

Graduate Group in  
**NUTRITIONAL BIOLOGY**

*Survival Guide for Graduate Students*



**2016-2017**

The Graduate Group in Nutritional Biology wishes to recognize the efforts of the authors of the original 1988-89 Survival Guide and the students who have revised the Guide over the past 28 years:

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## TABLE OF CONTENTS

<b>I. INTRODUCTION</b>	<b>6</b>
<b>GRADUATE PROGRAM STAFF</b>	<b>7</b>
<b>II. GRADUATE GROUP DETAILS</b>	<b>9</b>
<b>ADVISORS AND COMMITTEES</b>	<b>9</b>
<b>MAJOR PROFESSOR</b>	<b>9</b>
<b>ACADEMIC ADVISOR</b>	<b>10</b>
<b>RESOURCES</b>	<b>12</b>
KEYS	12
MAIL	12
PAYROLL CHECKS AND FELLOWSHIP CHECKS	12
FELLOWSHIP TRAVEL MONEY	12
GENERAL SUPPLIES	13
PHOTOCOPYING	13
AUDIO/VISUAL EQUIPMENT	13
CONFERENCE ROOMS	13
POSTER PRINTING	13
CAR AND PARKING PASSES	13
DEPARTMENTAL LIBRARIES	14
<b>III. GGNB ENTRANCE REQUIREMENTS</b>	<b>15</b>
<b>IV. MASTERS REQUIREMENTS</b>	<b>16</b>
<b>REQUIREMENTS FOR THE MS DEGREE PROGRAM</b>	<b>16</b>
PLAN I	16
PLAN II	16
<b>MINIMUM DEGREE REQUIREMENTS</b>	<b>16</b>
<b>ADVANCEMENT TO CANDIDACY: THE MASTER'S DEGREE</b>	<b>17</b>
<b>THE MASTER'S COMPREHENSIVE EXAMINATION</b>	<b>18</b>
<b>V. REQUIREMENTS FOR THE PH.D. PROGRAM</b>	<b>19</b>
<b>1) CORE REQUIREMENTS</b>	<b>19</b>
<b>2) AREA(S) OF SPECIALIZATION</b>	<b>20</b>
<b>3) ACADEMIC GUIDANCE COMMITTEE</b>	<b>24</b>
<b>4) PRELIMINARY EXAMINATION</b>	<b>25</b>
<b>5) QUALIFYING EXAMINATION COMMITTEE</b>	<b>26</b>
<b>6) ADVANCEMENT TO CANDIDACY</b>	<b>28</b>
<b>7) DISSERTATION COMMITTEE</b>	<b>28</b>
<b>DESIGNATED EMPHASIS (OPTIONAL)</b>	<b>29</b>

PROGRAM IN INTERNATIONAL AND COMMUNITY NUTRITION (PICN)	29
DESIGNATED EMPHASIS IN BIOTECHNOLOGY (DEB)	30
<b><u>VI. FINANCING AND MANAGING GRADUATE FUNDS</u></b>	<b><u>31</u></b>
<b>FUNDING GRADUATE SCHOOL</b>	<b>31</b>
1) FEDERAL FINANCIAL AID	31
2) FELLOWSHIPS, SCHOLARSHIPS, AND TRAVEL AWARDS	32
3) TEACHING AND GRADUATE STUDENT RESEARCH ASSISTANTSHIPS	34
4) MISCELLANEOUS RESOURCES	35
<b><u>VII. GRADUATE STUDENT RESOURCES</u></b>	<b><u>36</u></b>
<b>ESTABLISHING CALIFORNIA RESIDENCY</b>	<b>36</b>
<b>FILING FEE STATUS</b>	<b>36</b>
<b>PLANNED EDUCATIONAL LEAVE PROGRAM (PELP)</b>	<b>37</b>
<b>WHAT IS THE DIFFERENCE BETWEEN PELP AND FILING FEE?</b>	<b>37</b>
<b>SATISFACTORY/UNSATISFACTORY GRADING OPTION</b>	<b>37</b>
<b>RECOMMENDED UNIT LOAD</b>	<b>38</b>
<b>STUDENT PROGRESS</b>	<b>38</b>
<b>NORMATIVE TIME</b>	<b>38</b>
<b><u>VIII. USEFUL CAMPUS RESOURCES</u></b>	<b><u>39</u></b>
<b>UNIVERSITY LIBRARIES</b>	<b>39</b>
<b>TEACHING ASSISTANT (TA) SUPPORT</b>	<b>39</b>
<b>STATISTICAL CONSULTING SERVICES</b>	<b>39</b>
<b><u>IX. PROGRAMS OF INTEREST</u></b>	<b><u>42</u></b>
<b>CAMPUS SAFETY</b>	<b>42</b>
<b>INTERNATIONAL STUDENTS</b>	<b>42</b>
<b>YOUR GRADUATE STUDENT ASSOCIATION</b>	<b>42</b>
<b>WEBSITES OF INTEREST</b>	<b>43</b>
<b><u>APPENDIX 1: MENTORING GUIDELINES</u></b>	<b><u>44</u></b>
<b><u>APPENDIX 2: DISCUSSION POINTS REGARDING MAJOR PROFESSOR'S (MP) EXPECTATIONS OF GRADUATE STUDENTS</u></b>	<b><u>46</u></b>
<b><u>APPENDIX 3: PREP FOR PRELIMINARY EXAM</u></b>	<b><u>47</u></b>
<b><u>APPENDIX 4: RECOMMENDED STATISTICS COURSES</u></b>	<b><u>49</u></b>
<b><u>APPENDIX 5: TRAINING RESPONSIBILITIES</u></b>	<b><u>51</u></b>
<b><u>APPENDIX 6: INFORMATION ABOUT LABORATORY AND ANIMAL USE</u></b>	<b><u>54</u></b>
<b>ANIMAL USE AND CARE PROTOCOLS</b>	<b>54</b>
<b>ANIMAL HANDLING COURSE</b>	<b>54</b>

<b>CAMPUS ANIMAL FACILITIES</b>	<b>54</b>
<b>LAB SAFETY INFORMATION</b>	<b>55</b>
<b><u>APPENDIX 7: HELPFUL TEXTBOOKS FOR FIRST YEAR STUDENTS</u></b>	<b><u>56</u></b>

## I. Introduction

Welcome to the most diverse graduate group on campus! There is truly “something for everyone” in the Graduate Group in Nutritional Biology (GGNB).

Research activities in nutrition include work with human, laboratory, and domestic and wild animals. Areas of strength within the program include nutritional biochemistry, human/clinical nutrition, animal nutrition, nutrition and development, nutrient bioavailability, nutrition and behavior, nutritional energetics, maternal and child nutrition, nutrition and endocrinology, community and international nutrition, obesity/body composition, physiology, nutrition and chronic disease, culture and nutrition, nutrition and gene expression, nutrition and aging, food preferences, nutrition and immunology, diet and exercise, dietary assessment, protein and lipid metabolism, food intake regulation, nutrition and the gut microbiome, and nutrition education.

Websites you should get to know:

**GGNB:** <http://ggnb.ucdavis.edu>

**Office of Graduate Studies:** <https://gradstudies.ucdavis.edu>

**Office of the Registrar:** <http://registrar.ucdavis.edu>

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## **GRADUATE PROGRAM STAFF**

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### **Graduate Studies Office Contact:**

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**DISCLAIMER**

**The information in this publication is just a guide. Every effort has been made to include accurate information and precisely interpret material found in the Graduate Group in Nutritional Biology Bylaws and policies of the Office of Graduate Studies. The *Survival Guide* is not the final authority on any matter. All changes to degree requirements and policies will be made available in the Graduate Group in Nutritional Biology Website.**

## II. Graduate Group Details

### ADVISORS and COMMITTEES

This section contains information on the various advisors and committees you will encounter while in the Graduate Group in Nutritional Biology. You will also find information regarding how these people can help you meet your degree requirements. This information is important, but is also fairly complicated. Do NOT be concerned if you find this section confusing at first. As you progress through the program, you will find the roles each member plays more understandable. **HINT: KEEP THIS GUIDE AND REFER TO IT LATER WHEN YOU ARE READY TO DECIDE ON THE MEMBERSHIPS OF YOUR DIFFERENT COMMITTEES OR YOUR CLASSES OUTSIDE THE CORE AREA.**

Talk about the membership of your committees with your Major Professor. Be proactive about setting the committees up early and meeting with them regularly. The most important thing to remember is to **ask questions** if you are confused or in doubt about what you should do. The faculty and your peers in the GGNB are generally more than willing to help you understand the differences between the committees and advise you on their membership.

All students will select a MAJOR PROFESSOR and be assigned an ACADEMIC ADVISOR.

- M.S. students will work closely with the members of a single committee, their THESIS COMMITTEE. See “Requirements for Master’s Student” below for more details.
- Ph.D. students will work with four different committees over the course of their academic career: (1) ACADEMIC GUIDANCE COMMITTEE, (2) PRELIMINARY EXAMINATION COMMITTEE, (3) QUALIFYING EXAMINATION COMMITTEE, and (4) DISSERTATION COMMITTEE. See “Requirements for Ph.D. Student” below for more details.

### MAJOR PROFESSOR

In order to be accepted into the PhD or MS degree program in the Graduate Group in Nutritional Biology, a student must have a Major Professor. You may have contacted a faculty member in the Graduate Group directly before you came to Davis, and they agreed to serve as your Major Professor, or a Major Professor was assigned to you based on your research interest as indicated in your application's statement of purpose.

**It is possible to change Major Professors if you find that the two of you are not well matched in terms of research goals or even personality.** While this is best done during your first year, it

has been done later. You should inform your Academic Advisor and the Graduate Program Staff Coordinator, **Bekah Wilson in 1249 Meyer Hall**, of the change as soon as possible. If you need advice about finding a replacement, consult the Chair of the Graduate Group in Nutritional Biology, Carolyn Slupsky, or the Master Advisor, Christine Stewart. Contact information is included in the beginning pages of this booklet.

Your Major Professor is the single most **important** person that you will work with while at UCD. Sometimes your Major Professor is referred to as your “research professor” because he or she is the person you will work with while you conduct your graduate research. Start to review the discussion points in **Appendix 2** with your major professor as soon as you arrive at UCD.

#### **YOUR MAJOR PROFESSOR IS RESPONSIBLE FOR THE FOLLOWING:**

- Mentoring you and is your primary resource for information on research projects.
- Your Major Professor, in consultation with your Academic Guidance Advising Committee, may require you to take additional courses to design a program that is best suited to your academic research and professional needs. Any exception to the core requirements must be supported in writing by your Major Professor, in concurrence with your Academic Advising Committee and then approved by the Executive Committee of the Graduate Group in Nutritional Biology.
- Your Major Professor also serves as chairperson of both your Academic Guidance Committee (PhD students only) and your PhD Dissertation or MS Thesis Committee. After consultation with you and your Academic Advising Committee, your Major Professor informs your Academic Advisor when you are prepared to take your qualifying examination.

In general, even though your Major Professor plays a very important role in providing guidance to you regarding your research projects, he or she may not be as familiar with the latest academic requirements. Therefore, you should consult your Academic Advisor on a regular basis (ideally, every quarter) to report your academic progress. Also, be sure to check with your home department for other possible sources of financial support if your Major Professor is unable to provide that information.

#### **ACADEMIC ADVISOR**

Academic Advisors are officially appointed by the Dean of Graduate Studies to serve in matters affecting graduate students in their academic program. Your Academic Advisor's signature is

the only signature officially recognized by Graduate Studies on a variety of forms and petitions used by graduate students.

In general, your Academic Advisor acts as your first source of academic information and provides assistance with the details of the program. You should meet with your Academic Advisor on a regular basis and keep him or her up to date on your progress. Most Academic Advisors are extremely busy and may not seek you out. **Remember, it is up to you to be proactive!**

#### **YOUR ACADEMIC ADVISOR IS RESPONSIBLE FOR THE FOLLOWING:**

- Your Academic Advisor assists you in forming your Academic Guidance Committee (Ph.D. students only) and reviews and approves your course of study.
- Your Academic Advisor reviews and acts on each petition you might have to drop or add courses, or to take courses on an S/U (satisfactory/unsatisfactory) basis, and approves petitions for late adding and dropping of courses.
- Your Academic Advisor reviews and approves your petition for advancement to candidacy for the MS degree and makes recommendations for the composition of your MS Thesis Committee (MS only).
- After consulting with you and your Academic Guidance Committee, your Academic Advisor recommends to the Dean of Graduate Studies the members of your Qualifying Examination Committee (PhD only).
- After consulting with your Major Professor, your Academic Advisor recommends the members of your Dissertation Committee (PhD only). Your Academic Advisor periodically reviews your progress towards your degree objectives, and files an annual report with the Dean of Graduate Studies concerning your progress toward the completion of your degree requirements. Your Academic Advisor is also responsible for the approval of any Planned Educational Leave (PELP) you might request.
- Finally, your Academic Advisor will serve as your advocate in the rare event that you have conflicts with your Major Professor or any other faculty member. Your Academic Advisor should be your first contact in cases where you have differences of opinions with faculty and feel that you must seek outside assistance. For this reason we typically match a student with an advisor that is not a close collaborator with his or her Major Professor.

## **RESOURCES**

The Graduate Group in Nutritional Biology is your academic home. The Graduate Group is responsible for your curriculum, including coursework requirements, and the constitution of the committees that judge your performance. It is your department home that provides your physical work space and, often, your financial disposition. Your home department will provide your mail, office, lab, and funds for research. Look below to see what services or facilities are available to you. If you do not know whom to contact in your home department, you can talk to the Chief Administrative Officer (CAO) Kelly Wade, 752-4512, kswade@ucdavis.edu.

## **KEYS**

You will need a key for the building your laboratory is housed in, a key or key card to your lab, and perhaps an animal room key. Most departments may charge a deposit fee (~\$20). In most cases, you will only be able to get keys to the building where your lab is located. For example, if your lab is in Cruess Hall, you generally wouldn't be able to get a key to Meyer Hall. But there are always exceptions: you would be able to get keys for Meyer Hall, for example, if you have animals housed there.

## **MAIL**

Departments generally provide some form of mailbox for their students, it may simply be a folder with your name on it, or an actual mail cubbyhole. For example in Meyer Hall, each grad student has a folder with his or her name on it located next to the mailboxes on the third floor. You can get both campus and US mail at these boxes. Mail to UC Berkeley can go through campus mail, but be sure to mark it clearly and put it in the correct outbox. If you are TAing for a department that is not your home department, you might ask to have a mailbox there as well, so that your students can leave messages for you. NOTE: University policy prohibits use of outgoing US Mail service for personal mail items.

## **PAYROLL CHECKS and FELLOWSHIP CHECKS**

Checks paid to you for being a teaching or research assistant, and many other funding sources must be retrieved from the contact person in your department. A good suggestion is to talk to this person about arranging for "direct deposit" of your checks. The university sends your check directly to your bank account each month. This can be very handy if you plan to be out of town doing research for extended periods of time. Your earnings statement is then sent to your email. Some fellowship checks are handled by an office other than your home department; your fellowship award letter includes information on where to pick up your checks. Checks handled by the Nutrition Department can be picked up from Skye Jura in the Nutrition Department office on the 3<sup>rd</sup> floor of Meyer Hall.

## **FELLOWSHIP TRAVEL MONEY**

If you have been awarded a fellowship that includes conference travel money, you must follow specific procedures to request these funds. One key tip: SAVE ALL YOUR RECEIPTS! They must be presented to your departmental contact when you return.

## **GENERAL SUPPLIES**

Policies regarding the purchasing of general office supplies (transparencies, writing paper, stationery, envelopes, file folders, etc.) differ by department. Check with your major professor for policies and ordering instructions.

## **PHOTOCOPYING**

Most departments assign students an account number to be used on the departmental copier; students are then billed for that usage monthly. TAs for specific classes and GSRs working on certain grants will have additional account numbers for use in those cases. For copying and printing done at Shields Library or the Health Sciences Library, your student account will be charged.

## **AUDIO/VISUAL EQUIPMENT**

To checkout data projectors, laptop computers, laser pointers, slide and overhead projectors for student use when making presentations to journal clubs, seminars, or other classes, visit <http://nutrition.ucdavis.edu/about/admin/reservations.html> or email Skye Jura, the Administrative Assistant for the Department of Nutrition, at [nutrfrontdesk@ucdavis.edu](mailto:nutrfrontdesk@ucdavis.edu).

## **CONFERENCE ROOMS**

For reservations of Meyer Hall conference rooms, visit <http://nutrition.ucdavis.edu/about/admin/reservations.html>. These rooms can be reserved for most class-related purposes, qualifying exam practices, lab/group meetings, or study sessions.

## **POSTER PRINTING**

Students housed in the Departments of Nutrition or Animal Science can make use of the Food Chain Cluster Poster printing service. Information about the service is here: <http://foodchain.ucdavis.edu/it/poster.html>. If you are housed in another department, please check with your local IT team for your printing options.

\*Reminder\* Use of the Official UCD Seal is reserved exclusively for the office of the Chancellor. For research posters and most other uses, only the official UCD Wordmark should be used. The UCD Wordmark can be located here:

<http://marketingtoolbox.ucdavis.edu/identity-guide/logos/wordmark.html>

## **CAR AND PARKING PASSES**

Quarterly/Yearly permits can be purchased through the Transportation and Parking Service (TAPS) located on Hutchison Drive, next to the parking structure, or online: <http://taps.ucdavis.edu/>

If you are a bicycle commuter, join goClub through TAPS (<http://goclub.ucdavis.edu/>). This program provides bicycle commuters with complimentary parking passes, a locker at the Activities and Recreation Center (ARC), and a 40% discount on Unitrans 10-ride passes.

This is great for rainy days or times you need to transport items to campus. One-day car passes are also available for purchase in visitor parking lots. If you need one-day parking passes for guest speakers or off-campus research collaborators, you can request them from your home department.

### **DEPARTMENTAL LIBRARIES**

Some departments make copies of completed theses and dissertations available for students to check out. Some also maintain journal subscriptions. Check-out procedures vary by department.

### III. GGNB Entrance Requirements

While ideally you would have met these requirements before attending UC Davis, they can be completed once you are on campus. All entrance requirements must be completed before graduation. (To help in your planning, courses usually taken at UCD to satisfy the requirements are shown in parentheses.)

- 1) **BIOCHEMISTRY:** general, (Biological Sciences 102, 103 or Animal Biology 102, 103)
- 2) **CHEMISTRY:** General Chemistry (Chemistry 2A, 2B, 2C) and Organic Chemistry (Chemistry 8A, 8B)
- 3) **MATHEMATICS:** six units including a course in statistics (Statistics 13 or Agricultural Systems and Environment 120);
- 4) **NUTRITION:** nutritional biochemistry (Animal Biology 102, 103)
- 5) **PHYSIOLOGY:** mammalian or other advanced course at a level that assumes prerequisite knowledge in biology (Neurobiology, Physiology and Behavior 101).

The following courses are highly recommended but not required:

- a) Calculus (Math 16A, 16B, 16C)
- b) Physics: general physics with laboratory (Physics 7A, 7B)

\*Summer courses are offered and generally cover most of the lower division pre-requisites, in the event that additional pre-requisites are needed and there are scheduling conflicts. The general [catalog](http://catalog.ucdavis.edu) is an excellent source for this information: <http://catalog.ucdavis.edu>

## **IV. Masters Requirements**

### **REQUIREMENTS FOR THE MS DEGREE PROGRAM**

Students working toward a master's degree must be registered in residence for at least three quarters. Two regular six-week Summer Sessions may count as the equivalent of one quarter. Usually, all work for the master's degree is done in residence on the Davis campus. However, with the consent of your Graduate Adviser and the Dean of Graduate Studies, courses completed elsewhere may be credited toward your degree. The normal limit for transfer credits is 6 units from another institution, 12 concurrent units (taken as a non-student), or up to one half of the unit requirement if the courses were taken at another campus of the University of California while in graduate status, providing the units were not used to satisfy requirements for another degree.

The Graduate Group in Nutritional Biology designates its master's degree as a Master of Science (M.S.). All M.S. students are expected to complete a thesis (Plan I). Completion of the M.S. by comprehensive examination (Plan II) is not an option unless the student petitions the Executive Committee and the petition is approved.

#### **PLAN I**

Requires completion of 30 units of upper division (100-199 numbers) and graduate courses (200-299 numbers) and submission of a thesis. At least 12 of the 30 units required must be strictly graduate work in the major subject.

#### **PLAN II**

*(By petition only)* Requires completion of 36 units of upper division and graduate courses and satisfactory performance on a comprehensive final examination.

At least 18 of the 36 units required must be strictly graduate courses in the major subject. No more than 9 units of research (299 courses or equivalent) may be used to satisfy the 18-unit graduate course requirement.

A comprehensive final examination in the major subject area may be written or oral or both. You should be informed in advance of the general subject matter on which you will be examined.

A written summary of research results from all 299 coursework must be submitted to and approved by your Major Professor and two other faculty members.

### **MINIMUM DEGREE REQUIREMENTS**

The following is an outline of the minimum requirements for the M.S. degree in Nutritional Biology. Where a determination must be made of the adequacy of your background in a

particular subject, this will be done by your Graduate Adviser in consultation with you and your Major Professor.

All entrance requirements must be completed before graduation. (Assumes entry at B.S. level)

- a. **Animal Biochemistry & Metabolism** (ABI 102 (Fall) &ABI 103 (winter), 5 units each) will be taken during the first year, unless you have previously completed this requirement at UC Davis.
- b. **GGNB Core Classes** ( NUB 210A (Fall), NUB 210 (Winter), NUB 210C (Spring), 5 units each) will be taken during the first year
- c. **Beginning Nutrition Seminar and Presentation Course** (NUT 290, 2 units) will be taken in the first quarter
- d. **Advanced Nutrition Seminar** (NUT 291, 1 unit) must be taken at least two quarters per year
- e. **Research Units** (Nutrition 299, various units):5-9 units for students in Plan II, additional units as necessary to complete the thesis for Plan I. The committees for conduct of the comprehensive oral exams for Plan II students and for evaluation of the MS thesis for Plan I students are comprised of three faculty and are appointed by the Dean of Graduate Studies on advice of your Graduate adviser. **NOTE:** Plan II is by petition only.

Additional classes as required by your Major Professor in consultation with your Graduate Adviser to permit the formulation of a program best suited to your individual academic and professional needs, while at the same time maintaining academic excellence.

- f. **Advanced course in Statistics** (see APPENDIX 4 for example courses that meet the GGNB statistics requirement)
- g. All Academic Senate requirements for unit totals and residency.
- h. You may elect to add courses necessary for qualification as a Registered Dietitian. Information is available from the Undergraduate Staff Advisor for Nutrition.

### **ADVANCEMENT TO CANDIDACY: The Master's Degree**

You must file an official application for Advancement to Candidacy after completion of at least **one-half** of the course requirements for the degree and at least one quarter before completion of all degree requirements. Graduate Studies recommends early advancement, so that actual or potential issues can be solved to avert any crisis. The form is available online, from Graduate Studies in 250 Mrak Hall, or from the Graduate Staff Adviser.

After the form has been signed by your Graduate adviser and Thesis Chair (**Plan I, Thesis Plan only**), it is returned to Graduate Studies after giving a copy to the Graduate Staff Adviser. Once advancement is approved, formal notice of Advancement to Candidacy is sent to you and your Graduate Adviser. If you are not eligible for advancement, you and the department will be informed that action on your application has been deferred and the reason why (e.g., grade point average below 3.0).

On the candidacy application, you and your Graduate Adviser agree on and submit a statement of how you will complete the requirements for the degree. If you must make changes in your program after Advancing to Candidacy, recommendations for such changes must be made to Graduate Studies by your Academic Adviser.

When the advancement to candidacy application is approved by the Dean of Graduate Studies, you will get a copy of it with a packet of information that includes instructions on thesis preparation and submission (Plan I students). The instructions are included in the Graduate Studies page entitled "Information for Degree Candidates" where you should follow the link to "Preparing and Filing the Thesis and Dissertation." There you will find the forms you need to complete and submit to file your thesis with Graduate Studies. If you have any questions, contact the Graduate Studies office.

In order to submit your thesis, you must either be enrolled or on filing fee.

## **THE MASTER'S COMPREHENSIVE EXAMINATION**

### **PLAN II (by petition only)**

The Master's Comprehensive Examination is conducted by a committee of at least three members nominated by your Academic Adviser and appointed by the Chair of Graduate Council. Graduate Studies requires a unanimous pass vote of the Committee for successful completion. If you do not pass, the Committee may recommend, with the concurrence of your Academic Adviser, that you be reexamined one time. Changes in the composition of the Committee may be made only for reasons of clear necessity, e.g. the extended absence of a member from the campus. If you do not pass on the second attempt, you are subject to disqualification from further work as a graduate student. The result of all Master's comprehensive examinations must be reported to Graduate Studies.

Your Graduate Adviser will report to the Dean that you have completed all requirements for your degree, with the date of the examination, or that you have deferred or have failed. The reporting date usually coincides with the last day of the quarter. An affirmative response and the Graduate Adviser's signature certify that you have completed all program requirements for the degree. Your name will appear on the current degree list if you have satisfied the minimum Graduate Studies requirements.

In order to take your comprehensive exam, you must either be enrolled or on filing fee.

## V. Requirements for the Ph.D. Program

There are six major areas that you should be familiar with when planning your PhD: 1) courses fulfilling the Core Requirement 2) courses for your Area of Specialization, 3) your Academic Guidance Committee, 4) the Preliminary and 5) Qualifying Examination, and 6) the Dissertation. The requirements are covered in more detail below.

Ph.D. students will work with four different committees over the course of their academic career: (1) ACADEMIC GUIDANCE COMMITTEE, (2) PRELIMINARY EXAMINATION COMMITTEE, (3) QUALIFYING EXAMINATION COMMITTEE, and (4) DISSERTATION COMMITTEE.

### 1) CORE REQUIREMENTS

(Assumes entry at BS level)

- a. **Animal Biochemistry & Metabolism** (two 5-unit courses): ABI 102 (Fall), ABI 103 (Winter) will be taken first year (unless previously completed at UC Davis)
- b. **GGNB Core Classes** (three 5-unit classes): NUB 210A (Fall), NUB 210B (Winter), NUB 210C (Spring) will be taken first year
- c. **Beginning Nutrition Seminar and Presentation Course** (2-unit course): NUT 290 will be taken first year
- d. **Advanced Nutrition Seminar (Monday Seminar)** (1-unit course): NUT 291 must be taken at least two quarters per year until QE has been completed
- e. **NUT 250 or equivalent** (various units): One graduate level nutrition-related course, e.g., NUT 250 or another course chosen from the Nutrition 250 series. See the table below for examples. Please note, if one of these courses is used to support development of an Area of Specialization, it cannot be utilized to satisfy this requirement.
- f. **Advanced Statistics course** (various units): see APPENDIX 4 for example courses that meet the GGNB statistics requirement
- g. **Research units** (various units): NUT 299 taken as necessary to total 12 units per quarter
- h. **Additional courses** (various units): taken as necessary in consultation with your Major Professor and Academic Advisor to formulate a program best suited to your individual academic and professional goals, while at the same time maintaining academic excellence
- i. **American Dietetic Association courses** (various units): You may elect to add courses necessary for qualification as a Registered Dietitian. Information about these courses is available from the Undergraduate Staff Advisor for Nutrition.
- j. **All Academic Senate requirements for unit totals and residency**

<b>NUT 250 or equivalent courses</b>	<b>Course number (units)</b>	<b>Quarter Offered</b>
International Nutrition	NUT 219 A, B (3, 3)	Winter*, Spring*
Metabolic Homeostasis	NUT 250 (3)	Fall
Nutrition and Immunity	NUT 251 (2)	Winter*
Nutrition and Development	NUT 252 (3)	Winter
Developmental Nutrition	NUT 294A (2)	Fall
International Nutrition Methods	NUT 258 (3)	Spring**
Nutrition During Pregnancy	NUT 260 (6)	Fall
Lactation and Infant Nutrition	NUT 261 (6)	Winter
Child and Adolescent Nutrition	NUT 262 (6)	Spring
Maternal and Child Research Methods	NUT 263 (4)	Fall
*offered every other year, check current UC Davis General Catalog ** check current UC Davis General Catalog or Graduate Group websites for current listings		

## **2) AREA(S) OF SPECIALIZATION**

This is officially defined as “a group of courses selected in consultation with the student's Academic Guidance Committee and Graduate Faculty Advisor to complement the student's Nutritional Biology program in accord with the chosen career orientation.”

Either one or two areas of specialization are required. Normally, a single area of specialization requires 12 units of coursework beyond the core requirement and the basic upper division course in the area. Two areas of specialization normally require 6 units of advanced coursework in each area.

Several areas of specialization and typical courses associated with these areas of specialization are listed for your reference. These should not be considered an exhaustive listing. Your Academic Guidance Committee, in concurrence with your Academic Advisor, can help you

identify a specific area of specialization and courses that best suit your academic and career goals.

Course	Course number (units)	Quarter Offered
<b>Education</b>		
Educational Research Qualitative Research in Education Quantitative Methods in Educational Research: Analysis of Correlational Designs Quantitative Methods in Educational Research: Experimental Designs Concepts of the Curriculum The Psychology of School Learning School-Based Prevention Programs Experiential Learning	EDU 200 (4) EDU 201 (4) EDU 204A (4) EDU 204B (4) EDU 207 (4) EDU 210 (4) EDU 216 (4) EDU 292 (2)	Fall Winter Winter Fall ** Spring Fall Winter**
<b>Epidemiology and Statistics</b>		
Principles of Epidemiology Epidemiologic Study Design Advanced Epidemiologic Methodology Medical Statistics I Medical Statistics II Problems in Epidemiology Study Design Epidemiology of Chronic Disease and Aging	EPI 205A (4)/ MPM 405 (4) EPI 206 (4) / MPM 406A (4) EPI 207 (4) MPM 402 (4) MPM 403 (4) EPI 220 (4) EPI 260 (3)	Fall ** ** Summer II Fall Spring Winter
<b>Food Science and Technology</b>		
Food Chemistry and Biochemistry Chemical and Physical Changes in Food Advanced Food Microbiology Lipids: Chemistry and Nutrition Food Perception and the Chemical Senses	FST 201 (4) FST 202 (4) FST 204 (3) FST 211 (3) FST 227 (2)	Fall Spring Spring Winter Winter

<b>Gut Physiology and Microbial Ecology</b>		
GI Physiology Microbial Biology Microbial Diversity Human Immunology Mechanisms for Microbial Interactions w/ Hosts Microbiota and Health	NPB 114 (3) MIB 200A (3) MIC 105 (3) MMI 188 (3) MMI 200D (3) MMI 280 (3)	Fall Fall Winter Winter, Spring Winter Spring
<b>Immunology</b>		
Nutrition and Immunity Introductory Immunology Immunotoxicology Seminar Current Concepts in Immunology Topics in Immunology Mucosal Immunology Fundamentals of Immunology Immunology Laboratory Advanced Immunology	NUT 251 (2) IMM 201 (4) IMM 292 (2) IMM 293 (4) IMM 296 (2) IMM 297 (2) PMI 126 (3) PMI 126L (2) PMI 270 (3)	Winter* Fall Fall Winter Fall Spring* Winter** Winter** Spring
<b>Metabolism</b>		
Metabolic Homeostasis Physiology of the Endocrine Glands Advanced Physiology (Systemic emphasis)	NUT 250 (3) NPB 130 (4) MCP 210C (5)	Fall Fall Spring
<b>Molecular Biology</b>		
Recombinant DNA Advanced Molecular Biology Human Genetics and Genomics Molecular Genetics and Genomics Macromolecular Structure & Interactions	MIC 215 (3) MCB 121 (3) MCB 162 (3) BCB 210 (3) BCB 211 (3)	Fall Fall, Wi, Spr Fall Fall Fall

Developmental Biology Molecular Biology	BCB 213 (3) BCB 214 (3)	Winter Spring
<b>Public Health</b>		
Learning and Teaching in Public Health Contexts	SPH 203 (2)	Winter
Social and Behavioral Aspects of Public Health	SPH 222 (3)	Winter
Obesity Prevention in Community Settings	SPH 223 (3)	Spring**
Health Communication	SPH/CMN 232 (4)	Spring**
International Health	SPH 295 (1)	Spring
<b>Physiology</b>		
Advanced Physiology (Neuroscience emphasis)	MCP 210A (4)	Fall
Advanced Physiology (Systemic emphasis)	MCP 210B (6)	Winter
Advanced Physiology (Systemic emphasis)	MCP 210C (5)	Spring
Exercise Metabolism	EXB 110 (3)	Spring
Cellular Neuroscience	NSC 221 (4)	Fall
<p>*offered every other year, check current UC Davis General Catalog  **check current UC Davis General Catalog or Graduate Groups</p> <p>BCB: Biochemistry, Molecular, Cellular and Developmental Biology Graduate Group  EDU: Education  EPI: Epidemiology Graduate Group – School of Veterinary Medicine  EXB: Exercise Biology  FST: Food Science and Technology  IMM: Immunology  NPB: Neurobiology, Physiology, Behavior  MCB: Molecular and Cellular Biology  MCP: Molecular, Cellular, and Integrative Physiology  MIB: Microbiology  MIC: Microbiology  MMI: Medical Microbiology</p>		

MPM: Preventative Veterinary Medicine (Veterinary Medicine)  
NSC: Neuroscience  
PMI: Pathology, Microbiology, and Immunology (Veterinary Medicine)  
SPH: Public Health

### **3) ACADEMIC GUIDANCE COMMITTEE**

This three-member committee consists of your Major Professor (as the chair) and two other faculty members, at least one of which is preferably from your area of emphasis. One of your Academic Guidance Committee members can be your Academic Advisor. This Committee must be appointed before the end of your first quarter. You are required to meet with your Academic Guidance Committee at least once per year in order to get a satisfactory mark on your annual Progress Report.

The responsibilities of your academic guidance committee are:

- To meet with you during your **FIRST** quarter on campus, to assist you in planning a program, which will meet the general requirements of the Graduate Group, prepare for the Preliminary Exam, and to help you identify the areas in which you are interested or in which you might need further preparation. (*You may wish to request that your Academic Advisor be present at these meetings if he or she is not already part of your Academic Advising Committee; however this is not required*).
- To meet with you regularly (at least once a year) to discuss your progress and advise you on your study program.
- To evaluate your progress and to determine when you are ready to take your Preliminary and Qualifying Examinations
- To notify your Academic Advisor in writing when the Committee has determined that you are ready to take your Qualifying Examination. Suggestions regarding composition of the Qualifying Examination Committee may be included in the letter of notification.
- Regarding the Qualifying Examination: One member of this advising committee should be a member of the Qualifying Examination Committee. One member should also be from outside of your primary department.

The Academic Guidance Committee retains its responsibilities until your Qualifying Examination is passed and you have advanced to candidacy. You have the right to request that the graduate advisor (academic advisor) attend any of the advising meetings.

#### **4) PRELIMINARY EXAMINATION**

After you have completed the three core courses, you will take your Preliminary Exam during summer following your first year.

The purpose of the Preliminary Exam is to assess your (1) general nutrition knowledge, (2) ability to present verbally and on the white board, (3) and reason through questions. You should be familiar with the following topics:

- Absorption, Distribution, Metabolism, Elimination (ADME) for macronutrients and main vitamins and minerals
- Essential fatty acids
- Essential amino acids, conditionally essential amino acids, limiting amino acids
- DRIs (AMDR, RDA, EAR, AI, UL)
- Gene-nutrient interactions
- Nutrient-nutrient interactions
- Insulin signaling
- Obesity, diabetes
- Metabolic pathways (from ABI 102 and 103)
- Current issues in nutrition (new dietary recommendations, gut microbiota, etc.)
- Basics regarding research methods/tools (cell culture, animal models, human studies, western blots, PCR, etc.)

Helpful tips:

- Make a Preliminary Exam binder and fill it with information as you learn it from class. An example would be a page for vitamin A. The page should contain information such as: (1) The vitamin A requirement, (2) what happens with deficiency/toxicity, (3) food sources, (4) diagram of ADME including enzymes, transporters, and carrier proteins
- Form study groups ***early*** and practice speaking and writing at the white board. Invite people from previous years that have taken the prelim exam.
- Be able to describe/draw what happens when you eat a piece of white bread starting from digestion in the mouth to metabolism in liver in the healthy vs. diabetic state. This is a good test to see if you can clearly and concisely explain a complex process.

- You may not always have the “right” answer or there may not even be one “right” answer, but if you can calmly and logically work your way through a question you will do great.

## **5) QUALIFYING EXAMINATION COMMITTEE**

Although you may think the sole purpose of your Qualifying Examination Committee is to **ask** you questions you cannot possibly answer, it only seems that way. In fact, your Committee acts as a guide to help evaluate progress toward your degree. Remember, you have a part in choosing the membership of your Qualifying Examination Committee! A more complete description of this committee can be found under the discussion of Degree Requirements.

To be eligible to take the Qualifying Examination, you must have satisfied all core requirements, removed all deficiencies, and must have at least a “B” average in all coursework. You must be enrolled all quarters in which you take any portion of the Qualifying Examination. For those who this applies, you need to sign up for the Qualifying Exam three months prior to your VISA expiration. Students are not allowed to be on PELP the quarter before they take their Qualifying Examination.

At the end of 9 academic quarters of enrollment, a graduate student must have advanced to candidacy in order to continue to be employed.

Following advice from your Academic Guidance Committee, your Academic Advisor will recommend to the Dean of Graduate Studies the appointment of a final Qualifying Examination Committee.

This Committee will consist of **five** members who must include at least one member of your Academic Guidance Committee, and which reflects area(s) of specialization that will be included in the examination. One of your members should also be from outside of your primary department. While **you** might be tempted to include your Major Professor on your Committee, this is generally not done for a variety of reasons, not the least of which is the potential conflict of interest that could come into play.

The Qualifying Examination Application can be downloaded from the Graduate Studies Web site: <https://gradstudies.ucdavis.edu/forms/>. This form must be submitted to Graduate Studies at least **4 to 6 weeks prior** to the exam. As soon as your committee is confirmed, you should fill out the form, obtain the signatures and submit it. Graduate Studies does not need the exact date of your exam; the month or quarter in which you expect to take the exam is sufficient. If you are completing a designated emphasis (such as International & Community Nutrition or Biotechnology), the director of the designated emphasis must sign the application in addition to your graduate advisor. **A copy of the form and date/time/location of the exam must be provided to the Graduate Program Staff Coordinator.**

In general, all members of the Qualifying Examination Committee should have achieved a degree at least equivalent to the Ph.D. If the appointment of a Committee member from outside the University of California is necessary, please consult with your Academic Advisor. You'll need to complete an "External Committee Membership" form (link below), along with the suggested Committee member's CV, and submit to the Office of Graduate Studies for approval:

<https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/g311-external-committee-membership-app.pdf>

The primary objective of the PhD final Qualifying Examination is to assess whether you are suitably qualified and prepared to undertake independent research. It also evaluates your knowledge of your secondary field (your area of specialization). You are expected to have a broad understanding of the field of Nutritional Biology and one or more areas of specialization.

The main purpose of the examination is not to test you for factual information, but to evaluate your ability to apply scientific reasoning to the solution of nutrition problems. There may not be any single "right answer" to the questions posed to you. The Committee members are often more interested in the reasoning process you use to develop an answer than in the answer itself. Once the Committee is appointed you are advised to meet with the individual members to discuss their philosophy and general expectations regarding the Qualifying Examination. Also you should have some idea of the members' areas of research and you certainly may request some suggested reading materials from each Committee member. After the examination date is set, you should contact the individual Committee members at least once. It's a good idea to meet with each member in person about 4 weeks prior to the exam to discuss their expectations, especially if you have never met them before; this will allow you to be more comfortable the day of the exam.

A week before the examination date, you may wish to meet with the chair of the Qualifying Examination Committee to discuss the details necessary for the examination, e.g. the actual room set-up, the order of the examiners, etc. Also, you or your chairperson should send a memo to the Committee members reminding them of the date, time, and location of the examination. **IMPORTANT: Please inform your Graduate Program Staff Coordinator of your exam date, time, and location.**

The date of the examination will be arranged between you and your Committee chair. The Committee will conduct the examination and will submit the report of each of its members to Graduate Studies in one of the following outcomes:

- ◆ **PASS;**
- ◆ **NOT PASS;** with the option to retake all or part of the examination within a specified time period, or to satisfy specific requirements;
- ◆ **FAILURE.**

In cases where your Committee reports a Not Pass or Fail, the chair shall inform you of your right to appeal the Committee's decision for cause. Appeals cannot be based on the academic judgment of the Committee. The appeal is directed to the Associate Dean of Graduate Studies, who submits the matter to the Administrative Committee of the Graduate Council for review and recommendation. The chair of the Qualifying Examination Committee is responsible for reporting the votes and supplying other information to Graduate Studies.

The findings of the Qualifying Examination Committee, and especially its overall vote, are given to you immediately after the Examination so that you can know whether you performed acceptably. You should be aware that the final decision is made by the Graduate Council and that one or more negative votes does not necessarily mean a failure. When the decision is unanimous, the Graduate Council has delegated decision authority to the Qualifying Examination Committee itself.

Upon recommendation of the Qualifying Examination Committee and with the approval of the Dean, you may repeat the Qualifying Examination once. The exam must be held by the same Committee except that members may be replaced, with the approval of your Academic Advisor and the Dean, for cause such as extended absence from the campus. Failure to pass the examination on the second attempt will result in disqualification from further study for the doctoral degree at UC Davis. Upon successful completion of the Qualifying Examination, the chair of the Qualifying Examination Committee will report this information to Grad Studies.

## **6) ADVANCEMENT TO CANDIDACY**

After passing your Qualifying Exam, you must complete the Candidacy for the Degree of Doctor of Philosophy Plan B form. You should meet with your major professor to discuss who you would like to serve on your dissertation committee, described in more detail below. The candidacy form should be signed by your Major Professor and your Academic Adviser (no signature from the QE committee chair necessary). When it is filled out and signed, *first* you pay a candidacy fee (\$90.00) at the Cashier's Office (Dutton Hall) and *then* return the form to Graduate Studies (Mrak Hall) with a copy to the Graduate Program Staff Coordinator.

## **7) DISSERTATION COMMITTEE**

The function of this committee is to direct you in your research and to guide you in the preparation of your dissertation. The chairperson of the Dissertation Committee is your Major Professor. The other members of the Committee are nominated by you, your Major Professor, and your Academic Advisor, and appointed by the Dean of Graduate Studies. At least one member must be from outside your home department, and one member should represent your area of emphasis. Once the Dissertation Committee is appointed, it is difficult to have it changed; therefore, it would be advisable for you to meet with the members individually before submitting the Advancement to Candidacy form.

It is charged with three responsibilities.

1. To approve your dissertation topic and the plan that you have developed for independent study.
2. To advise you during the course of your research. You are responsible for informing the Committee of your progress.
3. To evaluate your dissertation, and your defense of the research, to recommend further research if desirable, and finally, to determine the acceptability of your thesis and to recommend to the Dean that you have satisfactorily fulfilled the dissertation requirement.

Detailed instructions on the format of dissertations (theses) can be obtained from the Graduate Studies Office (<http://gradstudies.ucdavis.edu/students/filing.html>). There are forms you have to complete and submit with your dissertation. If you have any questions, please call the Graduate Studies office.

After submission of the dissertation, the candidate is expected to present the results of this research in a graduate group seminar. Please note that in order to file your dissertation, you must either be enrolled or on filing fee.

### **DESIGNATED EMPHASIS (OPTIONAL)**

GGNB Ph.D. students may participate in a Designated Emphasis, a specialization that might include a new method of inquiry or an important field application. The Designated Emphasis is awarded in conjunction with the Ph.D. degree and is signified by a transcript designation; for example a “Ph.D. in Nutritional Biology with a Designated Emphasis in Biotechnology”. The GGNB is currently associated with two Designated Emphasis programs. Please see below for more details on each of these programs or visit <https://gradstudies.ucdavis.edu/programs/designated-emphases> for a listing of all Designated Emphases at UC Davis.

\*Please note that a Designated Emphasis is separate from an “Area of Specialization” for GGNB students.

### **Program in International and Community Nutrition (PICN)**

Students admitted to the Graduate Group in Nutritional Biology are eligible to participate in the activities of the Program in International and Community Nutrition (PICN), including the weekly seminar. Doctoral students can elect to complete the “Designated Emphasis in International Nutrition.” There is some overlap between courses for the Designated Emphasis and the doctoral degree/area of specialization. It is estimated that the Designated Emphasis may add 15 credits to the academic program. For more information, refer to the PICN website <http://picn.ucdavis.edu/> or contact program director Dr. Christine Stewart, [cpstewart@ucdavis.edu](mailto:cpstewart@ucdavis.edu).

### **Designated Emphasis in Biotechnology (DEB)**

This inter-graduate group program provides Ph.D. students with training in the area of biotechnology and includes exposure to bioethics, the business and legal aspects of biotechnology, and a 3-6 month internship at a biotechnology company or research laboratory in another college or national laboratory. For more information, refer to the DEB website <http://www.deb.ucdavis.edu/> or contact the program director, Dr. Judith Kjelstrom, jakjelstrom@ucdavis.edu.

## VI. Financing and Managing Graduate Funds

### **FUNDING GRADUATE SCHOOL**

Financial support for graduate study at UC Davis is available in several forms: 1) financial aid, 2) fellowships, scholarships, grants and travel awards, and 3) teaching and research assistantships. Talk with your major professor to determine what funding is available to you and how they expect your graduate studies to be funded.

Each type of financial support requires a different application process. The best resources to assist with this are 1) your major professor, 2) GGNB program coordinator & Academic Advisors, 3) Office of Graduate Studies at 250 Mrak Hall website:

<https://gradstudies.ucdavis.edu/current-students/financial-support>

### **IMPORTANT NOTES:**

\*\*\*Taxes may not be withheld from the funds listed below. You may need to set money aside each month to pay for your taxes.

\*\*\*First stipend disbursement and/or paycheck is **November 1<sup>st</sup>**. You will be in school for over 1 month without receiving any form of money.

### **1) FEDERAL FINANCIAL AID**

All graduate students (US citizens, permanent residents or immigrants) are **required** to file a “Free Application for Federal Student Aid” (FAFSA) as early as possible, but no later than March 1. This form, submitted directly to the Federal Student Aid Program Office, Iowa City, Iowa, is used to determine financial need only. Financial need is a component of the eligibility criteria for many fellowships, and for all forms of financial aid. The FAFSA may be obtained from the Financial Aid Office or online: <http://www.fafsa.ed.gov>.

## 2) FELLOWSHIPS, SCHOLARSHIPS, AND TRAVEL AWARDS

Internal fellowships and scholarships are awarded once per year for the following year based on academic merit. Applications are available online at <https://gradstudies.ucdavis.edu/current-students/financial-support>. There are many types of internal and external awards described at the Graduate Studies website listed above, and an entire staff, located at 250 Mrak Hall, which is dedicated to assist graduate students to obtain funding, utilize this resource. Final date for filing applications is usually JANUARY 15. External fellowship opportunities may be found on the Grad Studies website; additionally, GGNB coordinators will disseminate additional external fellowships to students and faculty as they become available. Be sure to look into these (typically sent in emails) to determine your eligibility, as they may present opportunities not provided by the University or department.

Awards are made as a mark of honor, primarily on the basis of scholarship and promise of outstanding academic and professional contribution. In evaluating applications, consideration is given to the extent and quality of previous undergraduate and graduate work, evidence of ability in research or other creative accomplishment, evidence of intellectual capacity, and promise of productive scholarship. Items to be included in this evaluation are: graduate grade point average, academic transcripts, statement of purpose, letters of recommendation, and other documentation, such as publications and awards. The minimum cumulative graduate grade point average required for most financial awards/assistance is 3.0. Financial need or the availability of other sources of support in your graduate program is not relevant to the evaluation of academic merit. However, financial need may be an additional criterion for some fellowships. **Common awards are described below; these and many more can be found at:** <https://gradstudies.ucdavis.edu/current-students/financial-support>

**GRADUATE PROGRAM FELLOWSHIP ALLOCATION (GPFA)**-formerly referred to as “BLOCK GRANT” To be eligible you must complete the Graduate Studies Continuing Student Fellowship application (<http://gradstudies.ucdavis.edu/ssupport/internal.html>) and the Graduate Group in Nutritional Biology form (e-mailed to you around December 1st). All documents must be submitted to the Graduate Staff Advisor by January 15th if you are in your first year; your statement of purpose should describe your proposed research activities. If you have prepared a full research proposal, you may submit it. If you are in your second year (or beyond), your statement of purpose should be a research proposal and references are not necessary.

**DISSERTATION YEAR FELLOWSHIP** is open to domestic graduate students, in their final stages of doctoral work, who demonstrate strong potential for university teaching and research. It includes a stipend of \$16,000 plus fee remission for the dissertation year, a research allowance of \$500, and up to \$470 for travel to other UC/CSU campuses to present their research. You may download and print the application for the Dissertation Year Fellowship or obtain one from the Office of Graduate Studies. You must submit your application to the Graduate Program Staff Coordinator (1249 Meyer Hall) by JANUARY 15.

**JASTRO SHIELDS GRADUATE RESEARCH SCHOLARSHIP** program provides annual awards to students with outstanding research proposals who are either in the College of Agricultural and Environmental Science or who are working with a major professor with an appointment to the Agricultural Experimental Station. Awards are available in the summer. Applications are usually available in spring quarter (deadline for submission usually May 1st). The amount of the award is based upon the allocation given to the group by the College of Agricultural and Environmental Science, usually \$3,000.

**UCD HUMANITIES GRADUATE RESEARCH AWARD** gives up to \$1,500 for financial support of research for masters or doctoral students. This is usually applied for within the Internal Fellowships Application, due during the fall quarter.

<https://gradstudies.ucdavis.edu/current-students/financial-support/internal-fellowships/application-and-descriptions>

**FULBRIGHT GRANTS FOR GRADUATE STUDY ABROAD and the FULBRIGHT-HAYS**

**DOCTORAL DISSERTATION RESEARCH ABROAD PROGRAM:** The purpose of the Fulbright scholarship program is to increase mutual understanding between the people of the United States and other countries through the exchange of persons, knowledge and skills.

Fullbright scholars are provided round trip travel, maintenance for the tenure of the award, a research allowance, and tuition waivers, if applicable. Travel grants provide round-trip transportation to the country of study. Selection is based on the applicant's academic or professional record, language preparation, feasibility of the proposed study project and personal qualifications. These are administered through the Graduate Studies office in Mrak Hall. The campus deadlines for these awards are usually in the Fall Quarter.

<http://www.iie.org/fulbright>.

**OFFICE OF RESEARCH** has a “funding information” list at their website:

<http://www.innovationaccess.ucdavis.edu/home.cfm?id=OVC,0>

**GRADUATE STUDENT TRAVEL AWARDS** for travel to professional meetings. There are fall and spring awards. [http://gradstudies.ucdavis.edu/ssupport/internal\\_travel.html](http://gradstudies.ucdavis.edu/ssupport/internal_travel.html)

**AMERICAN SOCIETY FOR NUTRITIONAL SCIENCES (ASN) GRADUATE RESEARCH TRAVEL AWARD** is based on abstracts submitted. Applications are available with the FASEB packet each year. [www.faseb.org](http://www.faseb.org)

### 3) TEACHING AND GRADUATE STUDENT RESEARCH ASSISTANTSHIPS

**Graduate Student Research Assistantships (GSRs)** are an excellent opportunity to gain invaluable experience in areas important to your graduate education and to receive financial support at the same time. Information and application materials for GSRs are available from the department in which you want to work. Work-study Research Assistantships are awarded by the GGNB. Please indicate to the GGNB Fellowship Committee Chair your interest in obtaining a work-study appointment, and verify your eligibility through filing the FAFSA.

Holding a **Teaching Assistantship (TA)** is a great way to help fund your graduate education. As a TA, you will be responsible for assisting the class professor in running undergraduate courses and have responsibilities such as teaching discussion sections, holding office hours and grading. TA positions will cover the cost of your in-state tuition, most fees, and will provide either a 25% or 50% stipend. 25% TAs require no more than 10 hours of work per week while 50% TAs require no more than 20 hours of work per week. There also specific eligibility criteria that must be met in order to hold a TA position. Please see the Grad Studies page on [Student Teaching and Research](#) for more information on job description, general eligibility and restrictions, tuition and fee remission and salary scales.

GGNB students may apply for Teaching Assistantships in any department in which the individual believes he or she qualifies. Every department has its own hiring process, so we encourage you to reach out to the department in which you wish to gain an appointment directly. The Nutrition department coordinators disseminate applications for TA positions and preferences typically before the start of the academic year. Please see the following links for more information on TAs in other departments:

- [Nutrition](#) (updated 4/2014)
- [Neurobiology, Physiology & Behavior \(NPB\)/Molecular and Cellular Biology](#)
- [Animal Science](#)
- [Food Science and Technology](#)

**Research Mentorship Program** provides research assistant support to PhD students who are in the early stages of their graduate research. Recipients will hold a 50% research assistant appointment for up to one year (you may apply for a second year). You may download and print the application for the Research Mentorship Program or obtain one from the Office of Graduate Studies. <http://gradstudies.ucdavis.edu/ssupport/>

#### 4) MISCELLANEOUS RESOURCES

**UC Davis Student Parent Child Care Funding Program** has two sources: (1) Community Based Care Grant (CBCG) for undergraduate, graduate and professional students, and (2) Graduate Student Child Care Grant (GSCCG) for graduate and professional students only provides \$900 to \$1,350 per quarter for child care expenses, regardless of financial need. Apply at:

[http://worklife-wellness.ucdavis.edu/family\\_care/children/childcaresub.html](http://worklife-wellness.ucdavis.edu/family_care/children/childcaresub.html)

**Dean Witter Fund** provides a limited amount of money to help offset the cost of room rental and food & beverage expenses for events intended to promote faculty/student academic interaction in informal settings. Graduate students or faculty may act as a sponsor and apply for Dean Witter funds. The sponsor may be reimbursed for up to \$10 per individual with a maximum of \$100 per event. Apply at: <http://gradstudies.ucdavis.edu/current-students/financialsupport/internal-fellowships/dean-witter-fund>

Other helpful links:

- Graduate Studies web site has information about funding: <https://gradstudies.ucdavis.edu/current-students/financial-support>
- Grad Financial Aid: 530-752-9246
- Student Accounting (located in Dutton Hall, 2<sup>nd</sup> Floor): <http://studentaccounting.ucdavis.edu/>
- Residency and Tuition: <http://registrar.ucdavis.edu/html/slr.html>
- International Students: <http://siss.ucdavis.edu/>
- Direct Deposit: <https://accounting.ucdavis.edu/DirectDeposit/>
- Loans (emergency, short-term, and assistance): <http://financialaid.ucdavis.edu/graduate/types/loans.html>

## **VII. Graduate Student Resources**

### **ESTABLISHING CALIFORNIA RESIDENCY**

To be considered a resident you must prove the following:

- Minimum of 366 days in California
- Intend to remain in California
  - Obtain California driver's license
  - Register to vote in California
  - File taxes as California resident
- Financial independence (see below)

You are considered financially independent if you are over the age of 24 by December 31 of the year resident classification is sought. If you are under the age of 24 and your parents qualify as California residents you do not have to verify that you are financially independent. If your parents are not California residents you must demonstrate that you were not claimed as dependents for the tax year immediately preceding the term for which a resident classification is sought. If you are a graduate student instructor, teaching or research assistant, or teaching associate employed at 49% time or more (or awarded the equivalent in University-administered funds, e.g., grants, stipends, fellowships) in the term for which resident classification is sought you may be exempt from the financial independence requirement.

California residence is difficult to establish if you have legal connections to another state or country (e.g. state tax liability, driver's license, voter's or vehicle registration). If you moved to California primarily for educational purposes you are not eligible for a resident classification for purposes of tuition and fees.

### **FILING FEE STATUS**

Filing fee was established to assist you when you have completed all requirements for your degree except to take the M.S. comprehensive examination, file your M.S. thesis, or Ph.D. dissertation. Filing fee is a one-time fee of \$162.00. Filing fee status is for ONE QUARTER ONLY.

To be eligible for filing fee status you:

- Must have advanced to candidacy
- No longer require university facilities including lab space. (You can buy library and ARC privileges, and the health insurance)
- Cannot use faculty time other than the time involved in the final reading of the thesis or dissertation or in holding the M.S. comprehensive exam
- Not eligible to hold any academic appointment title for more than 1 quarter (unless you have previously used that 1 quarter while on PELP or an earlier filing fee)

- Cannot receive a fellowship or financial aid

Filing fee applications are available in the Graduate Studies office. There is more information on the form and online in the Graduate Studies Web site

<https://gradstudies.ucdavis.edu/sites/default/files/upload/files/current-students/g305-filing-fee-app.pdf>. The form requires the signature of your Graduate Faculty Advisor and the chair of your thesis/dissertation committee (for M.S. Plan I and Ph.D. candidates). The fee must be paid before Graduate Studies will process the form.

You must either be registered or on filing fee when you submit your dissertation or thesis, or take your M.S. comprehensive exam.

If for some reason you have to return to registered status after going on filing fee, you will have to complete the readmission application

### **PLANNED EDUCATIONAL LEAVE PROGRAM (PELP)**

The Planned Educational Leave Program is designed to allow you to suspend your program of study for good cause (illness, temporary departure from the University, financial problems, etc.). You can leave the campus and return at the end of your PELP to enroll and continue your study and research.

PELP is recommended if you are certain which quarter you will return and if you will be away a maximum of 3 quarters. (If you are not certain of your return date, it is suggested that you use the readmission application when you are ready to continue your study.) The form requires the approval of your academic advisor, graduate program staff coordinator, Student Accounting, SISS (for international students), and a \$70 non-refundable fee.

Your PELP can be lengthened or shortened with the approval of those listed above and the Dean of Graduate Studies. Extension of PELP is considered on the basis of extenuating circumstances. More information about PELP is available from your Academic Advisor and your Graduate Program Staff Coordinator, 1249 Meyer Hall.

### **WHAT IS THE DIFFERENCE BETWEEN PELP AND FILING FEE?**

PELP is for those students who have not completed all their requirements, and will be away from campus up to 3 quarters. This is for students who intend to return to campus and enroll in classes. Filing fee is for students who have advanced to candidacy, no longer need University facilities, and only need to take their M.S. comprehensive exam, or submit their thesis or dissertation.

### **SATISFACTORY/UNSATISFACTORY GRADING OPTION**

The purpose of satisfactory/unsatisfactory (S/U) grading option is to allow graduate students the opportunity to explore areas unrelated to the student's academic discipline. No program core requirements may be taken S/U unless prior approval has been granted by the Graduate Council. Only one graded course per quarter may be taken S/U. In lower or upper division work (courses numbered 1-199) S means a grade of C- or better; in graduate work (courses numbered 200) an S means B- or better.

### **RECOMMENDED UNIT LOAD**

No more than 16 units of upper division (100 level) and graduate (200 level) courses should be taken in combination per quarter. Normally, no more than 12 units of 200 level course work should be taken per quarter. All full-time students must be enrolled in a minimum of 12 units per quarter.

### **STUDENT PROGRESS**

Student progress is reviewed annually by the student's GGNB Academic Advisor. If progress is unsatisfactory, a written notice will be sent to the student and to the dean of Graduate Studies; receipt of such notice is regarded as being on academic probation. The dean of Graduate Studies will provide notification to the student, indicating time limit and work required for completion in order to attain a satisfactory evaluation. If the student fails to meet the requirements specified, the student will be subject to disqualification from further graduate study in the program.

### **NORMATIVE TIME**

Perhaps you have heard horror stories of people coming to graduate school and never leaving! While that may have happened in the past, it is expected that you will finish the MS program within three years and the PhD program within five years. Further, it is expected that you will complete your PhD Qualifying Examination within the first three years (nine quarters of residency plus the intervening summer sessions). Those of you who complete an MS degree in Nutritional Biology at UCD and then transfer to the PhD program are expected to complete your Qualifying Examination within your first year in the PhD program.

Any deviations from or problems you might have in meeting the normative time guidelines should be discussed with your Graduate Advisor (Academic Advisor) and then filed with the Executive Committee of the Graduate Group.

NOTE: Failure to provide appropriate resolution to these progress delays carries with it serious penalties. If you have not completed the MS program by the end of three years, you will have to reapply for admission to the program. If you have not completed the requirements for the PhD by the end of the sixth year, you will have to retake your Qualifying Examination.

If you fail to provide a time table or program plan that addresses any problems you may have with completing your degree within the normative time, your Graduate Advisor (Academic Advisor) is obligated to file an Unsatisfactory Progress Report with the dean of Graduate Studies and you will be prevented from receiving any further institutional funding.

## VIII. Useful Campus Resources

### UNIVERSITY LIBRARIES

Research can be made easier if you know how to maximize your resources! Did you know that you can connect remotely to the UC Davis library and access research articles from anywhere? Additionally, if you can't find the article you are looking for, you may be able to request a copy from another UC library!

For instruction on using the library: <http://www.lib.ucdavis.edu/dept/instruc/>

To connect from off campus: <https://www.lib.ucdavis.edu/ul/services/connect//>

Request interlibrary loan for books and journal articles: <http://www.lib.ucdavis.edu/dept/ill/>

### TEACHING ASSISTANT (TA) SUPPORT

Are you serving as a TA during your time in graduate school? The Center for Educational Effectiveness (CEE) offers a variety of resources for getting started or improving as a TA. For new TAs, the CEE hosts a required TA orientation held prior to the start of fall quarter each year. For seasoned TAs, the CEE offers workshops for developing teaching skills and consultations about your classroom teaching technique complete with video recordings of your class. The CEE also provides test analysis support (scoring scantrons from in-class exams). For appointments and for more information about the CEE, visit:

<http://cee.ucdavis.edu/index.html>.

### STATISTICAL CONSULTING SERVICES

#### *Statistical Laboratory*

UC Davis  
One Shields Avenue  
4118 Mathematical Sciences Building  
Davis, California 95616  
Ph: 530.554.1478  
Fax: 530.752.7099

Statistical Consultation: <http://www-stat.ucdavis.edu/stat-lab/index.html>

Services include providing advice to individual researchers in preparing statistics-related sections of proposals for extramural funding, assisting researchers on the design of prospective experiments or studies, conducting or giving advice concerning statistical data analysis, and planning or executing statistically motivated computation. Inquiries on consulting contracts may be directed to the Stat-Lab staff at [statlab@ucdavis.edu](mailto:statlab@ucdavis.edu)

Appointments: First-time Client or New Project: Please complete the Statistical Consulting Form and submit for an appointment.

Graduate students who have advanced to candidacy may receive consultation at no cost for thesis/dissertation related advice (although it is \$95 per hour for associated programming or computation). A copy of the Advanced to Candidacy form should be brought to the first meeting.

### ***Social Science Data Service***

University of California, Davis  
One Shields Avenue  
Davis, CA 95616  
Ph: (530)752-4009

Statistical Consultation: <http://www.ssds.ucdavis.edu/consulting/index.html>

SSDS provides consulting services on a range of software and data sources used in social science research. Staff can assist with questions regarding the use of SSDS computers, as well as statistical and data-related programming. Limited statistical consulting also is available on both basic and intermediate methods including multiple regression, crosstabs, t-tests, and other procedures. In addition, our staff is knowledgeable about social science data sources and provides access to a variety of data sources.

The Social Science Data Service supports the following statistical packages:

- R (UNIX, Windows)
- SAS (UNIX, Windows)
- SPSS (Mac, Windows)
- Stata (UNIX, Windows)

### ***Clinical and Translational Science Center (CTSC) Biostatistics***

The Biostatistics Group assists researchers with all sizes and types of projects, from simple data analyses to large, multi-center clinical trials. Specific services include:

- Grant proposal preparation
- Study design/sample size calculation
- Statistical analysis plan
- Data analysis and interpretation
- Manuscript review and preparation

Students can receive up to two hours of free support. While this time can provide support for various areas listed above, this amount of time is generally not sufficient for conducting analyses unless they are relatively straight-forward.

Please see the CTSC biostatistics website for more information:

<http://www.ucdmc.ucdavis.edu/ctsc/area/biostatistics/>

Also see their presentation on How to Work with a Statistician for additional tips:

[http://www.ucdmc.ucdavis.edu/ctsc/area/biostatistics/Documents/Working%20with%20Statisticians\\_April\\_26\\_2012\\_Final.pdf](http://www.ucdmc.ucdavis.edu/ctsc/area/biostatistics/Documents/Working%20with%20Statisticians_April_26_2012_Final.pdf)

## **IX. Programs of Interest**

The UC Davis campus has a wide range of organizations and activities to complement your academic work, to entertain you, and to give you support. Below is a **small** sample of campus resources that might interest you. All of these organizations and dozens more can be accessed through the UC Davis Web site at <http://www.ucdavis.edu>.

### **CAMPUS SAFETY**

UC Davis is not a crime-free zone. The Campus Police Department has many programs to help all members of the campus community be safe. Through the Police Department, the Aggie Hosts offer an Escort Service **530-752-COPS (2677)** for anyone needing to walk to their bike, car, a bus, or to another building for FREE. The service is available 365 days of the year from 5:30 p.m. to 3:00 a.m. 7 days a week, excluding major holidays. For more information about the Campus Police Department visit <http://police.ucdavis.edu>  
<http://police.ucdavis.edu>

### **INTERNATIONAL STUDENTS**

The best source of information for international students is the Services for International Students and Scholars office (SISS), 100 University House, 752-0864, [siss@ucdavis.edu](mailto:siss@ucdavis.edu), <http://siss.ucdavis.edu>. It is important that you contact SISS before Changing Major, Changing Degree Objective, going on PELP (Planned Educational Leave Program), and going on Filing Fee. Changes in your academic status could change your visa.

### **YOUR GRADUATE STUDENT ASSOCIATION**

The Graduate Student Association (GSA) is the officially recognized student government for UC Davis graduate students. GSA is a vital communications network linking you and other graduate students from all corners of the campus to the UCD administration. GSA provides a place for discussion of any issue affecting graduate student academics and quality of life.

The Graduate Group in Nutritional Biology has two GSA representatives. For GSA to advocate for your concerns effectively, input is needed from the graduate student body. GSA provides advocacy, services and information to all graduate students, but in turn, needs your participation. Your voice counts!!

GSA General Assembly meetings are held once a month and are open to all. Graduate students are elected to the GSA Executive Council in a variety of positions, mandated to carry out the policies and/or functions of the organization. A small portion of your registration fees is used to support the activities of GSA. For more information call 752-5158, Room 253 South Silo, [gsa@ucdavis.edu](mailto:gsa@ucdavis.edu), <http://gsa.ucdavis>.

## **WEBSITES OF INTEREST**

### **Campus Recreation's Activities & Recreation Center**

<http://campusrecreation.ucdavis.edu>

### **Campus Violence Prevention Program**

Fire/Police Building, Kleiber Drive, 752-3299, [violenceprevention@ucdavis.edu](mailto:violenceprevention@ucdavis.edu)

<http://cvpp.ucdavis.edu>

### **Center for Excellence in Teaching and Learning**

1321 Harin Hall, 530-752-6050, <http://cetl.ucdavis.edu/http://cetl.ucdavis.edu/>

### **Cross Cultural Center,**

1<sup>st</sup> floor Student Community Center, 752-4287, <http://ccc.ucdavis.edu>

### **Harassment & Discrimination Resources**

Anonymous Call Line: 734-2255; <http://shep.ucdavis.edu/>

### **Information Educational Technology (IET) – Student Computing Services**

Student Computing Services Help Desk 754-HELP

<http://iet.ucdavis.edu/>

### **Internship and Career Center**

2<sup>nd</sup> and 3<sup>rd</sup> floor, South Hall, 752-2855, <http://iccweb.ucdavis.edu>

[icchelp@ucdavis.edu](mailto:icchelp@ucdavis.edu)

### **Lesbian, Gay, Bisexual, Transgender Resource Center**

Student Community Center, Suite 1400, 752-2452, <http://lgbcenter.ucdavis.edu/>

### **Student Academic Success Center**

2205 Dutton Hall, 530-752-2013, <http://success.ucdavis.edu/>

### **Student Disability Center**

54 Cowell Building, 752-3184, 752-6833 TTY, <http://sdc.ucdavis.edu>

### **Student Health and Counseling Services**

<http://shcs.ucdavis.edu/>

### **Transportation and Parking Services (TAPS)**

<http://www.taps.ucdavis.edu> 752-8277

Parking permit information and sales, commuter services, bicycle registration program, university airport.

## **Women's Resources and Research Center**

First Floor, North Hall, 752-3372, <http://wrrc.ucdavis.edu>

The WRRC offers discussion groups including a support group for women graduate students.

## **Appendix 1: Mentoring Guidelines**

Developed by the UC Davis Graduate Council

June 24, 1999

Graduate Council recognizes that the mentoring of graduate students by faculty is an integral part of the graduate experience for both. Faculty mentoring is broader than advising a student as to the program of study to fulfill coursework requirements and is distinct from formal instruction in a given discipline. Mentoring encompasses more than serving as a role model. Because of the uncertainty as to the nature of mentoring, the UC Davis Graduate Council has outlined the following mentoring roles to guide the relationship between faculty and graduate students. Faculty and graduate students must realize that, while the major professor will be the primary mentor during a student's career at UCD, many of the mentoring "functions" defined below may be performed by program faculty other than the major professor. An important corollary to this recognition is that faculty members must realize that much of their interaction with all students has an important mentoring component to it. Graduate students also have responsibilities to insure successful mentoring and these are also indicated below.

Faculty have a responsibility to mentor graduate students. Mentoring has been defined as....

- I. Guiding students through degree requirements. This means:
  1. Providing a clear map of program requirements from the beginning, making clear the nature of the coursework requirements and qualifying examination, and defining a timeline for their completion.
  2. Providing clear guidelines for starting and finishing dissertation or thesis work, including encouraging the timely initiation of the dissertation or thesis research.
  
- II. Guiding students through thesis or dissertation research. This means:
  1. Evaluating clearly the strengths and weaknesses of the student's research.
  2. Encouraging an open exchange of ideas, including pursuit of the student's ideas.
  3. Checking regularly on progress.
  4. Critiquing written work.
  5. Providing and discussing clear criteria for authorship of collaborative research.
  6. Assisting in finding sources to support dissertation research; such as, teaching assistantships, research assistantships, fellowships, etc.
  7. Being aware of student's research needs and providing assistance in obtaining required resources. For example, serve as the student's advocate for necessary desk and/or laboratory space.

III. Guiding students through professional development. This means:

1. Providing guidance and serving as a role model for upholding the highest ethical standards.
2. Treating students respectfully.
3. Encouraging and critiquing oral and written presentations.
4. Encouraging participation in professional meetings of regional groups as well as of learned societies.
5. Facilitating interactions with other scholars, on campus and in the wider professional community.
6. Assistance with applications for research funding, fellowship applications, and other applications as appropriate for the respective discipline.
7. Being the student's advocate in academic and professional communities.
8. Providing career guidance, specifically assistance in preparation of CV and job interviews, and writing letters of recommendation in a timely manner.
9. Recognizing and giving value to the idea that there are a variety of career options available to the student in her/his/your field of interest and accepting that the student's choice of career options is worthy of your support. For example, guiding the student to teaching opportunities when appropriate for the student's goals.

*As partners in the mentoring relationship, graduate students have responsibilities. As mentees, students should:*

- I. Be aware of their own mentoring needs and how they change through their graduate tenure. Graduate students should discuss these changing needs with their mentors.
- II. Recognize that one faculty member may not be able to satisfy all of a student's mentoring needs. Seek assistance from multiple individuals/organizations to fulfill the mentoring roles described above.
- III. Recognize that their mentoring needs must respect their mentor's other responsibilities and time commitments.
- IV. Maintain and seek regular communication with their mentors, especially their major professor.

While we have tried to provide examples of what mentoring means, we recognize that each discipline will provide its own special set of mentoring needs and challenges.

## **Appendix 2: Discussion points regarding Major Professor's (MP) expectations of graduate students**

1. MP's general philosophy of mentoring- general availability and preferred communication strategy; whom to ask different types of questions
2. Possible research topics and criteria for choosing a projects degree of independence of student's research
3. Need for student to seek input from guidance and thesis/dissertation committees on a regular basis (at least once a year)
4. Lab group meetings; expectations regarding participation
5. Expected time on research/in lab at each stage- type of research activities (general training vs. student's own work); time spent in courses vs. research
6. Funding arrangements- responsibility of student to apply for fellowships, TA and other sources of support
7. Expectations for 299/230 credit (standard is 3 hr/unit)
8. What MP considers "satisfactory progress"
9. MP's responsibility in providing feedback on student's work (type of feedback; timing); how often MP expects to meet with student at each stage
10. Writing skills of student
11. Student's skills at conducting literature reviews
12. Space for student: desk, lab; computer access
13. Expected timeline (approximate) for degree (see Survival Guide for normative time)
14. Formation of qualifying exam committee
15. Student's role in writing grant proposals
16. Expectations for the thesis or dissertation, and for an exit seminar (typical expectation for PhD dissertation is a lit review plus 3 publishable papers; for MS thesis a lit review and 1 publishable paper)
17. Authorship of publishable papers (see "Ethics in Authorship" in Graduate Advisers Handbook)
18. Student attendance and participation at professional meetings; funding for travel costs; oral vs. poster presentation preference
19. MP's role in career guidance, help preparing student's CV, writing letters of recommendation

## Appendix 3: Prep for Preliminary Exam

**Memo from Marta Van Loan, Ph.D., former Chair and Master Advisor of the Graduate Group in Nutritional Biology, for students preparing to take the Preliminary Examination.**

TO: Ph.D. Students Preparing to Take the Preliminary Examination  
FROM: Marta Van Loan, Ph.D.

I would like to share some thoughts with you about preparing for the preliminary oral exam. These comments come from discussions with past and current faculty members of the prelims committee. I hope they will be helpful to you.

- 1) As stated in the Survival Guide, the purpose of the Preliminary Exam is "to certify that PhD students in Nutrition have an adequate knowledge of nutrition including basic principles, methodological approaches, and practical applications, as covered in the three core nutrition courses and in the entrance requirements". We make a distinction between "information" and "knowledge" - information is simply facts, whereas knowledge includes an understanding of how the facts fit together - i.e. interpreting and integrating them. Many of you are very talented at learning information, but have had much less experience with developing a core of knowledge in nutrition. As Paul Davis puts it, making the transition from an information consumer (Undergraduate Student) to an information interpreter/developer (Researcher/Knowledge Professional) is not easy. We view the preliminary exam as a learning experience, with the goal being to help you to make this transition.
- 2) The corollary of the above is that it is less important for you to memorize lots of facts than to develop the reasoning skills that allow you to approach any question intelligently. Of course, we want you to learn the material covered in the core courses, but if during an exam you do not remember a particular detail, the prelim committee will generally work with you to "discover" the answer based on reasoning, using your basic knowledge. This is where the language above regarding "basic principles" and "entrance requirements" comes in. We expect that you understand the basics of chemistry and undergraduate-level nutrition, and are more worried when a gap is evident in your understanding of the basics than in the more advanced material covered in the core courses.
- 3) What does this mean in terms of studying? We would prefer that you spend less time memorizing information and more time making sure that you understand the information and talking about SCIENCE with your professors and fellow graduate students. Remember, the exam is oral, so the more experience you have engaging in scientific discussions, the better prepared you will be. If you are asked a question during the prelims that you cannot answer, tell the committee that, and let them guide you through the question. Not knowing

a few trivial facts is never a problem if you have a good grasp of the general principles of nutrition and can use them to discuss nutritional problems.

- 4) Preparing for your prelims should begin as soon as you begin graduate school (if not sooner!). Forming study groups in your graduate courses can be very helpful in terms of questioning what you are learning, debating points with each other, and being able to act as the "teacher" when explaining nutritional science. You should aim at understanding the basis for the statements that are made in class and how studies are designed to test hypotheses in nutrition. As you get closer to taking your prelims, practice exams with faculty and other students can be very useful.
- 5) Your prelim exam will start with you preparing and presenting a mini-lecture (20-30 minutes) on a nutrition topic of your choice. The committee will expect you to know the foundational facts of the topic, i.e. nutritional biochemistry, and to include other areas of nutrition that may impact or be affected. In other words, demonstrate your ability to integrate other aspects of nutrition.
- 6) Lastly, as we've said before, please don't bring refreshments for the faculty to the prelims exam. We don't want you to undergo the additional stress of preparing food and drink for the exam.

If you have any questions about this process, please let me know.

## Appendix 4: Recommended Statistics Courses

Below is a list of statistics courses other GGNB students have taken. Talk with your academic advising committee about which will be most appropriate for you.

Dept.	No.	Units	Name	Prereq*	Offered
ARE	106	4	Econometric Theory and Applications	ARE100A, STA 103	F,W,S
EDU	204A	4	Quantitative Methods in Educational Research: Analysis of Correlational Designs (Regression)		W
EDU	204B	4	Quantitative Methods in Educational Research: Experimental Designs (ANOVA)	EDU 114	F
EPI	204A	4	Foundation of Statistical Models, Methods, and Data Analysis for Scientists	STA 130A, 131A or 133	W
EPI	204B	4	Statistical Models, Methods, and Data Analysis for Scientists	EPI204A, STA108	S
PLS	120	4	Applied Statistics in Agricultural Science	None	F
PLS	205	5	Experimental Design and Analysis	PLS 120	W
PLS	206	4	Applied Multivariate Analysis in Ag and Envir. Sci.	PLS 120, STA 106, 108 or 205	F
PSC	204A	5	Statistical Analysis of Psychological Experiments	STA102	F
PSC	204B	5	Causal Modeling of Correlational Data	PSC204A	W
PSC	204D	5	Advanced Statistical Inference from Psychological Experiments	PSC204A	S
PSC	205A	4	Applied Multivariate Analysis of Psychological Data	PSC204 A,B,D	W
PSC	205B	4	Factor Analysis	PSC204A, PSC204B	W
PSC	205C	4	Structural Equation Modeling	PSC 204A, PSC 204B	TBD
PSC	205D	4	Multilevel Models	PSC 204A	W
SOC	106	5	Intermediate Social Statistics	SOC46B	
STA	100	4	Applied Stats for Biological Sciences	Calculus	F,W,S
STA	103	4	Applied Statistics for Business and Economics	Calculus	F,W,S

Dept.	No.	Units	Name	Prereq*	Offered
STA	104	4	Applied Statistical Methods: Nonparametric Stats	STA 100	W
STA	106	4	Applied Statistical Methods – Analysis of Variance	STA 100	F,W
STA	108	4	Applied Statistical Methods: Regression Analysis	STA 100	F,W,S
STA	135	4	Multivariate Data Analysis	STA 130B / 131B	S
STA	130A	4	Mathematical Statistics: Brief Course	Calculus	F
STA	130B	4	Mathematical Statistics: Brief Course	130A	W
STA	141A	4	Fundamentals of Statistical Data Science	STA 10, 13, 32, or 100	F

\*Talk with the professor of record about prerequisites. Some will allow you to use other equivalent courses in lieu of those listed.

## Appendix 5: Training Responsibilities

### Principal Investigator's Training Responsibilities For Animal Care and Use

The Principal Investigator must make sure that appropriate training is provided and documented for everyone listed on his/her Animal Use and Care Protocol. Training must be provided and documented for staff, volunteers or visitors who are exposed to live vertebrate animals.

The Principal Investigator must also make sure that everyone listed on his/her protocol or exposed to live vertebrate animals participates in the Occupational Health Program. To participate, each employee must submit a Risk Assessment form and an Animal Contact Medical Review form to Occupational Health Services. For the volunteer, non-paid students, the risk assessment and medical review forms need to be sent to Cowell Student Health Center for evaluation.

Both of these forms are available at <http://safetyservices.ucdavis.edu/occupational-health-services/acu/acu-program>. In addition, each person listed on the animal care and use protocol must attend the Animal Care and Use 101 (ACU 101) course. On-line course sign-up is available at <http://safetyapps.ucdavis.edu/EHS/Training/index.cfm#acu101>.

*The Principal Investigator must be sure that everyone listed on his/her Animal Care and Use Protocol has read and understands their responsibilities in relation to the protocol. Everyone working with live vertebrate animals must be qualified, informed and trained.*

### In-house Training:

The Principal Investigator must provide training on the following:

- **Personal hygiene:** How to reduce the risk of contamination to the person as well as surfaces and other personnel.
- **Personal protective equipment:** How to properly select and use personal protective equipment such as gloves, eyewear, lab coats, respirators, etc.
- **Use of the Hazard Analysis Tool:** How to use the on-line hazard analysis tool at <http://safetyapps.ucdavis.edu/IACUC/risktool/index.cfm>.
- **Animal bite instructions:** How to appropriately respond to an animal bite, including immediate washing and first aid procedures, who to contact, and to whom to report the bite. This information must be posted in the laboratory or work area.
- **Zoonotic diseases:** Inform individuals of all possible zoonotic diseases associated with the species they are exposed to. The on-line "[Hazard Analysis Tool](#)"

(<http://safetyapps.ucdavis.edu/IACUC/risktool/index.cfm>) can be used for this instruction.

- **Animal Care and husbandry:** Awareness of procedures necessary for animal care and husbandry. This is generally for animal care staff and investigator maintained animals only.
- **Euthanasia:** Procedures on the euthanasia method approved in the Animal Use and Care Protocol.
- **Pain and discomfort, anesthetics and analgesics:** How to recognize the signs of pain and discomfort in the species with which each individual will be working and the use of the anesthetics and analgesics approved in the Animal Use and Care Protocol.
- **Record keeping, monitoring procedures:** How to maintain the necessary records and the monitoring procedures for each project.
- **Information contained in and purpose of the Injury and Illness Prevention Program:** Inform all personnel on the information contained in the Injury, Illness Prevention Program (IIPP), such as how to read a Material Safety Data Sheet (MSDS), the evacuation plan, the availability of pertinent EH&S SafetyNets, etc.
- **Bloodborne Pathogens:** How to take the necessary precautions when working with bloodborne pathogens and what procedures to follow when possible contamination has occurred.
- **Other Hazardous Materials:** Information regarding other hazardous substances such as chemicals and radiation used within the work area. This may include the material safety data sheets, personal protection and other pertinent safety information.

#### **Documentation:**

Documentation of the above information must be maintained by the Principal Investigator and be readily accessible by the IACUC staff during area inspections. The training document must include:

- Name of person(s) conducting training
- Signature of person receiving training
- Date of training
- A brief description of subjects covered

The "Individual Training Record" (see [attachment 1](#)) can be used as guide to assure all training has been documented and acknowledged by the Principal Investigator and employee.

#### **Available Resources:**

The IACUC provides the Animal Care and Use 101 (ACU 101) classes as well as assistance with any other training issues. For more information, please contact [jacuc-staff@ucdavis.edu](mailto:jacuc-staff@ucdavis.edu) or 530-752-2364. The ACU 101 course does require an on-line registration.

The Office of the Attending Veterinarian provides classes for species-specific handling and biostatistics, anesthesia techniques, and aseptic surgery techniques. For information contact [lahc@ucdavis.edu](mailto:lahc@ucdavis.edu) or 530-752-0514. The class description is provided on-line at <http://safetyapps.ucdavis.edu/EHS/Training/index.cfm>.

## **Appendix 6: Information about laboratory and animal use**

### **ANIMAL USE AND CARE PROTOCOLS**

If you plan to conduct research that uses live, vertebrate animals, you must first obtain approval from the INSTITUTIONAL ANIMAL CARE AND USE COMMITTEE (IACUC). You cannot initiate your project, nor can you purchase your animals until you and your Research/Advisor/Principal Investigator have received written documentation that your protocol has been approved. IACUC review takes an average of 30 days, but can take as long as six weeks. You can get blank Animal Use and Care Protocol forms from the Environmental Health and Safety Office (752-1493), or from their web site: <http://safetyservices.ucdavis.edu/programs-and-services/animals/institutional-animal-care-and-use>

The completed protocol must be signed by your Principal Investigator (usually your Major Professor) and the chair of your department. You then submit your completed form to the IACUC Secretary in care of the Campus Veterinarian (TB 30). Questions about animal protocols should be directed to the IACUC Secretary, 752-2364. Once your protocol has been approved, you should post the first page of the protocol form in the facility where your animals are housed.

Please see APPENDIX 3 for a SafetyNet article from UC Davis EH&S on “Principal Investigator’s Training Responsibilities for Animal Care and Use”.

### **ANIMAL HANDLING COURSE**

If you are interested in learning how to handle and use lab animals, you must first complete the Animal Care & Use 101 course offered through EH&S. The class is Offered in response to demand, and may be offered as often as monthly during the academic year, and includes two to three hours of instruction on the care and handling of rabbits, rats, mice, guinea pigs, and hamsters. Records are kept on file of all students who have completed the training. To register for this class view the Health and Safety Classes on the EH&S website: <http://safetyapps.ucdavis.edu/EHS/Training/index.cfm>

### **CAMPUS ANIMAL FACILITIES**

There are animal facilities located throughout the campus. In general, the procedures enforced at each facility vary with the type of animals housed in that facility, the type of experiments that are to be conducted with these animals, and the usual protocol requirements. Your best sources for information about animal facilities are: your Major Professor, the faculty member who supervises the facility, and the facility supervisor and support staff.

## **LAB SAFETY INFORMATION**

Students have the right and responsibility to know what hazards they may encounter while pursuing their education and what measures to take to protect themselves and others. Campus policy requires all UCD employees and students to receive safety information and training from the individual's Major Professor or supervisor. This training encompasses chemical, biological, animal, physical and radiation hazards, including specific safety training in unit unique protocols and instrumentation.

You will be required to familiarize yourself with the Injury/Illness Prevention Program (IIPP) and take the Hazardous Chemical Class at EH&S. Your Major Professor, supervisor, unit safety officer, or the Department Safety Coordinator will be able to assist you in required training, EH&S classes, and documentation requirements for your projects and safety. If you TA or supervise students, you will be responsible for their safety and safety training. All TA's are to attend the TA Safety Training Class offered each fall. There will be Required Annual Training for Chemical, Biological, Evacuation Procedures and General Safety training for all employees and students. Always remember that you are not only responsible for your own safety, but also the safety of your fellow colleagues and students.

Reminders:

- Each year you will be required to attend the Chemical Safety Course offered by EH&S
- If you are a TA, you must attend the TA Safety Training Class that is offered each fall (only needs to be taken once). For more details contact Joel Van Enennaam, 752-2058, [jpvaneennaam@ucdavis.edu](mailto:jpvaneennaam@ucdavis.edu)

## Appendix 7: Helpful textbooks for first year students

The following is a brief list of textbooks helpful for first year students as a supplement for core classes and studying for the prelim exam. By no means is this an all-inclusive list and you are NOT required to purchase any of these. This list is simply for your reference, which past students have found helpful.

### ***Textbooks:***

Stipanuk, Martha. Biochemical, Physiological, and Molecular Aspects of Human Nutrition, 3<sup>rd</sup> ed. 2012.

Gropper, SG. Advanced Nutrition and Human Metabolism. 2012.

Salway, JM. Metabolism at a Glance. 2004.

Rodwell, Bender, Botham, Kennelly, Weil. Harpers Illustrated Biochemistry, 30<sup>th</sup> ed. 2015

Food and Nutrition Board. Dietary Reference Intakes: The Essential Guide to Nutrient Requirements. 2006.

Ferrier, DR. Lippincott's Illustrated Reviews: Biochemistry. 2013.

Zemleni, J. Handbook of Vitamins. 5<sup>th</sup> ed. 2013.

Lodish, H. 7<sup>th</sup> ed. Molecular Cell Biology.

PDF version:

[http://www.nal.usda.gov/fnic/DRI/Essential\\_Guide/DRIEssentialGuideNutReq.pdf](http://www.nal.usda.gov/fnic/DRI/Essential_Guide/DRIEssentialGuideNutReq.pdf)[http://www.nal.usda.gov/fnic/DRI/Essential\\_Guide/DRIEssentialGuideNutReq.pdf](http://www.nal.usda.gov/fnic/DRI/Essential_Guide/DRIEssentialGuideNutReq.pdf)

[http://www.nal.usda.gov/fnic/DRI/Essential\\_Guide/DRIEssentialGuideNutReq.pdf](http://www.nal.usda.gov/fnic/DRI/Essential_Guide/DRIEssentialGuideNutReq.pdf)

### ***Helpful Website for concepts in biochemistry:***

<http://www.rose-hulman.edu/~brandt/Chem330><http://www.rose-hulman.edu/~brandt/Chem330/>