must include at least two members with expertise in the major field of study and at least one from a minor area (the Minor Area Representative or MAR), being from outside the degree program or from a clearly differentiated subfield within the Biochemistry Department. At least two members of the committee, including the Advisor, must be faculty with a primary or secondary appointment in the Biochemistry Department. If the Advisor is a secondary faculty member, then the other Biochemistry department member must have a primary appointment.*

*MAR Justification Requirement: Provide a 1-2 sentence explanation about how this faculty member's expertise is **appropriate and distinct from** the major area of the thesis on the Committee Nomination Form.

G8 students: Required Extension Request

Any students who have not defended their thesis by the beginning their eighth year (G8 which begins the summer term after May of the G7 Academic Year), must file an Extension Request with the Graduate School. An annual progress report and a **specific timeline for completion of the dissertation** must be signed by the student, committee chair and DGS and submitted to the Associate Dean for Academic Affairs. If the dissertation is not defended by the new deadline, the student will be withdrawn from candidacy.

THE DISSERTATION SEMINAR & DEFENSE

The dissertation is expected to be a mature and competent piece of writing, embodying the results of significant and original research. Please see the *Guide to Graduation on page 41* for detailed requirements on writing and submitting your dissertation, along with all other important information for completing your defense (i.e., scheduling your seminar/defense, degree deadlines, etc.).

2023-24 IMPORTANT DATES FOR DISSERTATION & DEFENSE*

Apply for Graduation/Submission of the Intention to receive degree

Jun. 15 for Sep. 2023 Graduation Oct. 15 for Dec. 2023 Graduation Feb. 1 for May 2024 Graduation	Student must file an application for graduation in Duke Hub stating the degree program you are applying for.

Initial Electronic Submission of the Dissertation

Jul. 5 for Sep. 2023 Graduation Nov. 13 for Dec. 2023 Graduation March 20 for May 2024 Graduation	Initial submission of your thesis must take place at least 2 weeks before your defense and no later than 5:00 PM on the deadline dates (see left). Submit your dissertation to UMI/ProQuest

Defense, Final Submission of the Dissertation, and Certificate

Final submission of your corrected dissertation must occur within 30 days of your defense. However, if you defend within 30 days of the semester deadline of your graduation date, you must adhere to the semester deadline, and do not have 30 days to complete your final submission. Your Graduation Certificate will be generated by T3 after your entire committee approves your Defense. The Certificate is then automatically sent for approval by the DGS and is submitted to the Graduate School.

Jul. 19 for Sep. 2023 Graduation	Final day to hold your dissertation defense.
Aug. 2* for Sep. 2023 Graduation	Final day for the dept. to send Graduation certificate by 5:00 PM; submit final dissertation to UMI/ProQuest by 3:00 PM.
Nov. 27 for Dec. 2023 Graduation	Final day to hold your dissertation defense.
Dec. 11* for Dec. 2023 Graduation	Final day for the dept. to send Graduation certificate by 5:00PM; submit final dissertation to UMI/ProQuest by 3:00PM.
April 3 for May 2024 Graduation	Final day to hold your dissertation defense.
April 17* for May 2024 Graduation	Final day for the dept to send Graduation certificate by 5:00PM; submit final dissertation to UMI/ProQuest by 3:00PM.

***Please Note:** Deadlines are subject to change. You can find the most up-to-date deadlines here.*

Changes to the Supervisory Committee

Check your supervisory committee listing in Duke Hub and T3 and make sure it matches the committee that will be present at your defense. If a student requires a change to their Prelim/Dissertation supervisory committee, notify the DGSA by email immediately. This email should include an updated Committee Nomination Form. Before any request is sent, the student should consult with her/his mentor and the faculty member(s) they are planning to remove/add.

Please Note**:** *The Committee must consist of at least four members of the graduate faculty (including their advisor, a committee of five members is recommended. The committee must also include at least two members with expertise in the major field of study and at least one from a minor area, being from outside the degree program or from a clearly differentiated subfield within the Biochemistry Department (the Minor Area Representative or MAR)*. At least two members of the committee, including the Advisor, must be faculty with a primary or secondary appointment in the Biochemistry Department.*

*Outside Committee Member(s) Selection: The Graduate School requires justification for choosing the MAR you would like to serve on your committee. Provide a 1-2 sentence explanation about how this faculty member's expertise is appropriate and distinct from the major area of the thesis research to include on the Supervisory Committee Nomination Form.

Scheduling your dissertation seminar & defense

The Dissertation Seminar and the Oral Defense are generally given on the same day during consecutive time slots. The **seminar** is given first and is an hour-long presentation of the dissertation research. It is open to all members of the department and is held virtually or in a seminar room. The **Oral Defense** follows the seminar and is closed to the public and held in a smaller conference room. This question & answer session with the student's Thesis Committee is chaired by the Thesis Advisor and typically lasts ~2 hours. Once your seminar and oral defense are scheduled, the DGSA should be notified of the date and time with a zoom link (if appropriate). To reserve space for your seminar and defense (a 3-hour block), please contact the DGSA (*see page 11 for rooms and contacts*).

The **final examination** (oral defense) must be administered by ALL members of the supervisory committee and can be considered invalid unless all members of the defense committee are present. If one committee members cannot make it to the exam (even if four members remain), the student should inform the DGSA *immediately* so that arrangements for virtual attendance or a substitution can be made. The final exam should never be held with a committee other than the one approved by the Graduate School.

IMPORTANT: **You must be registered during the term in which you defend**. During the Fall & Spring terms, students will be allowed to schedule a defense on a date when classes are not in session (fall break, spring break, etc.). In the summer term, a defense may be scheduled only between the opening and closing dates of the summer session. View the official Duke academic calendars here.

Please Note: *See Graduate School degree deadlines* here.

BIOCHEMISTRY GUIDE TO GRADUATION

1. **Check your supervisory committee listing in both DukeHub and T3:**
   Make sure it matches the committee that will be present at your defense (which must contain at least four graduate faculty members). Your Research Advisor should be indicated as Chair. If you need it updated or need to change your committee, notify the DGSA immediately. Changes require **30 day advance** approval by the Graduate School of a DGS-signed Committee Nomination Form which can be found on the Biochemistry website.

2. **Apply for Graduation (Intention to receive degree):**
   When a student and his/her advisor have agreed that the student is ready to finish within a semester, the student will need to ***Apply for Graduation*** at least two weeks prior to his/her defense *and* no later than the initial submission deadline for his/her graduation term.

   - Log into the Duke Hub and navigate to Academics. Scroll down to Program/Degree Selection and click to open the application for graduation, which should include a list of degree programs for which you are eligible to apply.
   - If you applied to graduate in the previous term but did not, you would need to apply again for the current term.
   - If you are completing a certificate program, you must apply to graduate separately in DukeHub.

   By Applying for Graduation, you inform the Graduate School that you are planning to graduate in a particular semester. An "Apply for Graduation" form is good for only one semester and does not carry over to the next. Thus, if you file in the Fall and do not defend, you must file a new form in the Spring. Click here for the latest Application for Graduation deadlines.

3. **The Written Dissertation:**
   The Graduate School has very specific guidelines for the written dissertation's format, and strongly recommends all students use the templates (available in MS Word or LaTex) to reduce the chance of serious formatting problems that could delay graduation.

   The dissertation templates and the Guide for Electronic Submission of Thesis and Dissertations, along with other helpful information can be found here.

   A. Initial Electronic Dissertation Submission To UMI/ProQuest ("Format Check"):
   The initial submission must take place at least two weeks before your defense and no later than 5:00 p.m. on the deadline date. **Note**: If you submit your initial dissertation/thesis on the deadline date, you cannot defend until 14 days after that. Initial submission of the dissertation or thesis means that the document is complete.

   View the *Initial Submission deadlines* for each semester

   Submit your dissertation here. This initial submission of your dissertation to UMI/ProQuest is to check the format. The information you provide at the initial submission will be forwarded first to the Graduate School Administrator for approval. Do not destroy the original file from which you created the PDF, you will need this version for revision purposes. Revisions of your thesis/dissertation may be uploaded after your defense. More information about Electronic Theses and Dissertations (ETDs) can be found at the Graduate School Site.

After you submit your electronic dissertation/master's thesis to ProQuest, you will receive an email informing you of any formatting problems and providing a link to request an optional format check meeting with your assigned ETD administrator.

B. Dissertation Submission to the Supervisory Committee:

One month (no less than 3 weeks) prior to your exam date, submit a complete copy of your dissertation to each committee member (generally by email, but provide printed copies upon request), and **upload into T3**. Also, upload an updated version of **your CV into T3. If students do not meet this deadline, their oral defense date is subject to postponement.**

4. **Advisor Letter & Official Defense Announcement:**
No later than one month prior to your exam date, or at the time of the initial submission of your dissertation:

A. **Send an email** to the DGSA with the following information for creation and posting of the Departmental Defense Announcement:

- **Date, time, and place of dissertation seminar & defense**
- **Your name** (as it appears on your dissertation title pages)
- **Title of dissertation** (including any special fonts/symbols)
- **Your Advisor's name**
- the DGSA will create a ***Dissertation Seminar Flyer*** and email it to all department faculty, graduate students, and post- docs. The DGSA will also post flyers in the Nanaline Duke Bldg. If you would like copies to post at other campus locations, please notify the DGSA.

B. The DGSA will then ask your advisor to initiate the **T3 Milestone for the Dissertation Defense**. This will automatically generate an Advisor Letter and the Official Defense Announcement via the T3 portal. These documents will automatically be sent from T3 to the Graduate School.

Note: *For students who have Co-Advisors, only one is needed to initiate the Defense Milestone in T3, but that one should have an appointment in the Biochemistry Department.*

Provided you have done the following...

- ☐ Submitted your Applied for Graduation form (entered via DukeHub)
- ☐ Have an approved Dissertation Committee (Graduate Faculty membership verified and Committee submitted to GS for Dean's approval at least 30 days prior to defense)
- ☐ Given the DGSA information (title, date, time, location, virtual link if needed) for your Official Defense Announcement (DGSA entered into T3)
- ☐ Checked with your Advisor that they initiated and approved the Advisor Letter in T3
- ☐ Submitted your dissertation to UNI/ProQuest
- ☐ Entered into T3 your: dissertation, professional development activities, and CV

...you are ready to defend!

5. **The Dissertation Defense:**

The Defense consists of a public hour-long **seminar** held in a seminar/classroom or virtually. Following the seminar, a **final examination** of the written and oral presentations of the thesis is required to be administered by ALL members of the supervisory committee. At the conclusion of your defense, the supervisory committee will confer and vote, and the completed T3 evaluations will be forwarded to the DGS for approval. This will generate the Final Exam Certificate which will be sent to the Graduate School by the DGSA.

6. **Final Submission**:

Final submission of your revised dissertation must occur within 30 days of your defense; however, if you defend within 30 days of the semester deadline of your graduation date, you must adhere to the semester deadline. ***Deadlines are subject to change, so be sure to check.***

a. **Submit revised PDF file to UMI/ProQuest**:

The final version of your dissertation, taking into consideration the revisions required by the Graduate School **and** the revisions required by your committee. You will receive notification when the Graduate School has accepted your dissertation.

b. **Submit the following materials to the Graduate School after your defense**:
   i. Completed "Survey of Earned Doctorates."
   ii. Signed "Non-Exclusive Distribution License and Dissertation Availability Agreement"

***Note**: If, at the end of the semester/term, the student cannot meet the above deadlines, the student will need to register for the next term or semester in which the degree will be awarded and apply for Graduation again for the new term.*

==> Please also complete the Graduate School's computer-based Ph.D. Exit Survey that will be automatically sent to you upon completion of your dissertation.

ADDITIONAL INFORMATION FOR GRADUATES

Electronic Theses and Dissertations (ETDs)

For submission procedures and guidelines, see the Graduate School ETD Guidelines. For MS Word or Adobe Acrobat help, call the OIT Help Desk at 919-684-2200. For technical help with the PDF submission, contact UMI support or visit the Graduate School.

ETD Copyright Information**: When you submit your thesis/dissertation electronically, you will** also permit Duke University to make it available online through DukeSpace at Duke Libraries. View the following links for additional information about ETD Availability and the Non- exclusive Distribution License and Dissertation Availability Agreement, including the options to request an embargo. For more information see: Copyrights, Resources and Guidelines

Bound Copies of Dissertations

If you would like a personal copy, you can order through ProQuest or print out your dissertation and bring it to the Textbook Store in the Bryan Center for binding. Please note that image resolution will be higher on the self-printed copy brought to the Textbook Store than on the copy ordered through ProQuest.

Commencement

Graduation exercises are held once a year in May, when degrees are conferred, and diplomas are issued to those students who have completed requirements by the end of that spring. Those who complete degree requirements by the end of the previous fall or the summer term receive diplomas dated December 30 or September 1, respectively. September and December graduates are invited to attend the May graduation ceremonies but must register online for the Ph.D. Hooding Ceremony. More information on graduation exercises can be found here.

Health Insurance Information for Graduates

December Graduates Will you be graduating in the Fall? If so, you will have the option of ending your Duke SMIP coverage with a Dec 31st termination date. Submit your termination request to insurance@studentaffairs.duke.edu during Spring Open Enrollment - Nov 15 through Jan 31.

If they do not receive your termination request prior to the end of open enrollment, your policy will stay active until July 31, **NO EXCEPTIONS**.

Continuation of Coverage. Duke does not offer continuation of coverage, which means your current insurance plan will end July 31. As an option, you can apply for insurance at www.healthcare.gov (domestic students) and geobluetravelinsurance.com (international students) at least 30 days prior to your plan termination date.

If you have any questions that are not answered on the website concerning enrollment and termination, please email Student Health. Alternatively, you may call and leave a message at 919-684-1481.

REQUIREMENTS FOR THE MASTER'S DEGREES

Students may, under certain circumstances, receive a terminal Master's degree if they choose to end their study before finishing their Ph.D. The Biochemistry department awards two types of Master's degrees: Master of Arts, M.A. (without a thesis), and Master of Science, M.S. (with a thesis). At Duke, individual departments decide whether the M.A./M.S. program may be completed by submission of an approved thesis or by other academic exercises. In the Biochemistry Department, the recommendation for a student to proceed towards earning a terminal M.A. or M.S. is granted by the advisor, the DGS, the Chair, and/or the student's committee.

Formal Graduate School Requirements:

1) A minimum of 30 units of credit registration, at least 24 of which must be graded.
2) Continuous registration.
3) A master's exam or alternative, such as a thesis or other formal written exercise.

Course Requirements

30 units of graduate credit constitutes minimum enrollment for the M.A. and M.S. degrees. Students must present acceptable grades for **a minimum of 24 units of graded course work**, 12 of which must be in the major subject. A minimum of 6 units of the required 24 should normally be in a minor subject or in a related field approved by the student's major department. In Biochemistry, these course requirements are typically satisfied from coursework taken in the first two years of graduate training.

Completing the "Apply to Graduate" Process for an MS or MA

When a student and their advisor have agreed that the student is ready to finish with a Master's, the student will ***Apply for Graduation*** at least two weeks prior to the thesis defense (if applicable) *and* no later than the initial submission deadline for the graduation term.

- Log into the Duke Hub. Open the Academics tab and then Program
- Click on Apply for Graduation

Please Note: *By Applying for Graduation, you inform the Graduate School that you are planning to graduate in a given semester. An "Apply for Graduation" form is good for one semester and does not carry over to the next semester. Thus, if you file in the Fall and do not defend your Master's thesis, you must file a new form in the Spring.*

Declaration of Intention Letter: The declaration of intention letter, which should be sent to the Graduate School, presents the title of the thesis, or specifies alternative academic exercises on which the degree candidate will be examined. Alternative academic exercises can include written or oral exams on a prescribed reading list or body of material; oral exams on a paper or set of papers submitted by the student; or oral exam on a research project or memo. **The doctoral preliminary examination may also serve as the final examination for the master's degree**. You should inform the Graduate School which type of examination the department will use. The declaration must have the approval of the DGS in the major department and chair of the student's advisory committee

M.S. Thesis Requirements

For an M.S. degree, the thesis should demonstrate the student's ability to collect, arrange, interpret, and report pertinent material on a research problem. The thesis must be written in an acceptable style and should exhibit the student's competence in scholarly procedures. Copies of the document should be distributed by the student to all members of the examining committee **at least one month prior to the exam date**.

Requirements and formats are set forth by the Graduate School and can be found at this website.

The thesis must be submitted in an approved form to the Graduate School **at least two weeks before the scheduled date of the final examination or no later than the initial submission deadline for that semester**. Submission deadlines can be found at this website.

The Master's Degree Examining Committee and the Examination

The department's DGS, with the student, recommends an examining committee normally composed of three members of the graduate faculty, one of whom is the MAR, usually from a department other than the major department or from an approved minor area within the major department. Nominations for committee membership are submitted on the appropriate form for approval to the Dean of the Graduate School **at least one week preceding the MS exam**. The committee will conduct the examination, certify the student's success or failure, and the exam

Appendix I: Courses of Interest to Biochemistry Graduate Students

Courses Offered by the Biochemistry Dept, Fall Semester

Biochemistry G1 students typically do not have time to take additional courses in the Fall semester beyond the recommended Biochemistry courses. Refer to Duke Hub for days/times/locations

BIOCHEM 593-01 – Independent Study (2 units) Graded

Individual research by graduate students in a field of special interest under the supervision of a faculty member. The student will demonstrate data collection, critical analytical skills, and interpretation of results of research on a faculty mentor-approved topic.

BIOCHEM 658 – Structural Biochem I (2 units) Graded – first-half semester

Structure of Macromolecules – Principles of modern structural biology. Protein-nucleic acid recognition, enzymatic reactions, viruses, immunoglobulins, signal transduction, and structure-based drug design described in terms of the atomic properties of biological macromolecules. Discussion of methods of structure determination with particular emphasis on macromolecular X-ray crystallography NMR methods, homology modeling, and bioinformatics. Students use molecular graphics tutorials and Internet databases to view and analyze structures.

BIOCHEM 659 – Structural Biochem II (2 units) Graded – second-half semester

Molecular Biology I – Continuation of BCH 658. Structure/function analysis of proteins as enzymes, kinetics of binding, catalysis and allostery, protein folding, stability, and design protein-protein interactions. This is an introductory course to learn how to use quantitative methods to understand biological structure and function.

BIOCHEM 681 – Biophysical Methods (3 units) Graded

A structure-based introduction to the role of thermodynamic driving forces in biology. An overview of experimental sources of structural and dynamic data, and a review of the fundamental concepts of thermodynamics. Both concepts are combined to achieve a structural and quantitative mechanistic understanding of allosteric regulation, and of coupled ligand binding and conformational change. Statistical thermodynamics is used to develop ensemble models of protein and nucleic acid dynamics. This treatment leads into specific examples and general principles of how to interpret structural and dynamic information toward the purposes of other research.

BIOCHEM 745S – Biochemistry Seminar (1 unit) Graded

Required of all G1, G2 & G3 Biochemistry graduate students. The primary goal of this course is for students to learn how to orally present the background, data, conclusions, and future prospects of their research clearly and concisely. G1 students present rotation projects. G2 and G3 students present their research annually (in the fall or spring term), with students providing peer evaluations of each presenter.

BIOCHEM 790S – Seminar (Topics) (2 units) Graded

This is a 2-credit discussion-based course covering selected topics in Biochemistry. Topics and instructors announced each semester.

BIOCHEM 562 – Advanced Topics in Biochemistry–High Resolution CRYO-EM Image Analysis (3 units) Graded

This Advanced Topics course will focus on the image analysis aspects of cryo-electron microscopy (EM), including image enhancement, reconstruction, classification, and movie processing used to determine the high-resolution structure of proteins from cryo-EM images. The course will provide an overview of the cryo-EM structure determination pipeline, focusing primarily on the data analysis aspects of the technique and covering the full breadth of reconstruction strategies. Prerequisites: Students should have a background in either protein structure/molecular biology or computer vision/image processing.

Courses Offered by the Biochemistry Dept, Spring Semester

Refer to Duke Hub for days/times/locations

BIOCHEM 593-01 – Independent Study (2 units) Graded

Individual research by graduate students in a field of special interest under the supervision of a faculty member. The student will demonstrate data collection, critical analytical skills, and interpretation of results of research on a faculty mentor-approved topic.

BIOCHEM 746S – Biochemistry Seminar (1 unit) Graded

Required of all G1, G2 & G3 biochemistry graduate students. The primary goal of this course is for students to learn how to orally present the background, data, conclusions, and future prospects of their research clearly and concisely. G1 students present rotation projects. G2 and G3 students present their research annually (in the fall or spring term), with students providing peer evaluations of each presenter.

BIOCHEM 667 – Biochemical Genetics I (2 units) Graded **–** first-half semester

Topics include DNA and Genome Stability – Chromatin and chromosome structure, replication, repair, genetic recombination, mutation, and chromosome rearrangement. Primary research papers will be discussed in depth to explore how concepts have been developed and investigated in nucleic acids biology and biochemistry. Each section of the course will consist of background lecture material presented as needed by the faculty member. Paradigm papers selected by the faculty will be presented by students orally. Students will prepare a research paper or an oral talk to demonstrate proficiency in the topics.

BIOCHEM 631 (CMB631, NEURO631, PHARM631) – Contemporary topics in Membrane Biology (2 units) Graded– second-half semester

This course highlights modern topics regarding biological membranes and membrane proteins that are important for human physiology and disease. Topics include structure and dynamics of biological membranes, structure and function of membrane proteins in cell signaling, diseases related to dysfunction of membrane and membrane proteins, and current efforts on drug discovery. Major techniques used in membrane research are covered. The format is lectures and discussion of primary literature. Students will be evaluated based on their class participation and performance at the final presentations.

BIOCHEM 668 – RNA Biology (3 units) Graded

The major emphasis will be on reading and discussing primary research papers in depth. The course will explore new concepts in mechanisms of transcription, splicing, catalytic RNA, RNA modification, RNA editing, mRNA stability & translation. Each section of the course will consist of background lecture material and discussion of selected paradigm papers. Students will be asked to prepare presentations and discussions to demonstrate proficiency in the topics.

Note: *BIOCHEM 695 and 696 will be offered in Spring semester, alternating years:*

BIOCHEM 695 – Understanding NMR Spectroscopy (4 units) Graded (Even years)

Course aimed at graduate students who have some familiarity with high-resolution NMR who wish to understand how NMR experiments actually 'work'. Quantum mechanical tools needed to understand pulse sequences and advanced biomolecular NMR experiments that enable structural and dynamic characterization of biomolecules are covered. Online lectures, course textbook, and class meetings will emphasize concepts, group discussion, and problem solving. Instructor consent required.

BIOCHEM 696 – Macromolecular Crystallography (4 units) Graded (Odd years)

Theoretical and practical principles of macromolecular X-ray crystallography. Topics covered include crystal symmetry, space group theory and determination, diffraction theory, a practical understanding of crystallization, X-ray intensity data collection and data processing, phase determination, refinement, and model validation. Consent required - contact course director for permission number.

BIOCHEM 536 (CHEM 536) – Bioorganic Chemistry (4 Units) Graded

Basic enzymology, mechanisms of enzymatic reactions, cofactors, oxidoreductases, C1 chemistry, carbon-carbon bond formation, carboxylation/decarboxylation, heme, pyridoxal enzymes, thiamine enzymes.

Courses Offered by Other Departments in the Biomedical Sciences

A full list of courses offered by Basic Science Departments can be found on the OBGE website and DukeHub.

Course Overload:

With the approval of their director of graduate studies (DGS) and the associate dean for academic affairs, graduate students may enroll in more than 15.0 graded credits in a semester. The student should meet with the DGS to discuss his/her program of study and academic history to determine if a course overload is advisable.

The student must complete the request form, obtain the signature of the DGS and submit the form to gradacademics@duke.edu or to The Graduate School, 2127 Campus Drive, no later than two business days before the conclusion of the drop/add period.

If approved, the student's credit limit will be raised, and the student will be notified **by email** to add the course to his/her schedule in DukeHub before the end of the drop/add period.

Appendix II: Responsible Conduct of Research (RCR)

Academic integrity and research ethics are fundamental to the practice of science. We have created a rigorous program to train students in the highest standards for conducting research. **All biomedical PhD students are required to participate in in-person and online RCR courses for a total of 18 contact hours.** To receive credit for RCR training, students complete written assessments and course credit is formally tracked by the university registrar to ensure that all RCR requirements are met prior to graduation. The following requirements apply to students that matriculate in Fall 2020 or later. If you matriculated prior to Fall 2020, transitional requirements are outlined here.

<table>
<tr><th>Term Offered</th><th>Year 1</th><th>Year 2</th><th>Year 3</th><th>Year 4</th><th>Year 5+</th></tr>
<tr><td rowspan="3">Fall Only</td><td>BIOTRAIN 750 (RCR)</td><td>BIOTRAIN 720</td><td colspan="3"></td></tr>
<tr><td>BIOTRAIN 701</td><td colspan="4">BIOTRAIN 730 (offered every other year)</td></tr>
<tr><td colspan="5">BIOTRAIN 898</td></tr>
<tr><td>Fall and Spring</td><td></td><td colspan="2">BIOTRAIN 753 (RCR)</td><td></td><td>2 RCR Elective Forums or BIOTRAIN 755 (RCR)</td></tr>
<tr><td>Spring Only</td><td>BIOTRAIN 751 (RCR)</td><td colspan="2"></td><td>BIOTRAIN 754 (RCR)</td><td></td></tr>
<tr><td>Summer Only</td><td colspan="2"></td><td colspan="3">BIOTRAIN 899</td></tr>
</table>

*Courses in **BOLD** are required*

First Year

- **BIOTRAIN 750: Introduction to RCR Concepts:** A one-day event during Orientation week in August, all G1. Topics include conflict management, choosing a mentor, integrating well-being into graduate school, data management, identifying and reducing biases, and diversity, equity, and inclusion at Duke. (4 RCR credit hours)
- **BIOTRAIN 701: Foundations of Professionalism for Biomedical Scientists:** Fall semester, all G1 students**.** Thursdays from 8:30am-9:30am from Sep. 1-Nov. 3. Classes include in-person seminars, online content, and Gateway Group discussions consisting of interdisciplinary small groups of students led by one faculty mentor and one peer mentor. (4 RCR credit hours)
- **BIOTRAIN 751: The Responsible Scientist I**: Spring semester, all G1 students. This course utilizes online lectures/modules, in-person lectures and small group discussions, and focuses on Responsible Conduct of Research (RCR) and Rigor & Reproducibility (R&R) topics for early-stage graduate students. Each topic is accompanied by a short assessment and bi-monthly small group sessions. (4 RCR credit hours)

Second and Third Years

- **BIOTRAIN 753**: **Data Management and Quality for Biomedical PhD Students:** Online, self-paced, all G2/G3 students. This course is offered via Duke LMS (Learning Management System) in partnership with DOSI-ASIST and includes a set of 3 online interactive modules, each accompanied by an assessment. (2 RCR credit hours)

Fourth Year

- **BIOTRAIN 754: The Responsible Scientist II:** Spring, all G4 students. A semester long course that utilizes online lectures/modules, in-person lectures and small group discussions, and focuses on Responsible Conduct of Research (RCR) and Rigor & Reproducibility (R&R) topics for advanced graduate students. (4 RCR credit hours)

Fifth Year and Beyond

- G5 students and beyond will participate in two **RCR elective forums**. These are held throughout the year on a variety of topics to allow students to choose forums that relate to their personal interests and experience. These forums include PhD students from the humanities and social science and often provide a broader view of RCR than offered in previous training years. Each elective forum will provide 2 RCR credit hours.

The Responsible Scientist Teaching Assistant - BIOTRAIN 755:

- School of Medicine PhD students in years 4+ may earn BIOTRAIN 755 credit (replacing one of two required RCR Forums) by serving as a teaching assistant in BIOTRAIN 751: The Responsible Scientist I. School of Medicine PhD students in years 3+ may earn up to two semesters of BIOTRAIN 755 credit (replacing up to two of two required RCR Forums) by serving as an OBGE Graduate Student Peer Mentor over the course of one academic year, including participation in BIOTRAIN 701: Foundations in Professionalism.

RCR Resources

- Animal Care and Use Program
- Duke Office of Translation and Commercialization
- Duke Policy and Procedures Governing Misconduct in Research
- Duke Research Integrity Office
- Human Resource Department
- Institutional Review Board: Human Subjects Research
- Introduction to the Responsible Conduct of Research, by Nicholas H. Steneck, PhD
- Office for Institutional Equity
- Responsible Conduct In Research (RCR) Training and Regulations
- Trent Center for Bioethics, Humanities, & History of Medicine
- US Office of Research Integrity (ORI)

Questions?
Feel free to contact OBGE@duke.edu if you would like more information about RCR.

Appendix III: Certificate in College Teaching

Certificate in College Teaching (CCT)

This university-wide teaching certificate program is for enrolled PhD students in any department or program of study and makes use of departmental training and resources as well as Graduate School programming. This Duke University Graduate School Certificate will appear on the transcript of PhD students who complete its requirements. The certificate recognizes and validates professional development activities undertaken by PhD students and adds competitiveness and value to Duke PhDs. The program requirements take about a year to complete but may vary as opportunities for gaining teaching experience vary across departments. CCT work may be done alongside other classes, research, or work on a dissertation, and should not significantly interfere with their timely completion. After applying to the CCT program, the program director will meet with the student to go over the requirements and completion timeline.

Coursework

Participants must successfully complete two courses in college teaching (at any time either before or after enrolling as a CCT participant), which includes any combination of Graduate School and/or discipline specific pedagogy courses offered by a Department or Program. Ideally take the courses immediately before or in conjunction with your teaching experience.

1. **Teaching Experience & Observation**

   Participants should have at least one semester in a formal teaching role that takes place **after** enrolling in the CCT program (i.e., previous teaching experience is not applicable.)

   A formal instructional role can include the following:

   - Being the instructor of record of a class
   - Being an officially designated TA who leads a discussion, lab or recitation section that meets regularly (at least four times) throughout the semester with you as the primary leader/facilitator of those meetings
   - Being a guest lecturer on at least four separate sessions, each at least an hour long, in the same term or semester and working with that course's instructor of record
   - Other types of teaching experience approved by the CCT program director before the term in which it occurs.

   The following are *not* considered formal instructional roles:

   - Being a guest lecturer in a class where the instructional contact is less than four contact hours spread out through the term (e.g., two guest lectures in the week a lecturing professor is at a conference would not qualify)
   - TAs limited to grading, office hours, or administrative tasks

2. **Online Teaching Portfolio**

   Your portfolio should be appropriate for use in a job search and can be completed after the other CCT requirements, so you have enough material to create it. You may also include a current CV, a teaching statement, and other materials as appropriate to the student's discipline. A number of Duke PhD student portfolios can be found on the website.

Appendix IV: Individual Development Plan (IDP)

We encourage all students to complete an IDP as soon as possible in their graduate career. The AAAS online tool is useful to assess areas of interest and develop an initial plan.

Students draft a plan or an outline of a plan and select and contact a Career Planning Faculty Mentor (i.e., Thesis Advisor, Committee member, or other faculty). **Each year the student can meet and consult with their Career Mentor.** The contents of these meetings may be held confidentially. Students find it beneficial to discuss their IDP (or elements of it) at their Annual Committee meeting.

The IDP maps out your general path and helps match skills and strengths to your career choices. It is a living document since needs and goals will almost certainly evolve. The aim is to build upon current strengths and skills by identifying areas for development. **The IDP objectives encourage students to:**

1. Reflect on their training and career goal
2. Self-assess their skills and competencies
3. Discuss their goals and competencies with their mentor
4. Develop short- and long-term training goals

Rubric Questions

What are your career goals?

What are your strengths and weaknesses?

- *Ability to design and plan experiments to address questions and test models*
- *Technical/bench skills*
- *Ability to analyze data and interpret results*
- *Ability to work independently*
- *Ability to complete projects*
- *Command of the literature in your field*
- *Creativity and vision*
- *Writing skills*
- *Oral communication skills*
- *Personnel management skills*
- *Teaching skills*

How can you hone your skills for you career option(s)?

What are your 1-month goals, 6-month goals, and 1-year goals, in terms of experiments, learning analysis strategies, writing papers, writing grants, attending meetings, teaching, mentoring undergraduates, etc.?

Step 1. Conduct a Self-Assessment
Assess your skills, strengths, and areas that need development. (*See Assessment Tools*)

- Realistically look at your current abilities and weaknesses. Ask your peers, mentors, family, and friends what they see as your strengths and weaknesses.
- Outline your long-term career objectives. *(For useful information see Resources: Career Opportunities at the end of this document)*

Ask yourself:

- *What type of work would I like to be doing?*
- *Where would I like to be in an institution or organization?*
- *What is important to me in a career?*

Step 2. Survey Opportunities with Mentor

- Identify career opportunities and select those that interest you.
- Identify developmental needs: compare current skills and strengths with those needed for your career choice.
- Prioritize developmental areas and discuss how to address with your mentor

Step 3. Implement Your Plan

- The plan is the beginning of the career development process and serves as a road map.
- Put your plan into action
- Revise and modify the plan as necessary. The plan is not cast in concrete; it will need to be modified as circumstances and goals change. The challenge of implementation is to remain flexible and open to change
- Review the plan with your mentor regularly. Revise the plan on the basis of these discussions

Additional sites with IDP information for students:
NIH Individual Development Plans
AAAS IDP Tool