

# Interdepartmental Graduate Program in Nutritional Sciences— PHD

# **Program Handbook**

# 2021-2022

# **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.

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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:



Procedures" that defines key components of graduate education on our campus.

# wide policies.

## 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* (<u>guide.wisc.edu/graduate</u>). 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: <u>policy.wisc.edu/library/UW-1232</u>. 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 (<u>my.wisc.edu</u>) 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: <u>grad.wisc.edu/contacts</u>.

# **Department & Program Overview**

Modern nutrition is a multidisciplinary, integrative science, and the Interdepartmental Graduate Program in Nutritional Sciences (IGPNS) 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 IGPNS 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 IGPNS program promotes and values the individuality of all students and works to maintain a positive climate within our department, schools/colleges, 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.
- The College of Agriculture and Life Sciences recently conducted a Climate Survey in which the Department of Nutritional Sciences participated: <u>https://ecals.cals.wisc.edu/2020/11/16/cals-climate-survey-response-rate-and-next-steps/</u>
- Campus Resources for Underrepresented Student Support
  - Mentorship Opportunities in Science & Agriculture for Individuals of Color: <u>https://mosaic.cals.wisc.edu/</u>
  - SciMed GRS Community: <u>https://scimedgrs.wisc.edu/</u>
  - Office of Diversity, Inclusion, and Funding: <u>https://grad.wisc.edu/diversity/inclusion-and-engagement/</u>
  - o Gender and Sexuality Campus Center: http://lgbt.wisc.edu/
  - McBurney Disability Resource Center: <u>http://www.mcburney.wisc.edu/</u>
  - Office of the Vice Provost for Diversity and Climate: <u>https://diversity.wisc.edu/</u>
  - Multicultural Student Center: <u>https://msc.wisc.edu/</u>
  - o Black Cultural Center: <u>https://msc.wisc.edu/black-cultural-center/</u>
  - o University Veterans Services: <u>http://www.veterans.wisc.edu/</u>
  - Women in Science and Engineering Leadership Institute (WISELI): <u>http://wiseli.engr.wisc.edu/</u>
  - Undocumented Student Support: <u>https://msc.wisc.edu/undocumented-</u> <u>student-resources/</u>
- 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: <u>https://guide.wisc.edu/graduate/nutritional-sciences/nutritional-sciences-phd/#policiestext</u>

# 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 examples of national organizations and conference and our students have engaged with.

#### American Society for Nutrition (https://nutrition.org/)

<u>Annual Nutrition Science Meeting</u>

#### Aging

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

#### **Breastfeed and Maternal Health**

- Annual International Breastfeeding Conference (Links to an external site.)
- <u>The Origins and Benefits of Biologically Active Components in Human Milk</u> <u>Conference (Links to an external site.)</u>

#### Cancer

- Translational Cancer Genomics (Links to an external site.)
- Cancer Genetics and Epigenetics (Links to an external site.)
- DNA Damage, Mutation, and Cancer (Links to an external site.)
- Single Cell Cancer Biology (Links to an external site.)
- <u>Cancer Epigenetics: New Mechanisms & Therapeutic Opportunities (Links to an external site.)</u>

#### Carbohydrates

- Carbohydrate-Active Enzymes for Glycan Conversions (Links to an external site.)
- <u>Carbohydrate Synthesis and Research to Advance Glycobiology and</u> <u>Biomedicine (Links to an external site.)</u>

#### **Cystic Fibrosis**

• Annual European Cystic Fibrosis Conference (Links to an external site.)

#### Diabetes

- <u>American Diabetes Association Annual Scientific Sessions (Links to an external site.)</u>
- <u>American Diabetes Association Annual Clinical Conference on Diabetes (Links to</u> <u>an external site.)</u>
- Diabetes: Glucose Control & Beyond (Links to an external site.)

#### Exercise/Physiology

• <u>New Insights into the Biology of Exercise (Links to an external site.)</u> *joint with*: <u>Charting a New Course for Heart Failure: From Discovery to Data (Links to an external site.)</u>

#### Genetics/Genomics

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

#### Gut Microbiome/Pancreas

- American Pancreatic Association | Annual Conference (Links to an external site.)
- Digestive Disease Week | Annual Conference (Links to an external site.)
- The Gastrointestinal Tract Conference (Links to an external site.) (biannual)
- Understanding Cell Behavior and Environmental Influences in Pancreatic
   Diseases (Links to an external site.)
- A Gut-Systemic Perspective for Metabolic Disease (Links to an external site.)

#### **Experimental Biology**

#### Federation of Experimental Biology

- <u>The Mitochondrial Biogenesis and Dynamics in Health and Disease</u> Conference (Links to an external site.)
- The Protein Aggregation Conference (Links to an external site.)
- The Regulation of Glucose Metabolism Conference (Links to an external site.)
- <u>The Signal Transduction in the Immune System Conference (Links to an external site.)</u>
- The Biology and Chemistry of Vision Conference (Links to an external site.).
- The Endoplasmic Reticulum (ER) Conference (Links to an external site.)
- The Mobile DNA Conference (Links to an external site.)
- <u>The Regulation and Function of Small GTPases Conference (Links to an external site.)</u>
- <u>The RNA Localization and Local Translation conference (Links to an external site.)</u>
- The Autoimmunity Conference (Links to an external site.)
- <u>The Protein Lipidation Conference: Enzymology, Signaling, and</u> <u>Therapeutics (Links to an external site.)</u>
- The Biology of Calpains in Health and Disease (Links to an external site.)
- <u>The Genetic Recombination and Genome Rearrangements Conference (Links to an external site.)</u>

- The Smooth Muscle Conference (Links to an external site.)
- The Acute Kidney Injury Conference (Links to an external site.)
- <u>The Molecular Mechanisms of Immune Cell Development and Function (Links to an external site.)</u>
- Big Ten Academic Alliance Lipids Symposium (Links to an external site.)

#### **Metal Nutrients**

• Cell Biology of Metals (Links to an external site.)

#### Metabolism

- Enzymes, Coenzymes, and Metabolic Pathways (Links to an external site.)
- Epigenomics of Diabetes and Other Metabolic Diseases (Links to an external site.)
- Lipoprotein Metabolism (Links to an external site.)
- <u>Understanding Human Disease Through Metabolomics: Interactions Among the</u> Genome, Proteome, Gut Microbiome, and Nutrition (Links to an external site.)
- Integrating Metabolism and Immunity (Links to an external site.)

#### Obesity

- Obesity Symposium 2019 | (Links to an external site.)
- Obesity Conference 2020 | Implement Obesity Treatment Techniques in your Practice (Links to an external site.)

#### Proteins

- Intrinsically Disordered Proteins (Links to an external site.)
- <u>Membrane Transport Proteins (Links to an external site.)</u>
- Protein Folding Dynamics (Links to an external site.)
- Protein Processing, Trafficking, and Secretion (Links to an external site.)
- Protein Transport Across Cell Membranes (Links to an external site.)
- Proteins (Links to an external site.)
- PepTalk: The Protein Science Week (Links to an external site.)

#### **Conference Series:**

Abcam:

<u>https://www.abcam.com/index.html?pageconfig=tradeshowsearch (Links to an external site.)</u>

#### STEM Diversity and Equity Conferences:

- Society of Advancement of Chicanos/Hispanics and Native Americans in Science (Links to an external site.)
- <u>Annual Biomedical Research Conference for Minority Students (Links to an</u> <u>external site.)</u>

#### 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. (\*\*link coming soon\*\*)
- IGPNS Admissions Committee: Each year, IGPNS 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.

#### 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

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

#### Edward Alexander Bouchet Graduate Honor Society

grad.wisc.edu/diversity/bouchet

# **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 <u>my.wisc.edu.</u> 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 <u>DoIT Help Desk</u> 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 (<u>http://www.wiscard.wisc.edu/contact.html</u>) 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.

#### Lab Rotations:

In your first semester, you will spend time working in the labs of three professors whose work interests you. One of these will probably become your advisor. Therefore, these lab rotations are one of the most important things that you will do in your first year in Madison. The brief descriptions of research given in the rotation talks during orientation week should assist you in selecting the laboratories to visit. Expect to spend about five weeks in each of the three labs during the first semester. Additional rotations are allowed if a match cannot be made with the first three rotations. For students who are not on a fellowship or training grant, or are not direct admits, financial support is provided by the program through the period of rotations.

<u>Managing grades while rotating:</u> During rotations, students want to make sure they are maintaining the IGPNS and Graduate School minimum cumulative GPA of 3.00. With

that said, it is imperative students be present and dedicated to work in their rotating labs.

#### **Directly Admitted Students:**

Under rare circumstances, a student may be admitted directly to a faculty's research group. This typically arises from an introduction outside the normal admission process. 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 IGPNS. 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, IGPNS strongly recommends using the IGPNS 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:

<u>http://www.asm.wisc.edu/resources/buspass/.</u> 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: <u>http://grad.wisc.edu/newstudents/ngsw/</u>

# 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 (e.g. during rotations) 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: <u>policy.wisc.edu/library/UW-1232</u>. 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 advisory 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 <u>gsts.grad.wisc.edu</u>), 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 <u>IGPNS Mentor-Mentee Guidelines</u> below for further information about a tool we use in this program to formalize advising expectations.

## Finding & Selecting an 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. To learn more about the faculty in your program, consider consulting the following sources:

- Courses and seminars you attend
- Our program website (<u>https://nutrisci.wisc.edu/people/igpns-faculty/</u>)
- Faculty publications
- Students currently in a prospective advisor's group/lab
- Rotating in a lab (see more information below)
- IGPNS Mentor/Mentee Guidelines
- Mentorship Map

#### **Choosing Your Advisor**

#### Lab Rotations:

In your first semester, you will spend time working in the labs of three professors whose work interests you. One of these will probably become your advisor. Therefore, these

lab rotations are one of the most important things that you will do in your first year in Madison. The brief descriptions of research given in the rotation talks during orientation week should assist you in selecting the laboratories to visit. Expect to spend about five weeks in each of the three labs during the first semester. Additional rotations are allowed if a match cannot be made with the first three rotations. For students who are not on a fellowship or training grant, or are not direct admits, financial support is provided by the program through the period of rotations.

<u>Managing grades while rotating:</u> During rotations, students want to make sure they are maintaining the IGPNS and Graduate School minimum cumulative GPA of 3.00. With that said, it is imperative students be present and dedicated to work in their rotating labs.

#### Selection of an Advisor:

Normally selection of advisors occurs in mid-December. Until an advisor is determined, students will be assigned to the program director as their advisor. When you select your advisor and start to work in their lab, we strongly encourage using the <u>IGPNS Mentor-Mentee Guidelines</u>. When a match is made between an advisor and a graduate student, the laboratory will provide funding to the graduate student contingent upon satisfactory progress in their program and in their research. Once placed in a lab, the graduate coordinator will continue to provide enrollment guidance on program requirements and seek guidance from their advisor on additional coursework.

#### **Directly Admitted Students:**

Under rare circumstances, a student may be admitted directly to a faculty's research group. This typically arises from an introduction outside the normal admission process. 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 IGPNS. 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, IGPNS strongly recommends using the IGPNS Mentor-Mentee Guidelines.

Additionally, you may wish to have a discussion with a prospective advisor. Below are some questions to consider asking in this discussion, though it is not a complete list. You should spend some time identifying what is most important to you in your graduate training and ask questions accordingly.

#### **Questions to Ask of Prospective Advisors**

Adapted from IPiB handbook

• What thesis projects would be available to me if I were to join your group?

- Would these projects expose me to a variety of different approaches?
- In general, how available will you be to answer questions I might have?
- What is your philosophy regarding the amount of guidance the advisor should provide to a student during preparation of the thesis proposal, literature seminars, thesis writing, etc.?
- What are your expectations for the amount of time I should spend each day/week working in your group/lab?
- What regularly scheduled activities (e.g., group meetings, joint group meetings, research clubs) does your group participate in that provide an opportunity to get outside input on my research project and to hear about the work of other students and postdocs?
- Do you encourage your students to attend seminars and journal clubs, including those that may be outside of their narrow field of interest/research?
- Do students in your group/lab have the opportunity to attend professional meetings where they can interact with colleagues/researchers from other institutions?
- Do you include your graduate students in professional activities that will familiarize them with their field of interest/research, such as reviewing manuscripts and meeting with visiting speakers?
- How long do you think it should take me to get my degree?
- What are your former graduate students (if any) doing now?
- What is your general philosophy of graduate training and what goals do you have for your graduate students?

No faculty member is obligated to accept a student's request to serve as advisor, though invitations are often accepted unless the faculty member judges that a different advisor would serve your needs better.

Final placement into a research group will be coordinated by the Graduate Program Director at the end of the first semester.

# 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 IGPNS-related procedures list below.

(http://grad.wisc.edu/acadpolicy/?policy=grievancesandappeals).

The IGPNS Program Director and the Graduate Program Coordinator will assist the student in finding a new advisor. IGPNS 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.

If the decision to change labs occurs during the process of lab rotations be made during the fall semester, no agreements should be made between the transferring student and individual faculty without prior consultation with the Director of Graduate Studies and Graduate Program Coordinator. This is done to coordinate new lab placement with rotations of first-year students.

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) under "Academic Progress" and then "Advisors." IGPNS will work to find the student an appropriate placement, but cannot guarantee placement by the re-match process.

## **Advising Compact**

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

All IGPNS 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 <u>www.grad.wisc.edu/pd/idp.</u>

## **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 letters of recommendation. It is recommended that students seek out such mentorship in the first couple years of their graduate degree.

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

## **Doctoral Degree**

All students in the Nutritional Sciences PhD program are responsible for complying with the following requirements to complete the degree.

#### Requirements

For all current requirements to complete your degree (e.g., credits, courses, milestones, and learning outcomes/goals) see our program's page in the *Graduate Guide*. Navigate to <u>guide.wisc.edu/graduate</u>, then select "Degrees/Majors," our program's name, the "Named Option" of our 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 our 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 year policies that may be applicable to you, see guide.wisc.edu/archive.

#### Recommendations

#### **Recommended Elective Coursework**

- o Animal Science 414: Ruminant Nutrition
  - Integrates basic nutrition concepts and ration balancing skills by teaching students to balance and troubleshoot rations for various domesticated ruminants. 2 cr. Pre-Requisites: An Sci/ Dy Sci 311
- o Biochemistry 550: Topics in Medical Biochemistry
  - Biochemical and molecular analysis of selected human diseases. Topics will include lipid metabolism and atherosclerosis, cell cycle regulation and oncogene function in cancer, and human immunodeficiency virus (HIV) structure, life cycle, and mechanism of acquired immunodeficiency disease syndrome (AIDS). 2cr Prerequisites: Biochem 501 or 507
- Biochemistry 551: Biochemical Methods
  - Introduction to modern biochemical laboratory techniques and current biochemical literature. Students will present a seminar based upon scientific literature that parallels experiments they will perform in lab. For advanced undergraduates and non-biochemistry graduate students. 4cr. Pre-requisites: Biochem 501 or Biochem 507 or concurrent enrollment
- Biochemistry 601: Protein and Enzyme Structure and Function
  - Protein structure and dynamics. Protein folding. Physical organic chemistry of enzymatic catalysis. Analysis of enzyme kinetics and receptor-ligand interactions. Enzymatic reaction mechanisms. 2cr. Pre-requisites: CHEM 345 and (Biochem 501 or 507)
- o Biochemistry/Genetics 620: Eukaryotic Molecular Biology
  - 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.
- o Biochemistry 645: Molecular Control of Metabolism and Metabolic Disease
  - 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. 3cr. Pre-requisites: Biochem 501 or 508 or graduate standing
- o Biochemistry 630: Cellular Signal Transduction Mechanisms

- Comprehensive coverage of human hormones, growth factors and other mediators; emphasis on hormone action and biosynthesis, cell biology of hormone-producing cells. 3cr. Pre-requisites: Biochem 501 or Biochem 507 & 508 & Cell biology or instruct consent
- Biochemistry 729: Advanced Topics
  - Specialized subjects of current interest. Examples include: From Atoms to Molecules, Foundations of Biochemistry, Responsible Conduct of Research, Synthetic Biology
- o Biomolecular Chemistry 504: Human Biochemistry Laboratory
  - Introduction to basic biochemistry and molecular biology lab techniques through investigation of an enzyme involved in human metabolism. 3cr. Pre-requisites: Biochem 501, 507, 508, Bmolchem 503, or concurrent enrollment, or graduate/professional standing
- Biomolecular Chemistry 627: Methods and Technologies for Protein Characterization
  - 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. 2-3cr. Prerequisites: Graduate Standing
- Biomolecular Chemistry 704: Comprehensive Human Biochemistry
  - 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. 5cr. Pre-requisites: Chem 344, Physics 104, and Zoology; Professional;/graduate student standing
- Biomolecular Chemistry 720: Experimental Design and Paradigms in Cellular Biochemistry and Molecular Biology
  - 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. 3cr. Pre-requisites: Graduate/Professional Standing
- o CBE 781: Biological Engineering: Molecules, Cells, and System
  - Protein engineering and protein-protein interactions, receptor-ligand binding, cell metabolism and signaling, metabolic engineering and synthetic biology, tissue engineering. Additional topics may be

covered such as: regenerative medicine, biomaterials, microbe-host interactions. 3cr

- CRB 630: Proteomics for Biologists
  - 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. 2 cr. Prerequisites: Graduate Student or Biochem 501 or Biochem 507)
- Family Medicine 701: Perspectives in Multidisciplinary Clinical & Translational Research
  - 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. 2cr
- Kinesiology 774: Metabolic responses to exercise and stress
  - Examination of the metabolic and biochemical responses to acute and chronic exercise and environmental stress. Emphasis placed on the mechanisms underlying these responses. 2cr. Prerequisites: Physiol 720 or cons instr.)
- Kinesiology 779: Human Muscle Function in Health and Disease
  - Multidisciplinary seminar on human muscle function in health and disease. 2cr Prerequisites: Graduate Students
- o Life Science Communication 560: Scientific Writing
  - This course is intended for students in science disciplines to learn how to communicate and translate scientific research for a general audience. 3cr. Pre-requisites: Graduate/Professional Standing
- Medicine 701: Cell Signaling and Human Disease

- 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. 1cr
- Medicine 720: Endocrinology and Metabolism
  - 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. 2cr. Pre-**Regs: Graduate Standing**
- o Nutri Sci 875: Vitamin A; Molecule to Man
  - Topics course
- Oncology 703: Carcinogenesis and Tumor Cell Biology
  - 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. 3cr Pre-reqs: Graduate/Professional Student
- Population Health Sciences 451: Introduction to SAS Programming for Population Health
  - Use of SAS programming language for the management and analysis of biomedical data. 2 cr. Pre-reqs: Instructor Consent
- Population Health Sciences 552: Regression Methods for Population Health
  - Introduction to the primary statistical tool used in epidemiology and health services research; multiple linear regression, logistic regression and survival analysis. 3 cr. Pre-reqs: Pop Health 451 and 551; or Instructor Consent
- o Population Health Sciences 650: Intro to Pop. Health Sciences

- Population Health Sciences 651: Advanced Regression Methods for Population Health
  - 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. 3 cr. Pre-reqs: Pop Health 798 and Pop Health 552; or Instructor Consent
- Population Health Sciences 664: Prevention of Childhood overweight and obesity
  - 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. 2cr. Pre-requisites: MPH or Graduate Student
- Population Health Sciences 798: Epidemiologic Methods
  - 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. 3 cr. Pre-reqs: Pop Health 797 or Instructor Consent
- Population Health Sciences 849: Genetic Epidemiology
  - 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. 3cr. Pre-reqs: Graduate/Professional Study
- Population Health Sciences 888: Public Health Genomics
  - 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. 1cr

- Pathology-Biology 675: Special Topics
- Pathology 750: Cellular and Molecular Biology/Pathology
  - 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. Students in Cellular and Molecular Pathology graduate program must enroll for lectures (2 credits) and discussion section (1 credit) Pre-requisites: Graduate/Professional Standing
- Pathology 751: Cell and Molecular Biology of Aging
  - Cellular and molecular pathophysiology of human disease typically afflicting the aged, such as Alzheimer's, osteoporosis, Type II diabetes and arthritis, experimental systems to study aging. 3cr. Pre-requisites: Graduate/Professional Standing
- Pathology 803: Pathogenesis of Major Human Diseases
  - 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. 3 cr. Prerequisites: Upper-level general cell boil course or Path 703

#### **Quantitative Methods Courses**

- o BMI 541: Introduction to Biostatistics
  - Course designed for the biomedical researcher. Topics include: descriptive statistics, hypothesis testing, estimation, confidence intervals, t-tests, chisquared tests, analysis of variance, linear regression, correlation, nonparametric tests, survival analysis and odds ratio. 3cr. Pre-requisite: Graduate Standing
- BMI 542: Introduction to clinical trials statistics
  - 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. 3cr. Prerequisites: Stats 541 or equivalent

- CRB 630: Proteomics Approaches for Biologists
  - 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. 2cr. Prerequisites: Graduate Student or Biochem 501 or Biochem 507
- Genetics 885: Advanced Genomic and proteomic analysis
  - 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. 3cr. Class enrollment is limited to 20 students due to computer lab space. Prerequisites: General statistics, intermediate or advanced Genetics, and instructor consent
- Statistics 571: Statistical Methods for Bioscience I

- 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. 4 cr.
- o Statistics 572: Statistical Methods for Bioscience II
  - 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. 4cr. Prerequisites: Stats/Forestry/Hort 571
- o Statistics 641: Statistical Methods for Clinical Trials
  - Statistical issues in the design of clinical trials, basic survival analysis, data collection, and sequential monitoring.

Course	When Offered	Fall	Spring	Summer
Animal Science 414		Х		
Biochem 550			X	
Biochem 551		Х	X	
Biochem 601		Х		
Biochem/Genetics 620			X	
Biochem 645		Х		
Biochem 630		Х		
Biochem 729 (topics vary)		Х	X	
Biomolecular Chem 504		Х	X	
Biomolecular Chem 627			X	
Biomolecular Chem 704		Х		
Biomolecular Chem 720			X	
CBE 781		Х		
CRB 630			X	
Family Medicine 701			X	
Genetics 885 (even years)		Х		
Kines 774 (occasionally)			X	
Kines 779			X	
Life Science Comm 560			X	X
Medicine 701			X	
Medicine 720			X	
Nutri Sci 875			X	
Oncology 703		Х		
Pop Health 451		Х		
Pop Health 552			Х	

Pop Health 650	Х	Х	Х
Pop Health 651	Х		
Pop Health 664	Х		
Pop Health 798		Х	
Pop Health 849	Х		
Pop Health 888		Х	
Pathology-Biology 675 (varies)	Х	X	X
Pathology 750		X	
Pathology 751	Х		
Pathology 803 (occasionally)	Х		
Statistics/BMI 541	Х		
Statistics/BMI 542	Х		X (occasionally)
Statistics 571	Х		
Statistics 572		X	X (occasionally)

- Doctoral Minors Recommended for Nutritional Sciences Students:
  - Biochemistry, Doctoral Minor (<u>https://guide.wisc.edu/graduate/biochemistry/biochemistry-doctoral-minor/index.html</u>)
  - Community-Engaged Scholarship, Doctoral Minors (<u>https://guide.wisc.edu/graduate/civil-society-community-studies/community-engaged-scholarship-doctoral-minor/index.html</u>)
  - Distributed, Doctoral Minor (<u>https://guide.wisc.edu/graduate/graduateschool-wide/distributed-doctoral-minor/index.html</u>)
  - Endocrinology-Reproductive Physiology, Doctoral Minor (<u>https://guide.wisc.edu/graduate/medicine-public-health-school-</u> wide/endocrinology-reproductive-physiology-doctoral-minor/index.html)
  - Life Sciences Communication, Doctoral Minor (<u>https://guide.wisc.edu/graduate/life-sciences-communication/life-sciences-communication-doctoral-minor/index.html</u>)
  - Statistics, Doctoral Minor (<u>https://guide.wisc.edu/graduate/statistics/statistics-doctoral-minor/index.html</u>)
- Graduate/Professional Certificates Recommended for Nutritional Sciences Students:
  - Clinical and Community Outcomes Research, Graduate/Professional Certificate (<u>https://guide.wisc.edu/graduate/institute-clinical-translationalresearch/clinical-community-outcomes-research-graduate-professionalcertificate/index.html</u>)

- Consumer Health Advocacy, Graduate/Professional Certificate (<u>https://guide.wisc.edu/graduate/law-school-wide/consumer-health-advocacy-graduate-professional-certificate/index.html</u>)
- Fundamentals of Clinical Research, Graduate/Professional Certificate (<u>https://guide.wisc.edu/graduate/institute-clinical-translational-</u> <u>research/fundamentals-clinical-research-graduate-professional-</u> <u>certificate/index.html</u>)
- Global Health Online, Graduate/Professional Certificate

   (<u>https://guide.wisc.edu/graduate/medicine-public-health-school-</u>wide/global-health-online-graduate-professional-certificate/index.html)
- Global Health, Graduate/Professional Certificate
   (https://guide.wisc.edu/graduate/population-health-sciences/global-health-graduate-professional-certificate/index.html)
- Science Communication, Graduate/Professional Certificate (<u>https://guide.wisc.edu/graduate/life-sciences-communication/science-communication-graduate-professional-certificate/index.html</u>)

#### Advisory Committee

Doctoral advisory committees advise and evaluate satisfactory progress, administer preliminary and final oral examinations, evaluate a thesis or dissertation, and/or sign a degree warrant. For general guidance from The Graduate School on the role and composition of committees as well as an online tool to determine if your committee meets minimum requirements, see this policy page: <u>policy.wisc.edu/library/UW-1201</u>. In addition to this general guidance, our program requires the following of doctoral committees:

When you have identified an advisor and joined their lab, that professor will assume the role of chair to your Advisory committee. Prior to July 1st after your second semester, you will form a PhD Advisory Committee consisting of 3-5 faculty members, including your advisor. While a committee of three members is sufficient at this time, you will need to select a full five-member committee prior to taking the Preliminary exam. Your committee must consist of 3-4 IGPNS members (one of who must be a member of the Department of Nutritional Sciences) and 1-2 must have a graduate program affiliation outside of the IGPNS. If a committee member is a trainer in the IGPNS and also in another program (e.g. IPiB, CMB, etc.) and their name can be found on that second program's website, they can fulfill the role of the outside member. The advisor cannot serve as the outside committee member.

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.gualtrics.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

If an Option A minor is chosen, one member needs to be a professor from the minor department. Under normal circumstances, the committee membership will remain the same for the entire period of the student's graduate career. However, if your research focus changes and faculty with different expertise are needed, changes in the committee membership can be made. The final membership of your committee must be approved by the Graduate Program Coordinator

#### Informal Establishment of Additional Mentors:

Many graduating students 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 letters of recommendation. It is recommended that students seek out such mentorship in the first couple years of their graduate degree.

#### **Annual Meetings:**

You are required to meet with at least three members of your advisory committee each year except the years you complete your preliminary exam and your defense and thesis. During these annual meetings, anticipated timelines for progress of the research project should be discussed and concrete guidance should be given about completing the dissertation. You must file an <u>Annual Progress Meeting Report Form</u> signed by your committee with the Graduate Program Coordinator each year by November 1st. **Spring semester registration will be blocked if this form is not submitted.** 

#### **Preliminary Exam**

The IGPNS has one Preliminary Exam. The exam is focused on a written research proposal that you prepare and distribute to your committee prior to the exam. Your PhD advisory committee will also serve as your examination committee for this exam. The student is responsible for presenting all necessary forms and files at examinations. You must complete all coursework prior to taking your preliminary exam.

• Timing and Scheduling of the Exam Note that you must take the exam by the end of the sixth semester; summer session does not count as a semester.

Note that the exam requires a warrant from the Graduate School requested 3 weeks prior to the exam. The Preliminary Warrant Request Form is available on the Nutritional Sciences website. <u>https://nutrisci.wisc.edu/graduate/m-s-ph-d/current-students/preliminary-warrant-request/</u> This form will go directly to the Graduate Coordinator who will then request your warrant. You must also inform the Graduate Program Coordinator of the date/time/location of your exam, and schedule a room in the Nutritional Sciences building, if needed. When this exam has been successfully completed, the committee members will sign the warrant and the Graduate School will admit you to dissertator status.

- Forms and Items Needed for the Preliminary Exam:
  - Warrant—requested from the Graduate Coordinator 3 weeks prior to preliminary exam
  - Overall Evaluation of Preliminary Exam—print one copy for your mentor
  - Evaluation of Preliminary Exam Performance—print a copy for each member of your committee
- Policy of Retaking Examinations: Should your committee decide that the exam needs to be taken again you must do so within 6 months. You and your mentor must petition the Graduate Program Coordinator, in writing, to receive a waiver of this requirement. Students may not take an exam more than twice.

#### **Preliminary Exam Format**

• Objective and Format of the Preliminary Exam:

Successful completion of a Ph.D. degree requires that the individual is capable of performing original research. One indicator of this is the capacity to use previously known as well as new information to synthesize new ideas or hypotheses. Thus, the purpose of the research examination is for the student to demonstrate their ability to define a research problem and to plan and describe approaches for addressing an area of interest. You should show an ability to focus a series of experiments or research efforts towards answering a specific research problem. This examination provides you with an opportunity to illustrate your ability to develop new hypotheses and to design experiments that test those hypotheses. The proposal usually focuses on your doctoral research but another topic can be selected for this exam by you and your mentor. The completed research proposal must be given to the examination committee TWO WEEKS prior to the exam.

An important role of the examination committee is to provide you with feedback and suggestions regarding the proposed research and to stimulate constructive student/faculty interaction on the research problem. To this end each committee member will complete an evaluation form of the research proposal and exam (see Forms). The advisor will collect the forms and record the ratings on an overall evaluation form for the IGPNS records. The advisor will discuss the committee's evaluations and recommendations with the student. After a successful defense of the proposal, your mentor will sign your Overall Evaluation of Research Exam form (see Forms) to document their approval.

The recommended structure of the research proposal is the same as that used for F31 proposals submitted to the National Institutes of Health (NIH). The NIH format was selected as an outline for the research proposal because it encompasses the essential elements of a description of any proposed research. In addition, once completed, your proposal can be submitted to the NIH for funding; this is a great accomplishment to have on your c.v. If you would like to submit your proposal to an agency that uses a different proposal format, you may use that alternative format with PRIOR approval of your Ph.D. advisory committee.

General Information and Format for the Written Proposal: You and your mentor are expected to discuss the objectives of the proposal and the concepts to be addressed in your experimental design. However, the advisor, or any other faculty member, shall not review or provide comment on any draft of the proposal until it is distributed to the Ph.D.

advisory committee. The proposal should be your own work but you may have other students or postdoctoral investigators read the proposal for continuity and clarity before it is distributed to their committee.

#### Format of the Research Proposal:

The proposal should not exceed 14 double-spaced pages. Figures and tables are included in the 14-page total but references are not. Prepare the application using Arial, Helvetica, Palatino Linotype, or Georgia typeface in black font color at 11 points or larger. The margins should be at least 0.5 inches on all sides. Tables and figure should be interpretable on their own. That is, they should have a descriptive title and a brief legend that gives the relevant information. References cited in the proposal should include all the authors (i.e., not Jones, et al) and the full title and inclusive page numbers. Twenty to thirty references should be enough for most proposals.

- Specific Aims (1-2 pages): The proposal should begin with a brief overview of the research area that indicates what aspects/issues in the field have not yet been fully addressed. This should be followed by a brief description of the overall hypothesis and the research that is being proposed to test the hypothesis. For most research problems 2 to 3 specific aims (objectives) can be derived from the overall hypothesis you propose to test. The individual aims should be stated using a single sentence format. The aims should reflect a logical progression or approach to the solution of the overall research problem. This section of the proposal should describe how the aims test the overall hypothesis.
- Research Strategy (12-13 pages): The Research Strategy section is divided up into two subsections, Significance and Approach. If you have multiple Specific Aims, you can address Significance and Approach for each Specific Aim individually, or address Significance collectively and provide separate Approach sections for each Specific Aim.
- Significance. In this section, address the following:
  - Explain the importance of the problem or critical barrier to progress in the field that the proposed project addresses.
  - Describe the scientific premise for the proposed project, including consideration of the strengths and weaknesses of published research or preliminary data crucial to the support of your application.
  - Explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.

- Describe how the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field will be changed if the proposed aims are achieved.
- Approach. For each aim, you will need to describe the background information and preliminary studies that are required to put your aims and experimental design into context. This discussion should be a concise review of published research that is relevant to the proposed research. You should summarize and critically evaluate the evidence from the literature that you used as the basis for your hypothesis. It provides the justification for, or the reasons why, you have selected the specific objectives of the research. The preliminary studies that you describe should be directly relevant to the aims you propose. For each specific aim, a series of experiments or field exercises should be described that allows this aim to be accomplished. Experiment(s) you propose to conduct during the first year or two should be described in reasonable detail. However, excessive details should be avoided unless they describe a new/novel method or aspects of a method that are central to the proposed research. Methodology for subsequent experiments (i.e., beyond year 2) can be described more briefly. Students should realize that the direction of future experiments frequently depends on the results obtained in the initial series of experiments. Thus, the student should have thought through alternative approaches that could be discussed in the oral presentation.
- For each aim, address the following:
  - Describe the overall strategy, methodology, and analyses to be used to accomplish the specific aims of the project.
  - Describe the experimental design and methods proposed and how they will achieve robust and unbiased results. Include how the data will be collected, analyzed, and interpreted.
  - Discuss potential problems, alternative strategies, and benchmarks for success anticipated to achieve the aims.
  - If the project is in the early stages of development, describe any strategy to establish feasibility, and address the management of any high-risk aspects of the proposed work.
  - Explain how relevant biological variables, such as sex, are factored into research designs and analyses for studies in vertebrate animals and humans. For example, strong justification from the scientific literature, preliminary data, or other relevant considerations, must be provided for applications proposing to study only one sex.

- If your study involves human subjects, you are expected to explain how relevant biological variables are important to the proposed experimental design and analyses.
- Proposal Preparation: (Some Helpful Hints and Common Pitfalls)
  - You should start writing your proposal with an outline of your hypothesis, specific aims and methodology. However, as you finish writing you should reexamine, and perhaps rewrite, your specific aims. Check that your specific aims actually test your hypothesis and that the proposed experiments address your specific aims. It is not uncommon to rewrite the abstract and specific aims after the proposal is written, to reflect your changing thoughts about your research goals. Additional questions that should be considered: 1) What results do you anticipate? 2) What alternative approaches do you envision should you need to change direction on some aspect(s) of the research? 3) How long will it take to accomplish experiment X or Aim X?
  - Once your first draft is written ask yourself the following questions:
    - Is the proposal overly ambitious?
    - Are my experiments clearly presented?
    - Is there enough detail in the experimental section, at least for the first year or two of research?
    - Have I provided sufficient explanation (justification) concerning why I proposed these specific aims (objectives)?
    - Is the literature review the proper length? Is it too long?
    - What did my peers think of the proposal? Did they follow/understand the proposal?
- Oral Presentation to your committee: A 15- or 20-minute oral presentation should be prepared to proceed the questioning. It should follow the basic outline of the written proposal. The amount of time devoted to each section of the talk (i.e., background; specific aims, etc.) should be similar to the relative extent to which each area was discussed in the written proposal.

#### **Dissertation & Final Oral Exam/Defense**

#### Form & Content

Your Ph.D. advisory committee will serve as your dissertation examination committee. **Two months** before you wish to defend your dissertation, you should resubmit to the Graduate Program Coordinator your **certification form** and, if needed, the names of substituted or additional committee members.

The Doctor of Philosophy, a research degree, requires documentation of your ability for independent investigation presented as a dissertation based on your original research. This dissertation must be submitted to your examining committee **TWO WEEKS BEFORE THE EXAM**. Your examination committee will assess your written dissertation and examine you principally in the area of your research. Approval by this committee as evidenced by their signatures on the Graduate School warrant represents the final step in awarding of the Ph.D. degree by the program. Please bring copies of the Thesis/ Dissertation Defense Performance Evaluation form with you to your defense (see forms).

Dissertation presentations should be planned to be 20-30 minutes with time at the end for questions.

As per Graduate School policy, doctoral degree recipients must acknowledge in the dissertation contributions received from other individuals, including co-authors of published work that appears in the document, such as in designing the research, executing the research, analyzing the data, interpreting the data/ research, or writing, proofing, or copyediting the manuscript. Additionally, the co-advisor/ co-chair role is formalized then by including the following statement in advisor policy: The co-advisor/ co-chair will be designated on dissertation documentation.

While many programs include a dissertation defense seminar immediately prior to the defense, the IGPNS does not. Rather, you will be required to present a seminar in NS 931 during your last semester but this seminar need not coincide with your defense.

Shortly before or after your dissertation defense, contact the IGPNS Director of Graduate Studies to schedule an exit interview. This meeting provides you with the means to provide feedback on the program. Your experiences and insights are invaluable in helping us improve the IGPNS for current and future students.

Please note the following when picking your defense date. You should be enrolled in the semester in which you are defending. At the end of the semester there are dates referred to as the "window period". If you feel you need to complete your dissertation in

the intermediary time between semester, please talk to the Graduate Coordinator to ensure your enrollment in the correct semester.

#### Proposed Standards for Examining Dissertations

Excerpted from the Report by the Ad Hoc Committee on the Future of the Dissertation University of Wisconsin-Madison, April 11, 2016.

An acceptable dissertation completed in partial fulfillment of the PhD degree at the University of Wisconsin-Madison must have the following attributes, as recognized by the student's dissertation committee:

- **Focus**: A dissertation must clearly articulate a research problem or problems, a question or questions. It must specify the limits of the dissertation's investigation with respect to theory, knowledge, or practice within the field of study.
- **Appropriateness**: The methods and techniques applied in the execution of the dissertation must be recognized as appropriate to the subject matter and as fitting, original, and/or aesthetically effective.
- **Clarity**: The dissertation should communicate complex ideas in a form and manner that is clear and understandable to area specialists and, as appropriate, to readers beyond the specialty area.
- **Durability**: The description of the research and its major conclusions should be in a durable form (written or otherwise capable of being permanently archived).
- **Novelty**: The dissertation should embody scholarship that makes a substantive contribution to the field of study. The ideas, concepts, designs, and/or performances should move beyond the current boundaries of knowledge within the field of study.
- **Connectedness**: The dissertation should demonstrate a professional level of familiarity with, and understanding of, contemporary work in the field.
- **Quantity**: The dissertation should demonstrate an appropriately comprehensive investigation of the student's research area or artistic form.
- **Documentation and Replicability**: Documentation in the dissertation should be sufficiently thorough and of an appropriate standard and made available to ensure that the dissertation provides a useful starting point or reference for subsequent researchers, scholars and/ or artists.
- **Professionalism**: A dissertation should reflect high ethical and professional standard

## Doctoral 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: <u>grad.wisc.edu/current-students/doctoral-guide</u>. In addition to what is posted on this webpage from the Graduate School, you must meet all required steps of the program (outlined below), some of these steps may overlap what is required by the graduate school.

- □ Create a ProQuest Account
- □ 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 defense date
- Dissertation Deposit Fee—Go to Grad Portal to pay the \$90 dissertation deposit Fee
- □ Complete the Doctoral Exit Surveys (PDFs of survey completion must be entered into your ProQuest Account)
- □ Survey of Earned Doctorates (SED) Certificate of Completion
- Graduate School Doctoral Exit Survey (DES) Certificate of Completion
- □ Electronically deposit your dissertation (Please see the Guide to the deposit)
- □ Defense
- □ Upload an electronic copy of your fully signed warrant
- □ Receive email confirmation of successful dissertation deposit form the Graduate School Degree Coordinator

After submission of your thesis, you should obtain one copy for free. After that you will need to print an additional copy for the library and for the department of Nutritional Sciences. Talk to the Graduate Coordinator for binding options.

# **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

Canceling Enrollment grad.wisc.edu/documents/canceling-enrollment

Continuous Enrollment Requirement for Dissertators policy.wisc.edu/library/UW-1204

Enrollment Accountability grad.wisc.edu/documents/enrollment-accountability

Minimum Enrollment Requirements

policy.wisc.edu/library/UW-1208

IGPNS non-dissertators 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. Dissertators should enroll in 3 credits in Fall, Spring, and Summer.

# **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: <u>policy.wisc.edu/library/UW-1040</u>), 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: <u>policy.wisc.edu/library/UW-1218</u>. 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 PhD 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**

Graduate students (and postdoctoral fellows) who are supported by National Institutes of Health (NIH) funds are required to create and maintain an individual development plan (IDP) to help them set, track, and achieve their professional goals. 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.

As such, IGPNS has determined that students 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. 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 <u>www.grad.wisc.edu/pd/idp</u>

IGPNS students should use the IDP Reporting System to submit IDP completion evidence to the Graduate Student Coordinator.

#### Graduate students and postdoctoral researchers, <u>click here to access the IDP Reporting</u> <u>System</u>. Instructions are available <u>here</u>.

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: <u>conduct.students.wisc.edu</u>

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 nonacademic misconduct, and procedures related to non-academic misconduct, see:

#### The Graduate School

# Academic Policies & Procedures: Misconduct, Non-Academic grad.wisc.edu/documents/misconduct-nonacademic

#### Office for Student Conduct and Community Standards

Non-Academic Misconduct Website 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

Chapter 18: Conduct on University Lands 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

#### Office of the Vice Chancellor for Research and Graduate Education

#### **Research Policies**

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: <u>hr.wisc.edu/hib</u>. 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: <u>https://guide.wisc.edu/graduate/nutritional-sciences-phd/#policiestext</u>

## Process and Sanctions for Violations of Conduct Standards

The IGPNS Executive Committee will evaluate disciplinary actions and/ or dismissal cases when required. Within boundaries set by the faculty, the IGPNS 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.

IGPNS PhD and MS students are provided with a competitive stipend in addition to tuition remission. The stipend is a 5-year guarantee contingent upon satisfactory academic and research progress. 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 <u>here</u>.

The <u>due date</u> 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).

IGPNS 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, Trainees, and Fellowships.

The Metabolism and Nutrition Training Program (MANTP) is an NIH-Funded program that supports students studying nutrition and digestive diseases. MANTP provides a two-year funding position as a trainee. More information on MANTP can be found here: <u>https://nutrisci.wisc.edu/nih-training-grant/trainingprogram/</u>

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

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: <u>https://scimedgrs.wisc.edu/</u>

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

While IGPNS provides a 5-year funding guarantee contingent upon academic and research progress, 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

<u>External Fellowship Database</u> 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 (optional)**

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

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 every the newsletter every other week during the academic year and monthly during the summer.

# **IGPNS Mentor-Mentee Guidelines**

Effective PhD training in the Interdepartmental Graduate Program in Nutritional Sciences (IGPNS) relies on a strong relationship between the faculty mentor and the PhD 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 PhD 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 PhD 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, selfmotivation, 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 IGPNS, 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 PhD 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 PhD 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 PhD 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?

# **Mentorship Map**

