Nutrition and Metabolism—MS

Program Handbook

2023-2024

Department of Nutritional Sciences

Reference this handbook to learn about the unique policies, requirements, procedures, resources, and norms for graduate students in the Department of Nutritional Sciences.

Last updated: 8/16/2023
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Navigating Policy and Resources at UW-Madison

This handbook is one of many sources to consult as you become familiar with the policies, procedures, requirements, resources, and norms of graduate education at UW-Madison:
Who to Contact for Questions

Many of your questions about how to meet expectations and thrive as a graduate student will be answered by the various sources of policies, procedures, requirements, resources, and norms listed above. Several key positions in this department and on campus are ready to answer your remaining questions:

**Graduate Program Coordinator**
Each graduate program will have at least one department staff person typically called a Graduate Program Coordinator who serves as a point person for program policy and procedures. Graduate Program Coordinators are well versed in most elements of graduate education that extend beyond academic instruction in your program and will likely be your first stop for questions related to anything in this handbook.

**Director of Graduate Studies**
Each graduate program has one faculty member designated to direct its educational vision and structure.

Names and contact information of your Graduate Program Coordinator and Director of Graduate Studies can be found on your program’s page in the Graduate Guide (guide.wisc.edu/graduate). Simply navigate to the “Major/Degree” tab, click on your program’s name, and look for the contact information box on the righthand side.

**Faculty Advisor**
Each student will be assigned a faculty advisor in each graduate program in which they are enrolled. Your faculty advisor(s) will be a key source of guidance for your academic development. Further definition can be found here: policy.wisc.edu/library/UW-1232. Guidelines for finding, changing, and working with your advisor can be found in the Advising & Mentoring section below.

The name and contact information of your faculty advisor can be found on your Student Center on MyUW (my.wisc.edu) under “Academic Progress” and then “Advisors.”

**Graduate School Services**
For general inquiries and graduate student services from the Graduate School, see the operations and front desk contact information on this contact page: grad.wisc.edu/contacts.
Department & Program Overview

Modern nutrition is a multidisciplinary, integrative science, and the Nutrition and Metabolism graduate program has been developed to meet this diversity in approach and objective. It is the program's goal to provide graduate students interested in nutrition with an opportunity to obtain specialized training in a specific research area and also to obtain a general background in the science and practice of nutrition. The program is sufficiently flexible to allow students with a wide variety of undergraduate degrees to meet the background prerequisites. The program draws on the strengths of faculty in a number of the university's schools/colleges and academic departments to enhance the instructional and research experience.

The training objectives of the Nutrition and Metabolism graduate program are to provide students with an understanding of basic nutritional principles as they apply to both humans and animals, to provide them with current knowledge in a specific area of emphasis, to make them aware of the integrative and multidisciplinary nature of nutrition research, and to direct them to success in a wide variety of career paths.

Students may reference the Guide at guide.wisc.edu to learn more about curriculum and admissions requirements.

Diversity, Equity, and Inclusion

UW-Madison’s Nutrition and Metabolism program promotes and values the individuality of all students and works to maintain a positive climate within our department, schools/college, and university.

“Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.” -Institutional Statement of Diversity

Graduate Students who are interested in the activities of the Department of Nutritional Sciences’ Justice, Equity, Diversity, and Inclusion committee may contact the Graduate Program Coordinator.

The expectations of students, faculty, and staff to help foster an environment that promotes the success of everyone is included below:
• Create and maintain a dialogue about diversity within the program.
• Work towards creating a program in which students and trainers from all backgrounds feel welcomed, appreciated, and included.
• Continually assess the needs of underrepresented minorities in the program and determine a plan for addressing said needs.
• Recognize that privilege exists and use such privilege to lift communities that have been systematically marginalized. Privilege is a responsibility.
• Encourage students, trainers and staff to advocate for diversity by providing resources, such as time, space and/or monetary support.
• Recruit, retain, and support people who have overcome different barriers and created opportunities in different ways.
• Educate ourselves and our community about the reality of implicit bias and the impact it has on science and education.

Adapted from MDTP

• The College of Agriculture and Life Sciences recently conducted a Climate Survey in which the Department of Nutritional Sciences participated: https://ecals.cals.wisc.edu/2020/11/16/cals-climate-survey-response-rate-and-next-steps/
• Campus Resources for Underrepresented Student Support
  o Mentorship Opportunities in Science & Agriculture for Individuals of Color: https://mosaic.cals.wisc.edu/
  o SciMed GRS Community: https://scimedgrs.wisc.edu/
  o Office of Diversity, Inclusion, and Funding: https://grad.wisc.edu/diversity/inclusion-and-engagement/
  o Gender and Sexuality Campus Center: http://lgbt.wisc.edu/
  o McBurney Disability Resource Center: http://www.mcburney.wisc.edu/
  o Office of the Vice Provost for Diversity and Climate: https://diversity.wisc.edu/
  o Multicultural Student Center: https://msc.wisc.edu/
  o Black Cultural Center: https://msc.wisc.edu/black-cultural-center/
  o University Veterans Services: http://www.veterans.wisc.edu/
  o Women in Science and Engineering Leadership Institute (WISELI): http://wiseli.engr.wisc.edu/
  o Undocumented Student Support: https://msc.wisc.edu/undocumented-student-resources/

As part of an in-person research program on the UW-Madison campus, it is important for our program to acknowledge the history of the land of UW-Madison. The University of Wisconsin–Madison occupies ancestral Ho-Chunk land, a place their nation has called Teejop (day-JOPE) since time immemorial.
In an 1832 treaty, the Ho-Chunk were forced to cede this territory. Decades of ethnic cleansing followed when both the federal and state government repeatedly, but unsuccessfully, sought to forcibly remove the Ho-Chunk from Wisconsin.

This history of colonization informs our shared future of collaboration and innovation. Today, UW–Madison respects the inherent sovereignty of the Ho-Chunk Nation, along with the eleven other First Nations of Wisconsin.

The UW-Madison campus hosts many resources as they relate to diversity, inclusion, equity, and justice. An extensive, but non-exhaustive list can be found on the Diversity, Equity, and Inclusion website from UW-Madison or following this link: https://diversity.wisc.edu/inclusion-resources/

UW-Madison also hosts an annual Diversity Forum in which the Nutrition and Metabolism program highly encourages all constituents and stakeholders including mentors, mentees, administrative and academic staff to attend. More information on the forum can be found on the Diversity, Equity, and Inclusion website from UW-Madison or following this link: https://diversity.wisc.edu/diversity-forum-2021/

- Students who have questions and/or concerns related to DEI may contact the Graduate Program Coordinator.

- For Incident Reporting, please review our Grievances and Appeals page on Guide: https://guide.wisc.edu/graduate/nutritional-sciences/nutritional-sciences-phd/#policiestext

How to Get Involved

As a graduate student at UW-Madison, you have a multitude of opportunities to become involved on campus and in your academic discipline. This involvement often enhances your academic, professional, and personal growth through developing advanced leadership, communication, and collaboration skills. It also provides opportunity for professional networking.

In Our Discipline

Due to the Interdisciplinary nature of Nutrition, students may choose from a plethora of professional development opportunities. Below are example of national organizations and conference and our students have engaged with.
American Society for Nutrition (https://nutrition.org/)
- Annual Nutrition Science Meeting

Aging
- Biology of Aging (Links to an external site.)
- American Aging Association Annual Conference (Links to an external site.)

Breastfeeding and Maternal Health
- Annual International Breastfeeding Conference (Links to an external site.)

Cancer
- Cancer Genetics and Epigenetics (Links to an external site.)
- Cancer Cachexia Conference

Carbohydrates
- Carbohydrates Gordon Conference

Cystic Fibrosis
- North American Annual Cystic Fibrosis Conference

Diabetes
- American Diabetes Association Annual Scientific Sessions

Genetics/Genomics
- Human Genetics and Genomics (Links to an external site.)

Gut Microbiome/Pancreas
- American Pancreatic Association | Annual Conference
- Digestive Disease Week | Annual Conference (Links to an external site.)

Experimental Biology
- Federation of Experimental Biology Conferences (Assorted)

Metabolism
- Metabolic Health Summit
- Society for Inherited Metabolic Disorders

Muscle Wasting
- International Conference on Muscle Wasting
- International Conference on cachexia, sarcopenia, and muscle wasting

Obesity
- American Association of Clinical Endocrinology Annual Conference
- Obesity Medicine Annual Conference
- International Conference on Nutritional Genomics and Obesity

Proteins
- Protein Folding Dynamics (Links to an external site.)
- Protein Processing, Trafficking, and Secretion (Links to an external site.)
- PepTalk: The Protein Science Week (Links to an external site.)
Conference Series: 

**Experimental Biology (Assorted Topics)**

Founded in 1912, FASEB began with a small group of dedicated scientists, from three independent organizations, who wanted to provide a forum for educational meetings, develop publications, and disseminate results of biological research. Now the nation’s largest biomedical coalition, comprising 28 scientific societies and more than 115,000 researchers worldwide, FASEB is the recognized collective policy voice of biological and biomedical researchers.

Building on more than a century of service to the life sciences community, FASEB

- Represents 28 scientific societies and more than 115,000 researchers worldwide
- Hosts an array of scientific conferences and events each year
- Publishes the FASEB Journal, FASEB BioAdvances, and Washington Update
- Works to ensure a diverse and representative workforce in the biological and biomedical sciences
- Celebrates the efforts of those working to advance biological and biomedical sciences through an awards program
- Provides career resources through job/resume postings, fellowships, and networking
- Partners with affiliate organizations to advance awareness of biological and biomedical research

**Gordon Research Conference Series (Assorted Topics)**

The Gordon Research Conferences provide an international forum for the presentation and discussion of frontier research in the biological, chemical, physical and engineering sciences and their interfaces. GRC is a nonprofit organization dedicated to building communities that advance the frontiers of science. Our conferences bring a global network of scientists together to discuss the latest pre-publication research in their field. GRC’s unique format focuses on discussion and provides conferees with the opportunity to network informally during free afternoon times.

**Keystone Conference Series (Assorted Topics)**

Keystone Symposia will serve as a catalyst for the advancement of biomedical and life sciences by connecting scientists within and across disciplines at conferences and workshops held at venues that create an environment conducive to information exchange, generation of new ideas and acceleration of applications that benefit society.
STEM Conferences Focused on Diversity and Equity:
- Society of Advancement of Chicanos/Hispanics and Native Americans in Science (Links to an external site.)
- Annual Biomedical Research Conference for Minority Students (Links to an external site.)

In Our Program/Department

- **Justice, Equity, Diversity, and Inclusion Committee:**
  Students who are interested in being involved with diversity and equity within the department are welcome to join the Justice, Equity, Diversity, and Inclusion committee.

- **Nutrition and Metabolism Admissions Committee:**
  Each year, the Nutrition and Metabolism program hosts two graduate students on their admissions committee. Nominations are sent out by the Graduate Students Coordinator who will take nominations for oneself and others.

- **Seminar Speakers**
  Each Fall and Spring term, our NS 931: Advanced Nutrition Seminar series bring international and domestic speakers to take about their area of expertise in Nutrition. Each semester we look to the students for suggestions on the speakers.

On Campus & In the Community

The Wisconsin Idea is the principle that education should influence and improve people’s lives beyond the university classroom. For more than 100 years, this idea has guided the university’s work.

You will find a list of ways to engage in campus and local community life at:

**The Graduate School’s Current Student Page**
[grad.wisc.edu/current-students](http://grad.wisc.edu/current-students)

If you are a student actively involved in leadership and service activities, consider nominating yourself for membership in the following honor society:
Getting Started as a Graduate Student

This section guides you through important steps to take as you begin your journey as a graduate student at UW-Madison.

New Graduate Student Checklist

Be sure to review all steps listed on this webpage for new graduate students:
The Graduate School’s New Student Page
grad.wisc.edu/new-students

In addition to a checklist for all new graduate students, that webpage includes sections with additional steps to take if you are a new international student, student with a disability, student veteran, student with children, or student with funding.

Your First Semester:

Activate Your NetID:
You will need your NetID and password to access the My UW-Madison portal at my.wisc.edu. To activate your NetID click on the ACTIVATE NETID button from the My UW Madison login screen. Enter your 10 digit student campus ID number and birthdate. The NetID you create and password you enter are keys to your access to the MyUW portal, so make a record of it and keep it private. If you are unsure about your NetID and password, contact the DoIT Help Desk at 608-264-4357.

Enroll in Courses: With the assistance of the Graduate Program Coordinator.

Get your UW Photo ID Card (Wiscard):
Get your UW ID card - Wiscard - photo taken at the Wiscard Office (http://www.wiscard.wisc.edu/contact.html) in Union South, room 149, M-F 8:30 am - 5:00 pm. You must be enrolled and have valid identification, such as a valid driver’s license, passport, or state ID) to get your photo ID.

Orientation:
New student orientation will be held the week before classes start for your first year. During orientation you will fill out the required paperwork for payroll and health
insurance and register for your classes. Some of the week will be spent with scheduled talks given by faculty who are recruiting graduate students to join their labs.

**Directly Admitted Students:**
MS students are directly admitted into labs. Such students (“direct admits”) do not participate in laboratory rotations but must meet the same application requirements as other students applying to the Graduate School and to the Nutrition and Metabolism program. Direct admits are also required to participate in all Program orientation events the week before the fall semester in which they matriculate. When having expectation conversations with your advisor, the Nutrition and Metabolism program strongly recommends using the [Mentor-Mentee Guidelines](#).

**First Paycheck:** Your first paycheck will arrive October 1st.

**Pick up your Free Madison Metro Bus Pass:**
As a UW student, you can pick up a bus pass at no charge from the Memorial Union at the beginning of the fall and spring semesters. Visit the ASM Web site for more information on Madison Metro bus services: [http://www.asm.wisc.edu/resources/buspass/](http://www.asm.wisc.edu/resources/buspass/). Be sure to bring your UW Photo ID card. Prerequisite: You must be enrolled.

**Attend the New Graduate Student Welcome, hosted by the Graduate School**
This event provides a great opportunity to mingle with Graduate School deans and staff, hear from a panel of current students about grad student life, learn about the many campus and community resources available to you, and meet other new graduate students from across campus. Learn more and register here: [http://grad.wisc.edu/newstudents/ngsw/](http://grad.wisc.edu/newstudents/ngsw/)

**Develop a Vacation Time Policy with your Advisor (when placed or right away if a direct admit):**
Each student is expected to notify their advisor/PI well in advance of when they plan to be absent from campus. How long in advance is the decision of the professor. This and any lab policies about the timing of vacations and the total amount of annual vacation should be discussed with the advisor prior to or at the time of entering the lab. If a student is enrolled in classes, it is inadvisable to schedule a vacation during the semester.
Advising & Mentoring

Advising relationships are a central part of graduate school, important to both the experience and development of students and faculty members alike.

The Graduate School’s definition of an advisor can be found here: policy.wisc.edu/library/UW-1232.

Your advisor has two main roles:
1) To assist you in acquiring the highest possible level of knowledge and competence in the field, and
2) To chair the committee that will determine whether you have performed at an acceptable level in each of your degree milestones (see “Degree Requirements” section below for further information on building your committee).

Other roles of your advisor may include tracking your progress in completing your degree (note: this may include use of the Graduate Student Tracking System at gsts.grad.wisc.edu), assisting with course selection and planning your academic path, and helping you identify possible research mentors, committee members, and research opportunities.

Both the student and advisor are responsible for making their expectations clear to each other. Be sure to discuss this with your advisor. See Mentor-Mentee Guidelines below for further information about a tool we use in this program to formalize advising expectations.

Your Advisor

Your advisor should be a faculty member in the program whose expertise and project/research interests match closely with those that you intend to acquire. MS students are admitted directly to the Nutrition and Metabolism program and do not have the options of rotations.

Directly Admitted Students:
Directly admitted students (“direct admits”) do not participate in laboratory rotations but must meet the same application requirements as other students applying to the Graduate School and to the Nutrition and Metabolism program. Direct admits are also required to participate in all Program orientation events the week before the fall semester in which they matriculate. When having expectation conversations with your advisor, the Nutrition and Metabolism program recommends using the Mentor-Mentee Guidelines.
Changing Your Advisor

As the advisor-student relationship is one of mutual agreement, it may be ended by either party. Every effort should be made to resolve issues in the advisor-student relationship before any decision is made to have the student change their advisor and lab. It is the best for the students and advisor to speak directly to one another to manage any concerns. The student is also encouraged to meet with their advisory committee (with or without the advisor present if the student prefers) to help mediate a resolution.

If you change your advisor, you must notify your Graduate Program Coordinator and follow the Nutrition and Metabolism program procedures. ([http://grad.wisc.edu/acadpolicy/?policy=grievancesandappeals](http://grad.wisc.edu/acadpolicy/?policy=grievancesandappeals)).

The Nutrition and Metabolism Program Director and the Graduate Program Coordinator will assist the student in finding a new advisor. Nutrition and Metabolism trainers will be queried to determine which faculty have space and funding available. If faculty are available, the student will complete a 3-week rotation in the lab of the faculty of interest. After the rotation, the student and faculty will assess each other for placement. If a placement is made, the student will join the new lab and the faculty will become their new advisor. If a placement is not made, the student may continue to rotate with interested faculty until a placement is made.

Every graduate student must have an advisor or else they may be suspended from graduate study at UW-Madison by the Graduate School. Be sure to follow procedures to re-select a new advisor (described above) prior to finalizing the termination of your current advising relationship. You can confirm that the name of your advisor has been updated in the official record by looking in your Student Center on MyUW ([my.wisc.edu](http://my.wisc.edu)) under “Academic Progress” and then “Advisors.” The Nutrition and Metabolism program will work to find the student an appropriate placement, but cannot guarantee placement by the re-match process.

Advising Compact/Guidelines

Clearly defined expectations for both the student and advisor are a crucial starting point for a strong relationship. The Nutrition and Metabolism program has developed mentor-
mentee guidelines to communicate with your Advisor after being placed into a research group. We encourage students and Advisor to discuss and revisit guidelines biannually.

All Nutrition and Metabolism students regardless of funding source are required to create and maintain an individual development plan (IDP) to help them set, track, and achieve their professional goals. Students can use their annual progress report meetings as the venue for sharing with their advisory committee as much information about their IDPs as they are comfortable sharing. The contents of the IDP may be kept confidential by the student, but the student’s thesis advisor is required to report IDP activity annually. Templates, guidelines, and other resources for IDP development and maintenance are available at www.grad.wisc.edu/pd/idp.

Mentoring Networks

Graduating students have revealed that many have benefited from establishing a strong interaction with additional mentors who may or may not be members of the advisory committee. These interactions typically arise from a shared research interest and provide an opportunity to obtain additional guidance in professional development. It may also lead to additional significant letter(s) of recommendation. It is recommended that students seek out such mentorship in the first couple years of their graduate degree.

Students have found the National Center for Faculty Development and Diversity Mentorship Map to help map out where they receive different types of mentorship and support.

Degree Requirements

Master’s Degree

All students in the Nutritional Sciences MS Program are responsible for keeping aware of the following requirements to complete the degree.

Requirements

For all current requirements to complete your degree (e.g., credits, courses, milestones, learning outcomes/goals, etc.) see your program’s page in the Graduate Guide. Navigate to guide.wisc.edu/graduate, then select “Degrees/Majors,” your program’s name, the “Named Option” of your program (if applicable; found near the bottom of the
Requirements tab), and then “Requirements” from the navigation bar on the right side. You will be taken to a subsection of your program’s Guide page that contains all official requirements for your degree. Similarly, see “Policies” from the navigation bar of your program’s page to learn about policies affecting these requirements (e.g., prior coursework, probation, credits per term allowed, time constraints, grievances and appeals, etc.).

For prior catalog year policies that may be applicable to you, see the Guide Archive at guide.wisc.edu/archive.

Graduate Student Tracking System (GSTS):
GSTS provides access to GSTS Academic Advisement Reports for graduate students which track the academic requirements a student needs to fulfill in order to complete a Master’s or Doctoral degree program at the University of Wisconsin – Madison. This system is an advising tool not an auditing or degree clearing system, and is not intended to replace the role of advisors and graduate program coordinators. For instructions on how to access your Advisement Report, please following the instructions on the website: https://gsts.grad.wisc.edu/student-start/

Course Elective Recommendations
These are elective courses that are recommendation by the Nutrition and Metabolism program. Elective courses should be selected in consultation with your advisor and your advisory committee.

<table>
<thead>
<tr>
<th>Course</th>
<th>CR</th>
<th>Course Description</th>
<th>Term Off.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Science 414: Ruminant Nutrition</td>
<td>2</td>
<td>Integrates basic nutrition concepts and ration balancing skills by teaching students to balance and troubleshoot rations for various domesticated ruminants.</td>
<td>F</td>
</tr>
<tr>
<td>Pre-Req: AN SCI/DY SCI 311, (BIOCHEM 301 or 501) or graduate/professional standing</td>
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<td></td>
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<tr>
<td>Animal Science 434: Reproductive Physiology</td>
<td>3</td>
<td>Principles of Reproductive Physiology, Improvement of Fertility, and Artificial Insemination</td>
<td>F</td>
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<tr>
<td>Pre-Req: BIOLOGY/BOTANY/ZOOLOGY 152,</td>
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<tr>
<td>Course</td>
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<tr>
<td>(BIOLOGY/ZOOLOGY 101 and 102) or (BIOCORE 382, 383, and 384) or graduate/professional standing</td>
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<tr>
<td>Animal Sciences 710: Chemistry of the Food Lipids</td>
<td>2</td>
<td>Chemical constitution, structures, reactions, stereochemistry of fats, phospholipids, related compounds; methods of isolation, characterization; synthesis; relation of structure to physical properties</td>
<td>Sp</td>
</tr>
<tr>
<td>Animal Sciences 824: Ruminant Nutrition Physiology I</td>
<td>4</td>
<td>Focuses on rumen microbiology, metabolite modeling, as well as protein and VFA nutrition and metabolism</td>
<td>F, Su</td>
</tr>
<tr>
<td>Animal Sciences 825: Ruminant Nutrition Physiology II</td>
<td>4</td>
<td>Focuses on calf and heifer nutrition, regulation of dry matter intake, plant and forage chemistry, vitamins, lipids, and starch. Students should have undergraduate coursework in ruminant nutrition, biochemistry, and microbiology as background</td>
<td>F, Su</td>
</tr>
<tr>
<td>Animal Sciences 849: Genetic Epidemiology</td>
<td>3</td>
<td>This course will provide an introduction to genetic epidemiology. Topics will include a general overview of genetics and Mendelian and complex inheritance, as well as various elements of study design, including participant ascertainment; phenotype definition; biologic sample selection; genotyping, sequencing, and quality control; measurement of covariates, and choice of analytic methods.</td>
<td>F</td>
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<tr>
<td>Biochem 550: Topics in Medical Biochemistry</td>
<td>1-6</td>
<td>Advanced Topics</td>
<td></td>
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<tr>
<td>Biochem 551: Biochemical Methods</td>
<td>4</td>
<td>Introduction to modern biochemical laboratory techniques and current biochemical literature. Students will present a seminar based upon scientific literature that parallels experiments they will</td>
<td>F, Sp</td>
</tr>
<tr>
<td>Course</td>
<td>CR</td>
<td>Course Description</td>
<td>Term Off.</td>
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<tr>
<td>Biochem 601: Protein and Enzyme Structure and Function</td>
<td>2</td>
<td>Protein structure and dynamics. Protein folding. Physical organic chemistry of enzymatic catalysis. Analysis of enzyme kinetics and receptor-ligand interactions</td>
<td>F</td>
</tr>
<tr>
<td>Pre-Req: CHEM 345 and BIOCHEM 501 or 507</td>
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<tr>
<td>Biochem/Genetics 620: Eukaryotic Molecular Biology</td>
<td>3</td>
<td>This course focuses on the basic molecular mechanisms that regulate DNA, RNA, and protein metabolism in eukaryotic organisms. This course is intended for advanced undergraduates and first year graduate students with a firm knowledge of basic biochemistry.</td>
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<tr>
<td>Pre-Req: BIOCHEM 501, 508 or graduate/professional standing</td>
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<tr>
<td>Biochem 625: Mechanisms of Action of Vitamins and Minerals</td>
<td>2</td>
<td>Emphasizes the importance of coenzyme and cofactors of enzymes (i.e., vitamins and minerals) in biochemistry. All aspects of the biochemistry of coenzymes will be covered, including their biosynthesis as far as is known, the biochemical reactions they catalyze, their chemical and spectroscopic properties, and the mechanisms by which they facilitate biochemical reactions.</td>
<td>Sp</td>
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<tr>
<td>Pre-Req: CHEM 345 and previous or concurrent enrollment in BIOCHEM 501 or 507; or graduate standing</td>
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<tr>
<td>Biochem/Nutr Sci 645: Molecular Control of Metabolism and Metabolic Disease</td>
<td>3</td>
<td>Examination of various physiological states and how they affect metabolic pathways. Discussion of a number of special topics related to the unique roles of various tissues and to metabolic pathways in disease states, including adipocyte biology, beta-cell biology, epigenetics, inflammation, and aging related diseases</td>
<td>F</td>
</tr>
<tr>
<td>Pre-Req: BIOCHEM 501 or 508 or graduate standing</td>
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<tr>
<td>Biochem 630: Human Biochemistry Laboratory</td>
<td>3</td>
<td>Comprehensive coverage of human hormones, growth factors and other mediators; emphasis on hormone action and biosynthesis, cell biology of hormone-producing cells.</td>
<td>F</td>
</tr>
<tr>
<td>Pre-Req: Biochem 501 or Biochem 507 &amp; 508 &amp; Cell biology or instruct consent</td>
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<td>Course</td>
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<tr>
<td>Biochem 729: Topics in Biochemistry</td>
<td>1-6</td>
<td>Advanced Topics</td>
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<tr>
<td>Biomolecular Chem 504: Human Biochemistry Laboratory</td>
<td>3</td>
<td>Introduction to basic biochemistry and molecular biology lab techniques through investigation of an enzyme involved in human metabolism</td>
<td>F, Sp</td>
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<tr>
<td>Pre-Req: BIOCHEM 501, 507, 508, BMOLCHEM 503, or concurrent enrollment, or graduate/professional standing</td>
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<tr>
<td>Biomolecular Chem 627: Methods and Technologies for Protein Characterization</td>
<td>2-3</td>
<td>This course seeks to engage students interested in chemical instrumentation and those who desire to apply proteomic technologies to current biological problems. Understanding the current proteomics landscape, the limitations of these technologies, and their practical applications are among the course learning objectives</td>
<td>Sp</td>
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<tr>
<td>Pre-Req: Graduate Standing</td>
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<tr>
<td>Biomolecular Chem 704: Comprehensive Human Biochemistry</td>
<td>5</td>
<td>Lectures, conferences, and lab. Comprehensive basics in the chemistry, enzymology, and metabolism of living systems, with emphasis on the biochemical aspects of function and control</td>
<td>F</td>
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<tr>
<td>Pre-Req: Chem 344, Physics 104, and Zoology; Professional/graduate standing</td>
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<tr>
<td>Biomolecular Chem 720: Experimental Design and Paradigms in Cellular Biochemistry and Molecular Biology</td>
<td>3</td>
<td>A literature-based course taught in module format and covering the following areas from historical to modern contexts: biochemistry of post-translational modification of proteins, model organisms, transcriptional switches, chromosome replication, and RNA in biological regulation</td>
<td>Sp</td>
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<td>Pre-Req: Graduate/Professional Standing</td>
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<tr>
<td>CBE 781: Biological Engineering: Molecules, Cells, and System</td>
<td>3</td>
<td>Protein engineering and protein-protein interactions, receptor-ligand binding, cell metabolism and signaling, metabolic engineering and synthetic biology, tissue engineering. Additional</td>
<td>F</td>
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<td>Course</td>
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<tr>
<td>Pre-Req: Graduate/professional standing</td>
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<tr>
<td>CRB 630: Proteomics for Biologists</td>
<td>2</td>
<td>Proteomics and metabolomics are playing an increasingly important role in biology and medicine. Many biology labs are now starting to use proteomics and metabolomics in their research projects. This course is designed specifically for students in biological sciences who have interests to learn proteomics and metabolomics. It will integrate formal classroom lectures with one-on-one consultation. Lectures include the essential fundamentals and applications in mass spectrometry-based proteomics and metabolomics to address biological/medical problems. Meanwhile, one-on-one consultation will be offered to respond to students' individual needs, including the design of proteomics/metabolomics experiments, troubleshooting, and proper interpretation of the results. Students who take this course should have basic chemistry and biochemistry knowledge</td>
<td>Sp</td>
</tr>
<tr>
<td>CRB/Medicine 701: Cell Signaling and Human Disease</td>
<td>1</td>
<td>This course is intended for PhD and MSTP students interested in medically relevant basic science. Landmark discoveries, as well as current knowledge and controversies in human health, with an emphasis on cancer biology, will be covered</td>
<td>F, Sp</td>
</tr>
<tr>
<td>CRB 710: Developmental Genetics</td>
<td>3</td>
<td>Covers a broad range of topics in animal development, with an emphasis on molecular mechanisms. Focuses on common themes, with the goal of understanding and analyzing current research in developmental biology and genetics.</td>
<td>F</td>
</tr>
<tr>
<td>Family Medicine 701: Perspectives in Multidisciplinary Clinical &amp; Translational Research</td>
<td>2</td>
<td>An overview of clinical investigation, including translational research; observational, experimental and quasi experimental designs; efficacy and effectiveness; behavioral and community interventions; qualitative methods; educational research; quality assurance; health economics; bioethics; pharmacotherapy trials; health disparities, and patents</td>
<td>Sp</td>
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<td>Course</td>
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<td>Course Description</td>
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<tr>
<td><strong>Genetics 525: Epigenetics</strong>&lt;br&gt;Pre-Req: GENETICS 466 or 467</td>
<td>3</td>
<td>Introductory course in epigenetics - the layer of chemical information that sits on top of the genome - that switch genes 'on' or 'off'. Will introduce how the epigenome, in collaboration with the genome, controls versatile biological processes and cell fates. Will also cover the latest advances of how humans can control their own epigenetic destiny by lifestyle, diet, and other environmental factors.</td>
<td>F, Su</td>
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<tr>
<td><strong>Genetics 626: Genomic Science</strong>&lt;br&gt;Pre-Req: Graduate Students Only</td>
<td>2</td>
<td>Brings cutting-edge topics in the genomic sciences into the reach of those in chemistry, biology, engineering, computer science &amp; statistics fields. Enables biologically-oriented students to deal with advances in analytical science so that they may incorporate new genomic science concepts into their own scientific repertoires.</td>
<td>Sp</td>
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<tr>
<td><strong>Genetics 885: Advanced Genomic and proteomic analysis</strong> (even years)&lt;br&gt;Pre-Req: Class enrollment is limited to 20 students due to computer lab space; General statistics, intermediate or advanced Genetics, and instructor consent</td>
<td>3</td>
<td>With the availability of genome sequences and high-throughput techniques, organismal physiology can now be examined on a global scale by monitoring the behavior of all genes or proteins in a single experiment. This course will present modern techniques in genomics and proteomics, with particular focus on analyzing the data generated by these techniques. Course material will cover genomic sequencing, comparative sequence analysis, phylogeny construction and phylogenomics, transcription factor motif discovery, DNA microarray analysis, techniques in mass spectrometry, proteomic screening methods, and protein-interaction network analysis. In addition to lecture time, the course consists of a 2-hour per week computer lab where students get hands-on experience analyzing genomic and proteomic datasets. In addition, students conduct a semester-long computational project of their choice that uses multiple computational methods discussed in class</td>
<td>F</td>
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<tr>
<td><strong>Kines 774: Metabolic responses to exercise and stress</strong>&lt;br&gt;Pre-req: ANAT&amp;PHYS 720 or cons instr.</td>
<td>2</td>
<td>Examination of the metabolic and biochemical responses to acute and chronic exercise and environmental stress. Emphasis placed on the mechanisms underlying these responses</td>
<td>Sp</td>
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<tr>
<td><strong>Kines 779: Human Muscle Function in Health and Disease</strong></td>
<td>2</td>
<td>Multidisciplinary seminar on human muscle function in health and disease</td>
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<td>Pre-Req: Graduate/professional standing</td>
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<tr>
<td>Life Science Communication 561: Writing Science for the Public Pre-Req: Junior standing</td>
<td>3</td>
<td>Focuses on science writing concepts and techniques that can be used to communicate purposefully and effectively with public audiences about science, research, and technology.</td>
<td>Sp</td>
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<tr>
<td>Medicine 720: Endocrinology and Metabolism Pre-Req: Graduate/professional standing</td>
<td>2</td>
<td>Designed to provide students with a broad grounding in endocrinology and metabolism at the graduate level, with an emphasis on human and human-related disorders wherever possible from a research perspective. This course explores the physiological and molecular mechanisms by which the endocrine regulation of metabolism acts to preserve mammalian health, and how dysfunction in these mechanisms leads to disease, with an emphasis on diabetes, obesity and hypertension. Focuses primarily on whole animal/human endocrinology and organ systems regulating adult human health. Basic concepts of cell biology and biochemistry are also covered as a precursor to advanced topics courses to be taken later in the course of biomedical graduate studies. This course bridges basic science with clinical outcomes and exposes students to adult endocrine pathologies as well as case studies for real-world applications of course material.</td>
<td>Sp</td>
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<tr>
<td>Medical Genetics 565: Human Genetics Pre-Req: Graduate standing, GENETICS 466, 468, or BIOCORE 587</td>
<td>3</td>
<td>Principles, problems, and methods of human genetics. Surveys aspects of medical genetics, biochemical genetics, molecular genetics, cytogenetics, quantitative genetics, and variation as applied to humans</td>
<td>F, Sp</td>
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<tr>
<td>Nutri Sci 875: Adv. Topics</td>
<td>1-6</td>
<td>Assorted Topics in Nutritional Sciences</td>
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<tr>
<td>Oncology 703: Carcinogenesis and Tumor Cell Biology Pre-Req: Graduate/professional standing</td>
<td>3</td>
<td>Viral, chemical, and physical factors involved in tumor formation in humans and experimental animals; biology and biochemistry of neoplasia, both in vivo and in vitro</td>
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<tr>
<td>Pathology 750: Cellular and Molecular</td>
<td>2</td>
<td>The emphasis is on our current understanding of molecular and cellular mechanisms. Wherever possible, human diseases are used to illustrate the outcome at the organismal level of defects in these mechanisms. Lectures will draw from the current research literature and cover topics such as cell and tissue organization, intracellular sorting, cell migration and growth.</td>
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<tr>
<td>Biology/Pathology Pre-Req:</td>
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<td>Graduate/Professional Standing</td>
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<tr>
<td>Pathology 751: Biology of Aging</td>
<td>2</td>
<td>Examines the molecular, cellular, physiological, and clinical aspects of aging. Focuses on biology of aging and how it relates to translational biomedical and clinical research. Covers age-related diseases from basic science and clinical perspectives, and emerging concepts and technologies in aging research (e.g. epigenetics, metabolism, GWAS).</td>
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<td>Pre-Req: Graduate/professional standing</td>
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<tr>
<td>Pathology 803: Pathogenesis of Major Human</td>
<td>3</td>
<td>This course will focus on disease pathogenesis and discussion of the leading disease research model. Throughout the course, we will combine expert clinicians, basic scientists, and literature review on specific major diseases.</td>
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<td>Diseases</td>
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<td>Pre-Req: Graduate/professional standing</td>
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<tr>
<td>Pop Health 552: Regression Methods for</td>
<td>3</td>
<td>Introduction to the primary statistical tools used in epidemiology and health services research; multiple linear regression, logistic regression and survival analysis.</td>
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<tr>
<td>Population Health</td>
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<td>(occ.)</td>
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<tr>
<td>Pre-Req: B M I/STAT 541 or B M I/POP HLTH 551</td>
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<td>Pop Health 636: Public Health Genomics</td>
<td>1</td>
<td>Public health genomics uses knowledge gained from genetic and molecular research along with a consideration of ethical, legal, and social implications (ELSI) to prevent disease and improve the health of the population. Students enrolled in this course will be provided an introduction to public health genomics through a review of fundamental principles of genetics, followed by lectures and discussions on the use of genetic information in clinical and research settings and its implications for disease management and prevention. Students will also gain an awareness of policies that guide public health and will be able to discuss current ethical, legal, and social implications of these policies. These learning objectives will be met through readings and videos, lectures, and discussions of recent journal articles and current topics in public health genomics.</td>
<td>Sp</td>
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<td>(formerly Pop Health 888)</td>
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<tr>
<td>Pre-Req: (Junior standing and BIOLOGY/BOTANY/ZOOLOGY 151) or graduate/professional standing</td>
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<tr>
<td>Pop Health 650: Adv. Topics</td>
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<td>Advanced Topics</td>
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<tr>
<td>Pop Health 651: Advanced Regression Methods for Population Health</td>
<td>3</td>
<td>Extension of regression analysis to observational data with unequal variance, unequal sampling, and propensity weights, clusters and longitudinal measurements, using different variance structures, mixed linear models, generalized linear models, and GEE. Matrix notation will be introduced and underlying mathematical and statistical principles will be explained</td>
<td>F</td>
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<tr>
<td>Pop Health 664: Prevention of Childhood overweight and obesity</td>
<td>2</td>
<td>This course is intended to provide students with theoretical and practical knowledge to develop, implement, and evaluate obesity prevention interventions. This course will emphasize pediatric obesity prevention with a focus on nutrition and physical activity health behaviors and environments</td>
<td>F</td>
</tr>
<tr>
<td>Pop Health 794: Biological Basis of Population Health</td>
<td>2</td>
<td>Covers the physiology, biology and biochemistry of selected disease processes deemed to be important in population health sciences by virtue of their clinical significance including incidence, mortality and morbidity</td>
<td>F, Su</td>
</tr>
<tr>
<td>Pop Health 798: Epidemiologic Methods</td>
<td>3</td>
<td>The main emphasis is the design and interpretation of epidemiologic studies. Includes hands-on experience in the evaluation of epidemiologic evidence, the analysis of epidemiologic data, and the discussion of strategies aimed to improve study validity and efficiency</td>
<td>Sp</td>
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<tr>
<td>Pop Health 849: Genetic Epidemiology</td>
<td>3</td>
<td>Introduction to genetic epidemiology. Topics will include a general overview of genetics and Mendelian and complex inheritance, as well as various elements of study design, including participant ascertainment; phenotype definition; biologic sample selection; genotyping, sequencing, and quality control; measurements of covariates and choice of analytic methods.</td>
<td>F</td>
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<tr>
<td>Statistics/BMI 541: Introduction to Biostatistics</td>
<td>3</td>
<td>Course designed for the biomedical researcher. Topics include: descriptive statistics, hypothesis testing, estimation, confidence intervals, t-tests, chi-squared tests, analysis of variance, linear</td>
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<td>Course</td>
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<tr>
<td>Statistics/BMI 542: Introduction to Clinical Trials I</td>
<td>3</td>
<td>Intended for biomedical researchers interested in the design and analysis of clinical trials. Topics include definition of hypotheses, measures of effectiveness, sample size, randomization, data collection and monitoring, and issues in statistical analysis. Statistics graduate students should take Stat 641.</td>
<td>F, Su (occ.)</td>
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<tr>
<td>Statistics 571: Statistical Methods for Bioscience I</td>
<td>4</td>
<td>Descriptive statistics, distributions, one and two-sample normal inference, power, one-way ANOVA, simple linear regression, categorical data, non-parametric methods; underlying assumptions and diagnostic work</td>
<td>F</td>
</tr>
<tr>
<td>Statistics 572: Statistical Methods for Bioscience II</td>
<td>4</td>
<td>Continuation of STATS 571. Polynomial regression, multiple regression, two-way ANOVA with and without interaction, split-plot design, subsampling, analysis of covariance, elementary sampling, introduction to bioassay.</td>
<td>Sp, Su</td>
</tr>
<tr>
<td>Statistics 641: Statistical Methods for Clinical Trials</td>
<td>3</td>
<td>Statistical issues in the design of clinical trials, basic survival analysis, data collection and sequential monitoring. Intended for statistics graduate students; those with medical backgrounds should take STAT 542</td>
<td>F, Su</td>
</tr>
<tr>
<td>Statistics 642: Statistical Methods for Epidemiology</td>
<td>3</td>
<td>Methods for analysis of case-control, cross sectional, and cohort studies. Covers epidemiologic study design, measures of association, rates, classical contingency table methods, and logistic and Poisson regression</td>
<td>F, Su</td>
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</tbody>
</table>
MS Thesis

Committee & Topic

Master’s committees advise and evaluate satisfactory progress of the student, evaluate a thesis/capstone project, and sign the final degree warrant. For general guidance from UW-Madison’s Graduate School on the role and composition of committees as well as an online tool to determine if your committee meets minimum requirements, see the following policy page: policy.wisc.edu/library/UW-1201. In addition to this general guidance, this program requires the following of committees: Your committee must consist of 3 members—at least 2 should be from Nutrition and Metabolism. If you have questions about the advisory committee membership, please contact the Graduate Student Coordinator and/or use the UW-Madison’s Graduate School Advisory Committee Review Tool: https://uwmadison.co1.qualtrics.com/jfe/form/SV_3OeLFS8KbP46TqJ

Your advisor chairs your committee and provides individualized guidance on how to select committee members. No one has more at stake in a graduate program than the student. To obtain a quality education, the student must play an active role in coordination with their committee to:

- choose a concerned, knowledgeable committee
- schedule annual progress report meetings
- inform the membership of national associations and conferences
- design a challenging, high-quality learning program
- Participate in regular professional and research development

Form & Content

The research-based thesis or a literature-based report that passes scholarly review should be circulated to the examining committee TWO WEEKS prior to your thesis defense. In this exam, you will be expected to demonstrate depth of knowledge in Nutrition and mastery of the Nutrition concepts included in the core courses and prerequisites. This examination will also include a defense of thesis. The three-member examining committee will consist of your advisor and two other professors. Please bring copies of the Thesis/Dissertation Defense Performance Evaluation form with you to the defense. The Graduate School guidelines should help you prepare your thesis, so that it will constitute a permanent document of quality appropriate for a major graduate institution.
It must be approved by the faculty committee, be unbound, fully corrected, and complete. You may choose to deposit your thesis in Memorial Library even if your department does not require it.

Once your thesis is deposited in the library, you are not allowed to make changes on the final copy. Careful review of the final copy before you bring it to the library can prevent delays, and avoid the difficulties of correcting errors discovered later. Please make all personal or departmental copies before submitting the thesis to the library.

Most master’s theses at UW – Madison are not microfilmed. If you choose to publish your thesis through UMI, you need to talk to the Graduate School Degree Coordinator, Room 228 Bascom Hall, in order to file the appropriate paperwork. UMI works with Memorial Library to publish thesis abstracts and, upon request, to provide microfilm and photocopies of theses to the public.

- **Abstract**
  Your department may require an abstract to be included within the thesis. Please follow your department’s style requirements, and number these pages as part of the preliminary material.

- **Appendices**
  Unusual or supplementary materials, such as questionnaires or copies of photographs, may be put into appendices. The appendices must be consecutively paginated with the text. The paper quality and margins of the appendices must conform to the standards for the rest of the thesis.

- **Bibliography**
  The bibliography should meet your major department’s style requirements, which often conform to the leading journals or book series of the field.

- **CBE Style Manual. 5th ed.** By the Council of Biology Educators, Committee on Form and Style. American Institute of Biological Sciences, 1983. The standard reference source for life sciences (biology, chemistry, biochemistry, geography, and geology). Or defer to the reference style of the journal in which you plan to publish your research.

- **Copyright Registration**
  You may register a copyright of your thesis by writing to: Register of Copyrights, Library of Congress, Washington, D.C. 20559. You can find more information at the U.S. Copyright Office website (Links to an external site.).
• Corrections
To ensure a clean final copy, correct and reprint pages. Do not make handwritten corrections or use correction fluid in the final copy.

• Double-Sided Print
Double-sided print is acceptable. But the Title Page and the Advisor Approval Page must not be double-sided. We suggest that you set both right and left margins at 1 1/4 inches. Remember to place page numbers in the upper left-hand corner for the back side of the page.

• Equations, Superscript, and Subscript
Superscripts and subscripts may be one size smaller than the text. Separate equations with double spacing or enough space to identify each equation clearly.

• Footnotes and Endnotes
Footnotes and end-notes may be single-spaced with an extra space between notes. Footnotes for each chapter are usually numbered consecutively. Follow the preferences of your major department when deciding the location of footnotes or end-notes: at the bottom of the page, grouped at the ends of chapters, or grouped at the end of the thesis.

• Foreign Language Use
You may include quotations in languages other than English in your thesis. However, the thesis must be in English unless your department certifies that one or both of the following conditions have been met: the foreign language is that of the readers to whom the work is addressed; or translation into English would make the study obscure and imprecise. Theses submitted by students from a foreign language department are acceptable in the language of that department.

• Graphics
Computer-generated figures and graphs must meet the same standards as the rest of the thesis. Render original material with a permanent, non-water soluble, black ink (e.g. India ink, Koh-i-noor rapidograph drawing ink, etc.) Do not use pencil, ballpoint or felt tip in the final copy. Labels on photographs, charts, and other figures must be permanent. Headings, keys, and all other identifying information should be of the same quality of type as the text. If graphics, tables, or figures are horizontal, place the top of the printed page on the left side of the paper with the page number in the upper right hand corner.
• Margins
Remember that some copiers enlarge the original about one to two percent. To avoid problems with margins, we suggest that you produce the original copy with margins larger than the required minimum. The text begins 1 – 1/4 inches from the top and left side of the paper. Bottom and right side margins are 1 inch. Page numbers are placed in the upper right-hand corner 1 inch from both sides of the paper.

• Paper Quality
8 1/2 by 11 inches. White. Acid-free or PH neutral. At least 20 pound weight 25% cotton bond minimum You can buy paper that meets these requirements at book and stationery stores.

• Print
Print your thesis on a laser printer. Common problems are smudges, copy lines and specks, missing pages, margin shifts, slanting of the printed image on the page, and poor paper quality.

Black print with a sharp, dark image; 12 or 14 point type; Double-space the body of the thesis. Lengthy quotations, footnotes, and bibliographies may be single -spaced. Color maps, charts, etc. are acceptable.

• Page Headers
Please do not use page headers or decorative borders.

• Page Numbering
Please check your thesis to ensure that all pages are present and in numerical order. The library cannot check your thesis for the page order, and will bind the thesis in the order you present it. All pages must be numbered with the exception of the title page and advisor approval page. Preliminary pages (e.g. table of contents, dedication page, acknowledgments, abstract, etc.) that precede the main text are numbered with lower case Roman numerals beginning with numeral i. Page numbers are placed in the upper right-hand corner one inch from both sides of the paper. The main text is numbered consecutively beginning with Arabic numeral 1, in the upper right-hand corner one inch from both sides of the paper.

• Reprints and Use of Copyrighted Material
You are responsible for appropriate use of copyrighted materials in your thesis. Some material may be available for use without restriction while other material may require written permission from the rights holder. Other material may be appropriately used without written permission under the “fair use” provisions of the copyright law. General guidance regarding use of copyrighted materials is available from ProQuest/UMI (Links to an external site.) or from the UW-Madison Libraries website.

**Fair Use:** General information regarding how to determine if your use of copyrighted materials constitutes fair use can be found here. Reviewing and completing a fair use evaluation may also assist you. See the fair use evaluator here. Additionally, your own professional or disciplinary societies may have fair use statements to help you negotiate disciplinary specialties.

**Written Permission:** If written permission is required, you are responsible for obtaining such permission and maintaining records of the written permission to use the copyrighted material in your thesis. You can usually get permission by sending a letter of request to the copyright holder. Normally, your letter will be returned with an approval stamp or signature. Some copyright holders require a specific form of acknowledgment. Note that obtaining written permission can be a lengthy process. Plan ahead and budget ample time to obtain all required permissions.

- **Scanning and Mounting**
  You can scan photographs, tables, and graphs onto thesis quality paper. Alternatively, use a cold mount permanent adhesive sheet, or a dry-mount tissue that requires heat. These mounting products are available at most bookstores, photo supply stores, or art supply stores. We suggest that when you use one of these mounting methods, you have page numbers and identification of figures already on the thesis quality paper. Rubber cement, spray glues, tapes, and glue sticks are not suitable for archival purposes.

- **Title Page**
  Please follow the format of [this sample page](#).

- **Type**
  Prepare the application using Arial, Helvetica, Palatino Linotype, or Georgia typeface in black font color at 11 points or larger.
You may reference all the formatting requirements above at the Graduate School website: https://grad.wisc.edu/current-students/masters-guide/

Master’s Degree Checklist: Timeline & Deadlines

The Graduate School maintains a list of steps to complete your master’s degree, including deadlines and important things to know as you progress toward graduation: grad.wisc.edu/current-students/masters-guide. In addition to what is posted on this webpage from the Graduate School, you must meet all required steps of the program (outlined below).

- Graduate registration for a minimum of two graduate-level credits (300-level or above for a grade, no audits, or pass/fail) in the semester (fall, spring or summer) you expect your degree. Alternatively, if a degree completion fee has been approved by the Graduate School, you must have paid the fee in lieu of registration (see the Academic Guidelines: degree completion fee).

- Credit requirement for the appropriate degree has been met, or will be by the end of the semester (master’s degrees, 30 credits including 16 residence credits; MFA and Specialists 42 credits including 24 residence credits).

- Graduate GPA of at least 3.00

- Apply for Graduation through your Student Center (Instructions on how to apply for graduation)

- Warrant-Request from your Graduate Program Coordinator 3 weeks prior to your MS defense date.

- Return fully signed MS warrant to Graduate Program Coordinator after your MS defense.

Enrollment Requirements

You are responsible for following Graduate School policies related to course enrollment requirements and limitations:

**Adding / Dropping Courses**

grad.wisc.edu/documents/add-drop

**Auditing Courses**

policy.wisc.edu/library/UW-1224
Nutrition and Metabolism MS students should be enrolled in 12 credits in Fall and Spring semesters and at least 2 credits in Summer semester. The 12-credit enrollment includes NS 991 research credit enrollment.

**Academic Exception Petitions**

**Review by Director of Graduate Studies, Advisor, and Advisory Committee**

Academic exceptions are considered on an individual case by case basis and should not be considered a precedent. Deviations from normal progress are highly discouraged, but the program recognizes that there are in some cases extenuating academic and personal circumstances. Petitions for course exceptions/substitutions or exceptions to the Satisfactory Progress Expectations (academic or conduct) shall be directed to the Director of Graduate Studies or relevant committee chair (example Curriculum Chair). The following procedures apply to all petitions:

1. The specific requirement/rule/expectation pertinent to the petition must be identified.
2. The student's academic advisor must provide written support for the petition.
3. All course work substitutions and equivalencies will be decided by appropriate area-group faculty or curriculum chair.

More generally, the Director of Graduate Studies, in consultation with the student’s advisor and advisory committee, may grant extensions to normal progress requirements for students who face circumstances (similar to tenure extensions) as noted in university regulations, this includes childbirth, adoption, significant responsibilities with respect to elder or dependent care obligations,
disability or chronic illness, or circumstances beyond one’s personal control. Where warranted, the petition should provide good evidence of plans and ability to return to conformance with the standard and to acceptably complete the program. The normal extension will be one semester; anything beyond this will be granted only in the event of highly extraordinary circumstances. Extensions will be granted formally with a note of explanation to be placed in the student’s file.

**Satisfactory Academic Progress**

Your continuation as a graduate student at UW-Madison is at the discretion of your program, the Graduate School, and your faculty advisor. Any student may be placed on probation or dismissed from the Graduate School for not maintaining satisfactory academic progress, and this can impact your academic standing (detailed below), financial aid (see this policy page: [policy.wisc.edu/library/UW-1040](policy.wisc.edu/library/UW-1040)), or funding (consult your sources of funding, as applicable). Our program has its own definition of satisfactory academic progress and related procedures that supplement Graduate School policy, as described in this section.

**Definition**

Information about how the Graduate School determines satisfactory academic progress can be found at this policy page: [policy.wisc.edu/library/UW-1218](policy.wisc.edu/library/UW-1218). In addition to the Graduate School’s monitoring of satisfactory academic progress, this program regularly reviews the satisfactory academic progress of its students, defined as the following:

Success in the program is determined by satisfactory progress in both coursework and research. Student coursework is determined by Program requirements as well as by the student’s advisory committee. The committee may require or suggest additional courses that aim to help the student in their research. Satisfactory progress in the lab is determined by the student’s thesis advisor and advisory committee. This includes, but is not limited to, adequate working hours in the lab, participating in lab meetings and required training, and keeping detailed laboratory notebooks in the format required by the thesis advisor. If a student is not making satisfactory progress, the thesis advisor will consult with the student’s advisory committee and the student may be dismissed from the Program.
Individual Development Plans
The Nutrition and Metabolism program has determined that all students regardless of funding source are required to complete an IDP, and should use their annual progress report meetings as the venue for sharing with their advisory committee as much information about their IDPs as they are comfortable sharing. NIH-funded thesis advisors can use this information to demonstrate their compliance with this NIH requirement. Templates, guidelines, and other resources for IDP development and maintenance are available at www.grad.wisc.edu/pd/idp

Nutrition and Metabolism students should use the IDP Reporting System to submit IDP completion evidence to the Graduate Student Coordinator.

Graduate students and postdoctoral researchers, click here to access the IDP Reporting System. Instructions are available here.

The reporting system does not require you to submit the content of your IDP; rather, it helps you and your mentor log actions you take concerning the IDP. Your PI and Graduate Student Coordinator will have access to viewing the dates of these actions, to see that you are actively working on your IDP.

Not Meeting Academic Expectations

Failure to meet the program's academic or conduct expectations can result in disciplinary action including immediate dismissal from the program. If a student is not making satisfactory progress in regards to academic or conduct expectations, the advisor will consult with the student’s advisory committee to determine if disciplinary action or dismissal is recommended.

Student progress will be reviewed through coursework or annual meetings at Annual Committee Progress Meetings. If the advisor and advisory committee find that at the Yearly Meeting or at any other time that a student has failed to achieve satisfactory progress with academic or conduct expectations the student may be dismissed from the program. Students placed on probation will be placed on probation for one semester and will be reviewed by the Steering Committee following the probationary semester. Students placed on probation may be dismissed or allowed to continue based upon review of progress during the probationary semester.

The status of a student can be one of three options:
Good standing (progressing according to standards; any funding guarantee remains in place).
Probation (not progressing according to standards but permitted to enroll; loss of funding guarantee; specific plan with dates and deadlines in place in regard to removal of probationary status.

Unsatisfactory progress (not progressing according to standards; not permitted to enroll, dismissal, leave of absence or change of advisor or program).

A semester GPA below 3.0 will result in the student being placed on academic probation. If a semester GPA of 3.0 is not attained during the subsequent semester of full-time enrollment (or 12 credits of enrollment if enrolled part-time) the student may be dismissed from the program or allowed to continue for 1 additional semester based on advisor appeal to the Graduate School. A cumulative GPA of 3.0 is required to graduate.

Personal Conduct Expectations

Professional Conduct

The Office of Student Conduct and Community Standards maintains detailed guidance on student rights and responsibilities related to learning in a community that is safe and fosters integrity and accountability. You are responsible for keeping aware of their policies and procedures, found at the following page: conduct.students.wisc.edu

This program sees the following qualities as evidence of professional behavior by students:

- Shows respect for a diversity of opinions, perspectives, and cultures
- Accurately represents their work and acknowledges the contributions of others
- Aims to gain knowledge and contributes to the knowledge base of others
- Strives to incorporate and practice disciplinary ideals in their daily lives
- Demonstrates integrity; provides accurate information in resumes/CVs
- Challenges themselves in academic pursuits
- Follows research ethics including IRB protocols, documentation of research activities, protection of subject/client confidentiality, and follows HIPAA regulations
- Demonstrates commitment to an unbiased interpretation of data as well as related academic and professional endeavors
- Follows-through and pulls their weight in group activities
- Understands where collaboration among students is or is not allowed
• Does not plagiarize others or past work (self-plagiarism), cheat, or purposefully undermine the work of others
• Avoids conflicts of interest
• Interacts with peers, faculty, staff, and those they encounter in their professional capacity in a manner that is respectful and considerate
• Attends and is prepared for all scheduled meetings and classes, and honors agreed upon work schedules
• Communicates openly and offers prompt responses to inquiries
• Is careful in their use of available equipment, technology and resources
• Offers criticism in a constructive manner
• Welcomes feedback
• Is actively prepared for class and ready for questions and answers
• Notifies instructors at least one day in advance of a planned absence and takes responsibility for finding out what they missed
• Recognizes that the pursuit of knowledge is a continuous process and seeks guidance (when needed) as they adapt to change

(Adapted from MDTP)

Academic Misconduct

Academic misconduct is governed by state law, UW System Administration Code Chapter 14. For further information on this law, what constitutes academic misconduct, and procedures related to academic misconduct, see:

The Graduate School

   Academic Policies & Procedures: Misconduct, Academic
   grad.wisc.edu/documents/misconduct-academic

Office of Student Conduct and Community Standards

   Academic Misconduct Website
   conduct.students.wisc.edu/academic-misconduct

   Academic Misconduct Flowchart
   conduct.students.wisc.edu/documents/academic-misconduct-flow-chart
Non-Academic Misconduct

Non-academic misconduct is governed by state law, UW System Administration Code Chapters 17 and 18. For further information on these laws, what constitutes non-academic misconduct, and procedures related to non-academic misconduct, see:

The Graduate School

**Academic Policies & Procedures: Misconduct, Non-Academic**
[grad.wisc.edu/documents/misconduct-nonacademic](grad.wisc.edu/documents/misconduct-nonacademic)

Office for Student Conduct and Community Standards

**Non-Academic Misconduct Website**
[conduct.students.wisc.edu/nonacademic-misconduct](conduct.students.wisc.edu/nonacademic-misconduct)

University of Wisconsin System (UWS)

**Chapter 17: Student Non-Academic Disciplinary Procedures**
[docs.legis.wisconsin.gov/code/admin_code/uws/17](docs.legis.wisconsin.gov/code/admin_code/uws/17)

**Chapter 18: Conduct on University Lands**
[docs.legis.wisconsin.gov/code/admin_code/uws/18](docs.legis.wisconsin.gov/code/admin_code/uws/18)

Research Misconduct

Graduate students are held to the same standards of responsible conduct of research as faculty and staff. Further information about these standards and related policies and procedures can be found at:

The Graduate School

**Academic Policies & Procedures: Responsible Conduct of Research**
[grad.wisc.edu/documents/responsible-conduct-of-research](grad.wisc.edu/documents/responsible-conduct-of-research)

Office of the Vice Chancellor for Research and Graduate Education

**Research Policies**
[research.wisc.edu/compliance-policy](research.wisc.edu/compliance-policy)
Hostile and Intimidating Behavior (Bullying)

Hostile and intimidating behavior (HIB), sometimes referred to as “bullying,” is prohibited by university policy applicable to faculty, academic staff, and university staff. For further definition, policy, and procedures related to HIB see: hr.wisc.edu/hib. Students who feel they have been subject to HIB are encouraged to review the informal and formal options on the “Addressing HIB” tab of this website.

Grievance Process

Each college or program on campus has a grievance process that students can use to address other concerns regarding their experience in the program. This program’s grievance process can be found detailed at: https://guide.wisc.edu/graduate/nutritional-sciences/nutritional-sciences-phd/#policies

Process and Sanctions for Violations of Conduct Standards

The Nutrition and Metabolism Executive Committee will evaluate disciplinary actions and/or dismissal cases when required. Within boundaries set by the faculty, the Nutrition and Metabolism executive committee is authorized to take account of individual circumstances and problems, and to grant extensions of deadlines and waivers of requirements.

Disciplinary Actions

- Written reprimand
- Denial of specified privilege(s)
- Imposition of reasonable terms and conditions on continued student status
- Removal of funding
- Probation
- Restitution
- Removal of the student from the course(s) in progress
- Failure to promote
- Withdrawal of an offer of admission
- Placement on Leave of Absence for a determined amount of time
- Suspension from the program for up to one year with the stipulation that remedial activities may be prescribed as a condition of later readmission. Students who meet the readmission condition must apply for readmission and the student will be admitted only on a space available basis. See the Graduate School Academic
Policies & Procedures: Readmission to Graduate School:  
https://grad.wisc.edu/documents/readmission/  
- Suspension from the program. The suspensions may range from one semester to four years.  
- Dismissal from the program  
- Denial of a degree  

In addition to the program’s disciplinary actions, the Dean of Students Office may also have grounds to issue one or more of the following:  
- Reprimand  
- Probation  
- Suspension  
- Expulsion  
- Restitution  
- A zero or failing grade on an assignment/exam  
- A lower grade or failure in the course  
- Removal from course  
- Enrollment restrictions in a course/program  
- Conditions/terms of continuing as a student  

Incident Reporting (Hate, Bias, Sexual Assault, Hazing, Students of Concern, Bullying)  

The Dean of Students Office maintains a portal to report incidents of hate, bias, sexual assault, hazing, dating/domestic violence, stalking, missing students, and students displaying other concerning behaviors at UW-Madison:  

Dean of Students Incident Reporting  
doso.students.wisc.edu/report-an-issue  

As noted above in “Personal Conduct Expectations,” students who feel they have been subject to hostile and/or intimidating behavior (i.e., bullying) are encouraged to review the informal and formal options for addressing this behavior (including filing complaints when desired) at:  

Human Resources Hostile and Intimidating Behavior Website  
hr.wisc.edu/hib
Funding, Employment, and Finances

“Funding” is a term used to describe university employment or support to cover some or all of your costs of graduate education. It varies in kind, amount, and level of guarantee.

Nutrition and Metabolism PhD and MS students are provided with a competitive stipend in addition to tuition remission. Application to the program is also the application for funding and tuition remission.

Students are required to pay segregated fees each semester. Students may view a breakdown of the segregated fee expenses here. The due date for segregated and other fee payments is the first Friday after the third assistant paycheck of the term (or the day of the third paycheck if it falls on a Friday).

Nutrition and Metabolism PhD and MS students are qualified for the stipend, tuition remission, and health insurance through their Research Assistant appointment. Other common methods of funding are through Teaching Assistantship, Traineeship, and Fellowships.

A number of Nutritional Sciences students also qualified for assorted fellowships. https://grad.wisc.edu/funding/fellowships/

SciMed GRS also provides funding and community to enhance the experiences of underrepresented graduate students in the biological sciences. More information about SciMed can be found here: https://scimedgrs.wisc.edu/

The Graduate School maintains policies related to graduate student funding/employment:

Maximum Levels of Appointments
grad.wisc.edu/documents/maximum-levels-of-appointments

Concurrent Appointments for Fellows/Trainees
grad.wisc.edu/documents/concurrent-appointments

Enrollment Requirements for Graduate Assistants
policy.wisc.edu/library/UW-1208

Eligibility for Summer RA, TA, PA, and LSA Appointments
policy.wisc.edu/library/UW-5089
Finding Alternative Funding

Campus-Wide and External Sources

If needed, the Graduate School provides a comprehensive overview of the funding process on campus as well as descriptions of the types of funding available, sources of funding, minimum stipend rates and benefits, and links to applicable human resources policies (e.g. GAPP) at:

Graduate School: Funding and Financial Aid
grad.wisc.edu/funding

External Fellowship Database
grad.wisc.edu/funding/external-fellowship-database

UW-Madison Libraries Grants Information Collection
library.wisc.edu/memorial/collections/grants-information-collection

Additional Policies & Resources

Graduate School Policy: Residence for Tuition Purposes
grad.wisc.edu/documents/residence-for-tuition-purposes

Employee Disability Resources
employeedisabilities.wisc.edu

Graduate Assistantship Policies and Procedures (GAPP)
hr.wisc.edu/policies/gapp

Professional Development

When you participate in professional development, you build skills needed to succeed academically and thrive in your career. The following are professional development activities that we recommend for your consideration. Required professional development will be detailed in “Degree Requirements” above.
On Campus

The Graduate School develops and curates a wide variety of resources for professional development, including a tool to assess your skills, set goals, and create a plan with recommended activities on campus (e.g., the popular “Individual Development Plan” or IDP) as well as programming to help you explore careers, prepare for a job search, build your network and learn from alumni, manage projects, communicate about your research, and much more.

DiscoverPD helps master’s and doctoral students at UW-Madison advance their academic and professional goals with customized recommendations based on a skills self-assessment. The 400+ professional development recommendations available in the DiscoverPD database are available in a range of formats to best meet your diverse needs, including in-person, virtual, asynchronous, and synchronous opportunities. All of this can be found at:

**Professional Development from the Graduate School**
[grad.wisc.edu/professional-development](http://grad.wisc.edu/professional-development)

The Graduate School communicates professional development opportunities through an e-newsletter, *GradConnections*, that all graduate students receive at their wisc.edu email. Graduate students in traditional graduate degree programs receive the newsletter weekly during the academic year and every other week in the summer. Graduate students in online degree programs receive the newsletter every other week during the academic year and monthly during the summer.

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**Nutrition and Metabolism Mentor-Mentee Guidelines**

Effective training in the Nutrition and Metabolism program relies on a strong relationship between the faculty mentor and the student. Both the mentor and the student enter this relationship with expectations of each other and it is important to ensure that there is a shared understanding and agreement of those expectations. This document lays out some common commitments that we expect faculty members and students to make to each other. It is a fluid document in that we expect some changes in expectations to
occur as a student progresses through their training. If adopted, this document should be reviewed by the student and mentor at least once a year to ensure that they are working together effectively.

**Expectations of the student**

- I acknowledge that I have the primary responsibility for the successful attainment of my degree. This includes my commitment to focus my time and efforts on classes and in the laboratory. I will maintain a high level of professionalism, self-motivation, engagement, scientific curiosity, and ethical standards.
- I recognize that I have the primary responsibility for my professional development and commitment to life-long learning. I will stay abreast of the latest developments in my area of research through reading the literature and attending relevant seminars and scientific meetings. I will actively seek out opportunities outside of the classroom (e.g. professional development seminars, workshops in scientific writing or grant writing, oral communication skills, teaching, etc.) to help meet my career goals.
- I will develop a timeline to achieve my educational and research goals and review it annually with my mentor.
- I will maintain detailed, organized, and accurate laboratory records and in the format requested by my mentor. I will regularly backup computer files to avoid loss of valuable data.
- I will be honest and respect all ethical standards when I conduct my research and engage in scholarly activity. This includes compliance with all institutional and federal regulations for human and animal research as well as those regarding copyright infringement, permissions, plagiarism, etc.
- I will strive to be increasingly independent in my training activities including designing and conducting experiments, writing grant applications and publications, and mentoring undergraduate or less experienced graduate students.
- I will seek regular feedback on my performance and challenges I face through open and timely discussions with my mentor. I will be accepting of advice and constructive criticism and recognize that this feedback is intended to improve my professional skills.
- I will be knowledgeable and responsible for complying with the policies, deadlines, and requirements of the Nutrition and Metabolism program, the graduate school, and the university.
- I will treat others with respect and foster a positive workplace climate in my research lab, program, and department.
Expectations of the Faculty Mentor(s)

- I acknowledge that it is my responsibility to facilitate the training and professional development of the student to the best of my abilities. I will work closely with this student to develop a program plan that best prepares them to achieve their training goals.
- I will maintain a relationship with the student that is based on trust and mutual respect.
- I recognize that open communication and periodic formal performance reviews will ensure that the expectations of both parties are met.
- I will foster an increasing level of independence and responsibility as the student progresses through their training.
- I will promote all ethical standards for conducting research and engaging in scholarly activity. This includes compliance with all institutional and federal regulations for human and animal research as well as responsibility for copyright, permissions, plagiarism, etc.
- I will clearly define expectations of conduct within my research team and make myself available to discuss climate or ethical concerns as they arise.
- I will commit to be a supportive colleague as the student transitions to the next stage in their career and, to the extent possible, throughout their professional life. I recognize that the role of mentor continues after formal training ends.
- I will encourage participation in professional development and networking opportunities.
- I will treat others with respect and foster a positive workplace climate in my research lab, program, and department.

Items for Discussion
The mentor and student should discuss the items below and any other issues in order to reach a shared understanding of their relationship. The mentee should then summarize the final decisions and have the agreement signed and dated by the parties listed.

- How often will we meet? When and where will our meetings take place? Who will be responsible for establishing the agenda?
- What is the preferred method of communication between meetings? How quickly can a response to questions be expected?
- How much lead time do the participants need to review materials prior to discussion?
- What are the policies for work hours, sick time, and vacations?
- What are the policies for manuscript authorship, research presentations, and ownership of data?
- What format and content is expected in lab notebooks and other data archiving systems?
• What additional expectations does the mentor have of the student?
• What additional expectations does the student have of the mentor?
N&M MS timeline and checklist

1st semester
- Attend new student orientation
- Register for first semester courses
- Complete mentor-mentee agreement with advisor
- Establish a plan of coursework with your advisor

2nd semester
- Begin research
- Form advisory committee (advisor + 2)
- Prepare initial IDP (updated annually)
- Have first meeting with advisory committee (course plan approval, introduce research topic)

3rd semester
- Continue coursework
- Continue research
- Complete TA or learning internship requirement (can be done in 4th semester)

4th semester
- Finish uncompleted coursework
- Continue research
- Give seminar in NS 931
- Request degree warrant 3 weeks prior to thesis defense
- Submit thesis to committee (2 weeks before defense)
- Defend thesis
- Return signed defense warrant to Graduate Program Coordinator