The Honors Research Program

Human Biology, Health & Society (HBHS)
Nutritional Sciences (NS-CHE)
Nutritional Sciences (NS-CALS)

What is This Program About?
The Honors Research Program in the Division of Nutritional Sciences is designed to challenge the research-oriented NS and HBHS majors. This structured research experience involves 1) a course in research, NS 3980, 2) the conduct of a research project through which the student becomes intellectually engaged in the whole research process, 3) the completion of a written thesis that reports the research, and 4) an oral presentation of the project at the Undergraduate Honors Symposium. Students in the College of Human Ecology completing the program receive a “bachelor's degree with honors in research.” Students in the College of Agriculture and Life Sciences completing the program receive a “bachelor's degree with distinction in research.”

Who Should Consider the Honors Research Program?
The Honors Research Program is an excellent opportunity for students who are highly interested in research and wish to commit substantial time and intellectual energy to a project that will span at least 4 semesters of their undergraduate experience. Honors students experience the excitement of designing a project to generate new knowledge on a topic that interests them and reporting the project findings. By working with faculty mentors and other researchers, they develop skills in research methods and data analysis. Students also learn that research projects are labor intensive and that writing research reports, such as the honors thesis, is a vital, but time-consuming aspect of the research process. This intensive research experience is not suitable for all students, and those who wish a less intensive research experience may conduct research with a faculty member under NS 4010, Empirical Research.

How Do You Apply to the Program?
Students interested in the program should review the program requirements, take NS 3980 in the sophomore or junior years, and speak with the program directors. Application to the program typically occurs in February of the junior year. Applications may be accepted at other times for students who demonstrate that they can complete the program requirements before graduation. Acceptance into the honors research program occurs when the student 1) is accepted into a faculty member’s research program and 2) submits a research proposal abstract that is approved by the directors of the honors research program.

What Are the Program Requirements?

1) NS 3980 Research in Human Nutrition and Health. 1 credit, S/U grade only, Fall semester. Students are advised to complete NS 3980 by the fall of the junior year.
This lecture course focuses on the structures and practice of professional research conducted in human nutrition and health, a field that encompasses a wide range of questions ranging from subcellular components to population level issues. The course introduces the various approaches and methods used by researchers, and address the topics of ethics and research controls. The course describes the structure of the scientific literature, preparation of research proposals, roles of scientific organizations, and funding sources. Students are required to attend research seminars on campus and submit a report at the end of the term.

2) Be accepted into a faculty member’s research program
Students spend the spring sophomore and fall junior term exploring honors project opportunities with prospective faculty mentors. Students are responsible for contacting faculty members and applying to
their research programs, although some guidance in this process will be provided in NS 3980. By the fall of the junior year, the student is expected to have identified their faculty member and be working with them on a proposal abstract, which is due early in the spring junior term.

3) Complete 6 credits of NS 4990 Honors Problem
Students receive academic credit for work on their honors project under NS 4990. The 6 required credits may be taken over several semesters. How much time is spent on the project each term will be the decision of the student and the faculty mentor. For each 3-4 hours of work, the faculty mentor usually will assign one hour of academic credit. This applies to the preparation of the research plan and necessary library research (usually completed during the junior year) as well as the carrying out of the research itself and preparation of the thesis. The student may complete more than 6 credits of NS 4990 as desired.

4) Complete an honors thesis & present at Honors Student Symposium
The honors research project comprises the major component of the honors research program. It should be well defined and sufficiently circumscribed to give the student the opportunity to develop the research plan, execute the research and write an acceptable thesis within the limited time available to students carrying full academic loads. Typically, the project is designed early in the junior year, conducted in the spring junior term and fall senior term. Students may arrange with their faculty mentor to work on the project during the summer. The spring senior term is usually devoted to writing the thesis (an original research report of at least 25 pages). The student works with the faculty mentor to prepare a draft of the thesis, which is submitted by spring break to a second faculty member for evaluation. When comments are received from the reader, the student must revise the thesis to meet the criteria for acceptance. The student presents the thesis at the Honors Student Symposium at the end of the term.

5) Achieve satisfactory GPA for Honors Research Program
To graduate with honors, the student must maintain the minimum GPA required for the Honors Research Program. Students accepted into the program will be informed of the specific GPA that is required.

6) Meet all program requirements and deadlines
To graduate with honors, the student must meet all program requirements and deadlines as set by the faculty director of the program. Students who do not meet all program requirements may receive academic credit for research work under NS 4990 if recommended by the student's faculty mentor.

**PROGRAM DESCRIPTION & REQUIREMENTS:** The honors research program provides a structured experience involving original research for undergraduates with a demonstrated level of achievement in coursework and a genuine interest in exploring research.

Requirements for the DNS honors program:

1) GPA> 3.2.
2) Pass (S) NS 3980.
3) Pass (S) 6 credits of NS 4990.
4) Seek, and be accepted into, a faculty mentor's laboratory/research program.
5) Complete an honors thesis (>25 pages) reporting on a project with which the student played major role. "Major role" means considerable effort in the execution of the project plus intellectual engagement in the stages of a project (conception, planning execution, interpretation, reporting)
6) Thesis will be evaluated by a Reader, and acceptance of the thesis is by approval of Dr. Cha-Sook You.
7) Make all deadlines.
8) Preparation and oral presentation of the project at the undergraduate honors symposium around week 13 of
the last semester.

Acceptance into the program will be certified by email from Dr. You and will be based upon acceptance into a faculty member’s research program and the submission of a suitable proposal abstract on time as noted below. Waivers of **any** of these items, especially deadlines, are approved by Dr. You by written request only.

**DEADLINES:**

General deadlines for May 2016 graduates are listed below. Submit materials to Dr. You <cy12@cornell.edu> or designated assistant using the **requested filename**. If you do not receive an acknowledgement of receipt, *it was not received*. *Missing deadlines without prior approval is grounds for being dropped from the honors program.*

**Friday, 6 February 2015** (Week 3, three terms before graduation). Proposal abstract for honors thesis due. Submit as e-mail attachment, named `<YOURLASTNAME ProAbs16>` in DOC, TXT, PDF. This document must be approved by an identified mentor, and have a title, describe the overall project, the piece to be performed by the student, and an expected timeline for completion. One page single spaced maximum for proposal abstract, a second page for timetable. The document is not considered binding; mentor and student may agree to a change to a task requiring a similar degree of effort and intellectual input.

**Wednesday, 9 Sept 2015** (Week 4, two terms before graduation). Progress report due. Outline progress made, tasks left, and a brief schedule. Changes to the project should be made documented at this time. Submit as attachment. Filename must be `<YOURLASTNAME ProgRep16>` in DOC, TXT PDF, RTF.

**Friday, 5 February 2016, 3:00pm** (Week 3, final term). Literature review chapter(s) and a 1-paragraph abstract of the entire thesis in current form. Reader to be identified based on the abstract. 1 paper copy.

**Thursday, 10 March 2016, 3:00pm** (Week 8, final term). Full thesis is due to readers. 1 complete paper copy.

**Friday, 24 March 2016** (Week 10, final term). Readers return thesis with comments and for final corrections, and make recommendations for acceptance.

**Monday, 18 April 2016** (Week 14, final term). Final theses with all corrections/revisions are due. One electronic and paper copy each.

**Last week of class or early study period.** Symposium to be scheduled depending on room availability.

**Honors Research Projects in 2012**

- Assessing Community Readiness to prevent childhood obesity through community collaborations using a case study approach in two sites. Meredith Burcyk (Mentor: Jamie Dollahite)

- An examination of the effect of nutrition labels on food sales and food purchasing behavior among Cornell students. Catherine Cioffi (Mentor: David Levitsky)

- Consumption of a normal mixed diet plus a folic acid-containing prenatal supplement leads to "supra-nutritional" folate status in third trimester pregnant and lactating women. Margaret Dennin (Mentor: Marie Caudill)

- Expression of fatty acid desaturase alternative transcripts (FADS AT) in domestic piglets supplemented with arachidonic (n-6) and docosahexaenoic (n-3) fatty acids. Ian Downs (Mentor: Tom Brenna)

- Quantification of an Uncultered Bacterial Phylum in the Gut. Elle Glenny (Mentor: Ruth Ley)

- Expression of downstream targets of mTOR in response to a model of maternal undernutrition and hypoxia. Jessie Groth (Mentor: Patsy Brannon)

- The Effect of Parental Feeding Styles and Income on 12- and 24-Month Old Children’s BMI. Steven Han (Mentor: Gary Evans)
• Characterization of Antral Follicle Populations in Women with Polycystic Ovary Syndrome Using 2- and 3-Dimensional Ultrasonography. Brittany Jarrett (Mentor: Marla Lujan)

• Predictors of Variation in response to Vitamin E Supplementation. John LaBarre (Mentor: Patricia Cassano)

• Correlation of placental 1-alpha-hydroxylase and 24-hydroxylase expression with circulating calcitropic hormone concentrations in pregnant adolescents and their neonates. Shuang Li (Mentor: Kimberly O’Brien)

• Functional Analysis of Ribosomal Proteins Using Systemic RNA Interference in Mammalian Cells. Haerin Paik (Mentor: Shu-Bing Qian)

• Comparison of three methods to quantify repair cartilage collagen orientation. Keir Ross (Mentor: Lisa Fortier)

• Choline, Genotype, and Personalized Nutrition. Kelsey Shields (Mentor: Marie Caudill)

• Fuzzy Trace Theory, Personality Differences, and Regional Brain Volume: A VBM Study. Catherine Wassef (Mentor: Valerie Reyna)

• A Dietary Analysis of Haitian Infants and a Critical Analysis of Dietary Quality Using Nutrient Analysis, Dietary Diversity, and IYCF Standards. Lauren Webster (Mentor: Rebecca Stoltzfus & Rebecca Heidkamp)

• Acetylcholine System in Rat is Not Engaged in Low Concentration Odor Detection. Monica Youssef (Mentor: Christiane Linster)

• The Effects of Darkness on Food Consumption. Hana Yu (Mentor: David Levitsky)