Cornell University
Division of Nutritional Sciences

SURVIVAL GUIDE

for students majoring in

Nutritional Sciences
Human Biology, Health, and Society
and Global and Public Health Sciences

2017-2018
# TABLE OF CONTENTS

## An Introduction to the Division of Nutritional Sciences (DNS)
- Directory for Undergraduate Students in DNS ................................................................. 1
- Advising and Resources for DNS Undergraduates ......................................................... 3
- Choosing a Major in DNS ................................................................................................ 5
  - Nutritional Sciences ....................................................................................................... 6
  - Human Biology, Health, and Society ............................................................................. 8
  - Global and Public Health Sciences .............................................................................. 10
- Choosing Undergraduate Courses in DNS .................................................................... 12

## Major Requirements and Sample Schedules
- Nutritional Sciences major requirements (CHE) .............................................................. 13
- Nutritional Sciences major requirements (CALS) .......................................................... 17
- Nutritional Sciences sample schedules ........................................................................ 21
- Human Biology, Health, and Society major requirements (CHE only) ......................... 25
- Human Biology, Health, and Society sample schedules ................................................ 29
- Global and Public Health Sciences major requirements (CHE) .................................... 33
- Global and Public Health Sciences major requirements (CALS) .................................. 37
- Global and Public Health Sciences sample schedules ................................................... 41

## Minor Fields and Pre-Professional Paths
- The Pre-Health Track as a DNS Undergraduate ............................................................ 45
- Didactic Program in Dietetics (for DNS students only) .................................................. 47
- Global Health (minor for any non-GPHS Cornell undergraduate) ............................... 54
- Applied Exercise Science (minor field for DNS students only) .................................... 59
- Nutrition and Health (minor field for non-DNS students only) .................................... 62
- Human Nutrition (concentration for Biological Sciences majors) ............................... 65

## Undergraduate Opportunities in DNS
- The DNS Honors Program ............................................................................................ 66
- Undergraduate Research ............................................................................................... 75
- Supervised Field Work .................................................................................................. 77
- Study Abroad and Urban Semester .............................................................................. 79
- DNS Student Organizations ......................................................................................... 81

## Career Exploration and Planning
- General Career Exploration ......................................................................................... 82
- Graduate School for DNS Undergraduates .................................................................. 83
- Post-Cornell careers of previous DNS graduates ....................................................... 85

## Academic Policies
- Key Resources for Academic Policies .......................................................................... 88
- Substituting non-Cornell Courses for Major/College Requirements ......................... 89
- Changing/Add ing a Major or Minor ............................................................................ 92
- Scheduling for Transfer and Exchange Students ......................................................... 94
- Student Academic Privacy Rights through FERPA .................................................... 96
DIRECTORY for UNDERGRADUATE STUDENTS
in the Division of Nutritional Sciences

The Division of Nutritional Sciences (DNS)

Office of the Director
Patrick Stover, Director (pjs13@cornell.edu) // 127 Savage Hall // (607) 255-8001

Academic Affairs Office
General questions: (aadns@cornell.edu)
Julia Felice, Associate Director of Undergraduate Studies (DUS) (julia.felice@cornell.edu) // B17 Savage Hall // (607) 255-2651
(Ms.) Terry Mingle, Undergraduate Student Services Assistant (USSA) (tpm2@cornell.edu) // B21 Savage Hall // (607) 255-4410

Didactic Program in Dietetics
Patsy Brannon, Leader & Dietetic Internship Director (pmb22@cornell.edu) // 225 Savage // (607) 255-1033
Emily Gier, Didactic Program in Dietetics Director (eg47@cornell.edu) // 215 Savage Hall // (607) 255-2638

Honors Program
Julia Felice, Interim DUS (julia.felice@cornell.edu) // B17 Savage Hall // (607) 255-2651

Applied Exercise Science Program
(Ms.) Terry Mingle, USSA (tpm2@cornell.edu) // B21 Savage Hall // (607) 255-4410

The College of Human Ecology (CHE)

Admissions: 170 MVR Hall // (607) 255-5471

Student and Career Development: 172 MVR Hall // (607) 255-2532

Career Exploration Center: 162 MVR Hall // (607) 255-1846
Darryl Scott, Director of Admissions and Student and Career Services (ds42@cornell.edu)
Paul Fisher, Senior Associate Director / Admissions/Study Abroad (psf1@cornell.edu)
Verdene Lee, Senior Associate Director / Multicultural Affairs/Academic Counseling and Pre-health Advising (val3@cornell.edu)
Deanne Maxwell, Associate Director / Academic Counseling and Prelaw Advising / Career Development (dhm8@cornell.edu)
Patti Papapietro, Senior Associate Director / Academic Counseling and Advising / Disabilities Services representative (pjp4@cornell.edu)
Bernadette Parr, Associate Director / Admissions / Human Ecology Ambassadors (bs28@cornell.edu)

Registrar
Tracey Thompson, Registrar (ltl3@cornell.edu) // 146 MVR // (607) 255-2235
Lori Asperschlager, Assistant Registrar/Degree Auditor (law32@cornell.edu) // 146 MVR // (607) 254-5270

Continued on next page
The College of Agriculture and Life Sciences (CALS)

Admissions: 177 Roberts Hall // (607) 255-2036
For general questions, contact cals_admissions@cornell.edu
Pamela Tan, Director of Admissions (pmt1@cornell.edu)
Heather Marcotte, Associate Director of Admissions and Transfer Coordinator (hed24@cornell.edu)
Carla Crooker, Assistant Director of Admissions (cc147@cornell.edu)
Erin Treat, Assistant Director of Admissions (et335@cornell.edu)
Shawna Fulkerson, Administrative Coordinator (sb27@cornell.edu)
Aubrey Holbrook, Administrative Coordinator (arw93@cornell.edu)

Student Services: 140 Roberts Hall // (607) 255-2257
For broad information, you can search and post within Chatter: http://www.chatter.cals.cornell.edu/
or email cals-studentservices@cornell.edu
Ann LaFave, Director (aml25@cornell.edu)

Registrar: 140 Roberts Hall // (607) 255-2257
Shawna Alling, Registrar (sll33@cornell.edu)
Laura Mlyniec-Beam, Assistant Registrar (lbm78@cornell.edu)
Vicki Parker, Administrative Assistant, Registrar (vrp5@cornell.edu)

Advising and Diversity Programs
Torrey Jacobs, Community Manager and Associate Director of Student Services (tkj8@cornell.edu)
Lisa Ryan, Student Services and Advising Coordinator (lar4@cornell.edu)
Brandon Senior, Assistant Director of Advising & Diversity Student Support (brandon.senior@cornell.edu)
Nikki Wells, Administrative Assistant, Advising and Diversity Student Support (nl427@cornell.edu)

Study Abroad and International Exchange
Cindy Tarter, Associate Director, Academic Exchange and International Development (cmt95@cornell.edu)
Julia Franke, Assistant Director of International Programs (jef298@cornell.edu)

Career Development
Laurie Gillespie, Senior Associate Director (lag11@cornell.edu)
Jennifer DeRosa, Associate Director (jd242@cornell.edu)
Steve Shaum, Associate Director (sls243@cornell.edu)
Jo-Lynn Buchanan, Recruiting Coordinator (jb44@cornell.edu)

Professional Programs and Extended Learning: 212 Kennedy Hall // (607) 255-2215
For general questions, contact calsprofprograms@cornell.edu
Janet Anderson, Director (janet.anderson@cornell.edu)
Soledad Almeida, Program Coordinator (sa2242@cornell.edu)
Nicole Wilson, Student Services Associate (nicole.wilson@cornell.edu)
ADVISING and RESOURCES for DNS UNDERGRADUATES

SUMMARY OF DNS ADVISING RESOURCES
Faculty advisors, the DNS Academic Affairs Office, and the College advising offices work closely together to be sure that students’ advising and counseling needs are met.

Faculty Advisor
- Provides counsel for your academic program throughout your Cornell career
- Meets with you at least once each term to help plan courses for next term
- Follows your progress toward degree requirements
- Helps you think about specialized academic opportunities
- Gives you guidance if special issues or problems arise related to academics
- Knows you well enough to serve as reference

DNS Academic Affairs Office: B21 Savage // (607) 255-4410 // aadns@cornell.edu
- Place to go when you do not know whom else to ask!
- Advises HBHS, GPHS, and NS students when regular faculty advisor is not available
- Coordinates faculty advisor assignments
- Assists students with complex course scheduling, e.g. study abroad, urban semester
- Approves courses taken at other universities toward requirements for the major
- Acts on petitions to deviate from requirements for the major
- Reviews/Approves special study forms online (NS 4000, NS 4010, NS 4020 & NS 4030)
- Keeps students informed of course changes and special seminars and opportunities

College Advising and Counseling Offices
- Another place to go when you do not know whom to ask!
- Provides professional counseling and referral services to students who have academic, personal, and/or family problems
- Helps students who are undecided or changing their majors
- Provides general career planning services

Working with Your Faculty Advisor
Faculty members in DNS advise students in the HBHS, GPHS, and NS majors. Students are assigned to a faculty advisor by Dr. Julia Felice (Associate Director of Undergraduate Studies at the Division of Nutritional Sciences, B17 Savage) & Ms. Terry Mingle (Undergraduate Student Services Assistant, B21 Savage).

Establishing a good relationship with your faculty advisor is one of the most important things you can do at Cornell. Faculty advisors can help with decisions about course schedules and give critical guidance about your overall academic program. Advisors also suggest ways to enrich your program with other courses, individual projects, research, or internships. You will want your faculty advisor to get to know you quite well because in your junior or senior years you may need a letter of reference as you apply for jobs, internships or graduate programs. Contact your faculty advisor when you:

- need to plan your courses for next term
- are thinking about changing your major or college
- are having trouble in a course ★
- want to explore courses in a certain area and need help finding them
- want to know about research opportunities
- are developing new career interests or need some direction in career exploration
- are experiencing illness, family issues, or personal problems that prevent you from attending or concentrating on your classes ★
- feel so overwhelmed by courses and other commitments (work, athletics, family) that you are constantly exhausted and cannot concentrate ★
- are so worried about your grades that you are not performing your best and feel constantly tired ★

★ Contact your faculty advisor or someone else in DNS or your College ASAP! We are here to help!
KEY TIPS for Working with your Faculty Advisor

1. **Make an appointment** by phone, email, or sign-up sheets outside their office. Faculty members are involved in many different types of teaching, research, advising, and outreach activities in and away from their offices, and just “stopping by” may not get you the help you need.

2. **Be courteous and use your advisor’s time well**. Let them know why you wish to meet so that they can set aside the appropriate amount of time. Be on time, and remember to cancel or change the appointment if you have to change your schedule.

3. **Come prepared**. Bring a list of any questions you have, as well as any supporting documentation you need (e.g. your proposed course or career plan, an unofficial copy of your transcript, or any forms they need to sign). Review your own progress toward your graduation requirements, especially important core and prerequisite courses.

4. **Make a plan (but expect it to change)**. It is highly recommended that students develop a short- and long-term academic plan as soon as possible. Although this plan is likely to change as a result of a student’s evolving interests and changes in the Cornell course catalog, it is still a very helpful tool for tracking your progress on required coursework for your College, major, and any minor fields or pre-professional paths, and increases flexibility later to take elective courses.

5. **Know your OWN requirements**. It is the student’s responsibility to understand the course requirements and academic policies for their College and major. Rules and requirements vary across the colleges and by year of matriculation. Read the information available throughout this Survival Guide and the links within it, and ask your faculty advisor, the DNS Academic Affairs Office, or your College’s academic office for clarification if needed. Do not assume that your friend knows the rules that apply to you!

Students are expected to work with their assigned advisor for the first year. If at any point thereafter a student wishes to change advisors, they **must** 1) identify a faculty member willing to advise them, 2) have the new faculty advisor contact Terry Mingle (tpm2@cornell.edu) to authorize the change.

**Other Helpful Resources**

- **Learning Strategies Center**: Group and individual assistance is offered in Time Management, Textbook Mastery, Rapid Reading, Learning from Lecture, Exam Preparation and Strategies. For example, HE 1000 Critical Reading and Thinking is a 2 credit course to help students increase reading, thinking and learning skills. Find out more at [http://lsc.cornell.edu/](http://lsc.cornell.edu/).

- **Course instructors**: Interact with the professors, instructors, and TAs in your classes. If you don’t understand material or assignments, they need to know—and need to hear from you to know. They usually are happy to assist students who are working hard but having trouble. See them **early** when they can be most helpful. If you do poorly on the first assignment or exam, contact them to find sources of help. You probably need new strategies for working with the course material. Simply planning to study longer or better for the next exam often does not work as well as one hopes—and then it is very late to improve the situation.

- **Supplemental courses**: Students can enroll in "1000" courses that support courses in which they are enrolled (e.g. CHEM 1007 supports students in CHEM 2070). These supplemental courses clarify lecture material, help students keep pace with lectures, and assist students with exam preparation. Courses in Biology, Mathematics, Physics, Economics, and Statistics are also offered.

- **Center for Teaching Excellence**: The CTE offers academic support to Cornell students in all colleges. Their services include supplemental instruction for major introductory courses, tutorial assistance, and workshops. Find out more at [http://www.cte.cornell.edu/](http://www.cte.cornell.edu/).

- **Tutorial assistance**: Free walk-in tutorials are offered for many courses.

- **Writing Walk-In Service**: The Writing Workshop offers courses for credit as well as a Walk-In Service to assist Cornell students from all colleges. Walk-In tutors at three campus locations help students with particular pieces of writing including academic papers at any stage of development. The focus is on improving the substance and quality of the writing by helping the writer with issues of self-confidence, active use of the imagination, and critical thinking. **Tutors do not proofread or edit**. Find out more at [http://www.arts.cornell.edu/knight_institute/walkin/walkin.htm](http://www.arts.cornell.edu/knight_institute/walkin/walkin.htm).
CHOOSING YOUR MAJOR
within the Division of Nutritional Sciences

The Division of Nutritional Sciences (DNS) is a “Division” instead of a department because it is part of two colleges: the College of Human Ecology (CHE) and the College of Agriculture and Life Sciences (CALS). DNS has three majors:

1. **Nutritional Sciences** (NS)—within either CHE or CALS
2. **Human Biology, Health, and Society** (HBHS)—only within CHE
3. **Global and Public Health Sciences** (GPHS)—within either CHE or CALS

Major requirements do not differ between colleges—e.g., NS majors in both CHE and CALS complete the same biology, chemistry, and nutrition courses. The difference between being an NS major in CHE vs. CALS is in how students develop their major through their use of elective courses in the respective Colleges.

In general, a student’s choice of College is based on their secondary interests—i.e., those outside their major content area. In CHE, students will find a range of courses and opportunities in topics related to design, people, psychology, and policy. In CALS, students will find a range of courses and opportunities in topics related to plants, animals, economics, and food science. Students should visit each College’s Prospective Students pages within their Admissions websites for more information.

The following pages describe the general content of, and some career paths associated with, each DNS major.
Nutritional Sciences: CHE and CALS

What is Nutritional Sciences?

Nutritional Sciences (NS) is a broad, problem-solving field that draws upon biology, chemistry, and the social sciences. The NS major provides students with a strong foundation in the broad field of nutritional sciences as well as thorough training in chemistry and biology.

Completing the NS major helps prepare students to answer questions such as:

- How do dietary patterns influence the health and well-being of individuals, communities, and populations?
- What are the biological mechanisms through which nutrients affect metabolism?
- What are recommended dietary patterns for people of different activity levels and medical conditions?
- How can people be encouraged to adopt and maintain healthy eating patterns?
- What are the roles of governments and businesses in providing accessible, healthy food supplies and in promoting healthy eating practices?

Where might a degree in Nutritional Sciences lead me?

The NS major provides an excellent foundation for several different career paths. Some of these paths include:

- **Medicine** and other health careers such as physical therapist, physician’s assistant, nurse practitioner, or clinical pharmacy (also see The Pre-Health Track as a DNS Undergraduate)
- **Dietetics** including nutrition counseling, clinical nutrition, community nutrition, and management of food and nutrition services in business and the health industry (also see The Didactic Program in Dietetics)
- **Fitness and Wellness** including corporate wellness, sports nutrition, exercise science, and athletic training (also see the Applied Exercise Science minor)
- **Nutrition Communications** including nutrition education and outreach programs for businesses, governments, and community organizations
- **International Nutrition & Global Health** including programs concerned with hunger, health, and food supply issues in non-industrialized countries (also see the Global Health minor)
- **Research** including careers that use biochemical, physiological, genomic, clinical, and social science methods to understand how food, diet, and health are related (also see Undergraduate Research and The DNS Honors Program)

Following graduation from Cornell, most NS majors pursue their career interests through programs of advanced study such as including graduate school, dietetic internships, and medical school.

I’m Unsure About My Interests!

Expect your career interests to develop and possibly change while you are at Cornell! The first two years of curriculum allow you to explore the field of nutrition while you complete foundational courses in chemistry, biology, and the social sciences. The first-year course, NS 1150 Nutrition, Health and Society, introduces students to some important health issues and helps students develop their critical thinking and writing skills. In a 1-credit course, NS 1200 Nutrition and Health: Issues, Outlooks and Opportunities (spring term), students can meet experts working in different fields and learn about critical issues and trends in these fields as well as the requisite knowledge and skills to work in these areas. Take advantage of the different speakers and seminars offered throughout the year to learn about various career options, and discuss your career interests with your faculty advisor and with college counselors specializing in career planning. If you want to explore other majors, minor fields, or pre-professional paths, your advisor will suggest some people to contact.
What Courses Will I Be Taking?

The foundational curriculum includes introductory chemistry and biology, organic chemistry, biochemistry, physiology and math, as well as introductory courses in the social sciences. Specific college-level requirements (e.g., social sciences and humanities classes) will depend on whether a student is completing an NS through CHE or CALS. In all cases, it is very important to plan and sequence chemistry and biology courses appropriately and as early as possible!

NS students also complete five core NS courses:

- **NS 1150** Nutrition, Health and Society (fall freshman year)
- **NS 2450** Social Science Perspectives on Food and Nutrition (fall sophomore year)
- **NS 3450** Introduction to Physicochemical and Biological Aspects of Foods (fall sophomore or junior year)
- **NS 3310** Human Nutrition and Nutrient Metabolism (spring junior year)
- **NS 3320** Methods in Nutritional Sciences (fall senior year)

In addition, NS students select at least three advanced NS courses in from a variety of choices such as:

- **NS 3030** Nutrition, Health and Vegetarian Diets
- **NS 3060** Nutrition and Global Health
- **NS 3150** Obesity and the Regulation of Body Weight
- **NS 3220** Maternal and Child Nutrition
- **NS 4250** Nutrition Communications and Counseling
- **NS 4310** Mineral Nutrition and Chronic Disease
- **NS 4410** Nutrition and Disease
- **NS 4450** Toward a Sustainable Global Food System: Food Policy for Developing Countries
- **NS 4480** Economics of Food and Malnutrition
- **NS 4500** Public Health Nutrition
- **NS 4570** Health, Poverty, and Inequality: A Global Perspective

Detailed [NS-CHE major requirements](#), [NS-CALS major requirements](#), and [NS sample schedules](#) may be found in the [ORANGE PAGES](#) throughout this Survival Guide.
Human Biology, Health, and Society: CHE only

What is Human Biology, Health, and Society?

The Human Biology, Health, and Society (HBHS) major, only offered through the College of Human Ecology, helps students to view human health issues from a broad and multidisciplinary perspective.

The HBHS major may be a good fit for students who wish to pursue careers related to issues of human health and well-being. Many health problems are complex in origin and require that experts with different talents and perspectives work together and with the affected individuals and communities to understand the problems, propose solutions, and take steps to reduce health risks. HBHS students develop a strong background in both biological and social sciences, and use these perspectives to examine a range of issues related to human health and well-being.

An HBHS major will help prepare you to answer questions such as:

- What physiological and biochemical processes are involved in health and necessary for resistance to disease?
- What is normal growth of children and what biological, social, cultural and environmental factors are involved?
- How do biological processes explain normal and abnormal behavior?
- How do diet and other lifestyle factors influence the risk of chronic disease?
- What social, political, economic, and cultural factors explain the differential access to health care in the US and how can this situation be changed?
- How can communities, organizations, and practitioners work to promote health in the US and other countries?
- What can be done to reduce disease and promote quality of life for older Americans?

Where might a degree in Human Biology, Health, and Society lead me?

The HBHS major is one step toward a career in the health field. Most HBHS students will need to pursue advanced study to attain the academic and experiential credentials to work in their chosen profession. The HBHS major provides an excellent foundation for graduate and professional schools leading to careers in:

- **Medicine** and other health careers such as physical therapy, physician’s assistant, or clinical pharmacy (also see [The Pre-Health Track as a DNS Undergraduate](#))
- **Allied health professions** such as physical therapist, genetic counselor, occupational therapist, gerontologist, pharmacist, athletic trainer, or strength and conditioning specialist
- **Health education and promotion** careers such as health educator, health communicator, fitness and wellness educator; community action specialist
- **Biomedical research** in epidemiology, toxicology, pharmacology, biochemistry, or exercise physiology (also see [Undergraduate Research](#) and [The DNS Honors Program](#))
- **Health administration and policy** careers such as hospital administrator, public health administrator, legislative assistant, program evaluator, or policy analyst
- **Dietetics** including nutrition counseling, clinical nutrition, community nutrition, and management of food and nutrition services in business and the health industry (also see [The Didactic Program in Dietetics](#))

I’m Unsure About My Interests!

Expect your career interests to develop and possibly change while you are at Cornell! The HBHS program gives students time to consider different career interests while they get started completing introductory courses in chemistry, biology, math, writing, and the social sciences. The first-year course, NS 1150 Nutrition, Health and Society, introduces students to some important health issues and helps students develop their critical thinking and writing skills. In a 1-credit course, NS 1200 Nutrition and Health: Issues, Outlooks and Opportunities (spring term), students can meet experts working in different fields and learn
about critical issues and trends in these fields as well as the requisite knowledge and skills to work in these areas. In addition, take advantage of the different speakers and seminars offered throughout the year to learn about various career options, and discuss your career interests with your faculty advisor and with college counselors specializing in career planning. If you want to explore other majors, minor fields, or pre-professional paths, your advisor will suggest some people to contact.

**What Courses Will I Be Taking?**

All students in the HBHS program must complete the graduation requirements for the College of Human Ecology as well as the requirements for the major. All HBHS students complete NS 1150, Nutrition, Health and Society and one introductory course in each of two areas of social science chosen from anthropology, economics, psychology and sociology.

HBHS students develop a strong background in biology and chemistry. After a year of introductory chemistry and biology, students complete a sequence of courses in organic chemistry, physiology, and biochemistry. Students also choose advanced electives in biology selecting from courses in areas such as genetics, evolution, neurobiology, cell biology, microbiology and nutrition. A term of physics and a term of calculus also are required.

To explore issues related to human biology, health, and society, students choose from a wide array of selectives courses available in all departments in the College of Human Ecology that provide a more in-depth exploration into the biological science, social science, and nutritional science aspects of public health.

Detailed [HBHS major requirements](#) and [HBHS sample schedules](#) may be found in the [PURPLE PAGES](#) throughout this Survival Guide.
Global and Public Health Sciences: CHE and CALS

What is Global and Public Health Sciences?

Public health is the prevention of illness and promotion of wellness in communities, both large and small. The Global and Public Health Sciences (GPHS) major teaches the tools of public health research and action, and their application to population health issues in the U.S. and around the world. Sustained improvement of the health of populations often requires a multidisciplinary approach involving the biomedical, social, behavioral, political and environmental sciences, and careful consideration of the importance of cultural and ethical contexts.

The GPHS major is intended for students who are interested in the health problems of communities and the actions that will protect or improve the lives of large numbers of individuals within communities. Communities might be as small as a village, or as large as a country or even a continent, and successful actions can affect dozens or millions of persons. The work of public health professionals is distinct from the work of clinical professionals, who typically treat individuals after they have become sick or injured. Public health actions often involve educational and/or governmental approaches that influence many persons simultaneously, for example, in order to address issues such as obesity and diabetes, food security, HIV/AIDS and other infectious diseases, quality of food, water and air, and access to health care. The major is especially appropriate for students who wish to pursue advanced study that would lead to leadership positions in governmental or non-governmental organizations that deal directly with current and emerging health concerns in the U.S. or internationally.

Where might a degree in Global and Public Health Sciences lead me?

Opportunities in public health are numerous and growing. The GPHS major provides an excellent foundation for a wide variety of careers in public health, public service, research, social entrepreneurship, medicine and other health careers both domestically and globally:

- **Public health** fields such as epidemiology, biostatistics, health education and behavior, international health, health policy and management, environmental health, and many more
- **Medicine** and other health careers such as physical therapist, physician’s assistant, nurse practitioner, or clinical pharmacy (also see The Pre-Health Track as a DNS Undergraduate)
- **Research** including careers that use biochemical, physiological, genomic, clinical, and social science methods to improve human health and well-being domestically and globally (also see Undergraduate Research and The DNS Honors Program)

In many cases, these career paths will require appropriate graduate or professional training, such as a Master’s in Public Health. While the Global & Public Health Sciences major offers the broad interdisciplinary perspective to prepare students for the complex setting, organizations, and specialties encountered in advanced study, students are encouraged to meet with advisors and career counselors to ensure appropriate undergraduate preparation, as specific requirements differ among the various fields.

What does being a Global and Public Health Sciences major look like?

GPHS majors develop a strong background in biology, general chemistry, organic chemistry, biochemistry, and physiology. These courses collectively provide a foundation with which to understand the biomedical basis of public health issues. GPHS students also complete several core courses, a supervised Experiential Learning Opportunity, and a range of upper-level selectives, all of which are described in more detail below.

**Core Courses**

- **NS 1600** Introduction to Public Health (*mandatory* fall freshman year)
- **NS 2600** Introduction to Global Health (*mandatory* spring freshman year)
- **NS 2060** Preparation for Engaged Learning in Global & Public Health Sciences (*mandatory* fall sophomore year)
- **NS 3600** Epidemiology
- **NS 4600** Explorations in Global and Public Health
NS 1600 and NS 2600 introduce students to the principles of public health practice and research, domestically and internationally. Using case studies, students will learn about the achievements, challenges, and controversies in the field of public health, and the range of career opportunities. NS 2060 helps to prepare GPHS majors for their Experiential Learning Opportunity (described below).

NS 3600 introduces students to epidemiology, which is often referred to as the cornerstone of public health. Epidemiology and biostatistics are the foundation for public health research and practice. Epidemiology is the study of the distribution and determinants of health and well-being in human populations. Biostatistics is the application of statistics to biology, in this case to biomedical problems, and includes the analysis, interpretation and inferences in health-related studies. Epidemiology and biostatistics (preferably STSCI 2150 Introductory Statistics for Biology) should be completed within the first five semesters.

Upon completion of the Experiential Learning Opportunity, seniors enroll in NS 4600 Explorations in Global and Public Health, the capstone course in the major. This course involves, in part, a reflective document and presentation that connects the experiential component with the core principles of public health as presented in coursework taken over the previous three years.

**Experiential Learning Opportunity**
GPHS majors also complete a supervised Experiential Learning Opportunity (minimum of 3 credits) in either a laboratory or community setting. Experiential Learning Opportunity will provide GPHS students with a unique opportunity to connect theory and practice, to learn in unfamiliar contexts, to interact with others unlike themselves, and to practice using knowledge and skills in an applied public health setting. Through this requirement, students will be challenged to engage more effectively with the content of their courses while also learning about citizenship and about themselves as individuals. In addition, students will gain a deeper understanding of public health issues and problems and have the opportunity to enhance research, writing and critical thinking skills by applying knowledge and skills learned in the classroom to a public health community or laboratory setting. Students choose from a list of supervised experiences in the local community, on-campus laboratory, off-campus academic setting (e.g. Urban Semester in NYC, Cornell in Washington, Capital Semester in Albany), or international field setting in a resource-poor environment. Some settings—e.g., international placements—may involve pre-departure preparation and/or additional expenses.

**Selectives**
Given the interdisciplinary nature of population health problems, students are required to take one advanced course in each of the following three areas: Social and Behavioral Health, Biological Aspects of Public Health, Environmental Health, and Health Policy & Management. Students choose from a list of courses in each of these areas according to their interests and course schedule. Topics include public health microbiology, public health nutrition, nutrition and disease, nutrition and global health, social inequalities in physical and mental health, the U.S. healthcare system, reproductive health, and risk analysis and management.

Detailed GPHS-CHE major requirements, GPHS-CALS major requirements, and GPHS sample schedules may be found in the GREEN PAGES throughout this Survival Guide.
CHOOSING UNDERGRADUATE COURSES within the Division of Nutritional Sciences

Some courses offered within DNS are required for one or more majors (NS, HBHS, GPHS) and/or minor fields and pre-professional paths (Global Health, Dietetics). Others are offered as electives to further your knowledge based on your personal interests and professional goals.

Focusing your selections around a specific issue can result in a more concentrated experience and greater depth of understanding of that particular issue. The incomplete list of NS courses below is grouped into areas of interest to help you begin to plan your elective selections. A complete chronological list of NS courses offered can be found in the Cornell Courses of Study on this page: http://courses.cornell.edu/preview_program.php?catoid=31&poid=15311

**Global Perspectives on Human and Health**
- NS 2600 Introduction to Global Health (GPHS, Global Health) (S, 3 cr)
- NS 3060 Nutrition and Global Health (GPHS)
- NS 4450 // AEM 4450 Toward a Sustainable Global Food System: Food Policy for Developing Countries
- NS 4480 Economics of Food and Malnutrition
- NS 4570 // ECON 3910 Health, Poverty, and Inequality: A Global Perspective

**Epidemiology and Public Health**
- NS 1600 Introduction to Public Health (GPHS) (F, 3 cr)
- NS 3600 Epidemiology (GPHS) (F, 3 cr)
- NS 4500 Public Health Nutrition (Dietetics) (S, 3 cr)

**Food Quality**
- NS 2470 Food for Contemporary Living (Dietetics) (S, 2 cr)
- NS 3450 // FDSC 2000 Introduction to Physicochemical and Biological Aspects of Foods (F, 3 cr)
- NS 4880 Applied Dietetics in Food Service Systems (Dietetics) (S, 3 cr)

**Human Health and Nutrition**
- NS 1150 Nutrition, Health, and Society (NS, Dietetics) (F, 3 cr)
- NS 1220 Nutrition and the Life Cycle (Dietetics) (S, 3 cr)
- NS 2750 // ANTHR 2750 Human Biology and Evolution (F, 3 cr)
- NS 3030 Nutrition, Health and Vegetarian Diets (even S, 3 cr)
- NS 3150 // PSYCH 3150 Obesity and the Regulation of Body Weight (even S, 3 cr)
- NS 3220 Maternal and Child Nutrition (odd S, 3 cr; enrollment restricted – priority to Dietetics students)
- NS 3410 Human Anatomy and Physiology (Applied Exercise Science) (S, 4 cr)
- NS 3420 Human Anatomy and Physiology Laboratory (Applied Exercise Science) (S, 2 cr)
- NS 4410 Nutrition and Disease (Dietetics) (F, 4 cr)
- NS 4420 Implementation of Nutrition Care (Dietetics) (F, 3 cr; enrollment restricted – priority to Dietetics students)

**Nutritional Biochemistry**
- NS 3200 Introduction to Human Biochemistry (NS, HBHS, GPHS, and Dietetics, or equivalent) (F, 3 cr)
- NS 3310 Human Nutrition and Nutrient Metabolism (NS, Dietetics) (S, 4 cr)
- NS 3320 Methods in Nutritional Sciences (NS, Dietetics) (F, 3 cr)
- NS 3450 Nutritional and Physicochemical Aspects of Foods (NS, Dietetics) (F, 3 cr)
- NS 4310 Mineral Nutrition and Chronic Disease (F, 3 cr)

**Psychological and Social Influences on Human Nutrition**
- NS 2450 Social Science Perspectives on Food and Nutrition (NS, Dietetics) (F, 3 cr)
- NS 4250 Nutrition Communications and Counseling (Dietetics) (S, 3 cr)
Requirements for NS majors in the College of Human Ecology

- The requirements listed below pertain to students matriculating in August 2017 and January 2018 (also see NS/Human Ecology graduation requirements at http://www.human.cornell.edu/registrar/degree-progress/curriculum-sheets.cfm).
- All of the following sections are required to be completed to graduate, and all courses taken to fulfill college or major requirements (courses in areas 1-15 below) must be taken for a letter grade.

Nutritional Sciences (NS) students in the College of Human Ecology (CHE) must complete at least 120 credits to graduate. Of these 120 credits:
- 43 must be within CHE (DEA, FSAD, HD, HE, NS, or PAM)
- 9 must be taken outside the major (i.e., any on the previous list except NS). Courses used to fulfill this requirement may not also be used to fulfill any other college distribution or major requirement.
- Physical Education credits and those from supplemental courses do not count toward the 120 total required credits or the 12 credit semester minimum.

1. Introductory Chemistry: 8 cr
   CHEM 2070 General Chemistry I* (F, 4 cr) AND CHEM 2080 General Chemistry II (S, 4 cr)
   * Students may use an AP Chemistry score of 5 to place out of CHEM 2070. However, it is recommended that students take both CHEM 2070 and CHEM 2080 at Cornell, especially students considering the pre-health track. Students who take CHEM 2070 forfeit AP credit.

2. Introductory Biology Lab and Lecture
   [BIOG 1500 Investigative Lab (F/S, 2 cr) OR BIOSM 1500 Investigative Marine Biology Laboratory (Summer, 3 cr)] AND choose two out of the three lecture options:
   (a) BIOG 1350 Cell and Development (F/S, 3 cr)
   (b) BIOG 1440 Comparative Physiology (F/S, 3 cr) OR* BIOG 1445 Comparative Physiology (autotutorial) (F/S, 4 cr)
   (c) BIOEE 1610 Ecology and the Environment (F/S, 3 cr) OR* BIOEE 1780 Evolution and Diversity (F/S, 3 cr)
   * Cannot take both to fulfill this requirement.

3. Organic Chemistry Lecture
   Choose one of the following:
   (a) CHEM 1570 Elementary Organic Chemistry (S only, 4 cr, not for pre-health) OR
   (b) CHEM 3530 Principles of Organic Chemistry (F only, 4 cr) OR
   (c) CHEM 3570-3580 Introductory Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3570 alone will not fulfill the requirement) OR
   (d) CHEM 3590-3600 Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3590 alone will not fulfill the requirement)
   * Students interested in pre-health tracks should take a two-course sequence of organic chemistry, and should also take an organic chemistry lab (e.g. CHEM 2510 Introduction to Experimental Organic Chemistry OR CHEM 3010 Experimental Chemistry).

4. Organic Chemistry Lab
   (a) CHEM 2510 Introduction to Experimental Organic Chemistry (F/S/Summer, 2 cr) OR
   (b) CHEM 3010 Honors Experimental Chemistry (S, 4 cr)

5. Physiology
   Choose one of the following:
   (a) NS 3410 Human Anatomy and Physiology (S, 4 cr) OR
   (b) BIOAP 3110 Animal Physiology (F, 3 cr)
   * Pre-health students should also take NS 3420 Human Anatomy and Physiology Lab (S, 2 cr).

6. Biochemistry
   Choose one of the following*:
   (a) NS 3200 Introduction to Human Biochemistry (F, 4 cr)
   (b) BIOMG 3300 Principles of Biochemistry (F/S, 4 cr)
   (c) BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) AND BIOMG 3320 Principles of Biochemistry: Molecular Biology (S, 2 cr)
   (d) BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) AND BIOMI 2900 General Microbiology (F/S, 3 cr)
7. First Year Writing Seminars
Two first year writing seminar classes.
Note: These two classes must be completed during the first two semesters at Cornell.

8. Social Sciences
Choose one course in any two of the following four areas:

<table>
<thead>
<tr>
<th>Anthropology</th>
<th>Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHR 1400 The Comparison of Cultures (F, 3 cr)</td>
<td>ECON 1110 Introductory Microeconomics (F/S/Winter, 3 cr)</td>
</tr>
<tr>
<td></td>
<td>ECON 1120 Introductory Macroeconomics (F/S/Winter, 3 cr)</td>
</tr>
<tr>
<td>Psychology</td>
<td>Sociology</td>
</tr>
<tr>
<td>HD 1100 Lifespan Development</td>
<td>DSOC 1101 Introduction to Sociology (F/S, 3 cr)</td>
</tr>
<tr>
<td>HD 1150 Human Development: Infancy and</td>
<td>SOC 1101 Introduction to Sociology (F/S/Summer, 3 cr)</td>
</tr>
<tr>
<td>Child (F, 3 cr)</td>
<td></td>
</tr>
<tr>
<td>HD 1170 Adolescence and Emerging Adulthood (S, 3 cr)</td>
<td></td>
</tr>
<tr>
<td>PSYCH 1101 Introduction to Psychology (F/Summer, 3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

9. Humanities
Choose at least one additional course (3 cr) with the attributes HA, LA, or CA.

10. Calculus/Advanced Math*
(a) Choose one of the following Calculus/Advanced Math courses:
(b) MATH 1105 Finite Mathematics for the Life and Social Sciences (F, 3 cr)
(c) MATH 1106 Calculus for the Life and Social Sciences (S, 3 cr)
(d) MATH 1110 Calculus I (F/S/Sum, 4 cr)
(e) MATH 1120 Calculus II (F/S, 4 cr)
(f) A score of 4 or higher on the AB or BC Calculus AP Exam
   * See below under Statistics.

11. Statistics*
(a) STSCI 2150 Introductory Statistics for Biology (F/S, 4 cr) (recommended) OR
(b) PAM 2100 Introduction to Statistics (S, 4 cr) OR
(c) AEM 2100 Introductory Statistics (F, 4 cr) OR
(d) BTRY 3010 Biological Statistics I (F, 4 cr) OR
(e) ILRST/STSCI 2100 Introductory Statistics (F/S/Winter/Summer, 4 cr) OR
(f) MATH 1710 Statistical Theory and Application in the Real World (F/S, 4 cr) OR
(g) PSYCH 3500 Statistics and Research Design (F/Summer, 3-4 cr) OR
(h) SOC 3010 Statistics for Sociological Research (F, 4 cr)
(i) A score of 4 or 5 on the Statistics AP Exam
   * CHE students must take either Calculus/Advanced Math or Statistics at Cornell unless they have earned a score of 3 or higher on the BC Calculus AP Exam. Students in this case may use AP credit for both Calculus/Advanced Math and Statistics.

12. Nutritional Science Core Courses
NS 1150 Nutrition, Health and Society (F, 3 cr)
NS 2450 Social Science Perspectives on Food and Nutrition (F, 3 cr)
NS 3450 Introduction to Physicochemical and Biological Aspects of Food (F, 3 cr)
NS 3310 Nutrient Metabolism (S, 4 cr)
NS 3320 Methods in Nutritional Sciences (F, 3 cr)

13. Advanced Electives in Nutritional Sciences
At least 9 credits of NS courses at the 3000 level or above (see below for NS courses at the 3000/4000 level organized by area of interest). May include NS 3410 only if BIOAP 3110 is used to fulfill the physiology requirement. May include no more than a total of 3 credits from NS 4000 Directed Readings, NS 4010 Empirical Research, 4020 Supervised Fieldwork, and NS 4990 Honors Research. May not include NS 3200, NS 3980, NS 4620, or NS 4030 Teaching Apprenticeship.

Economic Influences on Human Nutrition
NS 3060 Nutrition and Global Health (odd F, 3 cr)
NS 4450 // AEM 4450 Toward a Sustainable Global Food System: Food Policy for Developing Countries (F, 3 cr)
NS 4480 Economics of Food and Malnutrition (S, 3 cr)
NS 4570 Health, Poverty, and Inequality: A Global Perspective (even F, 3 cr)
14. **Total Electives Requirements**
In addition to the above requirements, 120 total credits are required to graduate. Any courses that are not taken as a part of the above requirements count towards total elective requirements.

(a) A maximum of 15 credits of AP credit and in absentia credit can count towards the 120 total credits.
(b) A maximum of 15 credits of study abroad, Cornell-In-Washington, Urban semester or Capital semester can count towards the 120 total credits.
(c) A maximum of 12 credits of special studies credits (e.g. NS 4000, 4010, 4020, 4030, and 4990, or comparable courses in other departments) can count towards the 120 total credits.
(d) A course can only count towards the 120 total credits required once.

Students who exceed the above parameters—i.e., by taking more than 15 credits in cases (a), (b), and (c), or taking a course more than once—will have their total required credits increase by the same amount, and all credits will be counted toward their GPA. For example, a student who takes a 3-credit course twice to improve their grade will then be required to complete 123 total credits, and will have both grades factored into their GPA.

15. **Physical Education Requirement**
2 Physical Education courses must be completed in order to graduate. However, physical education does not count toward college and university minimum credit requirements for full-time status, nor does it count towards the 120 credits required for graduation.

16. **Swim Test Requirement**
A successful swim test must be completed in order to graduate.

**OTHER IMPORTANT NOTES**

**Pass/Fail Courses [S/U]**

- S/U grading option may NOT be used for any required course (i.e., courses in areas 1-12 below) unless it is the only grade option offered for those courses.
- S/Us MAY be used for the 9 credits of Human Ecology coursework outside of the major and for general elective credits.
- Students may apply no more than 12 credits of S/U towards graduation requirements. If a required course is only offered S/U, it will not count towards this limit. Students may take more S/Us if they choose, but the additional credit will not be applied towards graduation.
  - The **deadline for changing grade options is the 57th calendar day of the semester**, the same as the “drop” deadline.
Special Study Courses [4000, 4010, 4020, 4030]

- A total of 12 credits of special study course work from Human Ecology or other colleges will count towards the 120 graduation credit requirement. [Additional credits can be taken but will not be applied.]
- A maximum of three credits of 4000-4020 (not including 4030) may count towards the “credit outside the major” category as long as the special study is in a department outside the student’s major.
- Students cannot TA (4030) the same course for credit more than once or take and TA the same course simultaneously. 4030 does not fulfill any requirements towards the major. Registration for 4030 may not exceed 5 credit hours per semester.
- DNS students who wish to take Special Studies Courses must have taken and passed at least 2 S/U credits of the same course.
Requirements for NS majors in the College of Agriculture and Life Sciences

- The requirements listed below pertain to students matriculating in August 2017 and January 2018.
- All of the following sections are required to be completed to graduate, and all courses taken to fulfill college or major requirements (courses in areas 1-14 below) must be taken for a letter grade.

Nutritional Sciences (NS) students in the College of Agriculture and Life Sciences (CALS) must complete at least 120 credits to graduate. Of these 120 credits:
- 55 must be within CALS (e.g. AEM, COMM, FDSC, and a variety of biology-related fields)
- 9 must be taken outside the major (i.e., any non-NS CALS courses). Courses used to fulfill this requirement may not also be used to fulfill any other college distribution or major requirement.
- Physical Education credits and those from supplemental courses do not count toward the 120 total required credits or the 12 credit semester minimum.

1. Introductory Chemistry: 8 cr
   CHEM 2070 General Chemistry I * (F, 4 cr) AND CHEM 2080 General Chemistry II (S, 4 cr)
   * Students may use an AP Chemistry score of 5 to place out of CHEM 2070. However, it is recommended that students take both CHEM 2070 and CHEM 2080 at Cornell, especially students considering the pre-health track. Students who take CHEM 2070 forfeit AP credit.

2. Introductory Biology Lab and Lecture
   [BIOG 1500 Investigative Lab (F/S, 2 cr) OR BIOSM 1500 Investigative Marine Biology Laboratory (Summer, 3 cr)]
   AND choose two out of the three lecture options:
   (d) BIOG 1440 Comparative Physiology (F/S, 3 cr) OR
   (e) BIOG 1445 Comparative Physiology (autotutorial) (F/S, 4 cr)
   (f) BIOEE 1610 Ecology and the Environment (F/S, 3 cr) OR
   BIOEE 1780 Evolution and Diversity (F/S, 3 cr)
   * Cannot take both to fulfill this requirement.

3. Organic Chemistry Lecture
   Choose one of the following:
   (e) CHEM 1570 Elementary Organic Chemistry (S only, 4 cr, not for pre-health) OR
   (f) CHEM 3530 Principles of Organic Chemistry (F only, 4 cr) OR
   (g) CHEM 3570-3580 Introductory Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3570 alone will not fulfill the requirement) OR
   (h) CHEM 3590-3600 Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3590 alone will not fulfill the requirement)
   * Students interested in pre-health tracks should take a two-course sequence of organic chemistry, and should also take an organic chemistry lab (e.g. CHEM 2510 Introduction to Experimental Organic Chemistry OR CHEM 3010 Experimental Chemistry).

4. Organic Chemistry Lab
   (c) CHEM 2510 Introduction to Experimental Organic Chemistry (F/S/Summer, 2 cr) OR
   (d) CHEM 3010 Honors Experimental Chemistry (S, 4 cr)

5. Physiology
   Choose one of the following:
   (c) NS 3410 Human Anatomy and Physiology (S, 4 cr) OR
   (d) BIOAP 3110 Animal Physiology (F, 3 cr)
   * Pre-health students should also take NS 3420 Human Anatomy and Physiology Lab (S, 2 cr).

6. Biochemistry
   Choose one of the following:
   (g) NS 3200 Introduction to Human Biochemistry (F, 4 cr) OR
   (h) BIOMG 3300 Principles of Biochemistry (F/S, 4 cr) OR
   (i) BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) AND BIOMG 3320 Principles of Biochemistry: Molecular Biology (S, 2 cr) OR
   (j) BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) AND BIOMI 2900 General Microbiology (F/S, 3 cr) OR
   (k) BIOMG 3330 Principles of Biochemistry: Proteins, Metabolism, and Molecular Biology (Summer, 4 cr) OR
BIOMG 3350 Principles of Biochemistry: Proteins, Metabolism, and Molecular Biology (S, 4 cr)
* Students who take only one semester of introductory chemistry should talk with faculty advisors and biochemistry instructors as early as possible to determine which biochemistry course is best for them and how they may access resources for the best chance of success.

7. Communications
Complete 9 credits of courses in written and oral expression. At least 6 credits must be written expression. Select courses from First-year Writing Seminars and COMM or ENGL classes as per CALS distribution requirements. Note: Potential courses to fulfill this and any CALS distribution requirement may be found in "DUST."

8. Social Sciences and Humanities
Complete 12 credits, including four courses of at least 3 cr each:
- The four chosen courses must include at least 3 different categories from the following list: Cultural Analysis (CA), Human Diversity (D), Foreign Language (FL), Historical Analysis (HA), Knowledge, Cognition, and Moral Reasoning (KCM), Literature and the Arts (LA), and Social and Behavioral Analysis (SBA).
- At least one course must be in Human Diversity (D).

9. Calculus/Advanced Math*
Choose one of the following:
(g) MATH 1105 Finite Mathematics for the Life and Social Sciences (F, 3 cr)
(h) MATH 1106 Calculus for the Life and Social Sciences (S, 3 cr)
(i) MATH 1110 Calculus I (F/S/Sum, 4 cr)
(j) MATH 1120 Calculus II (F/S, 4 cr)
(k) A score of 4 or 5 on the AB or BC Calculus AP Exam *

* CALS students who earned a 4 or 5 on the AB Calculus AP Exam and complete MATH 1106, 1110, or equivalent forfeit their AP credit. CALS students who earned a 4 or 5 on the BC Calculus AP Exam and take MATH 1106, 1110, 1120, 1220, 1910, or equivalent forfeit their AP credit.
^ See below under Statistics.

10. Statistics*
Choose one of the following:
(j) STSCI 2150 Introductory Statistics for Biology (F/S, 4 cr) (recommended) OR
(k) PAM 2100 Introduction to Statistics (S, 4 cr) OR
(l) AEM 2100 Introductory Statistics (F, 4 cr) OR
(m) BTRY 3010 Biological Statistics I (F, 4 cr) OR
(n) ILRST/STSCI 2100 Introductory Statistics (F/S/Winter/Summer, 4 cr) OR
(o) MATH 1710 Statistical Theory and Application in the Real World (F/S, 4 cr) OR
(p) PSYCH 3500 Statistics and Research Design (F/Summer, 3-4 cr) OR
(q) SOC 3010 Statistics for Sociological Research (F, 4 cr) OR
(r) A score of 5 on the Statistics AP Exam*

* CALS students who earned a 5 on the Statistics AP Exam and complete AEM 2100, BTRY 3010, HADM 2010, ENGRD 2700, PAM 2100, ILRST/STSCI 2100, STSCI 2150, SOC 3010, MATH 1710, or equivalent forfeit their AP credit.
^ NS-CALS students must take either Calculus/Advanced Math or Statistics at Cornell unless they have earned a score of 3 or higher on the BC Calculus AP Exam. Students in this case may use AP credit for both Calculus/Advanced Math and Statistics.

11. Nutritional Science Core Courses
NS 1150 Nutrition, Health and Society (F, 3 cr)
NS 2450 Social Science Perspectives on Food and Nutrition (F, 3 cr)
NS 3450 Introduction to Physicochemical and Biological Aspects of Food (F, 3 cr)
NS 3310 Nutrient Metabolism (S, 4 cr)
NS 3320 Methods in Nutritional Sciences (F, 3 cr)

12. Advanced Electives in Nutritional Sciences
At least 9 credits of NS courses at the 3000 level or above (see below for NS courses at the 3000/4000 level organized by area of interest). May include NS 3410 only if BIOAP 3110 is used to fulfill the physiology requirement. May include no more than a total of 3 credits from NS 4000 Directed Readings, NS 4010 Empirical Research, 4020 Supervised Fieldwork, and NS 4990 Honors Research. May not include NS 3200, NS 3980, NS 4620, or NS 4030 Teaching Apprenticeship.

Economic Influences on Human Nutrition
NS 3060 Nutrition and Global Health (odd F, 3 cr)
NS 4450 // AEM 4450 Toward a Sustainable Global Food System: Food Policy for Developing Countries (F, 3 cr)
NS 4480 Economics of Food and Malnutrition (S, 3 cr)
NS 4570 Health, Poverty, and Inequality: A Global Perspective (even F, 3 cr)

**Nutrition and Public Health**
NS 3600 Epidemiology (F, 3 cr)
NS 4500 Public Health Nutrition (S, 3 cr)
NS 4600 Explorations in Global Health (F, 3 cr)

**Food Quality and Food Service Management**
NS 4880 Applied Dietetics in Foodservice Systems (S, 4 cr)

**Human Health and Nutrition**
NS 3030 Nutrition, Health and Vegetarian Diets (S, 3 cr)
NS 3150 // PSYCH 3150 Obesity and the Regulation of Body Weight (even S, 3 cr)
NS 3220 Maternal and Child Nutrition (odd S, 3 cr; enrollment restricted – priority to Dietetics students)
NS 3420 Maternal and Child Nutrition (odd S, 2 cr; enrollment restricted – priority to Dietetics students)
NS 3510 Nutrition and Disease (F, 3 cr)
NS 4310 Mineral Nutrition and Chronic Disease (F, 3 cr)
NS 4410 Nutrition and Disease (F, 4 cr)
NS 4420 Implementation of Nutrition Care (F, 3 cr; enrollment restricted – priority to Dietetics students)
NS 6140 Topics in Maternal and Child Nutrition (F, 3 cr)

**Nutritional Biochemistry**
NS 4310 Mineral Nutrition and Chronic Disease (F, 3 cr)
NS 6310 Micronutrients: Function, Homeostasis and Assessment (F, 2-4 cr)
NS 6320 Regulation of Macronutrient Metabolism (S, 4 cr)

**Psychological and Social Influences on Human Nutrition**
NS 4250 Nutrition Communications and Counseling (S, 3 cr)

13. **Total Electives Requirements**
In addition to the above requirements, 120 total credits are required to graduate. Any courses that are not taken as a part of the above requirements count towards total elective requirements.

(e) A maximum of 15 credits of AP credit and in absentia credit can count towards the 120 total credits.
(f) A maximum of 15 credits of study abroad, Cornell-In-Washington, Urban semester or Capital semester can count towards the 120 total credits.
(g) A maximum of 12 credits of special studies credits (e.g. NS 4000, 4010, 4020, 4030, and 4990, or comparable courses in other departments) can count towards the 120 total credits.
(h) A course can only count towards the 120 total credits required once.

Students who exceed the above parameters—i.e., by taking more than 15 credits in cases (a), (b), and (c), or taking a course more than once—will have their total required credits increase by the same amount, and all credits will be counted towards their GPA. For example, a student who takes a 3-credit course twice to improve their grade will then be required to complete 123 total credits, and will have both grades factored into their GPA.

14. **Physical Education Requirement**
2 Physical Education courses must be completed in order to graduate. However, physical education does not count toward college and university minimum credit requirements for full-time status, nor does it count towards the 120 credits required for graduation.

15. **Swim Test Requirement**
A successful swim test must be completed in order to graduate.

**OTHER IMPORTANT NOTES**

**Pass/Fail Courses [S/U]**
- S/U grading option may NOT be used for any required course (i.e., courses in areas 1-11 below) unless it is the only grade option offered for those courses.
- S/Us MAY be used for the 9 credits of Human Ecology coursework outside of the major and for general elective credits.
- Students may apply no more than 12 credits of S/U towards graduation requirements. If a required course is only offered S/U, it will not count towards this limit. Students may take more S/Us if they choose, but the additional credit will not be applied towards graduation.
  - The **deadline for changing grade options is the 57th calendar day of the semester**, the same as the “drop” deadline.
Special Study Courses [4000, 4010, 4020, 4030]

- A total of 12 credits of special study course work from Human Ecology or other colleges will count towards the 120 graduation credit requirement. [Additional credits can be taken but will not be applied.]
- A maximum of three credits of 4000-4020 (not including 4030) may count towards the “credit outside the major” category as long as the special study is in a department outside the student's major.
- Students cannot TA (4030) the same course for credit more than once or take and TA the same course simultaneously. 4030 does not fulfill any requirements towards the major. Registration for 4030 may not exceed 5 credit hours per semester.
  
  DNS students who wish to take Special Studies Courses must have taken and passed at least 2 S/U credits of the same course.
Sample Schedules for NS Majors

1. Sample schedules are meant **only as a guide**, representing **one example** of many ways to complete the NS major, and **are not an adequate substitute for meeting with faculty advisor(s)**. Most major and college requirements can be met with multiple options that should be considered in light of an individual student’s College, interests, professional goals, and other schedule constraints.

2. Students must complete **15 credits per semester on average** to graduate with the required 120. As a result, the courses listed in each semester do not necessarily represent the student’s actual full semester load—particularly in later semesters, as the variability in students’ remaining requirements and electives increases.

"BASELINE" SCHEDULE
(i.e., not pre-health or dietetics, no plans to study abroad)

<table>
<thead>
<tr>
<th>FRESHMAN YEAR</th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) NS 1150 Nutrition and Health (3 cr)</td>
<td>1) NS 1200 Nutrition and Health: Issues, Outlooks and Opportunities (1 cr)</td>
</tr>
<tr>
<td></td>
<td>2) NS 1160 Personalized Concepts and Controversies (1 cr)</td>
<td>2) CHEM 2080 Introductory Chemistry II (4 cr)</td>
</tr>
<tr>
<td></td>
<td>3) CHEM 2070 Introductory Chemistry I (4 cr)</td>
<td>3) BIOG 1500 Investigative Lab (2 cr) or Introductory biology lecture [e.g. BIOMG 1350 or BIOG 1440, or BIOEE 1610 or 1780] (3 cr)</td>
</tr>
<tr>
<td></td>
<td>4) Introductory biology lecture [e.g. BIOMG 1350, BIOG 1440, or BIOEE 1610 or 1780] (3 cr)</td>
<td>4) Freshman Writing Seminar (required spring of freshman year)</td>
</tr>
<tr>
<td></td>
<td>5) Freshman Writing Seminar (required fall of freshman year)</td>
<td>5) Humanities &amp; Social Sciences course (see College-level specifications)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOPHOMORE YEAR</th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) NS 2450 Social Science Perspectives on Food and Nutrition (3 cr)</td>
<td>1) NS 1220 Nutrition and the Life Cycle (3 cr)</td>
</tr>
<tr>
<td></td>
<td>2) BIOG 1500 Investigative Lab (2 cr) or Introductory biology lecture [e.g. BIOMG 1350 or BIOG 1445] (3 cr)</td>
<td>2) CHEM 2510 Introduction to Experimental Organic Chemistry (2 cr)</td>
</tr>
<tr>
<td></td>
<td>3) CHEM 3530 Principles of Organic Chemistry (4 cr)</td>
<td>3) Biology elective</td>
</tr>
<tr>
<td></td>
<td>4) MATH 1105 Finite Mathematics for the Life and Social Sciences (3 cr)</td>
<td>4) Written/oral expression course (if CALS) or Biology elective</td>
</tr>
<tr>
<td></td>
<td>5) Humanities &amp; Social Sciences course (see College-level specifications)</td>
<td>5) Humanities &amp; Social Sciences course (see College-level specifications)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>JUNIOR YEAR</th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) NS 3200 Biochemistry (4 cr) or BIOMG 3300 Principles of Biochemistry (4 cr)</td>
<td>1) NS 3310 Nutrient Metabolism (4 cr)</td>
</tr>
<tr>
<td></td>
<td>2) NS 3450 Introduction to Physicochemical and Biological Aspects of Food (3 cr)</td>
<td>2) NS 3410 Anatomy and Physiology (4 cr)</td>
</tr>
<tr>
<td></td>
<td>3) Advanced NS elective [e.g. NS 4410 or 4450, or research credits]</td>
<td>3) Advanced NS elective [e.g. NS 3420, 4480, or research credits]</td>
</tr>
<tr>
<td></td>
<td><em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
<td>4) Humanities &amp; Social Sciences course (see College-level specifications) <em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SENIOR YEAR</th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1) NS 3320 Methods in Nutritional Sciences (3 cr)</td>
<td>1) Remaining advanced NS elective credits [e.g. NS 3030, 3320, 4480, or 4500, or research credits]</td>
</tr>
<tr>
<td></td>
<td>2) Advanced NS elective [e.g. NS 4450 or research credits]</td>
<td><em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
</tr>
<tr>
<td></td>
<td>3) STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
<td><em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
</tr>
</tbody>
</table>
**PRE-HEALTH (or possibility of pre-health)**

*(not dietetics, no plans to study abroad)*

***It is very important that students pursuing or considering a pre-health track speak with a pre-health advisor. See The Pre-Health Track as a DNS Undergraduate for more information.***

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 1150 Nutrition, Health, and Society (3 cr)</td>
<td>1) NS 1200 Nutrition and Health: Issues, Outlooks and Opportunities (1 cr)</td>
</tr>
<tr>
<td>2) NS 1160 Personalized Concepts and Controversies (1 cr)</td>
<td>2) CHEM 2080 Introductory Chemistry II (4 cr)</td>
</tr>
<tr>
<td>3) CHEM 2070 Introductory Chemistry I (4 cr)</td>
<td>3) BIOG 1500 Investigative Lab (2 cr)</td>
</tr>
<tr>
<td>4) BIOG 1440 Introductory Biology: Comparative Physiology (3 cr)</td>
<td>4) BIOMG 1350 Introductory Biology: Cell and Developmental Biology (3 cr)</td>
</tr>
<tr>
<td>5) Freshman Writing Seminar (3 cr, required fall of freshman year)</td>
<td>5) Freshman Writing Seminar <em>(required spring of freshman year)</em> (3 cr)</td>
</tr>
<tr>
<td>6) Humanities &amp; Social Sciences course <em>(see College-level specifications; psychology or sociology recommended for pre-health)</em></td>
<td>6) Humanities &amp; Social Sciences course <em>(see College-level specifications)</em></td>
</tr>
</tbody>
</table>

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 2450 Social Science Perspectives on Food and Nutrition (3 cr)</td>
<td>1) NS 1220 Nutrition and the Life Cycle (3 cr)</td>
</tr>
<tr>
<td>2) NS 3450 Introduction to Physicochemical and Biological Aspects of Food (3 cr)</td>
<td>2) CHEM 3580 Organic Chemistry for the Life Sciences II (4 cr)</td>
</tr>
<tr>
<td>3) CHEM 3570 Organic Chemistry for the Life Sciences I (4 cr)</td>
<td>3) CHEM 2510 Introduction to Experimental Organic Chemistry (2 cr)</td>
</tr>
<tr>
<td>4) Humanities &amp; Social Sciences course <em>(see College-level specifications)</em></td>
<td>4) Biology elective [e.g. BIOMI 2900 General Microbiology Lectures (3-4 cr)]</td>
</tr>
<tr>
<td></td>
<td>5) Written/oral expression course (if CALS) OR Humanities &amp; Social Sciences course, if needed <em>(see College-level specifications)</em></td>
</tr>
</tbody>
</table>

### JUNIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3200 Biochemistry (4 cr) OR BIOMG 3300 Principles of Biochemistry (4 cr)</td>
<td>1) NS 3310 Nutrient Metabolism (4 cr)</td>
</tr>
<tr>
<td>2) Biology elective [e.g. BIOMG 2800 Lectures in Genetics and Genomics, <em>(recommended for pre-health)</em> (3 cr)]</td>
<td>2) NS 3410 Anatomy and Physiology (4 cr)</td>
</tr>
<tr>
<td>3) PHYS 1101 Fundamentals of Physics I (4 cr)</td>
<td>3) NS 3420 Anatomy and Physiology Lab (2 cr)</td>
</tr>
<tr>
<td>4) MATH 1110 Calculus I (4 cr)</td>
<td>4) Advanced NS elective [e.g. NS 4480 or research credits]</td>
</tr>
<tr>
<td>5) Additional biology elective, if desired, according to interests</td>
<td>5) PHYS 1102 Fundamentals of Physics II (4 cr)</td>
</tr>
</tbody>
</table>

### SENIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3320 Methods in Nutritional Sciences (3 cr)</td>
<td>1) Advanced NS elective [e.g. NS 3220, 4480, or 4500, or research credits]</td>
</tr>
<tr>
<td>2) STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
<td><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></td>
</tr>
<tr>
<td>3) Advanced NS elective [e.g. NS 4410 or research credits]</td>
<td><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></td>
</tr>
</tbody>
</table>
### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 1150 Nutrition and Health (3 cr)</td>
<td>1) NS 1200 Nutrition and Health: Issues, Outlooks and Opportunities (1 cr)</td>
</tr>
<tr>
<td>2) NS 1160 Personalized Concepts and Controversies (1 cr)</td>
<td>2) CHEM 2080 Introductory Chemistry II (4 cr)</td>
</tr>
<tr>
<td>3) CHEM 2070 Introductory Chemistry I (4 cr)</td>
<td>3) BIOG 1500 Investigative Lab (2 cr) OR Introductory biology lecture [e.g. BIOMG 1350, BIOG 1440, or BIOEE 1610 or 1780] (3 cr)</td>
</tr>
<tr>
<td>4) Introductory biology lecture [e.g. BIOMG 1350, BIOG 1440, or BIOEE 1610 or 1780] (3 cr)</td>
<td>4) Freshman Writing Seminar (required spring of freshman year)</td>
</tr>
<tr>
<td>5) Freshman Writing Seminar (required fall of freshman year)</td>
<td>5) Humanities &amp; Social Sciences course (see College-level specifications)</td>
</tr>
</tbody>
</table>

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 2450 Social Science Perspectives on Food and Nutrition (3 cr)</td>
<td>1) NS 1220 Nutrition and the Life Cycle (3 cr)</td>
</tr>
<tr>
<td>2) BIOG 1500 Investigative Lab (2 cr) OR Introductory biology lecture [e.g. BIOMG 1350 or BIOG 1445] (3 cr)</td>
<td>2) CHEM 2510 Introduction to Experimental Organic Chemistry (2 cr)</td>
</tr>
<tr>
<td>3) CHEM 3530 Principles of Organic Chemistry (4 cr)</td>
<td>3) STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
</tr>
<tr>
<td>4) MATH 1105 Finite Mathematics for the Life and Social Sciences (3 cr)</td>
<td>4) Written/oral expression course (if CALS) OR other College elective</td>
</tr>
<tr>
<td>5) Humanities &amp; Social Sciences course (see College-level specifications)</td>
<td>5) Humanities &amp; Social Sciences course (see College-level specifications)</td>
</tr>
</tbody>
</table>

### JUNIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELO // STUDY ABROAD SEMESTER</td>
<td></td>
</tr>
</tbody>
</table>

### SENIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3320 Methods in Nutritional Sciences (3 cr)</td>
<td>1) Biology elective, if needed</td>
</tr>
<tr>
<td>2) Advanced NS elective</td>
<td>2) Remaining NS elective credits, if needed [e.g. NS 3220, 4480, or 4500, or research credits]</td>
</tr>
<tr>
<td>3) Advanced NS elective</td>
<td><em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
</tr>
</tbody>
</table>

***plus remaining College (CALS/CHE) or general elective credits, according to needs and interests***
DIETETICS
(not pre-health, no plans to study abroad)

***It is very important that students speak with Emily Gier to be sure to meet all dietetics requirements on time and in the right sequence. See The Didactic Program in Dietetics for more information.***

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 1150 Nutrition and Health (3 cr)</td>
<td>1) NS 1220 Nutrition and the Life Cycle (3 cr)</td>
</tr>
<tr>
<td>2) NS 1160 Personalized Concepts and Controversies (1 cr)</td>
<td>2) CHEM 2080 Introductory Chemistry II (4 cr)</td>
</tr>
<tr>
<td>3) CHEM 2070 Introductory Chemistry I (4 cr)</td>
<td>3) BIOG 1500 Investigative Lab (2 cr) OR introductory biology lecture [e.g. BIOMG 1350, BIOG 1440, or BIOEE 1610 or 1780] (3 cr)</td>
</tr>
<tr>
<td>4) Introductory biology lecture [e.g. BIOMG 1350, BIOG 1440, or BIOEE 1610 or 1780] (3 cr)</td>
<td>4) Freshman Writing Seminar (required spring of freshman year)</td>
</tr>
<tr>
<td>5) Freshman Writing Seminar (required fall of freshman year)</td>
<td>5) Humanities &amp; Social Sciences course (see College-level specifications)</td>
</tr>
</tbody>
</table>

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 2470 Food for Contemporary Living (2 cr) <em>(if still needed)</em></td>
<td>1) CHEM 1570 Introduction to Organic and Biological Chemistry (3 cr; if CHEM 3530 not taken)</td>
</tr>
<tr>
<td>2) NS 2450 Social Science Perspectives on Food and Nutrition (3 cr)</td>
<td>2) CHEM 2510 Introduction to Organic Chemistry (2 cr)</td>
</tr>
<tr>
<td>3) CHEM 3530 Principles of Organic Chemistry (4 cr) <em>(OR CHEM 1570 in Spring)</em></td>
<td>3) NS 3410 Anatomy and Physiology (4 cr)</td>
</tr>
<tr>
<td>4) Introductory biology lecture [e.g. BIOMG 1350, BIOG 1440 or 1445, or BIOEE 1780] (3 cr)</td>
<td>4) NS 3420 Anatomy and Physiology Lab (2 cr)</td>
</tr>
<tr>
<td>5) Psychology [PSYCH 1101 Introduction to Psychology OR HD 1150 Human Development] (3 cr)</td>
<td>5) Humanities &amp; Social Sciences course (see College-level specifications)</td>
</tr>
<tr>
<td>6) Statistics</td>
<td><em>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</em>**</td>
</tr>
</tbody>
</table>

### JUNIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3200 Biochemistry (4 cr) <em>(OR BIOMG 3300 Principles of Biochemistry (4 cr) OR BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (3 cr)</em></td>
<td>1) NS 3310 Nutrient Metabolism (4 cr)</td>
</tr>
<tr>
<td>2) NS 3450 Introduction to Physiochemical and Biological Aspects of Foods (3 cr)</td>
<td>2) NS 4500 Public Health Nutrition (3 cr) <em>(OR NS 1600 in fall)</em></td>
</tr>
<tr>
<td>3) MATH 1110 Calculus I (4 cr)</td>
<td>3) Written/oral expression course (if CALS) OR College (CALS/CHE) elective</td>
</tr>
<tr>
<td>4) HADM 3365 Food Service Management Essentials (3 cr)</td>
<td>4) Humanities &amp; Social Sciences course (see College-level specifications)</td>
</tr>
<tr>
<td>5) BIOMI 2900 General Microbiology Lectures (3-4 cr)</td>
<td><em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
</tr>
<tr>
<td>6) Humanities &amp; Social Sciences course (see College-level specifications)</td>
<td></td>
</tr>
</tbody>
</table>

### SENIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3320 Methods in Nutritional Science (3 cr)</td>
<td>1) NS 4250 Nutrition Communications and Counseling (3 cr)</td>
</tr>
<tr>
<td>2) NS 4410 Nutrition and Disease (4 cr)</td>
<td>2) NS 4880 Applied Dietetics in Food Service Systems (4 cr)</td>
</tr>
<tr>
<td>3) NS 4420 Implementation of Nutrition Care (3 cr)</td>
<td><em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
</tr>
<tr>
<td>4) NS 1600 Intro to Public Health (3 cr) <em>(if NS 4500 not taken)</em></td>
<td></td>
</tr>
<tr>
<td>5) BIOMI 2900 General Microbiology Lectures (3-4 cr) <em>(if still needed)</em></td>
<td></td>
</tr>
<tr>
<td></td>
<td><em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
</tr>
</tbody>
</table>
Requirements for HBHS majors (College of Human Ecology only)

- The requirements listed below pertain to students matriculating in August 2017 and January 2018 (also see HBHS graduation requirements at http://www.human.cornell.edu/registrar/degree-progress/curriculum-sheets.cfm).
- All of the following sections are required to be completed to graduate, and all courses taken to fulfill college or major requirements (courses in areas 1-14 below) must be taken for a letter grade.

Human Biology, Health, and Society (HBHS) students in the College of Human Ecology (CHE) must complete at least 120 credits to graduate. Of these 120 credits:

- 43 must be within CHE (DEA, FSAD, HD, HE, NS, or PAM)
- 9 must be taken outside the major (i.e., any on the previous list except NS). Courses used to fulfill this requirement may not also be used to fulfill any other college distribution or major requirement.

In addition, Physical Education credits and those from supplemental courses do not count toward the 120 total required credits or the 12 credit semester minimum.

1. Introductory Chemistry: 8 cr
   CHEM 2070 General Chemistry I (F, 4 cr) AND CHEM 2080 General Chemistry II (S, 4 cr)
   * Students may use an AP Chemistry score of 5 to place out of CHEM 2070. However, it is recommended that students take both CHEM 2070 and CHEM 2080 at Cornell, especially students considering the pre-health track. Students who take CHEM 2070 forfeit AP credit.

2. Introductory Biology Lab and Lecture
   [BIOG 1500 Investigative Lab (F/S, 2 cr) OR BIOSM 1500 Investigative Marine Biology Laboratory (Summer, 3 cr)] AND choose two out of the three lecture options:
   (a) BIOMG 1350 Cell and Development (F/S, 3 cr)
   (b) BIOG 1440 Comparative Physiology (F/S, 3 cr) OR*
       BIOG 1445 Comparative Physiology (autotutorial) (F/S, 4 cr)
   (c) BIOEE 1610 Ecology and the Environment (F/S, 3 cr) OR*
       BIOEE 1780 Evolution and Diversity (F/S, 3 cr)
   * Cannot take both to fulfill this requirement.

3. Physics
   PHYS 1101 General Physics I OR PHYS 2207 Fundamentals of Physics*
   * Pre-health students should also take PHYS 1102 General Physics II OR PHYS 2208 Fundamentals of Physics.

4. Organic Chemistry Lecture
   Choose one of the following:
   (a) CHEM 1570 Elementary Organic Chemistry (S only, 4 cr, not for pre-health) OR
   (b) CHEM 3530 Principles of Organic Chemistry (F only, 4 cr) OR
   (c) CHEM 3570-3580 Introductory Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3570 alone will not fulfill the requirement) OR
   (d) CHEM 3590-3600 Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3590 alone will not fulfill the requirement)
   * Students interested in pre-health tracks should take a two-course sequence of organic chemistry, and should also take an organic chemistry lab (e.g. CHEM 2510 Introduction to Experimental Organic Chemistry OR CHEM 3010 Experimental Chemistry).

5. Organic Chemistry Lab
   (a) CHEM 2510 Introduction to Experimental Organic Chemistry (F/S/Summer, 2 cr) OR
   (b) CHEM 3010 Honors Experimental Chemistry (S, 4 cr)

6. Physiology
   Choose one of the following:
   (a) NS 3410 Human Anatomy and Physiology (S, 4 cr) OR
   (b) BIOP 3110 Animal Physiology (F, 3 cr)
   * Pre-health students should also take NS 3420 Human Anatomy and Physiology Lab (S, 2 cr).

7. Biochemistry
   Choose one of the following*:
   (a) NS 3200 Introduction to Human Biochemistry (F, 4 cr)
(b) BIOMG 3300 Principles of Biochemistry (F/S, 4 cr)
(c) BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) **AND** BIOMG 3320 Principles of Biochemistry: Molecular Biology (S, 2 cr)
(d) BIOMG 3311 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) **AND** BIOMI 2900 General Microbiology (F/S, 3 cr)
(e) BIOMG 3330 Principles of Biochemistry: Proteins, Metabolism, and Molecular Biology (Summer, 4 cr)
(f) BIOMG 3350 Principles of Biochemistry: Proteins, Metabolism, and Molecular Biology (S, 4 cr)

8. Biology Electives
6 additional credits selected from didactic courses in the following areas that relate to human biology. Qualifying courses must require one year of introductory biology as a pre-requisite, and may not include Special Studies (e.g., NS 4000, 4010, 4020, 4030) or independent research credits (e.g., NS 4990).

- Genetics, recommended (e.g., BIOMG 2800 and 2820)
- Microbiology (e.g., BIOM 2900, if not used for Biochem req. and VETMI 4310)
- Neurobiology (e.g., BIONB 2210, 2220 and 4280)
- Evolution (may use NS 2750 if not used as a HBHS Selective)
- Cell Biology (e.g., BIOMG 4320)
- Physiology (e.g., BIOAP 4890. May use NS 3410 or BIOAP 3110 if both are taken)
- Biochemistry (may not include BIOMG 3300, 3310, or 3320, 3350, or NS 3200)

9. First Year Writing Seminars
Two first year writing seminar classes.
**Note:** These two classes must be completed during the first two semesters at Cornell.

10. Social Sciences
Choose **one** course in any **two** of the following four areas:

<table>
<thead>
<tr>
<th>Anthropology</th>
<th>Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHR 1400 The Comparison of Cultures (F, 3 cr)</td>
<td>ECON 1110 Introductory Microeconomics (F/S /Summer/Winter, 3 cr)</td>
</tr>
<tr>
<td><strong>Psychology</strong></td>
<td>ECON 1120 Introductory Macroeconomics (F/S /Summer/Winter, 3 cr)</td>
</tr>
<tr>
<td>HD 1100 Lifspan Development</td>
<td><strong>Sociology</strong></td>
</tr>
<tr>
<td>HD 1150 Human Development: Infancy and Childhood (F, 3 cr)</td>
<td>DSOC 1101 Introduction to Sociology (F/S, 3 cr)</td>
</tr>
<tr>
<td>HD 1170 Adolescence and Emerging Adulthood (S, 3 cr)</td>
<td>SOC 1101 Introduction to Sociology (F/S/Summer, 3 cr)</td>
</tr>
<tr>
<td>PSYCH 1101 Introduction to Psychology (F/Summer, 3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

11. Humanities
Choose at least one additional course (3 cr) with the attributes HA, LA, or CA.

12. Calculus/Advanced Math*
(a) Choose **one** of the following Calculus/Advanced Math courses:
(b) MATH 1105 Finite Mathematics for the Life and Social Sciences (F, 3 cr)
(c) MATH 1106 Calculus for the Life and Social Sciences (S, 3 cr)
(d) MATH 1110 Calculus I (F/S/Sum, 4 cr)
(e) MATH 1120 Calculus II (F/S, 4 cr)
(f) A score of **4 or higher** on the AB or BC Calculus AP Exam
* See below under Statistics.

13. Statistics*
(a) STSCI 2150 Introductory Statistics for Biology (F/S, 4 cr) (**recommended** OR
(b) PAM 2100 Introduction to Statistics (S, 4 cr) **OR**
(c) AEM 2100 Introductory Statistics (F, 4 cr) **OR**
(d) BTRY 3010 Biological Statistics I (F, 4 cr) **OR**
(e) ILRST/STSCI 2100 Introductory Statistics (F/S/Winter/Summer, 4 cr) **OR**
(f) MATH 1710 Statistical Theory and Application in the Real World (F/S, 4 cr) **OR**
(g) PSYCH 3500 Statistics and Research Design (F/Summer, 3-4 cr) **OR**
(h) SOC 3010 Statistics for Sociological Research (F, 4 cr)
(i) A score of **4 or 5** on the Statistics AP Exam

*CHE students **must** take either Calculus/Advanced Math or Statistics at Cornell unless they have earned a score of 3 or higher on the BC Calculus AP Exam. Students in this case may use AP credit for both Calculus/Advanced Math and Statistics.
14. HBHS Selectives

Students must take a total of 15 credits, as broken down in the following three categories. A course cannot be used for more than one category. NS courses count toward the 43 required Human Ecology credits.

**Social Science Perspective on Health**

At least 6 cr from courses that cover some aspect of health (including nutrition) from a social science perspective. More than half of the course content must be devoted to consideration of health/life course/disease issues from a social science (sociological, anthropological, psychological, and/or economic) perspective. Courses with a focus on public policy related to health or education/counseling related to health are included in this category.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS 2450</td>
<td>Social Science Perspectives on Food and Nutrition</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>NS 4250</td>
<td>Nutrition Communications and Counseling</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>NS 4440</td>
<td>Toward a Sustainable Global Food System: Food Policy for Developing Countries</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>NS 4480</td>
<td>Economics of Food and Malnutrition</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>NS 4500</td>
<td>Public Health Nutrition</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>NS 4570</td>
<td>Health, Poverty, and Inequality: A Global Perspective</td>
<td>even F, 3 cr</td>
</tr>
<tr>
<td>DSOC 2200</td>
<td>Sociology of Health and Ethnic Minorities</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>DSOC 3111</td>
<td>Sociology of Medicine</td>
<td>S, 4 cr</td>
</tr>
<tr>
<td>HD 2180</td>
<td>Human Development: Adulthood and Aging</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>HD 2510</td>
<td>Social Gerontology: Aging and the Life Course</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>HD 3300</td>
<td>Developmental Psychopathology</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>HD 3490</td>
<td>Positive Psychology</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>HD 3620</td>
<td>Human Bonding</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>HD 3700</td>
<td>Adult Psychopathology</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>HD 4570</td>
<td>Health and Social Behavior</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>HD 4590</td>
<td>Life Transitions Across the Life Span</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>HD 4770</td>
<td>Psychopathology in Great Works of Literature</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>PAM 2350</td>
<td>The U.S. Health Care System</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>PAM 3110</td>
<td>Pharmaceutical Management and Policy</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>PAM 3280</td>
<td>Fundamentals of Population Health</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>PAM 3780</td>
<td>Sick Around the World? Comparing Health Care Systems Around the World</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>PAM 4280</td>
<td>Economics of Risky Health Behaviors</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>PAM 4370</td>
<td>Economics of Health Care Markets</td>
<td>F, 3 cr</td>
</tr>
</tbody>
</table>

**Natural Science Perspective on Health**

At least 6 cr from courses that cover some aspect of health (including nutrition) from a life science perspective. More than half of the course content must be devoted to consideration of health/life course/disease issues from a life science/biological perspective (e.g. biochemical, physiological, molecular, evolutionary, neuroscience, or a combination of these). Courses may be focused on use of diet and other health practices for the prevention and/or treatment of diseases or for the improvement of physiological function.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS 2750</td>
<td>Human Biology and Evolution</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>NS 3030</td>
<td>Nutrition, Health and Vegetarian Diets</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>NS 3060</td>
<td>Nutrition and Global Health</td>
<td>alt odd F, 3 cr</td>
</tr>
<tr>
<td>NS 3150</td>
<td>Obesity and Regulation of Body Weight (even S, 3 cr)</td>
<td></td>
</tr>
<tr>
<td>NS 3220</td>
<td>Maternal and Child Nutrition</td>
<td>odd S, 3 cr; enrollment restricted – priority to Dietetics students</td>
</tr>
<tr>
<td>NS 3310</td>
<td>Nutrient Metabolism</td>
<td>S, 4 cr</td>
</tr>
<tr>
<td>NS 3320</td>
<td>Methods in Nutritional Sciences</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>NS 3450</td>
<td>Introduction to Physiochemical and Biological Aspects of Food</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>NS 4310</td>
<td>Mineral Nutrition and Chronic Disease</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>NS 4410</td>
<td>Nutrition and Disease</td>
<td>F, 4 cr</td>
</tr>
<tr>
<td>NS 4420</td>
<td>Implementation of Nutrition Care</td>
<td>F, 3 cr; enrollment restricted – priority to Dietetics students</td>
</tr>
<tr>
<td>NS 6140</td>
<td>Topics in Maternal and Child Nutrition</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>NS 6310</td>
<td>Micronutrients: Function, Homeostasis and Assessment</td>
<td>F, 2-4 cr</td>
</tr>
<tr>
<td>NS 6320</td>
<td>Regulation of Macronutrient Metabolism</td>
<td>S, 4 cr</td>
</tr>
<tr>
<td>HD 2200</td>
<td>The Human Brain and Mind: Biological Issues in Human Development</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>HD 3250</td>
<td>Neurochemistry of Human Behavior</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>HD 3660</td>
<td>Affective and Social Neuroscience</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>HD 4780</td>
<td>Attention Deficit/Hyperactivity Disorder in Children</td>
<td>alt S, 3 cr</td>
</tr>
<tr>
<td>BIOMG 4390</td>
<td>Molecular Basis of Disease</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>BIOMI 2500</td>
<td>Public Health Microbiology</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>BIOMI 2600</td>
<td>Microbiology of Human Contagious Diseases</td>
<td>S, 3 cr</td>
</tr>
<tr>
<td>BIOMI 3210</td>
<td>Human Microbes and Health</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>FSAD 4390</td>
<td>Biomedical Materials and Devices for Human Body Repair</td>
<td>F, 3 cr</td>
</tr>
<tr>
<td>PLPPM 2950</td>
<td>Biology of Infectious Disease</td>
<td>F, 3 cr</td>
</tr>
</tbody>
</table>
Nutritional Science Perspective on Health

At least 6 cr from courses that cover some aspect of health (including nutrition) from a nutritional science perspective. More than half of the course content must be devoted to consideration of health/life course/disease issues from a nutritional science perspective. Courses may be focused on the use of diet for the prevention and/or treatment of diseases or the improvement of physiological function, or on basic nutritional requirements and concerns of individuals and populations.

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS 3030</td>
<td>Nutrition, Health and Vegetarian Diets (S, 3 cr)</td>
</tr>
<tr>
<td>NS 3150</td>
<td>Obesity and Regulation of Body Weight (even S, 3 cr)</td>
</tr>
<tr>
<td>NS 3220</td>
<td>Maternal and Child Nutrition (odd S, 3 cr; enrollment restricted – priority to Dietetics students)</td>
</tr>
<tr>
<td>NS 4310</td>
<td>Mineral Nutrition and Chronic Disease (F, 3 cr)</td>
</tr>
<tr>
<td>NS 4410</td>
<td>Nutrition and Disease (F, 4 cr)</td>
</tr>
<tr>
<td>NS 4420</td>
<td>Implementation of Nutrition Care (F, 3 cr; enrollment restricted – priority to Dietetics students)</td>
</tr>
<tr>
<td>NS 4450</td>
<td>Toward a Sustainable Global Food System: Food Policy for Developing Countries (F, 3 cr)</td>
</tr>
<tr>
<td>NS 4480</td>
<td>Economics of Food and Malnutrition (S, 3 cr)</td>
</tr>
<tr>
<td>NS 4500</td>
<td>Public Health Nutrition (S, 3 cr)</td>
</tr>
</tbody>
</table>

15. Total Electives Requirements

In addition to the above requirements, 120 total credits are required to graduate. Any courses that are not taken as a part of the above requirements count towards total elective requirements.

(a) A maximum of 15 credits of AP credit and in absentia credit can count towards the 120 total credits.
(b) A maximum of 15 credits of study abroad, Cornell-In-Washington, Urban semester or Capital semester can count towards the 120 total credits.
(c) A maximum of 12 credits of special studies credits (e.g. NS 4000, 4010, 4020, 4030, and 4990, or comparable courses in other departments) can count towards the 120 total credits.
(d) A course can only count towards the 120 total credits required once.

Students who exceed the above parameters—i.e., by taking more than 15 credits in cases (a), (b), and (c), or taking a course more than once—will have their total required credits increase by the same amount, and all credits will be counted toward their GPA. For example, a student who takes a 3-credit course twice to improve their grade will then be required to complete 123 total credits, and will have both grades factored into their GPA.

16. Physical Education Requirement

2 Physical Education courses must be completed in order to graduate. However, physical education does not count toward college and university minimum credit requirements for full-time status, nor does it count towards the 120 credits required for graduation.

17. Swim Test Requirement

A successful swim test must be completed in order to graduate.

OTHER IMPORTANT NOTES

Pass/Fail Courses [S/U]

- S/U grading option may NOT be used for any required course (i.e., courses in areas 1-12 below) unless it is the only grade option offered for those courses.
- S/Us MAY be used for the 9 credits of Human Ecology coursework outside of the major and for general elective credits.
- Students may apply no more than 12 credits of S/U towards graduation requirements. If a required course is only offered S/U, it will not count towards this limit. Students may take more S/Us if they choose, but the additional credit will not be applied towards graduation.
- The **deadline for changing grade options is the 57th calendar day of the semester**, the same as the "drop" deadline.

Special Study Courses [4000, 4010, 4020, 4030]

- A total of 12 credits of special study course work from Human Ecology or other colleges will count towards the 120 graduation credit requirement. [Additional credits can be taken but will not be applied.]
- A maximum of three credits of 4000-4020 (not including 4030) may count towards the “credit outside the major” category as long as the special study is in a department outside the student’s major.
- Students cannot TA (4030) the same course for credit more than once or take and TA the same course simultaneously. 4030 does not fulfill any requirements towards the major. Registration for 4030 may not exceed 5 credit hours per semester.
- DNS students who wish to take Special Studies Courses must have taken and passed at least 2 S/U credits of the same course.
Sample Schedules for HBHS Majors

1. Sample schedules are meant **only as a guide**, representing one of many ways to complete the HBHS major, and **are not an adequate substitute for meeting with faculty advisor(s) and making a personal plan**. Most major and college requirements can be met with multiple options that should be considered in light of an individual student’s College, interests, professional goals, and other schedule constraints.

2. Students must complete **15 credits per semester on average** to graduate with the required 120. As a result, the courses listed in each semester do not necessarily represent the student’s actual full semester load—particularly in later semesters, as the variability in students’ remaining requirements and electives increases.

### “BASELINE” SCHEDULE
(i.e., not pre-health or dietetics, no plans to study abroad)

#### FRESHMAN YEAR

<table>
<thead>
<tr>
<th></th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>CHEM 2070 Introductory Chemistry I (4 cr)</td>
<td>1) NS 1200 Nutrition and Health: Issues, Outlooks and Opportunities (1 cr)</td>
</tr>
<tr>
<td>2)</td>
<td>CHEM 1007 Academic Support for CHEM 2070 (1 cr)</td>
<td>2) CHEM 2080 Introductory Chemistry II (4 cr)</td>
</tr>
<tr>
<td>3)</td>
<td>Introductory biology lecture [e.g. BIOMG 1350, BIOG 1440, or BIOEE 1610 or 1780] (3 cr)</td>
<td>3) CHEM 1008 Academic Support for CHEM 2080 (1 cr)</td>
</tr>
<tr>
<td>4)</td>
<td>PSYCH 1101 Introduction to Psychology (3 cr) OR HD 1150 Human Development: Infancy and Childhood (3 cr)</td>
<td>4) BIOG 1500 Investigative Lab (2 cr) OR introductory biology lecture [e.g. BIOMG 1350, BIOG 1445, or BIOEE 1610 or 1780] (3 cr)</td>
</tr>
<tr>
<td>5)</td>
<td>Freshman Writing Seminar (required fall of freshman year)</td>
<td>5) DSOC 1101 Introduction to Sociology (3 cr) OR DSOC 1101 Introduction to Sociology (3 cr)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6) Freshman Writing Seminar (required spring of freshman year)</td>
</tr>
</tbody>
</table>

#### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th></th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>NS 1150 Nutrition and Health (3 cr)</td>
<td>1) HBHS selective</td>
</tr>
<tr>
<td>2)</td>
<td>BIOG 1500 Investigative Lab (2 cr) OR Introductory biology lecture [e.g. BIOMG 1350 or BIOG 1445] (3 cr)</td>
<td>2) Biology elective</td>
</tr>
<tr>
<td>3)</td>
<td>CHEM 3530 Principles of Organic Chemistry (4 cr)</td>
<td>3) MATH 1106 Calculus for the Life and Social Sciences (3 cr)</td>
</tr>
<tr>
<td>4)</td>
<td>CHEM 2510 Introduction to Experimental Organic Chemistry (2 cr)</td>
<td>4) <strong>non-NS</strong> Human Ecology credits (DEA, FSAD, HD, or PAM)</td>
</tr>
<tr>
<td>5)</td>
<td>ANTHR 1400 The Comparison of Cultures (3 cr)</td>
<td>5) Humanities course <em>(attributes HA, LA, or CA)</em></td>
</tr>
</tbody>
</table>

#### JUNIOR YEAR

<table>
<thead>
<tr>
<th></th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>NS 3200 Biochemistry (4 cr) OR BIOMG 3300 Principles of Biochemistry (4 cr)</td>
<td>1) HBHS selective</td>
</tr>
<tr>
<td>2)</td>
<td>HBHS selective</td>
<td>2) NS 3410 Anatomy and Physiology (4 cr)</td>
</tr>
<tr>
<td>3)</td>
<td>Biology elective</td>
<td>3) Human Ecology course (NS, DEA, FSAD, HD, or PAM)</td>
</tr>
<tr>
<td>4)</td>
<td>Human Ecology course (NS, DEA, FSAD, HD, or PAM)</td>
<td><strong>plus remaining Human Ecology or general elective credits, according to needs and interests</strong></td>
</tr>
<tr>
<td>5)</td>
<td>PHYS 1101 General Physics I</td>
<td></td>
</tr>
</tbody>
</table>

#### SENIOR YEAR

<table>
<thead>
<tr>
<th></th>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1)</td>
<td>HBHS selective</td>
<td><strong>any remaining Human Ecology or general elective credits, according to needs and interests</strong></td>
</tr>
<tr>
<td>2)</td>
<td>HBHS elective</td>
<td></td>
</tr>
<tr>
<td>3)</td>
<td>Human Ecology course (NS, DEA, FSAD, HD, or PAM)</td>
<td></td>
</tr>
<tr>
<td>4)</td>
<td>STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>plus remaining Human Ecology or general elective credits, according to needs and interests</strong></td>
<td></td>
</tr>
</tbody>
</table>
**PRE-HEALTH (or possibility of pre-health)**  
*(not dietetics, no plans to study abroad)*

***It is very important that students pursuing or considering a pre-health track speak with a pre-health advisor. See The Pre-Health Track as a DNS Undergraduate for more information.***

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) CHEM 2070 Introductory Chemistry I (4 cr)</td>
<td>1) NS 1200 Nutrition and Health: Issues, Outlooks and Opportunities (1 cr)</td>
</tr>
<tr>
<td>2) CHEM 1007 Academic Support for CHEM 2070 (1 cr)</td>
<td>2) CHEM 2080 Introductory Chemistry II (4 cr)</td>
</tr>
<tr>
<td>3) BIOG 1440 Introductory Biology: Comparative Physiology (3 cr)</td>
<td>3) CHEM 1008 Academic Support for CHEM 2080 (1 cr)</td>
</tr>
<tr>
<td>4) Freshman Writing Seminar (3 cr, <strong>required fall of freshman year</strong>)</td>
<td>4) BIOMG 1350 Introductory Biology: Cell and Developmental Biology (3 cr)</td>
</tr>
<tr>
<td>5) PSYCH 1101 Introduction to Psychology (3 cr) OR HD 1150 Human Development: Infancy and Childhood (3 cr)</td>
<td>5) Freshman Writing Seminar (<strong>required spring of freshman year</strong>) (3 cr)</td>
</tr>
<tr>
<td></td>
<td>6) DSOC 1101 Introduction to Sociology (3 cr) OR DSOC 1101 Introduction to Sociology (3 cr)</td>
</tr>
</tbody>
</table>

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 1150 Nutrition and Health (3 cr)</td>
<td>1) HBHS selective</td>
</tr>
<tr>
<td>2) BIOG 1500 Investigative Lab (2 cr)</td>
<td>2) CHEM 3580 Organic Chemistry for the Life Sciences II (4 cr)</td>
</tr>
<tr>
<td>3) CHEM 3570 Organic Chemistry for the Life Sciences I (4 cr)</td>
<td>3) CHEM 2510 Introduction to Experimental Organic Chemistry (2 cr)</td>
</tr>
<tr>
<td>4) MATH 1110 Calculus I (4 cr)</td>
<td>4) Biology elective [e.g. BIOMI 2900 General Microbiology Lectures (3-4 cr)]</td>
</tr>
<tr>
<td>5) ANTHR 1400 The Comparison of Cultures (3 cr)</td>
<td>5) Humanities course <em>(attributes HA, LA, or CA)</em></td>
</tr>
</tbody>
</table>

### JUNIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3200 Biochemistry (4 cr)</td>
<td>1) NS 3410 Anatomy and Physiology (4 cr)</td>
</tr>
<tr>
<td>2) HBHS selective</td>
<td>2) NS 3420 Anatomy and Physiology Lab (2 cr)</td>
</tr>
<tr>
<td>3) Biology elective [e.g. BIOMG 2800 Lectures in Genetics and Genomics, <strong>recommended for pre-health</strong> (3 cr)]</td>
<td>3) HBHS selective</td>
</tr>
<tr>
<td>4) PHYS 1101 Fundamentals of Physics I (4 cr)</td>
<td>4) Additional biology elective, if desired, according to interests</td>
</tr>
<tr>
<td>5) Additional biology elective, if desired, according to interests</td>
<td>5) PHYS 1102 Fundamentals of Physics II (4 cr)</td>
</tr>
</tbody>
</table>

### SENIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) HBHS selective</td>
<td><em><strong>any remaining Human Ecology or general elective credits, according to needs and interests</strong></em></td>
</tr>
<tr>
<td>2) HBHS selective</td>
<td></td>
</tr>
<tr>
<td>3) STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
<td></td>
</tr>
</tbody>
</table>

***plus remaining Human Ecology or general elective credits, according to needs and interests***
within-year STUDY ABROAD
(not pre-health or dietetics)

**NOTE:** Students planning to spend a semester away from Cornell will need to take 2-3 more credits per semester on average than students spending 8 semesters at Cornell to credit requirements for graduation.

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) CHEM 2070 Introductory Chemistry I (4 cr)</td>
<td>1) NS 1200 Nutrition and Health: Issues, Outlooks and Opportunities (1 cr)</td>
</tr>
<tr>
<td>2) CHEM 1007 Academic Support for CHEM 2070 (1 cr)</td>
<td>2) CHEM 2080 Introductory Chemistry II (4 cr)</td>
</tr>
<tr>
<td>3) BIOG 1440 Introductory Biology: Comparative Physiology (3 cr)</td>
<td>3) CHEM 1008 Academic Support for CHEM 2080 (1 cr)</td>
</tr>
<tr>
<td>4) Freshman Writing Seminar (3 cr, required fall of freshman year)</td>
<td>4) BIOMG 1350 Introductory Biology: Cell and Developmental Biology (3 cr)</td>
</tr>
<tr>
<td>5) PSYCH 1101 Introduction to Psychology (3 cr) OR HD 1150 Human Development: Infancy and Childhood (3 cr)</td>
<td>5) Freshman Writing Seminar (required spring of freshman year) (3 cr)</td>
</tr>
<tr>
<td></td>
<td>6) DSOC 1101 Introduction to Sociology (3 cr) OR DSOC 1101 Introduction to Sociology (3 cr)</td>
</tr>
</tbody>
</table>

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 1150 Nutrition and Health (3 cr)</td>
<td>1) HBHS selective</td>
</tr>
<tr>
<td>2) BIOG 1500 Investigative Lab (2 cr) OR Introductory biology lecture [e.g. BIOMG 1350 or BIOG 1445] (3 cr)</td>
<td>2) Biology elective</td>
</tr>
<tr>
<td>3) CHEM 3530 Principles of Organic Chemistry (4 cr)</td>
<td>3) MATH 1106 Calculus for the Life and Social Sciences (3 cr)</td>
</tr>
<tr>
<td>4) CHEM 2510 Introduction to Experimental Organic Chemistry (2 cr)</td>
<td>4) non-NS Human Ecology credits (DEA, FSAD, HD, or PAM)</td>
</tr>
<tr>
<td>5) ANTHR 1400 The Comparison of Cultures (3 cr)</td>
<td>5) Humanities course (attributes HA, LA, or CA)</td>
</tr>
</tbody>
</table>

### JUNIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) BIOG 3300 Principles of Biochemistry (4 cr)</td>
<td>1) BIOG 3300 Principles of Biochemistry (4 cr)</td>
</tr>
<tr>
<td>2) NS 3410 Human Anatomy and Physiology (S, 4 cr)</td>
<td>2) NS 3410 Human Anatomy and Physiology (S, 4 cr)</td>
</tr>
<tr>
<td>3) HBHS selective</td>
<td>3) HBHS selective</td>
</tr>
<tr>
<td>4) HBHS selective</td>
<td>4) Biology elective</td>
</tr>
<tr>
<td>5) Biology elective</td>
<td>5) Biology elective</td>
</tr>
</tbody>
</table>

**ELO // STUDY ABROAD SEMESTER**

***plus remaining Human Ecology or general elective credits, according to needs and interests***

### SENIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) HBHS selective</td>
<td>1) HBHS selective</td>
</tr>
<tr>
<td>2) HBHS selective</td>
<td>2) Physics 1 Fundamentals of Physics I (4 cr)</td>
</tr>
<tr>
<td>3) PHYS 1101 Fundamentals of Physics I (4 cr)</td>
<td>3) STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
</tr>
<tr>
<td>4) STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
<td>4) STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
</tr>
<tr>
<td></td>
<td>5) Biology elective</td>
</tr>
</tbody>
</table>

***any remaining Human Ecology or general elective credits, according to needs and interests***

***plus remaining Human Ecology or general elective credits, according to needs and interests***
DIETETICS
(not pre-health, no plans to study abroad)

***It is very important that students speak with Emily Gier to be sure to meet all dietetics requirements on time and in the right sequence. See The Didactic Program in Dietetics for more information.***

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 1150 Nutrition and Health (3 cr)</td>
<td>1) NS 1220 Nutrition and the Life Cycle (3 cr)</td>
</tr>
<tr>
<td>2) CHEM 2070 Introductory Chemistry I (4 cr)</td>
<td>2) CHEM 2080 Introductory Chemistry II (4 cr)</td>
</tr>
<tr>
<td>3) CHEM 1007 Academic Support for CHEM 2070 (1 cr)</td>
<td>3) CHEM 1008 Academic Support for CHEM 2080 (1 cr)</td>
</tr>
<tr>
<td>4) BIOG 1440 Introductory Biology: Comparative Physiology (3 cr)</td>
<td>4) BIOMG 1350 Introductory Biology: Cell and Developmental Biology (3 cr)</td>
</tr>
<tr>
<td>5) Freshman Writing Seminar (3 cr, required fall of freshman year)</td>
<td>5) Freshman Writing Seminar (required spring of freshman year) (3 cr)</td>
</tr>
<tr>
<td>6) PSYCH 1101 Introduction to Psychology (3 cr) OR HD 1150 Human Development: Infancy and Childhood (3 cr)</td>
<td>6) DSOC 1101 Introduction to Sociology (3 cr) OR DSOC 1101 Introduction to Sociology (3 cr)</td>
</tr>
</tbody>
</table>

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 2470 Food for Contemporary Living (2 cr)</td>
<td>1) NS 3410 Anatomy and Physiology (3 cr)</td>
</tr>
<tr>
<td>2) NS 2450 Social Science Perspectives on Food and Nutrition (3 cr)</td>
<td>2) NS 3420 Anatomy and Physiology Lab (2 cr)</td>
</tr>
<tr>
<td>3) CHEM 3530 Principles of Organic Chemistry (4 cr)</td>
<td>3) NS 2470 Food for Contemporary Living (2 cr, if still needed)</td>
</tr>
<tr>
<td>4) CHEM 2510 Introduction to Experimental Organic Chemistry (2 cr)</td>
<td>4) BIOMI 2900 General Microbiology Lectures (3-4 cr)</td>
</tr>
<tr>
<td>5) Introductory biology lecture [e.g. BIOG 1440 or 1445, or BIOEE 1610 or 1780] (3 cr)</td>
<td>5) MATH 1106 Calculus for the Life and Social Sciences (3 cr)</td>
</tr>
<tr>
<td>6) ANTHR 1400 The Comparison of Cultures (3 cr)</td>
<td>6) Humanities course (attributes HA, LA, or CA)</td>
</tr>
</tbody>
</table>

### JUNIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3200 Biochemistry (4 cr) OR BIOMG 3300 Principles of Biochemistry (4 cr)</td>
<td>1) NS 3310 Nutrient Metabolism (4 cr)</td>
</tr>
<tr>
<td>2) NS 3450 Introduction to Physiochemical and Biological Aspects of Foods (3 cr)</td>
<td>2) NS 4500 Public Health Nutrition (3 cr) (OR NS 1600 in fall)</td>
</tr>
<tr>
<td>3) BIOMI 2900 General Microbiology Lectures (3-4 cr; if still needed)</td>
<td>3) Biology elective</td>
</tr>
<tr>
<td>4) HADM 3365 Food Service Management Essentials (3 cr)</td>
<td>4) Statistics</td>
</tr>
<tr>
<td>5) HBHS selective (Social Science Perspective on Health; DPD requirements fulfill Natural Science Perspective on Health and Nutritional Science Perspective on Health categories)</td>
<td><em><strong>plus remaining Human Ecology or general elective credits, according to needs and interests</strong></em></td>
</tr>
<tr>
<td>6) PHYS 1101 Fundamentals of Physics I (4 cr)</td>
<td></td>
</tr>
</tbody>
</table>

### SENIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3320 Methods in Nutritional Science (3 cr)</td>
<td>1) NS 4250 Nutrition Communications and Counseling (3 cr)</td>
</tr>
<tr>
<td>2) NS 4410 Nutrition and Disease (4 cr)</td>
<td>2) NS 4880 Applied Dietetics in Food Service Systems (4 cr)</td>
</tr>
<tr>
<td>3) NS 4420 Implementation of Nutrition Care (3 cr)</td>
<td></td>
</tr>
<tr>
<td>4) NS 1600 Intro to Public Health (3 cr, if NS 4500 not taken)</td>
<td><em><strong>plus remaining Human Ecology or general elective credits, according to needs and interests</strong></em></td>
</tr>
</tbody>
</table>

***plus remaining Human Ecology or general elective credits, according to needs and interests***
Requirements for GPHS majors in the College of Human Ecology

- The requirements listed below pertain to students matriculating in August 2017 and January 2018 (also see GPHS/Human Ecology graduation requirements at http://www.human.cornell.edu/registrar/degree-progress/curriculum-sheets.cfm).
- All of the following sections are required to be completed to graduate, and all courses taken to fulfill college or major requirements (courses in areas 1-12 below) must be taken for a letter grade.

Global and Public Health Sciences (GPHS) students in the College of Human Ecology (CHE) must complete at least 120 credits to graduate. Of these 120 credits:

- 43 must be within CHE (DEA, FSAD, HD, HE, NS, or PAM)
- 9 must be taken outside the major (i.e., any on the previous list except NS). Courses used to fulfill this requirement may not also be used to fulfill any other college distribution or major requirement.
- Physical Education credits and those from supplemental courses do not count toward the 120 total required credits or the 12 credit semester minimum.

1. Introductory Chemistry: 4-8 cr
   Choose one of the following:
   (a) CHEM 2070 General Chemistry I * ^ (F, 4 cr) AND CHEM 2080 General Chemistry II (S, 4 cr) (two-course sequence required for pre-health)
   (b) CHEM 2070 General Chemistry I * (F, 4 cr) (single course not adequate for pre-health)
   (c) CHEM 1560 Introduction to General Chemistry * (F/Summer, 4 cr) (not for pre-health)
   (d) CHEM 2150 Honors General and Inorganic Chemistry ^ (F/Summer, 4 cr) (not for pre-health)
      * Students may use an AP Chemistry score of 5 to place out of CHEM 2070. However, GPHS students must take at least one semester of chemistry at Cornell—i.e., students who use AP credit toward their chemistry requirement must take an additional chemistry course (i.e., CHEM 2080, CHEM 2150, or other, but not CHEM 1560). Students interested in the pre-health track should take two semesters of chemistry at Cornell.
      ^ Students who take CHEM 2070 forfeit AP credit. Students who take CHEM 2150 may keep AP credit.

2. Introductory Biology Lab and Lecture
   [BIOG 1500 Investigative Lab (F/S, 2 cr) OR BIOSM 1500 Investigative Marine Biology Laboratory (Summer, 3 cr)] AND choose two out of the three lecture options:
   (a) BIOMG 1350 Cell and Development (F/S, 3 cr)
   (b) BIOG 1440 Comparative Physiology (F/S, 3 cr) OR *
      BIOG 1445 Comparative Physiology (autotutorial) (F/S, 4 cr)
   (c) BIOEE 1610 Ecology and the Environment (F/S, 3 cr) OR *
      BIOEE 1780 Evolution and Diversity (F/S, 3 cr)
      * Cannot take both to fulfill this requirement.

3. Organic Chemistry Lecture
   Choose one of the following:
   (a) CHEM 1570 Elementary Organic Chemistry (S only, 4 cr, not for pre-health) OR
   (b) CHEM 3530 Principles of Organic Chemistry (F only, 4 cr) OR
   (c) CHEM 3570-3580 Introductory Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3570 alone will not fulfill the requirement) OR
   (d) CHEM 3590-3600 Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3590 alone will not fulfill the requirement)
      * Students interested in pre-health tracks should take a two-course sequence of organic chemistry, and should also take an organic chemistry lab (e.g. CHEM 2510 Introduction to Experimental Organic Chemistry OR CHEM 3010 Experimental Chemistry).

4. Physiology
   Choose one of the following:
   (a) NS 3410 Human Anatomy and Physiology (S, 4 cr) OR *
   (b) [BIOG 1440 Comparative Physiology (F/S, 3 cr) OR **
      BIOG 1445 Comparative Physiology (autotutorial) (F/S, 4 cr)] OR
   (c) NS 1150 Nutrition, Health, and Society (F, 3 cr)
      * Pre-health students should also take NS 3420 Human Anatomy and Physiology Lab (S, 2 cr).
      ** Cannot take both to fulfill this requirement. Can only be used to fulfill physiology requirement if not used to fulfill introductory biology requirement.
5. **Biochemistry**  
Choose one of the following*:  
(a) NS 3200 Introduction to Human Biochemistry (F, 4 cr)  
(b) BIOMG 3300 Principles of Biochemistry (F/S, 4 cr)  
(c) BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) **AND** BIOMG 3320 Principles of Biochemistry: Molecular Biology (S, 2 cr)  
(d) BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) **AND** BIOMI 2900 General Microbiology (F/S, 3 cr)  
(e) BIOMG 3330 Principles of Biochemistry: Proteins, Metabolism, and Molecular Biology (Summer, 4 cr)  
(f) BIOMG 3350 Principles of Biochemistry: Proteins, Metabolism, and Molecular Biology (S, 4 cr)  
* Students who take only one semester of introductory chemistry should talk with faculty advisors and biochemistry instructors as early as possible to determine which biochemistry course is best for them and how they may access resources for the best chance of success.

6. **First Year Writing Seminars**  
Two first year writing seminar classes.  
**Note:** These two classes must be completed during the first two semesters at Cornell.

7. **Social Sciences**  
Choose one course in any two of the following four areas:  

<table>
<thead>
<tr>
<th>Anthropology</th>
<th>Economics</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTHR 1400 The Comparison of Cultures (F, 3 cr)</td>
<td>ECON 1110 Introductory Microeconomics (F/S /Summer/Winter, 3 cr)</td>
</tr>
<tr>
<td>Psychology</td>
<td>ECON 1120 Introductory Macroeconomics (F/S /Summer/Winter, 3 cr)</td>
</tr>
<tr>
<td>HD 1100 Lifespan Development</td>
<td>DSOC 1101 Introduction to Sociology (F/S, 3 cr)</td>
</tr>
<tr>
<td>HD 1150 Human Development: Infancy and Childhood (F, 3 cr)</td>
<td>SOC 1101 Introduction to Sociology (F/S/Summer, 3 cr)</td>
</tr>
<tr>
<td>HD 1170 Adolescence and Emerging Adulthood (S, 3 cr)</td>
<td></td>
</tr>
<tr>
<td>PSYCH 1101 Introduction to Psychology (F/Summer, 3 cr)</td>
<td></td>
</tr>
</tbody>
</table>

8. **Humanities**  
Choose at least one additional course (3 cr) with the attributes HA, LA, or CA.

9. **Statistics**  
STSCI 2150 Introductory Statistics for Biology (F/S, 4 cr)  
* Must be taken at Cornell; AP Statistics is not accepted.

10. **GPHS Core Courses**  
NS 1600 Introduction to Public Health (F, 3 cr)  
NS 2060 Preparation for Engaged Learning (F, 2 cr)  
NS 2600 Introduction to Global Health (S, 3 cr)  
NS 3600 Epidemiology (F, 3 cr)  
NS 4600 Explorations in Global and Public Health (F, 3 cr)

11. **Supervised Experiential Learning in Global & Public Health**  
Pre-approval required. May be completed anytime from spring semester sophomore year onward; must be largely completed before the fall semester of senior year.  
This experience may be obtained through one of several options, including (but not limited to):  
- Urban semester  
- Global Health Summer Programs  
- Cornell in Washington  
- Public Health Research and Internship  
- Cornell Cooperative Extension (Tompkins County and others)  
May require additional context-specific preparation, such as NS 2061 (individual faculty sections) or NS 4620 (Tanzania, Zambia, Dominican Republic).

12. **GPHS Selectives**  
Take at least one course from each of the following four categories:
Social & Behavioral Health
NS 2450 Social Science Perspectives on Food and Nutrition (F, 3 cr)
HD 3570 // SOC 3670 Social Inequalities in Physical and Mental Health (F, 3 cr)
PAM 3280 // DSOC 3280 Fundamentals of Population Health (F, 3 cr)
PAM 4280 // ECON 3710 The Economics of Risky Health Behaviors (S, 3 cr)
ANTHR 2468 Medicine, Culture, and Society (S, 3 cr)

Biological Aspects of Public Health
NS 3060 Nutrition and Global Health (odd F, 3 cr)
NS 3150 Obesity and the Regulation of Body Weight (even S, 3 cr)
NS 4310 Mineral Nutrition and Disease (F, 3 cr)
NS 4410 Nutrition and Disease (F, 4 cr)
BIOMG 4390 Molecular Basis of Disease (S, 3 cr)
BIOMG 4870 Human Genomics (F, 3 cr)
BIOMI 2600 Microbiology of Human Contagious Diseases (S, 3 cr)
BIOMI 3210 Human Microbes and Health (F, 3 cr)

Environmental Health
DEA 2700 Healthy Places: Design, Planning and Public Health (F, 3 cr)
DSOC 3400 Agriculture, Food Systems and Society (F, 3 cr)
BIOMI 2500 Public Health Microbiology (F, 3 cr)
BIOMI 4310 // BIOMS 4310 Medical Parasitology (F, 2 cr)
CEE 5970 // TOX 5970 Risk Analysis and Management (S, 3 cr)
COMM 2850 // STS 2851 Communication, Environment, Science and Health (S, 3 cr)
ENTOM 2100 // BSOC 2101 Plagues and People (S, 2-3 cr)
ENTOM 3070 // TOX 3070 Pesticides, the Environment, and Human Health (even F, 2 cr)
ENTOM 3520 Medical and Veterinary Entomology (odd F, 3 cr)
FDSC 3960 Food Safety Assurance (S, 2 cr)
ILRIC 3342 Workplace Health and Safety as a Human Right (S, 4 cr)

Health Policy & Management
NS 4500 Public Health Nutrition (S, 3 cr)
NS 4570 // ECON 3910 Health, Poverty and Inequality (even F, 3 cr)
NS 4800 Implementation and Impact in Global and Public Health (S, 4 cr; restricted to students in the Cornell in Washington program)
PAM 2350 The US Health Care System (F, 3 cr)
PAM 3110 Pharmaceutical Management and Policy (F, 3 cr)
PAM 3780 Sick Around the World? Comparing Health Care Systems Around the World (S, 3 cr)
PAM 4370 // ECON 3720 Economics of Health Care Markets (F, 3 cr)

13. Total Electives Requirements
In addition to the above requirements, 120 total credits are required to graduate. Any courses that are not taken as a part of the above requirements count towards total elective requirements.

(a) A maximum of 15 credits of AP credit and in absentia credit can count towards the 120 total credits.
(b) A maximum of 15 credits of study abroad, Cornell-In-Washington, Urban semester or Capital semester can count towards the 120 total credits.
(c) A maximum of 12 credits of special studies credits (e.g. NS 4000, 4010, 4020, 4030, and 4990, or comparable courses in other departments) can count towards the 120 total credits.
(d) A course can only count towards the 120 total credits required once.

Students who exceed the above parameters—i.e., by taking more than 15 credits in cases (a), (b), and (c), or taking a course more than once—will have their total required credits increase by the same amount, and all credits will be counted toward their GPA. For example, a student who takes a 3-credit course twice to improve their grade will then be required to complete 123 total credits, and will have both grades factored into their GPA.

14. Physical Education Requirement
2 Physical Education courses must be completed in order to graduate. However, physical education does not count toward college and university minimum credit requirements for full-time status, nor does it count towards the 120 credits required for graduation.

15. Swim Test Requirement
A successful swim test must be completed in order to graduate.
OTHER IMPORTANT NOTES

Pass/Fail Courses [S/U]
- S/U grading option may NOT be used for any required course (i.e., courses in areas 1-12 below) unless it is the only grade option offered for those courses.
- S/Us MAY be used for the 9 credits of Human Ecology coursework outside of the major and for general elective credits.
- Students may apply no more than 12 credits of S/U towards graduation requirements. If a required course is only offered S/U, it will not count towards this limit. Students may take more S/Us if they choose, but the additional credit will not be applied towards graduation.
- The **deadline for changing grade options is the 57th calendar day of the semester**, the same as the “drop” deadline.

Special Study Courses [4000, 4010, 4020, 4030]
- A total of 12 credits of special study course work from Human Ecology or other colleges will count towards the 120 graduation credit requirement. [Additional credits can be taken but will not be applied.]
- A maximum of three credits of 4000-4020 (not including 4030) may count towards the “credit outside the major” category as long as the special study is in a department outside the student’s major.
- Students cannot TA (4030) the same course for credit more than once or take and TA the same course simultaneously. 4030 does not fulfill any requirements towards the major. Registration for 4030 may not exceed 5 credit hours per semester.
- DNS students who wish to take Special Studies Courses must have taken and passed at least 2 S/U credits of the same course.
Requirements for GPHS majors in the College of Agriculture and Life Sciences

- The requirements listed below pertain to students matriculating in August 2017 and January 2018.
- All of the following sections are required to be completed to graduate, and all courses taken to fulfill college or major requirements (courses in areas 1-11 below) must be taken for a letter grade.

Global and Public Health Sciences (GPHS) students in the College of Agriculture and Life Sciences (CALS) must complete at least 120 credits to graduate. Of these 120 credits:

- 55 must be within CALS (e.g. AEM, COMM, FDSC, and a variety of biology-related fields)
- 9 must be taken outside the major (i.e., any non-NS CALS courses). Courses used to fulfill this requirement may not also be used to fulfill any other college distribution or major requirement.
- Physical Education credits and those from supplemental courses do not count toward the 120 total required credits or the 12 credit semester minimum.

1. Introductory Chemistry: 4-8 cr
   Choose one of the following:
   (a) CHEM 2070 General Chemistry I *^ (F, 4 cr) AND CHEM 2080 General Chemistry II (S, 4 cr) (two-course sequence required for pre-health)
   (b) CHEM 2070 General Chemistry I * (F, 4 cr) (single course not adequate for pre-health)
   (c) CHEM 1560 Introduction to General Chemistry * (F/Summer, 4 cr) (not for pre-health)
   (d) CHEM 2150 Honors General and Inorganic Chemistry * (F/Summer, 4 cr) (not for pre-health)
   * Students may use an AP Chemistry score of 5 to place out of CHEM 2070. However, GPHS students must take at least one semester of chemistry at Cornell—i.e., students who use AP credit toward their chemistry requirement must take an additional chemistry course (i.e., CHEM 2080, CHEM 2150, or other, but not CHEM 1560). Students interested in the pre-health track should take two semesters of chemistry at Cornell.
   ^ Students who take CHEM 2070 forfeit AP credit. Students who take CHEM 2150 may keep AP credit.

2. Introductory Biology Lab and Lecture
   [BIOG 1500 Investigative Lab (F/S, 2 cr) OR BIOSM 1500 Investigative Marine Biology Laboratory (Summer, 3 cr)] AND choose two out of the three lecture options:
   (a) BIOMG 1350 Cell and Development (F/S, 3 cr)
   (b) BIOLG 1440 Comparative Physiology (F/S, 3 cr) OR*
      BIOLG 1445 Comparative Physiology (autotutorial) (F/S, 4 cr)
   (c) BIOEE 1610 Ecology and the Environment (F/S, 3 cr) OR*
      BIOEE 1780 Evolution and Diversity (F/S, 3 cr)
   * Cannot take both to fulfill this requirement.

3. Organic Chemistry Lecture
   Choose one of the following:
   (a) CHEM 1570 Elementary Organic Chemistry (S only, 4 cr, not for pre-health) OR
   (b) CHEM 3530 Principles of Organic Chemistry (F only, 4 cr) OR
   (c) CHEM 3570-3580 Introductory Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3570 alone will not fulfill the requirement) OR
   (d) CHEM 3590-3600 Organic Chemistry (F and S, 4 cr each, must take both, CHEM 3590 alone will not fulfill the requirement)
   * Students interested in pre-health tracks should take a two-course sequence of organic chemistry, and should also take an organic chemistry lab (e.g. CHEM 2510 Introduction to Experimental Organic Chemistry OR CHEM 3010 Experimental Chemistry).

4. Physiology
   Choose one of the following:
   (a) NS 3410 Human Anatomy and Physiology (S, 4 cr) OR*
   (b) BIOG 1440 Comparative Physiology (F/S, 3 cr) OR**
      BIOG 1445 Comparative Physiology (autotutorial) (F/S, 4 cr) OR
   (c) NS 1150 Nutrition, Health, and Society (F, 3 cr)
   * Pre-health students should also take NS 3420 Human Anatomy and Physiology Lab (S, 2 cr).
   ** Cannot take both to fulfill this requirement. Can only be used to fulfill physiology requirement if not used to fulfill introductory biology requirement.
5. **Biochemistry**

Choose one of the following:

(a) NS 3200 Introduction to Human Biochemistry (F, 4 cr)
(b) BIOMG 3300 Principles of Biochemistry (F/S, 4 cr)
(c) BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) **AND** BIOMG 3320 Principles of Biochemistry: Molecular Biology (S, 2 cr)
(d) BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) **AND** BIOMI 2900 General Microbiology (F/S, 3 cr)
(e) BIOMG 3330 Principles of Biochemistry: Proteins, Metabolism, and Molecular Biology (Summer, 4 cr)
(f) BIOMG 3350 Principles of Biochemistry: Proteins, Metabolism, and Molecular Biology (S, 4 cr)

*Students who take only one semester of introductory chemistry should talk with faculty advisors and biochemistry instructors as early as possible to determine which biochemistry course is best for them and how they may access resources for the best chance of success.*

6. **Communications**

Complete 9 credits of courses in written and oral expression. At least 6 credits must be written expression. Select courses from First-year Writing Seminars and COMM or ENGL classes as per CALS distribution requirements. **Note:** Potential courses to fulfill this and any CALS distribution requirement may be found in “DUST.”

7. **Social Sciences and Humanities**

Complete 12 credits, including four courses of at least 3 cr each:
- The four chosen courses must include at least 3 different categories from the following list: Cultural Analysis (CA), Human Diversity (D), Foreign Language (FL), Historical Analysis (HA), Knowledge, Cognition, and Moral Reasoning (KCM), Literature and the Arts (LA), and Social and Behavioral Analysis (SBA).
- At least one course must be in Human Diversity (D).

8. **Statistics**

STSCI 2150 Introductory Statistics for Biology (F/S, 4 cr)

*Must be taken at Cornell; AP Statistics is not accepted.*

9. **GPHS Core Courses**

NS 1600 Introduction to Public Health (F, 3 cr)
NS 2060 Preparation for Engaged Learning (F, 2 cr)
NS 2600 Introduction to Global Health (S, 3 cr)
NS 3600 Epidemiology (F, 3 cr)
NS 4600 Explorations in Global and Public Health (F, 3 cr)

10. **Supervised Experiential Learning in Global & Public Health**

**Pre-approval required.** May be completed anytime from spring semester sophomore year onward; must be largely completed before the fall semester of senior year.

This experience may be obtained through one of several options, including (but not limited to):
- Urban semester
- Global Health Summer Programs
- Cornell in Washington
- Public Health Research and Internship
- Cornell Cooperative Extension (Tompkins County and others)

May require additional context-specific preparation, such as NS 2061 (individual faculty sections) or NS 4620 (Tanzania, Zambia, Dominican Republic).

11. **GPHS Selectives**

Take at least one course from each of the following four categories:

**Social & Behavioral Health**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS 2450</td>
<td>Social Science Perspectives on Food and Nutrition (F, 3 cr)</td>
</tr>
<tr>
<td>HD 3570 // SOC 3670</td>
<td>Social Inequalities in Physical and Mental Health (F, 3 cr)</td>
</tr>
<tr>
<td>PAM 3280 // DSOC 3280</td>
<td>Fundamentals of Population Health (F, 3 cr)</td>
</tr>
<tr>
<td>PAM 4280 // ECON 3710</td>
<td>The Economics of Risky Health Behaviors (S, 3 cr)</td>
</tr>
<tr>
<td>ANTHR 2468</td>
<td>Medicine, Culture, and Society (S, 3 cr)</td>
</tr>
</tbody>
</table>

**Biological Aspects of Public Health**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>NS 3060</td>
<td>Nutrition and Global Health (odd F, 3 cr)</td>
</tr>
<tr>
<td>NS 3150</td>
<td>Obesity and the Regulation of Body Weight (even S, 3 cr)</td>
</tr>
<tr>
<td>NS 4310</td>
<td>Mineral Nutrition and Disease (F, 3 cr)</td>
</tr>
<tr>
<td>NS 4410</td>
<td>Nutrition and Disease (F, 4 cr)</td>
</tr>
<tr>
<td>BIOMG 4390</td>
<td>Molecular Basis of Disease (S, 3 cr)</td>
</tr>
</tbody>
</table>
12. Total Electives Requirements

In addition to the above requirements, 120 total credits are required to graduate. Any courses that are not taken as a part of the above requirements count towards total elective requirements.

(e) A maximum of 15 credits of AP credit and in absentia credit can count towards the 120 total credits.
(f) A maximum of 15 credits of study abroad, Cornell-In-Washington, Urban semester or Capital semester can count towards the 120 total credits.
(g) A maximum of 12 credits of special studies credits (e.g. NS 4000, 4010, 4020, 4030, and 4990, or comparable courses in other departments) can count towards the 120 total credits.
(h) A course can only count towards the 120 total credits required once.

Students who exceed the above parameters—i.e., by taking more than 15 credits in cases (a), (b), and (c), or taking a course more than once—will have their total required credits increase by the same amount, and all credits will be counted toward their GPA. For example, a student who takes a 3-credit course twice to improve their grade will then be required to complete 123 total credits, and will have both grades factored into their GPA.

13. Physical Education Requirement

2 Physical Education courses must be completed in order to graduate. However, physical education does not count toward college and university minimum credit requirements for full-time status, nor does it count towards the 120 credits required for graduation.

14. Swim Test Requirement

A successful swim test must be completed in order to graduate.

OTHER IMPORTANT NOTES

Pass/Fail Courses [S/U]

- S/U grading option may NOT be used for any required course (i.e., courses in areas 1-11 below) unless it is the only grade option offered for those courses.
- S/Us MAY be used for the 9 credits of Human Ecology coursework outside of the major and for general elective credits.
- Students may apply no more than 12 credits of S/U towards graduation requirements. If a required course is only offered S/U, it will not count towards this limit. Students may take more S/Us if they choose, but the additional credit will not be applied towards graduation.
- The deadline for changing grade options is the 57th calendar day of the semester, the same as the "drop" deadline.
Special Study Courses [4000, 4010, 4020, 4030]

- A total of 12 credits of special study course work from Human Ecology or other colleges will count towards the 120 graduation credit requirement. [Additional credits can be taken but will not be applied.]
- A maximum of three credits of 4000-4020 (not including 4030) may count towards the “credit outside the major” category as long as the special study is in a department outside the student’s major.
- Students cannot TA (4030) the same course for credit more than once or take and TA the same course simultaneously. 4030 does not fulfill any requirements towards the major. Registration for 4030 may not exceed 5 credit hours per semester.
- DNS students who wish to take Special Studies Courses must have taken and passed at least 2 S/U credits of the same course.
Sample Schedules for GPHS Majors

1. Sample schedules are meant only as a guide, representing one of many ways to complete the GPHS major, and are not an adequate substitute for meeting with faculty advisor(s) and making a personal plan. Most major and college requirements can be met with multiple options that should be considered in light of an individual student’s College, interests, professional goals, and other schedule constraints.

2. Students must complete 15 credits per semester on average to graduate with the required 120. As a result, the courses listed in each semester do not necessarily represent the student’s actual full semester load—particularly in later semesters, as the variability in students’ remaining requirements and electives increases.

**BASELINE** SCHEDULE
(i.e., not pre-health or dietetics, no plans to study abroad or do within-year ELO)

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
</table>
| 1) NS 1600 Introduction to Public Health (3 cr, **required fall of freshman year**)  
2) CHEM 2070 Introductory Chemistry I (4 cr) **OR** CHEM 1560 Introduction to General Chemistry* (4 cr) **OR** CHEM 2150 Honors General and Inorganic Chemistry* (4 cr) **not for pre-health**  
3) Freshman Writing Seminar [**required freshman fall**]  
4) Humanities & Social Sciences course (see College-level specifications) | 1) NS 2600 Introduction to Global Health (3 cr, **required spring of freshman year**)  
2) BIOG 1500 Investigative Lab (2 cr)  
3) Introductory biology lecture [e.g. BIOMG 1350, BIOG 1440, or BIOEE 1610] (3 cr)  
4) Freshman Writing Seminar (**required freshman spring**)  
5) Humanities & Social Sciences course (see College-level specifications) |

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
</table>
| 1) NS 1150 Nutrition, Health, and Society (3 cr)  
2) NS 2060 Preparation for Engaged Learning (2 cr)  
3) Introductory biology lecture [e.g. BIOMG 1350 or BIOG 1440] = (3 cr)  
4) STSCI 2150 Introductory Statistics for Biology (4 cr)  
5) GPHS selective | 1) CHEM 1570 Introduction to Organic and Biological Chemistry (3 cr)  
2) Humanities & Social Sciences course  
3) Written/oral expression course (if CALS) **OR** College (CALS/CHE) elective  
4) GPHS selective |

### JUNIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
</table>
| 1) NS 3600 Epidemiology (3 cr)  
2) NS 3200 Biochemistry (4 cr) **OR** BIOMG 3300 Principles of Biochemistry (4 cr)  
3) NS 3610 Hot Topics in Global and Public Health (1 cr)  
4) GPHS selective  
5) Humanities & Social Sciences course (see College-level specifications) | 1) NS 3410 Anatomy and Physiology (4 cr)  
2) GPHS selective  
3) Humanities & Social Sciences course (see College-level specifications)  
***plus remaining College (CALS/CHE) or general elective credits, according to needs and interests*** |

### SUMMER AFTER JUNIOR YEAR: Experiential Learning Opportunity

### SENIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
</table>
| 1) NS 4600 Explorations in Global and Public Health (3 cr)  
2) GPHS selective | 3) **remaining College (CALS/CHE) or general elective credits, according to needs and interests*** |

***plus remaining College (CALS/CHE) or general elective credits, according to needs and interests***
PRE-HEALTH (or possibility of pre-health)  
(not dietetics, no plans to study abroad or do within-year ELO)  
***It is very important that students pursuing or considering a pre-health track speak with a pre-health advisor. See The Pre-Health Track as a DNS Undergraduate for more information.***

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th><strong>FALL</strong></th>
<th><strong>SPRING</strong></th>
</tr>
</thead>
</table>
| 1) NS 1600 Introduction to Public Health (3 cr, **required fall of freshman year**)  
2) CHEM 2070 Introductory Chemistry I (4 cr)  
3) Introductory biology lecture [e.g. BIOG 1440] (3 cr)  
4) Freshman Writing Seminar (3 cr, **required freshman fall**)  
5) Humanities & Social Sciences course [see College-level specifications; psychology or sociology recommended for pre-health] | 1) NS 2600 Introduction to Global Health (3 cr, **required spring of freshman year**)  
2) CHEM 2080 Introductory Chemistry II (4 cr)  
3) BIOG 1500 Investigative Lab (2 cr)  
4) Introductory biology lecture [e.g. BIOMG 1350] (3 cr)  
5) Freshman Writing Seminar (**required freshman spring**) (3 cr) |

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th><strong>FALL</strong></th>
<th><strong>SPRING</strong></th>
</tr>
</thead>
</table>
| 1) NS 1150 Nutrition, Health, and Society (3 cr)  
2) NS 2060 Preparation for Engaged Learning (2 cr)  
3) CHEM 3570 Organic Chemistry for the Life Sciences I (4 cr)  
4) GPHS selective  
5) Written/oral expression course (if CALS) OR College (CALS/CHE) elective | 1) CHEM 3580 Organic Chemistry for the Life Sciences II (4 cr)  
2) CHEM 2510 Introduction to Experimental Organic Chemistry (2 cr)  
3) BIOMI 2900 General Microbiology Lectures OR other elective biology course, if desired (3-4 cr)  
4) STSCI 2150 Introductory Statistics for Biology (3 cr) |

### JUNIOR YEAR

<table>
<thead>
<tr>
<th><strong>FALL</strong></th>
<th><strong>SPRING</strong></th>
</tr>
</thead>
</table>
| 1) NS 3600 Epidemiology (3 cr)  
2) NS 3200 Biochemistry (4 cr) **OR** BIOMG 3300 Principles of Biochemistry (4 cr)  
3) NS 3610 Hot Topics in Global and Public Health (1 cr)  
4) PHYS 1101 Fundamentals of Physics I (4 cr)  
5) BIOMG 2800 Lectures in Genetics and Genomics (**recommended for pre-health**) **OR** other elective biology course, if desired (3 cr)  
6) GPHS selective | 1) NS 3410 Anatomy and Physiology (4 cr)  
2) NS 3420 Anatomy and Physiology Lab (2 cr)  
3) PHYS 1102 Fundamentals of Physics II (4 cr)  
4) GPHS selective  
5) Humanities & Social Sciences course (see College-level specifications) |

### SUMMER AFTER JUNIOR YEAR: Experiential Learning Opportunity

### SENIOR YEAR

<table>
<thead>
<tr>
<th><strong>FALL</strong></th>
<th><strong>SPRING</strong></th>
</tr>
</thead>
</table>
| 1) NS 4600 Explorations in Global and Public Health (3 cr)  
2) GPHS selective  
3) GPHS selective  
4) Humanities & Social Sciences course (see College-level specifications)  
***plus remaining College (CALS/CHE) or general elective credits, according to needs and interests*** | 1) GPHS selective  
2) Humanities & Social Sciences course (see College-level specifications)  
3) Humanities & Social Sciences course (see College-level specifications)  
***plus remaining College (CALS/CHE) or general elective credits, according to needs and interests*** |
within-year EXPERIENTIAL LEARNING OPPORTUNITY / STUDY ABROAD
(not pre-health or dietetics)

**NOTE:** Students planning to spend a semester away from Cornell will need to take 2-3 more credits per semester on average than students spending 8 semesters at Cornell to credit requirements for graduation.

### FRESHMAN YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 1600 Introduction to Public Health (3 cr, <strong>required fall of freshman year</strong>)</td>
<td>1) NS 2600 Introduction to Global Health (3 cr, <strong>required spring of freshman year</strong>)</td>
</tr>
<tr>
<td>2) CHEM 2070 Introductory Chemistry I (4 cr) <strong>OR</strong> CHEM 1560 Introduction to General Chemistry* (4 cr) <strong>OR</strong> CHEM 2150 Honors General and Inorganic Chemistry* (4 cr) *not for pre-health</td>
<td>2) BIOG 1500 Investigative Lab (2 cr) <strong>OR</strong> introductory biology lecture [e.g. BIOMG 1350 or BIOEE 1610] (3 cr)</td>
</tr>
<tr>
<td>3) Freshman Writing Seminar (<strong>required freshman fall</strong>)</td>
<td>3) Freshman Writing Seminar (<strong>required freshman spring</strong>)</td>
</tr>
<tr>
<td>4) Humanities &amp; Social Sciences course (<strong>see College-level specifications</strong>)</td>
<td>4) STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
</tr>
<tr>
<td></td>
<td>5) Humanities &amp; Social Sciences course (<strong>see College-level specifications</strong>)</td>
</tr>
</tbody>
</table>

### SOPHOMORE YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 2060 Preparation for Engaged Learning (2 cr)</td>
<td>1) CHEM 1570 Introduction to Organic and Biological Chemistry (3 cr)</td>
</tr>
<tr>
<td>2) NS 3600 Epidemiology (3 cr)</td>
<td>2) Introductory biology lecture [e.g. BIOG 1440 or BIOMG 1350] (3 cr)</td>
</tr>
<tr>
<td>3) BIOG 1500 Investigative Lab (2 cr), if not completed, <strong>OR</strong> introductory biology lecture [e.g. BIOG 1440 or BIOMG 1350] (3 cr)</td>
<td>3) GPHS selective</td>
</tr>
<tr>
<td>4) GPHS selective</td>
<td>4) Humanities &amp; Social Sciences course</td>
</tr>
<tr>
<td>5) Humanities &amp; Social Sciences course (<strong>see College-level specifications</strong>)</td>
<td>5) Written/oral expression course (if CALS) <strong>OR</strong> College (CALS/CHE) elective</td>
</tr>
</tbody>
</table>

### JUNIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELO // STUDY ABROAD SEMESTER</td>
<td><strong>see College-level specifications</strong></td>
</tr>
<tr>
<td>1) NS 3410 Anatomy and Physiology (4 cr)</td>
<td>1) NS 3410 Anatomy and Physiology (4 cr)</td>
</tr>
<tr>
<td>2) BIOG 3300 Principles of Biochemistry (4 cr)</td>
<td>2) GPHS selective</td>
</tr>
<tr>
<td>3) GPHS selective</td>
<td>3) <em>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</em>**</td>
</tr>
<tr>
<td>4) Humanities &amp; Social Sciences course (<strong>see College-level specifications</strong>)</td>
<td>4) Humanities &amp; Social Sciences course (<strong>see College-level specifications</strong>)</td>
</tr>
</tbody>
</table>

### SENIOR YEAR

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 4600 Explorations in Global and Public Health (3 cr)</td>
<td>1) GPHS selective</td>
</tr>
<tr>
<td>2) NS 3610 Hot Topics in Global and Public Health (1 cr)</td>
<td><strong>see College-level specifications</strong></td>
</tr>
<tr>
<td>3) GPHS selective</td>
<td><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong>*</td>
</tr>
</tbody>
</table>

***plus remaining College (CALS/CHE) or general elective credits, according to needs and interests***
**DIETETICS**

*(not pre-health, no plans to study abroad or do within-year ELO)*

***It is very important that students speak with Emily Gier to be sure to meet all dietetics requirements on time and in the right sequence. See The Didactic Program in Dietetics for more information.***

---

**FRESHMAN YEAR**

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 1150 Nutrition and Health (3 cr)</td>
<td>1) NS 1220 Nutrition and the Life Cycle</td>
</tr>
<tr>
<td>2) NS 1600 Introduction to Public Health (3 cr, <strong>required fall of freshman year</strong>)</td>
<td>2) NS 2600 Introduction to Global Health (3 cr, <strong>required spring of freshman year</strong>)</td>
</tr>
<tr>
<td>3) CHEM 2070 Introductory Chemistry I (4 cr)</td>
<td>3) CHEM 2080 Introductory Chemistry II (4 cr)</td>
</tr>
<tr>
<td>4) Introductory biology lecture [e.g. BIOG 1440 or BIOMG 1350] (3 cr)</td>
<td>4) BIOG 1500 Investigative Lab (2 cr) OR introductory biology lecture [e.g. BIOG 1440, BIOMG 1350, or BIOEE 1610] (3 cr)</td>
</tr>
<tr>
<td>5) Freshman Writing Seminar (<strong>required fall of freshman year</strong>)</td>
<td>5) Freshman Writing Seminar (<strong>required spring of freshman year</strong>)</td>
</tr>
</tbody>
</table>

---

**SOPHOMORE YEAR**

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 2060 Preparation for Engaged Learning (2 cr)</td>
<td>1) CHEM 1570 Introduction to Organic and Biological Chemistry (3 cr)</td>
</tr>
<tr>
<td>2) NS 2470 Food for Contemporary Living (2 cr)</td>
<td>2) CHEM 2510 Introduction to Experimental Organic Chemistry (2 cr)</td>
</tr>
<tr>
<td>3) Introductory biology lecture [e.g. BIOG 1440 or BIOMG 1350] (3 cr)</td>
<td>3) BIOMI 2900 General Microbiology Lectures (3-4 cr)</td>
</tr>
<tr>
<td>4) Psychology [e.g. PSYCH 1101 Introduction to Psychology] (3 cr)</td>
<td>4) HADM 1360 Introduction to Foodservice Management (3 cr)</td>
</tr>
<tr>
<td>5) STSCI 2150 Introductory Statistics for Biology (4 cr)</td>
<td>5) Written/oral expression course (if CALS) OR College (CALS/CHE) elective</td>
</tr>
<tr>
<td>6) Humanities &amp; Social Sciences course (see <strong>College-level specifications</strong>)</td>
<td></td>
</tr>
</tbody>
</table>

---

**JUNIOR YEAR**

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3200 Biochemistry (4 cr) <strong>OR</strong> BIOMG 3300 Principles of Biochemistry (4 cr)</td>
<td>1) NS 3410 Anatomy and Physiology (4 cr)</td>
</tr>
<tr>
<td>2) NS 3600 Epidemiology (3 cr)</td>
<td>2) NS 3420 Anatomy and Physiology Lab (2 cr)</td>
</tr>
<tr>
<td>3) NS 3610 Hot Topics in Global and Public Health (1 cr)</td>
<td>3) GPHS selective (<strong>from remaining categories</strong>)</td>
</tr>
<tr>
<td>4) NS 3450 Introduction to Physiochemical and Biological Aspects of Foods (3 cr)</td>
<td>4) GPHS selective (<strong>from remaining categories</strong>)</td>
</tr>
<tr>
<td>5) GPHS selective (Social &amp; Behavioral Health, Environmental Health, or Health Policy &amp; Management; Biological Aspects of Health fulfilled by NS 4410)</td>
<td>5) Humanities &amp; Social Sciences course (see <strong>College-level specifications</strong>)</td>
</tr>
</tbody>
</table>

---

**SUMMER AFTER JUNIOR YEAR: Experiential Learning Opportunity**

---

**SENIOR YEAR**

<table>
<thead>
<tr>
<th>FALL</th>
<th>SPRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) NS 3320 Methods in Nutritional Science (3 cr)</td>
<td>1) NS 4250 Nutrition Communications and Counseling (3 cr)</td>
</tr>
<tr>
<td>2) NS 4410 Nutrition and Disease (4 cr)</td>
<td>2) NS 4880 Applied Dietetics in Food Service Systems (4 cr)</td>
</tr>
<tr>
<td>3) NS 4420 Implementation of Nutrition Care (3 cr)</td>
<td>3) Humanities &amp; Social Sciences course (see <strong>College-level specifications</strong>)</td>
</tr>
<tr>
<td>4) NS 4600 Explorations in Global and Public Health (3 cr)</td>
<td><em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
</tr>
<tr>
<td>5) GPHS selective (<strong>if remaining</strong>)</td>
<td><em><strong>plus remaining College (CALS/CHE) or general elective credits, according to needs and interests</strong></em></td>
</tr>
</tbody>
</table>
The PRE-HEALTH TRACK as a DNS undergraduate

Students considering applying to school for medicine, physical therapy, dentistry, physical assistantship, nursing, or other advanced medical training need a more rigorous background in chemistry and biological sciences. These pages contain a list of required or recommended courses for students in or considering a pre-health track (adapted to reflect the courses most likely taken by DNS students) and information about other opportunities for getting pre-health experience. The information about pre-health tracks within this Survival Guide is not a substitute for meeting with a pre-health advisor. Much more information about pre-health planning and exploration can be found in annual guides provided by Cornell Career Services: the Guide for First- and Second-Year Pre-Med Students ([link](http://www.career.cornell.edu/resources/upload/PreMed-Guide-16-17.pdf)) and the Guide for Advanced Pre-Medical Students ([link](http://www.career.cornell.edu/resources/upload/Advanced-Guide-16-17.pdf)).

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>CORNELL COURSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td><strong>Option 1</strong></td>
</tr>
<tr>
<td></td>
<td>• BIOG 1500 Investigative Biology Laboratory (F/S, 2 cr) <strong>AND</strong></td>
</tr>
<tr>
<td></td>
<td>• BIOMG 1350 Introductory Biology: Cell and Developmental Biology (F/S, 3 cr) <strong>AND</strong></td>
</tr>
<tr>
<td></td>
<td>• [BIOG 1440 Introductory Biology (F/S, 3 cr) <strong>OR</strong> BIOG 1445** (F/S, 3 cr)]**</td>
</tr>
<tr>
<td></td>
<td><strong>Option 2</strong></td>
</tr>
<tr>
<td></td>
<td>• BIOG 1107 Introductory Biology I: From Atom to Cell (Summer, 3 cr) <strong>AND</strong></td>
</tr>
<tr>
<td></td>
<td>• BIOG 1108 Introductory Biology II: From Cell to Biosphere (Summer, 3 cr) <strong>AND</strong></td>
</tr>
<tr>
<td></td>
<td>• BIOG 1500 Investigative Biology Laboratory</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>One of the following:</td>
</tr>
<tr>
<td></td>
<td>1. NS 3200 Introduction to Human Biochemistry (F, 4 cr) <strong>OR</strong></td>
</tr>
<tr>
<td></td>
<td>2. BIOMG 3310 Principles of Biochemistry: Proteins and Metabolism (F, 3 cr) <strong>AND</strong> BIOMG 3320 Principles of Biochemistry: Molecular Biology (S, 2 cr) <strong>OR</strong></td>
</tr>
<tr>
<td>Physiology</td>
<td>• Anatomy/physiology lecture (e.g. NS 3410; S, 4 cr) <strong>AND</strong></td>
</tr>
<tr>
<td></td>
<td>• Anatomy/physiology laboratory (e.g. NS 3420; S, 2 cr)</td>
</tr>
<tr>
<td>Biology (not required, but recommended)</td>
<td>Further courses in areas of interest, such as:</td>
</tr>
<tr>
<td></td>
<td>• Genetics <em>(strongly recommended</em>, e.g. BIOMG 2800 or 2810)</td>
</tr>
<tr>
<td></td>
<td>• Microbiology (e.g. BIOM 2900 or VETMI 4310)</td>
</tr>
<tr>
<td></td>
<td>• Neurobiology (e.g. BIONG 2210, 2220, or 4280)</td>
</tr>
<tr>
<td></td>
<td>• Cell Biology (e.g. BIOMG 4320)</td>
</tr>
<tr>
<td></td>
<td>• Physiology <em>(beyond requirements</em>, e.g. BIOAP 3110)</td>
</tr>
<tr>
<td></td>
<td>• Biochemistry <em>(beyond requirements)</em></td>
</tr>
<tr>
<td></td>
<td>• Evolution (e.g. NS 2750 or BIOEE 1780)</td>
</tr>
<tr>
<td></td>
<td>• Ecology (e.g. BIOEE 1610 Introductory Biology: Ecology and the Environment</td>
</tr>
<tr>
<td></td>
<td>• Nutrition (e.g. NS 3030, 3220, 3310, 4310, or 4410)</td>
</tr>
<tr>
<td>General Chemistry</td>
<td>• Two semesters introductory chemistry (e.g. CHEM 2070-2080, held as a fall-spring pair) <strong>AND</strong></td>
</tr>
<tr>
<td></td>
<td>• Introductory chemistry lab (e.g. BIOG 1500)</td>
</tr>
<tr>
<td>Organic Chemistry</td>
<td>• Two semesters organic chemistry (e.g. CHEM 3570-3580 <strong>OR</strong> CHEM 3590-3600) <strong>AND</strong></td>
</tr>
<tr>
<td></td>
<td>• Organic chemistry lab (e.g. CHEM 2510; F/S/Summer, 2 cr)</td>
</tr>
<tr>
<td>English</td>
<td>The Freshman Writing Seminar sequence (two semesters) usually satisfies this. For the rare exceptions, see the Medical School Admissions Requirements Guide (MSAR).</td>
</tr>
<tr>
<td>Math</td>
<td>One semester each of calculus and statistics.</td>
</tr>
<tr>
<td>General Physics</td>
<td>Two semesters physics (held as a fall-spring pair), such as:</td>
</tr>
<tr>
<td></td>
<td>• PHYS 1101-1102 (individualized instruction, not calculus-based) <strong>OR</strong></td>
</tr>
<tr>
<td></td>
<td>• PHYS 2207-2208 (calculus-based) <strong>OR</strong></td>
</tr>
<tr>
<td></td>
<td>• PHYS 1112-2208 (calculus-based)</td>
</tr>
<tr>
<td></td>
<td>Crossovers between 1101/2208 and 2207/1102 are acceptable; consult Physics website or Physics Director of Undergraduate Studies (DUS).</td>
</tr>
<tr>
<td>Social Science</td>
<td>One semester of a social science course, preferably Psychology or Sociology. Consult with a pre-health advisor to find a relevant course.</td>
</tr>
</tbody>
</table>
Other Potentially Valuable Courses

In addition to the required and recommended courses listed on the previous page, a number of other Cornell courses may be valuable to pre-health students in DNS, depending on personal interests. Some of these classes are listed below in alphabetical (not value) order.

ANTHR 2468 Medicine, Culture, and Society
BIOMI 2500 Public Health Microbiology
BIOMI 2900 General Microbiology
BIOMI // BIOMS 4310 Medical Parasitology
BIONB 4270 Darwinian Medicine
BSOC 4411 Philosophy of Medicine
COMM 2850 // STS 2851 Communication, Environment, Science, and Health
DSOC // LSP 2200 Sociology of Health and Ethnic Minorities
DSOC 3111 // BSOC 3111 // SOC 3130 // STS 3111 Sociology of Medicine
ENTOM 2100 Plagues and Peaple
ENTOM // TOX 3070 Pesticides, the Environment, and Human Health
HD 2180 Human Development: Adulthood and Aging
FDSC 4220 Fundamental Foods and Dietary Supplements for Health
HD 1150 Human Development: Infancy and Childhood
FSAD 4390 Biomedical Materials and Devices for Human Body Repair
HD 1170 Human Development: Adolescence and Emerging Adulthood
HD 2180 Human Development: Adulthood and Aging
HD 2200 The Human Brain and Mind: Biological Issues in Human Development
HD // SOC 2510 Social Gerontology: Aging and the Life Course
HD 3300 Developmental Psychology
HD 3250 Neurochemistry of Human Behavior
HD 3570 // SOC 3670 Social Inequalities in Physical and Mental Health
HD 3660 Affective and Social Neuroscience
HD 3700 // PSYCH 32510 Adult Psychopathology
HD 3250 Neurochemistry of Human Behavior
HD // SOC 4570 Health and Social Behavior
HD 4590 Life Transitions Across the Life Span
NS 3150 Obesity and the Regulation of Body Weight
NS 3200 Epidemiology
NS 3310 Human Nutrition and Nutrient Metabolism
(Shelpful for the MCAT, fundamental nutrition knowledge useful to non-nutrition majors)
NS 4250 Nutrition Communications & Counseling
NS 4500 Public Health Nutrition
PAM // DSOC 3280 Fundamentals of Population Health
PAM 2350 The U.S. Healthcare System
PAM 3110 Pharmaceutical Management and Policy
PAM 3780 Sick Around the World? Comparing Health Care Systems Around the World
PAM 4050 Reproductive Health Policy
PAM 4280 // ECON 3710 The Economics of Risky Health Behaviors
PAM 4370 // ECON 3720 The Economics of Health Care Markets
PLPPM 2950 Biology of Infectious Disease: From Molecules to Ecosystems
AND courses in languages, oral communications, and culture and religion

Getting pre-health experience

Coursework is not the only important part of preparing for a career in medicine and health. There are many other activities and resources that will help you to decide whether a career in medicine is right for you, assess what type of career in medicine interests you, and gain early insight into the skills and thought processes involved in a career in medicine and health. Some of these activities and resources are described briefly below.

CU Alumni Connections Program
Students can apply to the CU Alumni Connections Program to shadow a Cornell alum in one of the health professions. Find more information at http://www.career.cornell.edu/students/options/ACP/index.cfm.

Field Experience in Your Major
Field experience in your major can provide unique opportunities for your education and personal professional growth. More information about getting this field experience—and getting credit for that experience, most likely through NS 4020 Supervised Fieldwork—can be found within the Supervised Field Work section of the Survival Guide.
Research
Undergraduates can participate in research for credit (see Undergraduate Research for more information), as a volunteer, or through the DNS Honors Program (see The DNS Honors Program for more information). Participating in research and working closely with a faculty member can help you decide how interested you are in the research aspects of nutrition and medicine.

Urban Semester
Students may spend a semester (usually in the sophomore or junior year) in New York City gaining experience in health care fields. Find more information at http://www.human.cornell.edu/academics/urban-semester/index.cfm.

Student Volunteer Opportunities
Information about how to find volunteer opportunities at Cornell, in Ithaca, and in your hometown can be found at http://www.career.cornell.edu/paths/health/experience/volunteer/index.cfm.

A wide range of volunteer opportunities based on Cornell campus, including the Pre-Medical Community Mentorship Program (described below), can be found at http://www.career.cornell.edu/paths/health/experience/volunteer/campus.cfm.

The Pre-Medical Community Mentorship Program gives selected Cornell students the opportunity to observe up close some of the realities of the medical profession. Spending two half days shadowing a Tompkins County physician, students are connected with a mentor who can answer questions about opportunities in the diverse field of medicine and preparation for a medical career. This program is offered for Cornell undergraduates seriously considering a career in medicine. Call (607) 255-4782 to find out more.

Summer Experience
Volunteer to help health care providers and community support programs in your neighborhood or hometown.
The DIDACTIC PROGRAM IN DIETETICS
Available to all Cornell undergraduates

For more information regarding requirements and procedures of the DNS Didactic Program in Dietetics, please see the program website (http://www.dpd.human.cornell.edu/) or contact Emily Gier (416 Savage Hall // (607) 255-2638 // eg47@cornell.edu).

An Introduction to Dietetics

Job markets demand—and many states require—that anyone who advises others about nutrition or diet must be a registered dietitian nutritionist (RD/RDN). In addition, academic training and work experience in dietetics opens doors to advancement in many directions, including management positions and not-for-profit organizations, consulting or counseling practices, and opportunities to combine dietetics with other health care specialties. For pre-health students, completing the dietetics program provides valuable preparation in health, disease and clinical nutrition for practicing medicine and other careers in healthcare.

Careers in Dietetics

Dieticians can work in many fields and settings, and some dietitians practice in highly specialized areas. Some potential career paths for RD/RDNs include:

- Clinical Nutrition
- Sports Nutrition
- Child Nutrition
- Medicine
- Dietetics Education
- Public Health Nutrition
- Community Nutrition
- Food and Nutrition Management
- Nutrition Counseling
- Dietetics Research
- Corporate Wellness
- Retail Nutrition

In addition, there is an increased demand for dietitians with expertise in several areas, including:
- community settings such as in programs that promote maternal and child health, adult fitness and wellness, and diabetes education
- the management of complex health conditions and diseases such as cancer, AIDS, newborn intensive care, eating disorders, burns, and diabetes.
- private industry such as food manufacturers, grocery stores, food service corporations, restaurants, software companies, health clubs, and print and broadcast media.

For examples of current job opportunities in dietetics see Jobs in Dietetics, a job list service for nutrition and dietetic professionals at www.healthecareers.com and http://www.eatrightpro.org/resources/career/become-an-rdn-or-dtr.

Deciding if Dietetics is Right for You

It is strongly recommended that DNS students consider applying to the Didactic Program in Dietetics (DPD). Many employment opportunities related to nutrition require or strongly prefer an RD/RDN credential. In particular, students should consider pursuing the RD/RDN credential if they are interested in:

- nutrition and health care
- counseling and/or educating individuals and groups to improve diet and health, including working as sports dietitians and in private practice settings
- nutrition knowledge with the culinary arts and students interested in large scale food service operations
- teaching in academic settings
- enhancing their graduate degrees
**Becoming a Registered Dietitian**

The Academy of Nutrition and Dietetics is the largest professional organization for dietetics professionals and sets the standards for dietetics education through the Accreditation Council for Education in Nutrition and Dietetics (ACEND) and for credentialing as a registered dietitian nutritionist through the Commission on Dietetic Registration (CDR). To become a registered dietitian nutritionist, you must:

1. Earn a bachelor’s degree*
2. Complete the required courses of an academic program that is accredited by ACEND (such as the Didactic Program in Dietetics in DNS)
3. Complete an ACEND-accredited supervised practice program (see below) prior to taking the registration exam
4. Pass the national registration exam given by the CDR to earn the RD credential

*NOTE: Beginning in 2024, the degree requirement to sit for the RDN credential will move to a graduate degree. A student may earn a graduate degree before, during or after supervised practice and the graduate degree may be in any area (e.g. nutrition, management, public health, etc). Learn more at [https://www.cdrnet.org/certifications/registered-dietitian-rd-certification](https://www.cdrnet.org/certifications/registered-dietitian-rd-certification).

Supervised practice programs, located throughout the U.S., typically range from 9-12 months in duration to provide a minimum of 1200 hours of supervised learning experience. Some programs also offer advanced degrees. Dietetic interns receive supervised experience in clinical nutrition, community nutrition, and food and nutrition service management as well as a concentration area specific to an internship.

Admission to supervised practice programs is highly competitive, with the national placement rate at approximately 50%. Admission to supervised practice programs requires prior completion of an undergraduate dietetics program as well as relevant and adequate field experience (paid or volunteer) in clinical, community, management and/or research settings. For more information about dietetics programs and supervised practice programs, see the Academy website ([http://www.eatright.org](http://www.eatright.org)) and the DNS website ([http://www.dpd.human.cornell.edu/](http://www.dpd.human.cornell.edu/)).

**The Didactic Program in Dietetics at Cornell**

**Program Content**

Translating the science of nutrition into healthy food choices for individuals and groups or appropriate nutritional therapy for those with illness requires the integration of many different disciplines. The Dietetics curriculum provides a broad and integrated academic program that is strongly grounded in the physical, biological, social and behavioral sciences. The program emphasizes critical thinking, communication skills, quantitative literacy, and the application of theory to practice.

Students begin with basic courses in biology, chemistry, social sciences and introductions to food, nutrition, and health issues and nutrition and the life cycle. In their second year, Dietetics students progress to organic chemistry, physiology, and courses that examine the social and behavioral science aspects of food and nutrition as well as the nutritional and physicochemical properties of foods. Advanced courses taken in the junior and senior years apply biochemistry, physiology, social, and behavioral sciences to problems in clinical nutrition, counseling, communications, public health, and food and nutrition management. Throughout the program, students develop skills that will foster personal and professional growth as life-long learners and as leaders and team members in the dietetics profession.

The Division of Nutritional Sciences at Cornell University offers an ACEND-accredited DPD. The mission of the DPD is to prepare critically-thinking graduates ready for supervised evidence-based practice toward becoming registered dietitians and for leadership in their careers in nutrition and dietetics. Although many of the course requirements in the ACEND-accredited dietetics program are met by courses required in the NS, HBHS, and GPHS majors, there are additional requirements unique to the DPD (see Dietetics Requirements in this section). Approximately 15% of DNS students participate in the DPD.
Planning and Preparation

The earlier a student begins planning to complete the DPD requirements, the more freedom they may have later in their undergraduate career to select their preferred electives. Careful early planning may also enable students to study abroad or complete a minor.

Students should plan to be on track with meeting dietetics requirements so that they can apply to the DPD at the beginning of their junior year. Students pursuing dietetics education work closely with their faculty advisors and with the Dietetics Program faculty to prepare their course schedules and to acquire field experience in dietetics, and research experiences that enhance their classroom learning. Such efforts increase the likelihood of acceptance into the DPD and ultimately placement into supervised practice programs. Students should check their progress at the end of each year using the “Dietetics Pathway Flowchart” found on the DPD website.

Students should also get involved with CUDA and/or HealthNutS (also see Student Organizations) and make every effort to attend DPD informational meetings (typically held in the fall; refer to undergraduate dietetics website for dates). Meeting with the DPD Director is also strongly advised.

Application and Registration

Pre-Dietetics Registration. Students who are interested in completing the DPD should 1) submit a Pre-Dietetics Student Intent Form, 2) meet with the DPD Director, 3) begin taking dietetics courses, and 4) seek dietetics-related experiences prior to their application to the DPD program.

Application to the DPD. Students interested in pursuing a career as a Registered Dietitian must apply for admission into the DPD, typically at the beginning of the junior year. Admission into the DPD is a competitive and selective process with a limited number of placements. Completing DPD requirements should be an option pursued as part of a thoughtful plan by students serious in pursuing dietetics and health careers. Admissions reflect an overall competitiveness for successful placement into supervised practice and commitment to a career in dietetics and health. Selection is based on successful academic progress, committed intention to pursue a career in dietetics and health, potential for excellence or leadership in the field of dietetics and a high likelihood for successful placement into an accredited internship post-baccalaureate. Students who determine that becoming a registered dietitian nutritionist is a good fit with their professional goals after thoughtful consideration and career exploration should apply to the DPD program at Cornell. Refer to additional information regarding the application process on the DNS undergraduate dietetics website.

Application to Supervised Practice Programs. The placement rate of Cornell DPD students who apply to supervised practice programs over the past five years is, on average, 89%. The Cornell DPD placement rate is notably higher than the national placement rate of approximately 50%. However, acceptance into supervised practice programs is highly competitive. Strong applicants have the most potential for success at gaining acceptance into internship programs and exhibit the following:

- is completing DPD coursework and degree requirements with an overall GPA of 3.0 or better
- has strong letters of support (from advisors, instructors, an RD practitioner, coaches, employers, etc) to practice in the field of dietetics.
- has gained relevant and adequate dietetics related experiences through work, volunteer, lab and field experiences.
- is mature and capable of balancing the rigors of work and study during the internship experience
- has developed leadership skills through involvement with clubs, organizations, sports, work, volunteer and other extracurricular experiences and exhibits potential for excellence or leadership in the field of dietetics
- is passionate about food, nutrition and health and practicing in the field of dietetics
- is committed to pursuing a career in dietetics and health
Requirements for the Didactic Program in Dietetics

For more information regarding requirements and procedures of the DNS Didactic Program in Dietetics, please contact Emily Gier, 215 Savage Hall, (607) 255-2638, eg47@cornell.edu.

BRIEF REQUIREMENTS OVERVIEW: Many courses that are required for Dietetics are also required for NS, HBHS, and GPHS majors or may count as advanced electives in those majors!

1. 2 semesters introductory biology + 1 introductory biology lab
2. 2 semesters introductory chemistry
3. 1-2 semesters organic chemistry + 1 organic chemistry lab
4. Microbiology
5. Biochemistry
6. 5 core courses in Nutritional Sciences
7. 8 courses in Dietetics
8. Statistics
9. Psychology

PLEASE NOTE that, starting in 2024, candidates for the RD/RDN exam will need to have a graduate degree in addition to completing dietetics requirements to sit for the exam.

Physical and Biological Sciences

Inorganic Chemistry
CHEM 2070 General Chemistry I (F, 4 cr) AND CHEM 2080 General Chemistry II (S, 4 cr)

Organic Chemistry Lecture and Lab
Choose one of the following lecture options:
(a) CHEM 1570 Elementary Organic Chemistry (S only, 3 cr, not for pre-health) OR
(b) CHEM 3530 Principles of Organic Chemistry (F only, 3 cr) OR
(c) CHEM 3570-3580 Introductory Organic Chemistry I and II (6 cr, must take both, CHEM 3570 alone will not fulfill the requirement)

AND choose one of the following labs:
(a) CHEM 2510 Introduction to Experimental Organic Chemistry (F/S/Summer, 2 cr) OR
(b) CHEM 3010 Honors Experimental Chemistry (S, 4 cr)

Introductory Biology Lab and Lecture
BIOG 1500 Investigative Lab (F/S, 2 cr) AND choose two out of the three lecture options:
(a) [BIOMG 1350 Cell and Development (F/S, 3 cr)
(b) BIOG 1440 Comparative Physiology (F/S, 3 cr) OR*
  BIOG 1445 Comparative Physiology (autotutorial) (F/S, 4 cr)
(c) BIOEE 1610 Ecology and the Environment (F/S, 3 cr) OR*
  BIOEE 1780 Evolution and Diversity (F/S, 3 cr)
* Cannot take both to fulfill this requirement.

Microbiology
BIOMI 2900 General Microbiology Lectures (F/S/Summer, 3 cr)

Physiology
NS 3410 Human Anatomy and Physiology (S, 4 cr) AND
NS 3420 Human Anatomy and Physiology Lab (S, 2 cr, recommended concurrent registration with NS 3410)

Biochemistry
Choose one of the following*:
(a) NS 3200 Introduction to Human Biochemistry (F, 4 cr) OR
(b) BIOMG 3300 Principles of Biochemistry (F, 4 cr) OR
Behavioral Sciences

Psychology
Choose one of the following:
(a) HD 1100 Lifespan Development (F, 3 cr)
(b) HD 1150 Human Development: Infancy and Childhood (F/Summer, 3 cr)
(c) HD 1170 Human Development: Adolescence and Emerging Adulthood (S, 3 cr)
(d) PSYCH 1101 Introduction to Psychology (F, 3 cr)

Communications

Communication
Two Freshman Writing Seminars.

Computational Sciences

Statistics
Choose one of the following:
(a) STSCI 2150 Introductory Statistics for Biology (F/S, 4 cr) OR
(b) PAM 2100 Introduction to Statistics (S, 4 cr) OR
(c) AEM 2100 Introductory Statistics (F, 4 cr) OR
(d) BTRY 3010 Biological Statistics I (F, 4 cr) OR
(e) ILRST/STSCI 2100 Introductory Statistics (F/S/Winter/Summer, 4 cr) OR
(f) MATH 1710 Statistical Theory and Application in the Real World (F/S, 4 cr) OR
(g) PSYCH 3500 Statistics and Research Design (F/Summer, 3-4 cr) OR
(h) SOC 3010 Evaluating Statistical Evidence (S, 3 cr)

Professional Sciences

Nutrition Core Courses
NS 1150 Nutrition, Health and Society (F, 3 cr)
NS 2450 Social Science Perspectives on Food and Nutrition (F, 3 cr)
NS 3450 Nutritional and Physicochemical Aspects of Foods (F, 3 cr)
NS 3310 Human Nutrition and Nutrient Metabolism (S, 4 cr)
NS 3320 Methods in Nutritional Sciences (F, 3 cr)

Dietetics Courses
NS 1220 Nutrition and the Life Cycle (S, 3 cr)
NS 2470 Food for Contemporary Living (F/S, 2 cr)
HADM 1360 Food Service Management (F/S, 3 cr) OR HADM 3365 Foodservice Management Essentials (F, 3 cr) *(recommended; must ask Terry Mingle (tpm2) for permission to enroll in either)*
NS 4250 Nutrition Communications (S, 3 cr)
NS 4410 Nutrition and Disease (F, 4 cr)
NS 4420 Implementation of Nutrition Care (F, 3 cr)
NS 4500 Public Health Nutrition (S, 3 cr) OR NS 1600 Introduction to Public Health (S, 3 cr)
NS 4880 Applied Dietetics in Food Service Management (S, 4 cr)
The DIDACTIC PROGRAM in DIETETICS
Student Intent Form

Deadlines for submitting form: September 30th (FALL) and February 15th (SPRING).

As soon as you decide to complete the requirements of the DNS Didactic Program in Dietetics, please complete this form and return to B21 Savage Hall. This form may also be found on the DPD website (http://www.dpd.human.cornell.edu). Also, please schedule a meeting as soon as possible with Emily Gier (eg47@cornell.edu) to discuss your plans for dietetics. If at any time you decide not to complete these requirements, please notify us. Thank you!

Student ID Number: __________________________   netID: ________   Date: _________________

Name: ___________________________________________________________________________
Current (Campus) Address: __________________________________________________________
__________________________________________________________________________

College: ___________________________    Major: _______________________________________
Expected Graduation: (circle one) fall / spring 20 _____   Faculty Advisor: ______________________
Phone #: _____________________________   Indicate any minor fields or pre-professional paths
(e.g. pre-health): ______________________________________________ _______________________
Faculty Advisor’s Name: _____________________________________________________________

I am aware that information about the DPD, including the program Handbook and policies, is available on the dietetics web site. I understand that students interested in completing DPD requirements will need to apply to the DPD, typically in their junior year. Students who are not accepted into the program, or choose not to apply, will no longer be identified with the “Dietetics” milestone in Cornell’s academic records system, which will affect the ability to enroll in any (NS) “dietetics-preferred” courses.

Signature _____________  ____________________________  Date: __________________
(Please sign. If submitting form electronically, please stop by B21 Savage to sign the form at your earliest convenience.)

Are you a Transfer Student? YES     NO   IF YES: Year transferred to Cornell: ________
Transferred from (College/Dept.): _______________________________________________

FOR OFFICE USE ONLY

___________________________          DPD Completion Date:

Notes:

TPM       DB       XLSX       PS       DUST
The GLOBAL HEALTH Minor
Available to all Cornell undergraduates

DNS offers an undergraduate minor in Global Health that available to all Cornell undergraduates in all Colleges and majors. The Global Health minor provides students with basic knowledge about global and public health as well as the necessary skills and experience to begin to build their own unique career path in global and public health. More information about the Global Health minor can be found at http://www.human.cornell.edu/dns/globalhealth/undergraduate/index.cfm or by contacting:

Jeanne Moseley, Associate Director (jmm298@cornell.edu), 607-254-6228, Savage Hall B15
Tatyana Roberts, Global and Public Health Fellow (tdr37@cornell.edu), 607-255-8983, Savage Hall B20

The minor is designed to achieve three educational objectives:
1) to learn more about the problems of global and public health in a classroom setting
2) to experience the issues in global and public health first-hand in a field setting
3) to gain exposure to various careers in global and public health from a diverse spectrum of graduate and medical students and faculty who focus on global and public health.

Requirements for the Global Health minor

To successfully complete the Undergraduate Minor in Global Health, students must enroll in two (2) Core Courses and three (3) Elective Courses for a total of fifteen (15) credits. Additionally, students are required to complete an 8-week international Experiential Learning Opportunity (ELO) in a resource-limited environment. These requirements must be as follows:

1. Take the first required Core Course, NS 2600 Introduction to Global Health (F, 3 cr), to gain a basic understanding of global health and to prepare you for additional coursework and the ELO. NS 2600 Introduction to Global Health must be completed prior to completing the ELO.
2. Begin to complete Elective Coursework (described further below). It is recommended (but not required) that to begin Elective Coursework prior to completing the.
3. Meet with the Global Health Program Associate Director or Fellow to discuss your intended ELO.
   a. If you apply and are accepted to participate in a Global Health Summer Program, you are required to enroll in NS 4620: Global Service Learning Pre-Departure Seminar (2 cr) during the Spring semester prior to the Field Experience.
   b. If you elect to participate in an Independent ELO, you are required to attend one Health & Safety Seminar, one Ethics, Culture & Diversity Seminar, and one NS 4600 Preparatory Seminar the Spring semester prior to the Field Experience.
4. Complete an 8-week (minimum) Experiential Learning Opportunity in which you live and work abroad on a health-related placement in a resource-limited setting.
5. Complete the Final Report detailing your ELO AND attend a mandatory post-ELO meeting in the Fall.
6. Take the second required Core Course, NS 4600 Explorations in Global and Public Health (F, 3 cr). This course must be taken the Fall semester immediately following the completion of your ELO (junior or senior year).

Elective Coursework

Students are required to take and successfully complete the three Elective Courses. These courses must be distributed across three (3) of the five (5) Elective Course categories:

I. Biomedical & Epidemiological Approaches to Global Health
II. Social & Ethical Approaches to Global Health
III. Political, Economic, & Food Systems Approaches to Global Health
IV. Health Systems & Programmatic Approaches to Global Health
V. Area-Specific Studies (Petition Only)
A description of each of these categories and the courses in each category is below. The most updated, complete list of elective options can be found on the Global Health minor website: (http://www.human.cornell.edu/dns/globalhealth/undergraduate/index.cfm)

I. **Biomedical & Epidemiological Approaches to Global Health**

Includes courses encompassing a “hard science” approach to the study of disease and epidemiology. Examines both communicable and parasitic vectors that commonly occur in resource-poor contexts as well as the nutritional and environmental factors that relate to increasingly prevalent non-communicable diseases.

**FALL**
- BIOMI 2500 Public Health Microbiology (F, 3 cr)
- BIOMI 3210 Human Microbes and Health (F, 3 cr)
- BIOMI // BIOMS 4090 Principles of Virology (F, 3 cr)
- BIOMI // BIOMS 4310 Medical Parasitology (F, 2 cr)
- PLBRG 4070 Nutritional Quality Improvement of Food Crops (F, 2 cr) *(previously BIOPL)*
- ENTOM 3520 Medical and Veterinary Entomology (alt odd F, 3 cr)
- NS 3060 Nutrition and Global Health (alt odd F, 3 cr)
- NS 3600 Epidemiology (F, 3 cr)
- NS 4410 Nutrition and Disease (F, 4 cr)
- PLPPM 2950 Biology of Infectious Disease: From Molecules to Ecosystems (F, 3 cr) *(previously PLPA)*

**SPRING**
- BIOMI // BIOMS 4040 Pathogenic Bacteriology (S, 2-3 cr)
- BIOMS // VETMI 7190 Immunology of Infectious Diseases (S, 2 cr)
- ENTOM 2100 // BSOC 2101 Plagues and People (S, 2-3 cr)
- FDSC 4220 Functional Foods and Dietary Supplements for Health (S, 2 cr)
- NS // PSYCH 3150 Obesity and the Regulation of Body Weight (alt even S/Summer, 3 cr)
- NS 3220 Maternal and Child Nutrition (alt odd S, 3 cr)

II. **Social & Ethical Approaches to Global Health**

Includes courses that examine cultural and social issues affecting the health of global populations and that form a foundation upon which students can build effective policies and frameworks tailored to a population. Courses in this category examine the health of macro- and micro-communities as well as the relationships among ethics, human rights, and health in different communities and contexts.

**FALL**
- ANTHR // FGSS // LGBT 2421 Sex and Gender in Cross-Cultural Perspective (F, 3 cr)
- ANTHR // BSOC // STS 3465 Anthropology of the Body (F, 4 cr)
- ANTHR // BSOC 3620 // FGSS 3621 A Global Controversy: How to Study a Human Rights Violation (F, 4 cr)
- BSOC // STS 2051 Ethical Issues in Health and Medicine (F, 4 cr)
- CRP 3011 Ethics, Development, and Globalization (alt F/S)
- DSOC 2010 // SOC 2202 Population Dynamics (F, 3 cr)
- DSOC 2200 Sociology of Health of Ethnic Minorities (F, 3 cr)
- DSOC 4210 Theories of Reproduction (F, 3 cr)
- DSOC 4380 Population and Development (F, 3 cr)
- HD // SOC 3570 Social Inequalities in Physical and Mental Health (F, 3 cr)
- PAM 3280 Fundamentals of Population Health (F, 3 cr)

**SPRING**
- ANTHR // ASRC 4682 Healing and Medicine in Africa (S, 4 cr)
- ANTHR // BSOC // STS 2468 Medicine, Culture and Society (S, 3 cr)
- ASRC 4602 // STS 3460 Women and Gender Issues in Africa (S, 4 cr)
- CRP 3011 Ethics, Development, and Globalization (alt F/S)
DSOC // STS 3111 // SOC 3130 Sociology of Medicine (S, 4 cr)
PHIL 2450 Ethics and Healthcare (S, 4 cr)
PLHRT 2350 Food, Fiber, and Fulfillment: Plants and Human Well-Being (alt even S, 2 cr)
(formerly HORT)
NS 4500 Public Health Nutrition (S, 3 cr)

III. Political, Economic, & Food Systems Approaches to Global Health
Includes courses that examine local and global economic and political forces that influence the healthcare system of a particular region and the development of that healthcare system. Courses in this category include a wide range of subjects, from agriculture and food system regulations to formulating balanced policy recommendations. This category focuses mainly on nutritional public policy, from its basis in agro-economic theory to its specific application to developing political systems.

FALL
AEM // NS 4450 Towards a Sustainable Global Food System: Food Policy for Developing Countries (F, 3 cr)
ANSC // IARD 4000 Feeding the World: The Biological and Quantitative Analyses of Livestock and Crop Systems (F, 4 cr)
BIOEE 4690 // BSOC // STS 4691 Food, Agriculture, and Society (F, 3 cr)
ECON 4640 Economics of Agricultural Development (F, 3 cr)
ECON // PAM 4370 Economics of Health Care Markets (F, 3 cr)
ECON 3910 // NS 4570 Health, Poverty and Inequality: A Global Perspective (F, 3 cr)
(formerly 4740)
FDSC // IARD 4020 Agriculture in Developing Nations I (even alt F, 3 cr)
IARD // PLSCS 4140 Tropical Cropping Systems: Biodiversity, Social & Environmental Impacts (F, 4 cr)
IARD // DSOC 2020 Perspectives on IARD (F, 3 cr)
PAM 2350 The U.S. Healthcare System (F, 3 cr)
PAM 4140 // ECON 3740 Global Health Economics and Policy (F, 3 cr)
PLSCS // BSOC // GOVT // IARD // STS 4303 The GMO Debate: Science & Society (F, 4 cr)

SPRING
AEM 2000 Contemporary Controversies in the Global Economy (S, 3 cr)
AEM 4310 Agricultural and Food Policy (S, 3 cr)
COML // EAS // ROMS 2021 Humans and Climate Change (S, 3 cr)
DSOC 2050 // SOC 2206 International Development (S, 3-4 cr)
DSOC 3400 Agriculture, Food and Society (F, 3 cr)
ECON // PAM 4280 The Economics of Risky Health Behaviors (S, 3 cr)
FDSC // IARD // NTRES 4800 Global Seminar: Building Sustainable Environments and Secure Food Systems for a Modern World (S, 3 cr)
FDSC // IARD 6020 International Agriculture in Developing Nations (S, 3 cr)
HIST 2791 International Humanitarianism (S, 4 cr)
ILRIC 3342 Workplace Health and Safety as a Human Right (S, 4 cr)
PAM 3780 Sick Around the World? Comparing Healthcare Systems Around the World (S, 3 cr)

IV. Health Systems & Programmatic Approaches to Global Health
Courses that include study of interventions, programs, and other methodologies, so as to provide students with the skills, tools and frameworks upon which to implement sustainable development. Courses in this category focus techniques for engineering infrastructures to that are effective in supporting public health initiatives.

FALL
BEE // ENGRD 2510 Engineering for a Sustainable Society (F, 3 cr)
BEE 3299 Sustainable Development: A Web-based course (F/S/Summer, 3 cr)
BME 4110 Science and Technology Approaches to Problems in Human Health (F, 3 cr)
CEE 2550 // 4550 AguaClara: Sustainable Water Supply Project (F/S, 3 cr)
CEE 4540 Sustainable Municipal Drinking Water Treatment (F, 3 cr)
ILROB 4710 Social Science Research Methods (S, 4 cr)
MAE 1900 // 4291 Engineering World Health (F/S 1-4 cr)

SPRING
ANTHR // BSOC // STS 4311 From Surgery to Simulation (S, 4 cr)
BEE 3299 Sustainable Development: A Web-based course (F/S/Summer, 3 cr)
BEE 4760 Solid Waste Engineering (S, 3 cr)
CEE 2550/4550 AguaClara: Sustainable Water Supply Project (F/S, 3 cr)
MAE 1900/4291 Engineering World Health (F/S 1-4 cr)*
NS 4800 Implementation and Impact in Global and Public Health (S, 4 cr; restricted to students in the Cornell in Washington program)

SUMMER
BEE 3299 Sustainable Development: A Web-based course (F/S/Summer, 3 cr)
HE 4060 Fieldwork in Diversity and Professional Practice: The Culture of Medicine and Public Health (Summer, 3 cr)

* Students intending to use MAE 1900 / 4291 Engineering World Health towards completion of the Global Health minor must submit a petition describing the focus of their project team’s topic—which must be health-related—prior to taking the course.

V. Area-Specific Studies (Petition Only)
A variety of courses focusing on specific regions or populations in developing countries, so as to enable studies targeted to the context in which they complete their field experience. Includes regional anthropological, sociological and economic studies. Students are encouraged to study regional languages that may aid in implementation of health policies; however, language courses do not count towards the minor.

Please contact the Global Health Fellow or Program Assistant for an Elective Petition Form. All forms must be submitted prior to the completion of the course.

Experiential Learning Opportunity (ELO)

A critical element of the Global Health Minor is an approved eight-week (minimum) Experiential Learning Opportunity (ELO), in which students live and work abroad in a resource-poor setting. The ELO component encourages students to empirically deepen their understanding of global health while continuously living, learning, working and/or serving abroad in a resource-limited environment. For a minimum of 8 weeks, students are challenged to apply their classroom learning to the field setting and to deepen their understanding of the health problems that disproportionately affect the resource-poor.

An ELO is completed during a Fall, Spring, or Summer term in one of two general ways:

A. Cornell Global Health Summer Programs
- Santo Domingo, Dominican Republic
- Mysore, India
- Moshi, Tanzania
- Mwanza, Tanzania
- Lusaka, Zambia

Required Pre-Departure Preparation: NS 4620: GSL Pre-Departure Seminar OR ILRIC 4260: GSL Pre-Departure Seminar (India) (S, 2 cr)

B. Independent ELOs
- Full-time academic study abroad program
- Summer internship
- Volunteer service project
• Work/research experience

Required Pre-Departure Preparation: one Health & Safety Seminar AND one Ethics, Culture & Diversity Seminar AND NS 4600 Preparatory Assignments

Specific opportunities within (A) the Cornell Global Health Summer Programs and among (B) Independent ELOs are described in further detail below.

A. Cornell Global Health Summer Programs

Santo Domingo, Dominican Republic | Universidad de Autonoma de Santo Domingo

Concurrent Coursework: Universidad Autonoma de Santo Domingo
Service Project: Asesoria Nutricional Para del Desarrollo Armonico, La Casa Comunitaria de Justica
Living Arrangements: Homestay with local family
Language Skills: Spanish fluency required

Mysore, India | Swami Vivekananda Youth Movement (offered in collaboration with the School of Industrial & Labor Relations)

Course Period (2 weeks): Vivekananda Institute for Indian Studies
Service Project (6 weeks): Swami Vivekananda Youth Movement
Living Arrangements: SVYM hostel or guesthouse, depending on site

Moshi, Tanzania | Kilimanjaro Christian Medical University-College

Policy Case Study (4 weeks, 4 credits): Kilimanjaro Christian Medical University-College
NS 4630: Global Health and Policy Issues in Tanzania (counts as an Elective Course)
Service Project (4 weeks): Local NGO, government agency, rural clinic or home for children with disabilities
Living Arrangements: Homestay with local family

Mwanza, Tanzania | Weill-Bugando University College of Health Sciences (offered in collaboration with Weill Cornell Medical College)

Concurrent Clinical Shadowing: Active learning from Cornell & Tanzanian faculty in referral and regional hospitals
Student Project: Participate in a faculty-elected student project (i.e. faculty research, fieldwork, etc.)
Living Arrangements: Hospital guesthouse
Other: Prior clinical experience (i.e. shadowing, EMS) and a strong desire for a career in medicine required

Lusaka, Zambia | Southern African Institute for Policy & Research

Offered in collaboration with the School of Industrial & Labor Relations
Concurrent Policy Case Study: Southern African Institute for Policy & Research
Service Project: University of Zambia’s University Teaching Hospital
Living Arrangements: Homestay with local family (4 weeks), guesthouse (4 weeks)

B. Independent Experiential Learning Opportunities

An Independent ELO is an eight-week field experience that counts towards completion of the Global Health Minor, but is not directly affiliated with the Cornell Global Health Program.

Pre-Approved Opportunities

- ProWorld (Intrax) – Ghana
- Support for International Change – Tanzania
- UBElong – Cambodia, Ecuador, Ghana, Peru
- Unite For Sight – Ghana, Honduras, India

Other Opportunities (By Petition Only)

For all other Independent ELOs (i.e. research opportunities, programs outside of Pre-Approved Opportunities, etc.), students are required to complete and submit an Independent ELO Proposal to the Global Health Program Associate Director or Fellow at least eight weeks prior to departure.
The APPLIED EXERCISE SCIENCE Minor
Available to all DNS undergraduates

A minor in Applied Exercise Science may be completed by any DNS undergraduate. The minor is completed through Ithaca College's Department of Exercise and Sport Sciences, School of Health Sciences and Human Performance. This program is helpful to students seeking positions in nutrition and physical fitness or pursuing careers in sports medicine and related fields. Students can choose to complete all the requirements for the minor or take some courses as long as they have met the course prerequisites.

Students who complete all specified courses receive a certification letter from Ithaca College (IC), which is a useful credential for job and school applications. Program completion is good preparation for the examination for Fitness Instructor Certification by the American College of Sports Medicine (a certification that also requires American Red Cross Cardiopulmonary Resuscitation (CPR) Certification or the equivalent). Most candidates will benefit from also having a course in physical fitness programming.

See the following website for more information: [http://www.sce.cornell.edu/exmu/ic_cu_exchange.php#4](http://www.sce.cornell.edu/exmu/ic_cu_exchange.php#4)

**Requirements for the Applied Exercise Science minor**

The applied exercise science minor requires 11 credit hours of specified course work at Ithaca College and 6 prerequisite credit hours of course work at Cornell. Exercise science students are required to take both prerequisites (NS 3410 Human Anatomy and Physiology and NS 3420 Human Anatomy and Physiology Laboratory) before enrolling in three required Ithaca College courses:

1. **Kinesiology**: Examines the anatomical structures and mechanical aspects of human movement. Emphasis is placed on the functional anatomy of the musculoskeletal and articular systems.
2. **Exercise Physiology**: Examines physiological changes during exercise, after exercise, and during a training period. Also considers efficiency, needs, and limitations of body systems, and their interrelationships.
3. **Biomechanical Principles of Human Movement**: The study of biological and mechanical factors that affect humans as they move in exercise and sport. Kinematic and kinetic descriptions of selected motor skills receive careful consideration. *Note*: prerequisite is Kinesiology.

Further information about the program and courses may be found at the following links: Program Description/Courses ([http://www.ithaca.edu/admission/programs/#P657_48181](http://www.ithaca.edu/admission/programs/#P657_48181)) and the Ithaca College Course Catalog: ([https://homerconnect.ithaca.edu/](https://homerconnect.ithaca.edu/); search for Exercise and Sport Sciences). In addition, a physics sequence is required for advanced study in most related areas.

Students should take the IC courses as early as possible once pre-requisites are completed (see sequence below). There may be a schedule conflict between your major required courses and Ithaca College courses, so check for conflicts in advance and plan accordingly. Careful planning of course schedules is required to complete both the minor and major, and students are responsible for all logistical arrangements. Travel between campuses is possible by the city bus or by carpooling with other students.

<table>
<thead>
<tr>
<th>FRESHMAN</th>
<th>Introductory biology courses (Cornell)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOPHOMORE</td>
<td>NS 3410 Human Anatomy and Physiology (S, 4 cr) (Cornell)</td>
</tr>
<tr>
<td></td>
<td>NS 3420 Human Anatomy and Physiology Laboratory (S, 2 cr) (Cornell; also counts as advanced NS elective or HBHS selective)</td>
</tr>
<tr>
<td>JUNIOR / SENIOR</td>
<td>Kinesiology (F/S, 4 cr) (Ithaca College)</td>
</tr>
<tr>
<td></td>
<td>Exercise Physiology (F/S, 4 cr) (Ithaca College)</td>
</tr>
<tr>
<td></td>
<td>Biomechanical principles of Human Movement* (Ithaca College) (F/S, 3 cr; prerequisite: Kinesiology)</td>
</tr>
<tr>
<td></td>
<td>* Advanced Biomechanics also available (S, 3 cr; prerequisites: Kinesiology and Physics)</td>
</tr>
</tbody>
</table>
Application, Pre-registration, & Registration

Application

Indicate the intent to participate by submitting an Applied Exercise Science Minor Intent form to Terry Mingle (tpm2@cornell.edu, B21 Savage Hall). After this form is submitted, Terry keeps track of the student's progress and will inform both Ithaca College and the student’s Cornell College Registrar upon completion. Ithaca College will then send a paper letter to the student’s home address listed in the system confirming the completion of the minor, and the student’s Cornell College Registrar will add the minor to their transcript.

Pre-Registration

1. **Each semester during pre-registration, request from Terry Mingle** (tpm2) the course(s) you wish to take at Ithaca College the following semester. This is so that DNS can negotiate the desired number of spaces, which will be assigned based on availability/program seniority.

2. **Have the required prerequisites** to register for a course. Ithaca College is very strict about prerequisites, and you must indicate how you have met prerequisites on the form you file at pre-registration.

Please note that **spaces are limited**; not all requests can be met. Because of high demand for places in the Ithaca College courses for this minor, the Division will NOT request a place in additional courses for any student who has earned a grade of less than C in an Applied Exercise Science minor course.

Registration

1. **After being approved by Nutritional Sciences to enroll**, pick up an IC-CU Exchange petition from the CU School of Continuing Education Office (B20 Day Hall). Complete the petition, secure all required for approval signatures (faculty advisor and CALS or CHE Registrar, as appropriate), and return the signed form to the CU School of Continuing Education Office.

2. **Present the approved petition to the continuing education office at Ithaca College during the first week of classes, before attending the first class** (G72 Peggy Ryan Williams Center).

3. Pick up registration/add-drop forms and take the registration form to the first class meeting.

**IMPORTANT NOTE:** It is the student’s responsibility to find out when classes start at Ithaca College—sometimes before Cornell classes begin—and to accommodate their schedule to fit with Ithaca College and Cornell fall/spring breaks. You are required to be there during these times, unless you personally make other arrangements with the Ithaca College course instructors.

Grades, Transcripts, and Transfer Credits

The minor in applied exercise science is possible through a long-standing exchange agreement between Ithaca College and Cornell through which students may take up to 12 credits at Ithaca College (and vice versa) without additional cost during the school year. Within this agreement, Ithaca College courses:

1. …count toward 120 Cornell graduation credits as elective credits, but **only if a grade of “C” or above has been achieved**. However, **CALS** students who start but do not finish the minor must petition to count the credits.

2. …count toward the 12 needed in a semester for full-time status and good academic standing.

3. …do **not** appear on the Cornell transcript and are **not** included in the Cornell GPA. Students must obtain separate transcripts from Ithaca College to reflect courses completed at this college.

4. …are only free to Cornell students up to 12 credits. Students must pay for any credits taken at Ithaca College beyond 12, and **may not take a course at Ithaca College under the exchange program if that course is offered at Cornell**.

5. …count toward the 60 credits that external transfer students need to take at Cornell to earn a Cornell degree.
The APPLIED EXERCISE SCIENCE Minor

Student Intent Form

As soon as you decide to complete the Applied Exercise Science Minor, please complete this form and hand in to Terry Mingle in the Academic Affairs Office (B21 Savage Hall). If at any time you decide not to complete the requirements, please be sure to notify the Academic Affairs Office. Thank you!

Indicate if you have completed the prerequisites listed below (YES or NO, plus Semester and Year completed). If you have not completed them, please supply an anticipated completion date.

NS 3410 (Human Physiology and Anatomy) ____________________________________________
NS 3420 (Human Physiology and Anatomy Laboratory) ________________________________

Student ID Number: __________________________ netID: ________ Date: ________________
Name: __________________________________________________________________________
Current (Campus) Address: _________________________________________________________
________________________________________________________________________
College: ___________________________ Major: ______________________________________
Expected Graduation: (circle one) fall / spring 20 _____ Phone #: _______________________
Indicate any minor fields or pre-professional paths (e.g. dietetics): __________________________
________________________________________________________________________
Faculty Advisor’s Name: _________________________________________________________

FOR OFFICE USE ONLY:

<table>
<thead>
<tr>
<th>COURSE</th>
<th>SEMESTER COMPLETED</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise Physiology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinesiology/Applied Anatomy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biomechanics of Human Movement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Verified Completion @ Ithaca College __________________________________________

Notes:
The NUTRITION AND HEALTH Minor
Available to all non-DNS Cornell undergraduates

DNS offers an undergraduate minor in Nutrition and Health that available to all Cornell undergraduates in all Colleges and majors (except undergraduates in DNS—i.e. NS, HBHS, or GPHS majors—and Biology majors who have a Human Nutrition concentration). The Nutrition and Health minor provides students with basic knowledge about global and public health as well as the necessary skills and experience to begin to build their own unique career path in global and public health. For more information about the Nutrition and Health minor, contact Dr. Julia Felice (julia.felice@cornell.edu // B17 Savage Hall) or see the Nutrition and Health minor page (http://www.human.cornell.edu/DNS/academic/minor-in-nutrition.cfm).

Requirements for the Nutrition and Health minor

The Minor in Nutrition and Health will consist of NS 1150 Nutrition, Health, and Society AND 9 credits of didactic NS courses from the list below. Students must choose the 9 cr. of NS courses from the list. Courses must be completed as letter grade. Please note that NO substitutions for NS 1150 will be accepted, and NO Special Studies (NS 4000, 4010, 4020, 4030, or 4990) or transfer credit courses may be used.

Global Perspectives on Human Health
- NS 3060 Nutrition and Global Health (odd F, 3 cr)
- NS 4450 Toward a Sustainable Global Food System: Food Policy for Developing Countries (F, 3 cr)
- NS 4480 // AEM 4485 Economics of Food and Malnutrition (S, 3 cr)
- NS 4570 // ECON 4740 Health, Poverty, and Inequality: A Global Perspective (even F, 3 cr)

Public Health and Nutrition
- NS 4500 Public Health Nutrition (S, 3 cr)
- NS 3600 Epidemiology (F, 3 cr)

Food Quality and Food Service Management
- NS 2470 Food for Contemporary Living (F/S, 2 cr)
- NS 3450 // FDSC 2000 Introduction to Physicochemical and Biological Aspects of Foods (F, 3 cr)

Human Health and Nutrition
- NS 1220 Nutrition and the Life Cycle (S, 3 cr)
- NS 2750 // ANTHR 2750 Human Biology and Evolution (F, 3 cr)
- NS 3030 Nutrition, Health and Vegetarian Diets (S, 3 cr)
- NS 3150 // PSYCH 3150 Obesity and the Regulation of Body Weight (even S, 3 cr)
- NS 3220 Maternal and Child Nutrition (odd S, 3 cr; enrollment restricted – priority to Dietetics students)
- NS 3410 Human Anatomy and Physiology (Lecture) (S, 4 cr)
- NS 4410 Nutrition and Disease (F, 4 cr)
- NS 4420 Implementation of Nutrition Care (F, 3 cr; enrollment restricted – priority to Dietetics students)

Nutritional Biochemistry
- NS 3200 Introduction to Human Biochemistry (F, 4 cr)
- NS 3310 Human Nutrition and Nutrient Metabolism (S, 4 cr)
- NS 3320 Methods in Nutritional Sciences (F, 3 cr; enrollment restricted – priority to NS majors and Dietetics students)
- NS 4310 Mineral Nutrition and Chronic Disease (F, 3 cr)

Psychological and Social Influences on Human Nutrition
- NS 2450 Social Science Perspectives on Food and Nutrition (F, 3 cr)
- NS 4250 Nutrition Communications and Counseling (S, 3 cr; enrollment restricted – priority to Dietetics students)
Registration in and Completion of the Minor

Students will be personally responsible for planning their minor program of study in conjunction with their advisor in their major.

To graduate with a minor in Nutrition and Health, a student must submit the following materials to the DNS Academic Affairs Office, B21 Savage, as soon as the student decides to complete the minor.

When you have completed all of your courses and submitted all forms, the DNS Academic Affairs Office will then review your transcript (accessible online; students do not need to provide a copy), and (if complete) will notify the Registrar’s Office that the requirements for the minor have been completed. The College Registrar then adds the Minor to your transcript (but it will not appear on your diploma). If there are any problems regarding completion, we will contact you. If you do not see the minor on your transcript within a month after you have completed it, please contact your College Registrar’s Office to inquire.
The NUTRITION AND HEALTH Minor
Student Intent Form

As soon as you decide to complete the Nutrition and Health Minor, please complete this form and hand in the TOP portion to Terry Mingle in the Academic Affairs Office (B21 Savage Hall). If at any time you decide not to complete the minor, please be sure to notify the Academic Affairs Office. Thank you!

Student ID Number: __________________________   netID: ________   Date: __________________

Name: ___________________________________________________________________________

Current (Campus) Address: __________________________________________________________
__________________________________________________________________________

College: ___________________________    Major: ________________________________

Expected Graduation: (circle one) fall / spring 20 _____   Faculty Advisor: ______________________

Phone #: _____________________________   Indicate any minor fields or pre-professional paths (e.g. pre-health): ______________________________________________

Faculty Advisor’s Name: _____________________________________________________________

NUTRITION & HEALTH MINOR Courses Taken / Grades Received

Please submit the BOTTOM section of this form to B21 Savage when you are in your last semester at Cornell.

STUDENTS – PLEASE FILL IN THIS TABLE WITH COURSES THAT YOU’VE TAKEN (OR ARE ENROLLED IN):

<table>
<thead>
<tr>
<th>COURSE</th>
<th>SEMESTER COMPLETED/ENROLLED</th>
<th>*GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>REQUIRED COURSE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NS 1150</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADDITIONAL COURSES (9 credits, at or above the 2000-level. This may include NS 1220)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

• Note: If you are finishing up a course during the LAST semester of your Senior year just fill in the course information, and we will check for the completion and grade at the end of the semester. We will report all minor completions to your college registrar’s office at the end of the semester after grades are final. They should appear on your transcript within a month or so after completion.

FOR OFFICE USE ONLY:

Date Application to Graduate submitted: __________________________
Human Nutrition is one of many concentrations available to Biological Sciences majors at Cornell. All of the courses required for the Human Nutrition concentration are offered through DNS. For more information about Biology concentrations and their requirements, see the Biological Sciences Major Requirements page: https://biology.cornell.edu/academics/major.

Nutritional sciences draws upon several disciplines, including biology, to understand the relationships between food, nutrients, and human health. The concentration in Human Nutrition offers Biological Sciences majors courses related to the nature and biochemical function of essential and non-essential nutrients, nutrient requirements, the role of nutrients in gene expression, and the role of diet in both risk of chronic disease and treatment of existing disease states. Students completing the concentration in Human Nutrition most often choose to continue their education in medical or graduate school, and pursue careers in the applied aspects of nutrition or in laboratory-based or epidemiological research.

Students in this concentration are encouraged to complete a diverse set of advanced courses that afford a perspective on current knowledge of nutrient requirements and function and how this knowledge can be put to use. With the exception of one core course in the structure and function of nutrients, the requirements of the Human Nutrition concentration are left unspecified. Faculty advisors work with individual students to develop a curriculum that fits the students’ interests. As part of their program, students are encouraged to obtain laboratory experience either through coursework or research. Faculty in Nutritional Sciences are engaged in a wide variety of research activities, including nutritional regulation of gene expression, nutrient function, and regulation of nutritional status, employing diverse approaches such as cell culture, animal experimentation, and human metabolism.

Learning Outcomes for the Biological Sciences Concentration in Human Nutrition:

1. Demonstrate core knowledge of metabolism and function of the essential nutrients
2. Demonstrate breadth in biological aspects of nutrition beyond the core

Requirements for Concentration in Human Nutrition

Biology majors who wish to complete the Human Nutrition concentration must take NS 3310 Human Nutrition and Nutrient Metabolism (S, 4 cr) AND at least 9 additional credits of coursework ONLY from the following list:

- NS 2750 Human Biology and Evolution (S, 3 cr)
- NS 3030 Nutrition, Health and Vegetarian Diets (S, 3 cr)
- NS 3060 Nutrition and Global Health (even S, 3 cr)
- NS 3150 Obesity and the Regulation of Body Weight (S, 3 cr)
- NS 3220 Maternal and Child Nutrition (odd S, 3 cr; enrollment restricted – priority to Dietetics students)
- NS 3320 Methods in Nutritional Sciences (F, 3 cr; enrollment restricted – priority to NS majors and Dietetics students)
- NS 3410 Human Anatomy and Physiology (S, 4 cr)
- NS 3420 Human Anatomy and Physiology Lab (S, 4 cr)
- NS 3450 Introduction to Physiochemical and Biological Aspects of Foods (F, 3 cr)
- NS 4310 Mineral Nutrition and Chronic Disease (F, 3 cr)
- NS 4410 Nutrition and Disease (F, 4 cr)
- NS 6110 Molecular Toxicology (S, 3 cr)
- NS 6140 Topics in Maternal and Child Nutrition (F, 3 cr)
- NS 6310 Micronutrients: Function, Homeostasis and Assessment (F, 2-4 cr)
- NS 6320 Regulation of Macronutrient Metabolism (S, 4 cr)
- NS 6310 Micronutrients: Function, Homeostasis and Assessment (F, 2-4 cr)

IMPORTANT NOTES:

1. For students in the College of Agriculture and Life Sciences, credits in NS courses count towards the required 55 CALS credits. For students in the College of Arts and Sciences, NS credits count towards the 100 hours required in A&S if those credits fulfill major requirements.
2. Independent study credits may not be used toward the 13 credit minimum.
The DNS HONORS PROGRAM
Available to all NS, HBHS, and GPHS majors

What is the Honors Program?

The Honors Program in the Division of Nutritional Sciences is designed to challenge research-oriented NS, HBHS, and GPHS majors. This structured research experience involves:

- a course in research, NS 3980
- the conduct of a research project, in which a student has major role and intellectual engagement in the whole research process
- the completion of a written thesis that reports the research
- an oral presentation of the project at the DNS 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.

Program Description and 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. As part of the honors research program, students must meet the following 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. **Acceptance 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 for May graduates.

3. **Completion of 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, the necessary library research (usually completed during the junior year), the carrying out of the research and analysis itself, and the preparation of the thesis. The student may complete more than 6 credits of NS 4990 as desired, but must complete at least 6.

4. **Complete an honors thesis & present at the 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 (> 25 pages) within the limited time available to students carrying full academic loads. Please note that a student’s “major role” in this process means considerable effort in the execution of the project plus intellectual engagement in all stages of a project (conception, planning, execution, interpretation, and reporting).

   Because of this high level involvement, an honors project is typically designed early in the junior year, and conducted in the spring junior term and fall senior term (for May graduates). Students may also 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 (called a “Reader”) 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 (around week 13 of the semester).

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 (> 3.2).

6. **Meet all program requirements and deadlines.** To graduate with honors, the student must meet all program requirements and deadlines as set by the director of the honors program (see Deadlines below). **Students are responsible for meeting deadlines, and missing deadlines without prior approval is grounds for being dropped from the honors program.** Students who do not meet all honors program requirements may still receive academic credit for research work under NS 4990 if recommended by the student’s faculty mentor.

***Waivers of ANY of these items, especially deadlines, can only be approved by written request to the director of the honors program, Dr. Felice.***

**How to 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 honors program director. Application to the program typically occurs in February of the junior year, and a student’s work with their honors thesis mentor typically begins at least 1 semester prior to that point.

Application to the program includes three components: 1) the application form, 2) the faculty advisor agreement form, and 3) a project description with timeline (see Honors Thesis Components below).

Acceptance into the honors research program occurs when the student: 1) is accepted into a faculty member’s research program, 2) submits an application (including a description of their proposed research proposal abstract) and an advisor approval form, and 3) is approved by the director of the honors research program.

**Late Applications**

In some cases, students may be admitted into the DNS honors program after the application deadline has passed. However, students should be aware that late applications to the DNS honors program will be subject to a more stringent review. Namely, late applicants and their faculty mentors will have to
demonstrate the student’s readiness to complete an honors thesis on a shorter timeline. As a result, late applicants must submit—along with their other application materials—two additional items:

1. **A detailed project description and timeline.** Students should submit a detailed description of their completed work on their honors thesis research to date, including whether any statistical analyses have been planned or completed. Students should also provide a detailed, descriptive timeline for how they will “catch up” to the honors program deadlines.

2. **A detailed letter of support from their faculty mentor.** This letter should illustrate whether and how the student’s work with that faculty mentor to date supports their ability to complete an honors thesis on time. For example, a faculty mentor should describe the length and nature of their student’s work, the relevant knowledge and skills their student has acquired in that work, and their assessment of their student’s personal ability—e.g., their work ethic or level of independence—to complete an honors thesis on time.

Late applications will only be accepted if they include both of these components in addition to other application materials.

### Description of Thesis Components

The completion of an honors thesis requires the submission of multiple components, which are due throughout a student’s last three semesters at Cornell. Each of these components and important administrative notes for submitting them are described below.

- **Proposal abstract.** To be turned in along with honors program application and advisor approval form. 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. The abstract should be no more than one page single spaced maximum, and the timetable should go on a second page. The document is not considered binding; mentor and student may agree to change to a task requiring a similar degree of effort and intellectual input.

- **Program application.** A form turned in with the project abstract and advisor agreement form that outlines the basic application information: student information, proposed thesis mentor and title, etc.

- **Advisor agreement.** A form turned in with the application and project abstract that describes the duties related to faculty mentorship, and allows faculty members to affirm their understanding of these duties and their support of the proposed honors student.

- **Progress report.** A document that clearly outlines the student’s progress made, tasks left, and a brief schedule. Any changes that were made to the project since the proposal abstract was submitted must be documented at this time.

- **Literature review chapter(s) and a 1-paragraph abstract.** The literature review and abstract should relate to the entire thesis in its current form. Thesis reader will be identified based on the abstract. 1 paper copy.

- **Full thesis draft.** To be turned over to a thesis reader for review and comments. Turn in 1 digital copy as email attachment and 1 complete paper copy in Dr. Felice’s mailbox.

- **Final thesis with all corrections/revisions.** Turn in 1 digital copy as email attachment and 1 complete paper copy in Dr. Felice’s mailbox.

- **Honors research symposium.** Students must give a PowerPoint presentation of their honors thesis research (~30 minutes) and must attend the presentations of at least three other honors students.
**Important Formatting Guidelines for Honors Program Documents**

****Students are responsible for knowing and following formatting guidelines. Documents turned in without any of these guidelines—e.g., without the correct file name format—will not be counted as on time!****

- All documents must be in either .docx or .pdf format, single-spaced, have page numbers, and be labeled with the correct file name format (see table below).
- All components must be turned in with one signed paper copy to Dr. Felice’s mailbox in Savage Hall and one digital copy to her email (julia.felice@cornell.edu). Electronic signatures may be accepted, but a paper copy is still required.
- Components turned in on time but without faculty mentors’ approval will not be accepted.

**Naming honors thesis files for submission: sample student “Ezra Tompkins” graduating in Spring 2018**

<table>
<thead>
<tr>
<th>Component</th>
<th>File name format</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposal abstract</td>
<td>Lastname Abstract gradsemester</td>
<td>Tompkins Abstract S18</td>
</tr>
<tr>
<td>Progress report</td>
<td>Lastname ProgRep gradsemester</td>
<td>Tompkins ProgRep S18</td>
</tr>
<tr>
<td>1-paragraph abstract and literature review</td>
<td>Lastname LitRev gradsemester</td>
<td>Tompkins LitRev S18</td>
</tr>
<tr>
<td>Full thesis draft</td>
<td>Lastname Draft gradsemester</td>
<td>Tompkins Draft S18</td>
</tr>
<tr>
<td>Final thesis</td>
<td>Lastname Final Thesis gradsemester</td>
<td>Tompkins Final Thesis S18</td>
</tr>
</tbody>
</table>
### Deadlines

- General deadlines for honors students graduating between Spring 2017—Fall 2019 are listed below, where each column represents the due dates for students planning to graduate in the semester listed at the top of the column.
- Late applications do not change these deadlines: late admits to the honors program are expected to meet all deadlines that arise after their admittance.
- Submit materials to Dr. Felice (julia.felice@cornell.edu) using the requested filename (see Description of Thesis Components). If you do not receive an acknowledgement of receipt, the file was not received, will be considered late, and will be grounds for being dropped from the Honors Program.

<table>
<thead>
<tr>
<th>Component</th>
<th>General Deadline</th>
<th>Expected semester of graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall 2017</td>
<td>Spring 2018</td>
</tr>
<tr>
<td>Application, Advisor approval form, and Proposal abstract</td>
<td>3 semesters pre-grad, Friday of Week 3</td>
<td>Friday, 9/9/2016</td>
</tr>
<tr>
<td>Progress report</td>
<td>2 semesters pre-grad, Wednesday of Week 4</td>
<td>Wednesday, 2/15/2017</td>
</tr>
<tr>
<td>Literature review chapter, 1-paragraph Abstract</td>
<td>Final term, Friday of Week 3</td>
<td>Friday, 9/8/2017</td>
</tr>
<tr>
<td>Full thesis draft</td>
<td>Final term, Thursday of Week 8</td>
<td>Thursday, 10/12/2017</td>
</tr>
<tr>
<td>Readers return thesis with comments</td>
<td>Final term, Friday of Week 10</td>
<td>Friday, 10/27/2017</td>
</tr>
<tr>
<td>Symposium presentation</td>
<td>Last week of class or early study period</td>
<td>Monday, 12/11/2017</td>
</tr>
</tbody>
</table>
2017 Honors Research Projects

“Effects of Self-Weighing on Responses to Health Questionnaires.” Nana Entsiwa Adenu-Mensah. (Mentor: David Levitsky)

“Association of childhood parental control over feeding practices with chocolate eating behavior in college-aged females.” Cody Goldsmith. (Mentor: Jeff Sobal)

“The determinants and effects of uracil misincorporation in DNA.” Jabez Gondokusumo. (Mentors: Patrick Stover, Martha Field)

“Anthropometry and Dengue Fever in Coastal Ecuador.” Julia Tedesco. (Mentor: Julia Finkelstein)

“Characterization of the alpha-tocopherylquinone-omega-hydroxylase activity of CYP4F2 and human liver microsomes.” Sloan Lynch. (Mentor: Bob Parker)

“Vitamin B12 Deficiency-Induced Peripheral Neuropathy in a Mouse Model of Perturbed Folate Metabolism.” Danny Zheng. (Mentors: Patrick Stover, Martha Field)

“Factors Associated with Pica Behavior During Pregnancy and Postpartum Among a Cohort of Women in Western Kenya.” Joshua Miller. (Mentor: Sera Young)

“Characterization of vascular smooth muscle cell contractile phenotypes in response to wall shear stress in the pharyngeal arch arteries.” Jessica Ryvlin. (Mentor: Jonathan Butcher)

2016 Honors Research Projects


“Lamin malformation disrupts nuclear de novo thymidylate synthesis and leads to uracil accumulation in nuclear DNA.” Phil Brown. (Mentor: Patrick Stover)

“The Impact of a Weight Loss Intervention on Health-Related Quality of Life in Overweight and Obese Women with Irregular Menses.” Hayden Haun Chung. (Mentor: Marla Lujan)

“Negative Priming Effect of Weighing on Food Intake.” Rachel Corona. (Mentor: David Levitsky)

“The effects of folate deficiency, arsenic trioxide, and serine hydroxymethyltransferase (SHMT1) on de novo thymidylate synthesis.” Aislyn DiRisio. (Mentor: Dr. Patrick J. Stover)

“Influence of Caffeine on Cognition and Cholinergic-Induced Cognitive Deficits.” Annie Erickson. (Mentor: Eve de Rosa)

“Comparison of Accelerometer Data Reduction Algorithms in Women of Reproductive Age.” Dana Larsen. (Mentor: Marla Lujan)

“Tissue Transglutaminase Interacts with the Major Focal Adhesion Protein Paxillin.” Yilun Ma. (Mentor: Richard A. Cerione)

“Identifying Factors that Influence a Child's Food Choice.” Nina Quirk. (Mentor: Jamie Dollahite)
“Cadherin-11 overexpression induces extracellular matrix remodeling and calcification in mature aortic valves.” Derek Sung. (Mentor: Jonathan Butcher)

“Maternal Characteristics Affecting Preschool-Aged Children’s Diets.” Madeline Tchack. (Mentor: Carol Devine)

“Investigating the efficacy of caloric restriction to attenuate inflammatory cell activity and cancer proliferation in a metastatic mouse model.” Camille Wang. (Mentor: Nozomi Nishimura)

“Self-Weighing can Block Priming Effects of Food Advertising and Control Caloric Intake.” Christine Wang. (Mentor: David Levitsky)

“Vitamin D₃, 25-dihydroxyvitamin D₃, and 1,25-dihydroxyvitamin D3 Increase CYP24A1 mRNA Expression in Human Placental Extravillous Trophoblast Cells, but Their Action is Modified by Hypoxia.” Madeleine Wood. (Mentor: Patsy Brannon)
The DNS HONORS PROGRAM

Program Application

Please return to Dr. Julia Felice—along with DNS Honors Program Application and project abstract—via email (julia.felice@cornell.edu), in her mailbox in Savage Hall, or in person in B17 Savage. Applications are due in February of the junior year. See the The DNS Honors Program information in the DNS Survival Guide or contact Dr. Felice for more information.

Student ID Number: __________________________ netID: ________ Date: _________________

Name: ___________________________________________________________________________

Current (Campus) Address: __________________________________________________________________________

College: ___________________________ Major: _______________________________________

Expected Graduation: (circle one) fall / spring 20 _____ Faculty Advisor: ___________________________

GPA: overall _____ major _____ Indicate any minor fields or pre-professional paths (e.g. pre-

health): __________________________________________________________________________

Faculty Advisor’s Name: __________________________________________________________________________

When did you complete NS 3980? (Term, Year) ______________________________________________

Description of Honors Project (briefly describe indicate general topic, proposed question of interest, and study design):

Tentative Thesis Title:

Honors Thesis Advisor: _____________________________________________________________

Honors Thesis Advisor Department: ___________________________________________

Campus Address: ____________________________________________________________

Phone: _________________________ Email: __________________________________

I approve this DNS Honors Program application.

Honors Thesis Advisor signature: ___________________________ Date: __________

73
The DNS HONORS PROGRAM
Faculty Advisor Agreement Form

***To be filled out by honors thesis advisor***

Please return to Dr. Julia Felice—along with DNS Honors Program Application and project abstract—via email (julia.felice@cornell.edu), in her mailbox in Savage Hall, or in person in B17 Savage. If you have any questions, please contact Dr. Felice.

As an HONORS THESIS ADVISOR, I agree to:
(Please review the following information carefully and initial each item)

- Review, provide feedback, and sign my honors student’s proposal abstract (February of Junior year)
- Review, provide feedback, and sign my honors student’s progress report (September of Senior year)
- Review, provide feedback, and sign my honors student’s abstract and literature review (February of Senior year)
- Review, provide feedback, and sign my honors student’s thesis that will be submitted for review (March of Senior year)
- Serve as a reader for 1 to 2 other Honors theses
- Assist my honors student in responding to reader’s required revisions for the final honors thesis

Please initial the following statements:

- I have read the DNS Honors Program Requirement and I agree to serve as supervisor for this student’s honors project.
- I believe that my honors student has enough data to write a 20-30 page honors thesis.
- I am aware that any Honors student may be removed from the program at any time, if the Honors Program Director deems that inadequate work has been submitted, or if deadlines are not met.
- On the lines below my signature I have listed the name of at least one appropriate thesis reviewer.

Name of Honors Program Applicant: _________________________________________________

Name of Honors Thesis Advisor: ____________________________________________________

Thesis Advisor Signature: __________________________________________ Date: __________

***Name two DNS faculty members who could review the thesis of this Honors student:***

______________________________________________  ________________________________
UNDERGRADUATE RESEARCH
Available to all NS, HBHS, and GPHS majors

Participating in research as an undergraduate has many benefits, even if research is not part of a student's long-term career goals. Research projects provide important practical experience in the scientific process, from conceptualization of research questions and study design to implementation and even publication. Research experience is recommended or required for many educational and professional opportunities, and may yield helpful recommendations or professional connections.

Ways to Participate in Undergraduate Research

A variety of opportunities exist for undergraduates in DNS to become involved in research at Cornell. These opportunities fall under four general categories.

1. **NS 4010 Empirical Research**: Students first identify the kind of research they are interested in pursuing and then contact faculty members with relevant types of research to see whether and how they may become involved in a project (see below). The student and faculty member then discuss the details of and outline the agreement for the content of the student’s research work. Once an agreement is reached, the **student must submit a form online** to enroll in NS 4010 credits: https://students.human.cornell.edu/student/.

   **IMPORTANT NOTES**:
   - Students may register for a **maximum** of 4 credits of NS 4010 per semester.
   - Before NS 4010 can be taken for a letter grade, it **must first be taken as S/U for at least 2 credits**. After the course has been successfully completed for at least 2 credits S/U, the student may then request to take the course for a letter grade if they choose. They may also take it again as S/U.
   - CALS students also register for NS 4010 through the CHE petition page at the link above.

2. **NS 4990 Honors Program**: Students with very strong academic records are invited to apply to the DNS Honors Program in February of their junior year (or three semesters before their expected graduation date). This structured research experience is for students who are highly interested in research and willing to commit substantial time and intellectual energy to a project that will span multiple semesters. Students must apply to the DNS Honors Program with a confirmed faculty advisor and a proposed Honors research project, so they typically have **already completed 1-2 semesters of research in the same lab by the time they apply** (e.g. as NS 4010 credits). For more information, also see The DNS Honors Program.

3. **Research in other departments**: Undergraduates in DNS may participate in research in other departments, both within and outside their College, and they typically register for research credit through that department (i.e., their equivalent of NS 4010). This experience comes with many of the same benefits as participating in research within DNS, and also helps to diversify a student’s content knowledge and expertise.

   **IMPORTANT NOTES**: Students considering participating in research in other departments or Colleges should discuss this option carefully with their DNS faculty advisor, because:
   - Research credits outside DNS cannot be used for advanced NS elective credits (relevant only to Nutritional Science majors).
   - Research outside a student’s College cannot be used for College elective credits.
   - Research that is unrelated to human health and/or nutrition may affect a student’s eligibility for the DNS Honors Program. For more information, contact Dr. Julia Felice (julia.felice@cornell.edu).

4. **Student Employment**: A few opportunities may exist for students to assist with a research project as an employee during the academic year and/or summer. The number and nature of the opportunities vary. To identify such opportunities, students contact faculty members directly.
Exploring Research Opportunities

Identifying potential faculty research advisors

Identifying potential faculty research advisors may include searching for faculty members that use the type of research methods you wish to learn about (e.g., social science methods or lab methods) or investigate the problem you wish to investigate (e.g., infant nutrition or lipid metabolism). The extent to which a faculty member can involve students in his/her research program will vary according to the size and scope of various projects, the faculty member's other commitments, and the skills/abilities of individual students.

To identify potential faculty research advisors within DNS, it is most helpful to find out about the types of research being conducted in DNS. DNS faculty members' websites describe their current research interests and activities, and these websites can be accessed on this page: http://www.human.cornell.edu/dns/academic/facultyconcen.cfm Academic faculty advisors can also help students identify appropriate DNS faculty members to contact.

To identify potential faculty research advisors in other departments, speak with your faculty advisor, the instructors of courses that interest you, and students in other majors. In addition, explore the faculty pages of department web sites and contact department offices for lists of faculty research areas.

Suggestions for contacting potential faculty research advisors

BEFORE meeting with a faculty member:
- **Speak** to faculty members at least a semester before you would like to start research.
- **Make an appointment** to see a faculty member by speaking with their administrative assistant, signing up for office hours, or sending an email.
- **Prepare** an updated copy of your resume and coursework.
- **Look** at any necessary forms (e.g., https://students.human.cornell.edu/student/) and **think** about how much weekly time you have in the coming semester(s) to devote to research.

DURING a meeting with a faculty member:
- **Ask** the faculty member about their current/future research projects and their expectations for undergraduates who work with them in research.
- Be prepared to **discuss** why you are interested in research and working within their research group, how much time per semester and/or how many semesters you wish to be involved in research, and previous work and research-related experiences.
- **Remember** that all faculty members were undergraduates at some time, and many of them arranged their first research experience through this process. Faculty members like to talk about their research!

Assistance with Statistics

One of the many things that students learn when they are involved in research is how to apply the knowledge acquired in statistics classes to real data. The Cornell Statistical Consulting Unit (CSCU) is here to help you with this. Students involved in research projects are encouraged to seek assistance from CSCU for the design of experiments and surveys, the write-up of the statistical method section of proposals, the planning and implementation of statistical analyses, the interpretation of output and, the write-up of the results for reports or publications. Help is available by appointment or during specified walk-in hours; see the CSCU web site at http://www.cscu.cornell.edu/ for more information.
SUPERVISED FIELDWORK
in FOOD, NUTRITION, and HEALTH
Available to all NS, HBHS, and GPHS majors

Structured learning experiences in the real world (i.e., the “field”) help students link theory to practice. Students also learn about communication, team work, setting goals, client needs, and the social, economic and political forces that influence professionals who work in the food, nutrition and health fields. Students can earn credit for a planned field experience through NS 4020 Supervised Fieldwork. This fieldwork is “supervised” in that the student registers for this credit through a DNS faculty member, who evaluates the student’s work.

Examples of Potential Supervised Fieldwork Experiences

Students may conduct supervised fieldwork in a variety of topic areas settings. For example:

- **Nutrition and fitness**: Advanced nutrition students serve as nutrition counselors to student athletes and members of local fitness clubs.
- **Community nutrition**: Students work with local Cooperative Extension professionals and others in developing and pilot testing educational programs for adults and children.
- **Nutrition and business**: Students intern with a local software firm to learn about developing and testing food composition data bases, dietary assessment instruments, and food management programs for use by the health care industry.
- **Nutrition and health care**: Students examine how nutritionists and other health care practitioners treat and counsel patients with different conditions and the many factors that influence how these professionals conduct their work.
- **The Urban Semester Program**: Based in New York City, this summer program is another excellent opportunity to gain field experience. Although the program is based in the College of Human Ecology, all undergraduate students that have completed their freshman year are eligible to apply. More information is available on the Urban Semester website: http://www.human.cornell.edu/academics/urban-semester/

Participating in Fieldwork through for NS 4020

Participating in fieldwork for credit through NS 4020 requires several components:

1. **Planning**: Students must **plan fieldwork with a DNS faculty member in advance**, with explicit goals, planned activities, and expected outcomes determined **before** the student registers for NS 4020 credits.

2. **Registration**: Students must register for NS 4020 online on this page: https://students.human.cornell.edu/student/. On this form, the student will have to describe the content of their fieldwork as agreed upon with their DNS faculty supervisor.

**IMPORTANT NOTES**:
- Students may register for a **maximum** of 4 credits of NS 4020 per semester.
- Before NS 4020 can be taken for a letter grade, the course must be first be taken as S/U for at least 2 credits. After the course has been successfully completed for at least 2 credits S/U, the student may then request to take the course for a letter grade if they choose. They may also take it again as S/U.
- CALS students also register for NS 4010 through the CHE petition page at the link above.
3. **Communication and Evaluation:** A student's fieldwork experience must involve ongoing **communication** with their DNS faculty supervisor via regular conferences in person or by phone or email. The fieldwork experience also must include a **reflective component** (e.g. an analysis of a journal or systematic record of the experience) to allow the student to consider their feelings, attitudes, and understandings as well as the applications of classroom learning to practice. The student’s work also must be **evaluated** by the faculty supervisor.

**IMPORTANT NOTES:**
- The basis on which a student’s **grade** will be determined must be agreed upon in advance with the faculty supervisor (e.g. by evaluating journals, papers, oral presentations, input from field supervisors, and/or other materials developed as part of the experience).
- The number of **credits** also must be determined in advance. For 1 academic credit, the student should be working in the placement or on materials relevant to the placement an average of 3-4 hours per week for 14 weeks. This time is in addition to that spent with the faculty member.
STUDY ABROAD, EXCHANGE, and URBAN SEMESTER
Available to all NS, HBHS, and GPHS majors

Undergraduates in NS, HBHS, and GPHS majors may take a semester off campus to supplement their academic experiences through the Study Abroad and Urban Semester program. Undergraduates in CHE may also take a semester off campus through the Exchange Program. Usually, the semester is devoted to studying in elective areas or gaining field experience related to their career goals.

DNS students have studied in Italy, Australia, England, Israel, Spain, Denmark, and the Semester at Sea. Through the Urban Semester Program, students have learned about multicultural issues in New York City and gained experience in geriatric long term care facilities, surgical intensive care units, pediatric medical practice, and community nutrition programs. Students who have taken advantage of these programs report that they have wonderful experiences in many different ways, and return to campus with new understandings about themselves, their career goals, the global environment, and the social, cultural, economic, and political forces affecting people’s lives in the real world.

Planning Ahead for Study Abroad or Urban Semester

Most NS, HBHS, and GPHS majors have interests and career goals that involve complex sets of sequenced courses, and some students have multiple goals. Fitting in a semester off-campus requires early planning, including developing a plan for completing required courses in the right order and on time. To fit everything in, students may need to double up on some courses earlier than other students or take one or more courses during summer or winter terms. Some students choose to postpone plans to attend medical school, dietetic internships, or graduate programs. Extracurricular commitments, the need to work during the summer or academic year, and personal situations may also impact a student’s planning for a semester off campus.

Students who wish to spend a semester off-campus should start the planning process as early as possible—no later than the fall of the sophomore year. This planning process must include:

1) meeting with the student’s faculty advisor to discuss academic goals
2) developing a plan to complete graduation requirements on time
3) seeking out relevant contacts and information related the program(s) of interest (see below)

Which courses or requirements can be fulfilled during a semester off campus?

In general, it is not recommended for students to complete required courses in chemistry, biology or nutrition when they are off-campus. Students do, however, complete courses for college distribution requirements. GPHS major may use these opportunities toward the major’s “experiential learning” requirement, if approved in advance.

Junior year is usually the time that NS, HBHS, and GPHS majors spend off campus. However, this is also the year in which biochemistry is taken by most/all DNS students and in which NS 3310 Nutrient Metabolism is taken by NS majors. Students who take a semester off campus during their junior year can take biochemistry in the alternate semester—however, for CHE students, the only biochemistry option that offers CHE credit is NS 3200 (a fall semester only course). Students may also postpone NS 3310 until the spring of their senior year.

Important Notes for Students Planning Study Abroad or Urban Semester

For All Students

Students are responsible for understanding all the graduation requirements for his/her program and all the procedures related to his/her academic and career goals, including the procedures for the Study Abroad,
Exchange, or Urban Semester Programs. Cornell abounds in resources to help, but students are responsible for pulling together information from many sources, including your faculty advisor, the DNS Academic Affairs Office, either CHE or CALS Student Services, and the Urban Semester, Cornell Abroad, and/or the CHE Exchange Programs.

Remember that questions are always welcome! There are people to speak with, printed materials to study, and many sources of information on the web. Be sure to find out the application deadlines for the program(s) of interest. **Program application deadlines may be two semesters students enter the program.**

For the **Study Abroad Program**, contact the University office and your College’s Study Abroad advisor:
- **Cornell Abroad**: 474 Uris Hall // [http://www.cuabroad.cornell.edu/](http://www.cuabroad.cornell.edu/)
- **CHE Study Abroad advisor**: Paul Fisher, 170 MVR Hall // psf1@cornell.edu
- **CALS Study Abroad advisor**: Julia Franke, 278 Morrison Hall // jef298@cornell.edu

For **Urban Semester**:
- **Website**: [http://www.human.cornell.edu/academics/urban-semester/index.cfm](http://www.human.cornell.edu/academics/urban-semester/index.cfm)
- **Program Director**: Sam Beck // (212) 746-1846 // sb43@cornell.edu

For the **CHE Exchange Program**:
- **Program Director**: Dr. Pauline Morin, MVR 183, pmm24@cornell.edu

**For Honors Students**

Students who wish to participate in the Honors Program should note that DNS Honors Program students are expected to participate in required seminar (NS 3980), and are normally expected to begin planning their research in the fall of their junior year and begin implementing it in the spring of their junior year. DNS Honors Program students who plan to study off campus in the junior year must receive special permission to make up required work. Contact Dr. Julia Felice (julia.felice@gmail.com) for more information.

**For Pre-Health Students**

Pre-health students must consider carefully their timeline for applying to and attending medical school. Students apply to medical school more than a year before they plan to matriculate. For example, those who wish to attend medical schools immediately after graduating from Cornell begin the application process in the junior year. Therefore, students who plan to be off-campus in your junior year must plan when to complete the core pre-health requirements, when to take the MCAT, and how to participate in the Cornell’s Health Careers Evaluation Committee’s centralized services for obtaining letters of reference.

Fall term of the junior year is a common time for our students to spend a term abroad or in The Urban Semester Program. However, a fall junior term off-campus requires that you have completed the requirements for two terms of organic chemistry and two terms of physics prior to your junior year. Spring term is usually a less desirable time to be off-campus because this is the term in which pre-health students participate in the interviews for the Health Careers Evaluation Committee.

**For Dietetics Students**

Dietetics students must pay close attention to the sequence of and prerequisites for required Dietetics courses, including NS 2470, 4250, 4410, 4420, 4500, 4880. Fall term of the junior year is a good time to study off-campus because students can take NS 3310 Human Nutrition and Nutrient Metabolism, which is a prerequisite for NS 4410, Nutrition and Disease, taken in the fall of the senior year. However, this plan requires taking biochemistry in the spring of the sophomore year or in the summer before the junior year.
Among the many organizations, societies, and activities that are available to Cornell undergraduates are two organizations related to food, health, and nutrition. Many DNS undergraduates participate in these organizations as part of their academic and professional development, and also find great value in forming connections within and through these organizations as well as in the Ithaca community.

**HealthNutS**

“HealthNutS is Cornell’s undergraduate Health and Nutrition Society. Through volunteer work and educational programs, we bring health and nutrition awareness to the Cornell community and beyond to the greater Ithaca area.”

The Health and Nutrition Society (HealthNutS) is an undergraduate student organization with goals of promoting healthy eating practices in the Cornell and Ithaca communities and encouraging interaction among DNS students and faculty members. HealthNutS has a busy agenda, including nutrition education for day care programs, local elementary schools, and programs for residents of adult care homes, as well as faculty-student activities and food drives.

Find out more on the HealthNutS website: [http://blogs.cornell.edu/cornellhealthnuts/](http://blogs.cornell.edu/cornellhealthnuts/)

**CUDA**

“CUDA is a pre-professional organization for students in the Didactic Program in Dietetics (DPD) and students interested in pursuing a career in nutrition and dietetics. In addition to fostering professional development, this club provides volunteer opportunities, hosts guest speakers, and much more!”

Students interested in dietetics are encouraged to join and serve in leadership roles with the Cornell University Dietetics Association (CUDA). With goals similar to HealthNutS, CUDA opportunities are also geared towards professional development in dietetics. CUDA holds meetings and educational sessions throughout the year that feature RD speakers, guidance on gaining dietetics-related jobs and internships, and opportunities to network with RDs and dietetics students. CUDA also elects students to serve as liaisons to the local and national dietetics academies.

Find out more on the CUDA Facebook page: [https://www.facebook.com/CUDieteticsAssociation/](https://www.facebook.com/CUDieteticsAssociation/)
GENERAL CAREER EXPLORATION

Career Services Available at Cornell

Cornell offers career services at both the College and University level, and these services are available to students at every stage of career exploration and planning! Each office offers scheduled appointments and walk-in hours.

**College of Agriculture and Life Sciences** Career Development Office: 140 Roberts Hall // (607) 255-2257 // [http://cals.cornell.edu/academics/advising/career](http://cals.cornell.edu/academics/advising/career)


**University** Career Center: 103 Barnes Hall // (607) 255-5221 // [http://www.career.cornell.edu/](http://www.career.cornell.edu/)

Career Exploration Guides

Cornell publishes several annual guides to help undergraduate students explore and plan for their post-undergraduate educations and careers. Links to these guides are below, but the most recent guides may be found at the start of each academic year on this website: [http://www.career.cornell.edu/resources/additional-ccs-guides.cfm](http://www.career.cornell.edu/resources/additional-ccs-guides.cfm)

**Graduate and Professional School:**
[http://www.career.cornell.edu/resources/upload/Graduate-School-Guide-16-17.pdf](http://www.career.cornell.edu/resources/upload/Graduate-School-Guide-16-17.pdf)

**Guide for First- and Second-Year Pre-Med Students:**

**Guide for Advanced Pre-Medical Students:**

**Legal Careers:**

**Animal Health Professions:**
[http://www.career.cornell.edu/resources/upload/Pre-Vet-Guide-16-17.pdf](http://www.career.cornell.edu/resources/upload/Pre-Vet-Guide-16-17.pdf)

**Fellowships** (for study and academic/professional travel):
GRADUATE SCHOOL for DNS UNDERGRADUATES

After completing an undergraduate degree at Cornell, some students want to pursue a graduate degree. NS, HBHS, and GPHS majors often go to graduate school to acquire more specialized training in nutrition or health or to study in a new field. Some of the graduate degree programs that attract graduates in NS, HBHS, and GPHS include:

- Public Health
- Community Nutrition
- International Nutrition
- Biochemistry or Genomics
- Health Administration or Policy
- Food Science
- Education or Communications
- Exercise Science or Physiology
- Pharmacy or Toxicology

There are many types of graduate degrees—for example, some focus more on professional skills and courses, while others focusing more on research. In general, M.S. and Ph.D. programs have a strong emphasis on research and expect the graduate student to design, conduct, and report on a substantial research project.

Graduate study can be an exciting experience that allows you to focus full-time on particular areas of study and be surrounded by people in academic pursuits. In addition, a graduate degree generally enhances your career options. However, deciding to go to graduate school is a big decision. Graduate school is a major investment of your time and someone’s money. Most graduate programs expect students to be very self-directed, highly committed to their academic programs, and able to handle demands from courses as well as from pre-professional placements and/or research. Students are best prepared for graduate school if they have thought carefully about their readiness (academic, personal, and financial) and goals for going to graduate school.

What To Do Now to Prepare to Apply to Graduate School

JUNIOR YEAR

Explore: Starting early is the best way to explore the options that graduate school has to offer. Helpful information can be found in the annual Graduate and Professional School guide provided by Cornell Career Services, found on this page: http://www.career.cornell.edu/resources/upload/Graduate-School-Guide-16-17.pdf. Cornell abounds with many more sources of information about graduate schools, including printed resources as well as faculty members who have all been graduate students at one time and at many different universities. If you are having trouble defining your interests or the types of programs that might be appropriate, speak with your faculty advisor or college career development office. Once you have identified the field in which you would like to study, identify programs of possible interest and learn about admission requirements, degree options and curriculum, faculty interests, specialized facilities, and financial aid options. A director of graduate studies coordinates most programs, and it is important to know this person and his/her assistant.

Get Ready: Most programs require that applicants take the Graduate Record Examination (GRE) or another standardized test. The University Career Center has information about when these tests are given and how to register to take them. Be sure to take the test early enough for your scores to be sent to programs in time for their deadlines.

SENIOR YEAR

Start the Application Process
Some graduate schools have a rolling acceptance process, but many graduate schools have an application deadline, often January 1st for the students wishing to enter the following fall. In addition to standardized test scores, you will need to send undergraduate transcripts, a completed application form, and letters of recommendation.
Most applications require an essay or personal statement that has an important influence on how your application is evaluated. Admissions committees use the statement to judge your understanding of the field and degree program to which you are applying, whether your particular interests in the field are a good match for the program faculty and facilities, your writing skills, your motivation for applying to the program, and any particularly relevant qualifications you may have such as work experience or technical skills. Therefore, take the time to prepare a well-written and clear statement. Be as specific as you can about the aspects of the program that interest you including the faculty with whom you wish to work. Before writing the statement, do some background reading about faculty interests.

**Get Letters of Recommendation**

Letters of recommendation are a key component of an application. Many programs prefer letters from faculty members who can write about your potential for graduate study because they can evaluate your academic abilities and potential in research. Programs that emphasize professional practice may ask for some letters from employers or field placement supervisors. Recommenders will be asked to write about your motivation for graduate work, critical thinking and problem-solving skills, creativity and originality, and abilities to work under stress, independently, and with others. The following faculty members may be appropriate people to ask for letters:

- a faculty member who has supervised you in research or independent study
- a faculty member for whom you have worked as an employee
- your faculty advisor
- a faculty member who knows your work through a course

When asking for letters of recommendation, you must provide the appropriate forms, as well as any other information that the person needs such as a transcript, resume, or personal statement. Provide all the necessary envelopes and give the person the materials well before the deadline—a month ahead or more. In most cases, once a faculty member has prepared one letter, it is fairly easy for him/her to send additional letters to other schools.

**Schedule a Visit**

If you can, visit the programs that interest you before or after you apply. A personal visit usually will enhance your chances of acceptance and/or being offered financial aid. In general, faculty members are much more involved in the acceptance of graduate students than they are in the acceptance of undergraduate students. A personal visit allows you to meet with the director of graduate studies and/or the faculty in whose work you are interested. You will be able to describe your interests and qualifications as they relate to their interests and expectations. Bring a resume and be prepared to ask questions about the graduate program or the research topic as appropriate. Find out how competitive you will be as an applicant. Will you need to take additional courses? If you have not applied yet, are their particular types of information you should include in your application to be competitive?

A visit will also give you the chance to find out important information such as the number of students in the program, the average time to program completion, what program graduates do, how students are matched with advisors, and whether you will have access to faculty members with whom you wish to work. If possible, talk to students in the program and learn about their experiences.

**Financial Considerations**

Many graduate programs offer financial assistance to their students in the form of fellowships, teaching assistantships and research assistantships. Most of the time, financial aid for graduate students is handled differently than it is for undergraduate education. Financial aid at the graduate level is generally competitive and based on academic and experiential qualifications; financial need is usually less important. For many graduate programs, financial aid in the form of fellowships and assistantships is coordinated at the department or program level. Therefore, ask the director of graduate studies for the department or program or his/her assistant how to find out about all possible sources of assistance, how to apply, and the application deadlines. Find out about the selection criteria for different types of assistance. Prior experience in research or as a teaching assistant may be important. Also ask about the schedule for making financial aid decisions. For example, letters of acceptance and offers of financial aid for graduate students are usually made on a rolling basis.
WHAT DO DNS STUDENTS DO AFTER GRADUATION?

Immediately after graduation (**Percentages based on intentions of students as reported at graduation. Data for GPHS major will be available after 2018 since the major accepted the first class in Fall, 2014):
- 35-50% of HBHS and 10-20% of NS graduates intend to go to medical school within 1-2 years
- 40-60% NS graduates plan to complete dietetic internships
- 5-8% of NS graduates expect to pursue advanced study in exercise science or physical therapy.
- 10-20% of seniors intend to go to graduate programs in fields other than medicine or exercise science, including students earning graduate degrees while they complete dietetic internships
- Others enter the job market in areas as diverse as banking and the Peace Corps

Medicine and Dentistry (examples of placement; more than one graduate at some sites)
- SUNY Upstate Medical School
- SUNY Stony Brook Medical School
- New York University of Medicine
- University of Buffalo Medical School
- University of Buffalo School of Dental Medicine
- Albert Einstein College of Medicine
- Washington Medical School
- University of Cape Town Medical School
- University of Wisconsin Medical School
- Weill Cornell Medical College
- Dartmouth Medical School
- New Jersey Medical School
- University of Virginia Medical School
- University of Texas Medical School
- Drexel University College of Medicine
- St George’s University
- Loyola University
- Mount Sinai University
- The George Washington University of Medicine and Health Science
- Hong Kong
- Columbia University
- Emory University School of Medicine: Atlanta, GA
- University of Rochester
- Tufts University
- SUNY Downstate College of Medicine
- National Institute of Health Intramural Research
- University of Southern California
- University of The Pacific, School of Dentistry
- University of Pennsylvania School of Dental Medicine
- SUNY Stony Brook
- University of California at San Francisco School of Dentistry
- Georgetown University
- Harvard University
- Temple University
- Sackler School of Medicine
- Indiana University School of Medicine
- Loma Linda Medical School, California
- Ohio State University
- Kech School of Medicine
- Yale University
- University of Maryland School of Medicine
- Johns Hopkins School of Medicine
- Stony Brook Medical School
- Case Western Reserve
- FIU’s Herbert Wertheim College of Medicine in South Carolina
- University of Miami Medical School
- Touro College of Osteopathic Medicine in Manhattan
- University of Pittsburgh School of Medicine
- Quinnipiac School of Medicine
- Nova-Southeastern University Medical School in Fort Lauderdale
- New York Institute of Technology College of Osteopathic Medicine
- UMDNJ-Rowan SOM Medical School
- Virginia Tech Carilion School of Medicine

Physician’s Assistant (examples of placement)
- Army’s PA program
- Pace University, Lenox Hill Hospital in NYC

Nursing (examples of placement)
- Accelerated Nursing Program at the University of Pennsylvania
- Johns Hopkins University, School of Nursing

Pharmacology (examples of placement)
- Emory University, Ph.D. program in Pharmacology
- University of Maryland School of Pharmacy, Baltimore
Veterinary (examples of placement)

- University of Pennsylvania School of Veterinary Medicine

Dietetics (examples of dietetic internship placements; more than one graduate at some sites):

- Cornell University
- Clemson University
- North Shore Long Island Jewish Health Care System
- Baylor University Medical Center
- Brigham and Woman’s Hospital
- VA Bronx Medical Center
- Yavapai County Health Department
- Aramark Dietetic Internship
- Massachusetts General Hospital
- University of Buffalo
- SUNY Stony Brook
- New York Presbyterian Hospital
- University of Maryland Medical Center
- Syracuse University
- Cornell University
- Brook Army Military Hospital
- Pennsylvania State
- University of Wisconsin Hospital and Clinics
- Saint Francis Medical Center; Peoria, IL
- Meredith College; Raleigh, NC
- University of California; San Francisco
- Sodexo (in Metro NY and at St Johns Medical Hospital in Westlake, OH)
- National Institute of Health, Washington D.C.
- Purdue University
- Baptist Health System, San Antonio, Texas
- SUNY Buffalo
- Hunter College NYC
- IUPUI Indiana
- Vanderbilt University Medical Center
- Mount Auburn Hospital
- University of Virginia Health System
- Southern Illinois University-Carbondale
- California State University, Chico
- Henry Ford Hospital in Detroit
- UNC Chapel Hill
- University of Nevada Las Vegas

Physical Therapy and Exercise Science (examples of placements, more than one graduate at some sites):

- Auburn University, Auburn, GA (exercise science)
- Boston University, Boston, MA (physical therapy)
- Columbia University, New York, NY (exercise physiology, physical therapy)
- SUNY Stony Brook, NY (physical therapy)
- Syracuse University, Syracuse, NY (physical therapy)
- University of California at San Francisco, CA (physical therapy)
- University of Tennessee at Chattanooga, TN (athletic training)
- University of Texas, Austin, TX (exercise physiology)
- Washington University, St. Louis MO (physical therapy)
- NYU Steinhardt Doctor of Physical Therapy
- Colorado State University, Occupational Therapy
- Tuft University, Occupational Therapy
- University of Illinois, Chicago
- University of Delaware

Other Graduate and Professional Programs (examples of placements, more than one graduate at some sites):

- UNC Chapel Hill
- Boston University, Public Health
- Cornell University
- Colorado State University, Biomedical Sciences
- Columbia University, Human Nutrition Program
- Emory University
- SUNY Cortland
- St. George’s University
- University of Puerto Rico
- New York University, Steinhardt School of Education
- Oxford University
- University of Utah
- Columbia University Teachers College
- Sloan Program in Health Administration; Cornell University
- John Hopkins’s Cell and Molecular Medicine PhD Program
- Rutgers University
- University of South California Berkley
- University of Minnesota, law school
- New York University: optometry, clinical nutrition, and sports business
- University of Pennsylvania: nursing
- Reading Hospital School of Health Sciences: Nursing
- Texas Tech
- University of Pittsburgh: Nursing
- Natural Gourmet Institute’s Chef training program
- Johns Hopkins School of Public Health
- U.S. Military-Baylor Graduate Program in Nutrition
- Hunter College: public Health Nutrition
- University of Maryland: MS in animal science
- Columbia College of Physicians and Surgeons
- Brown University, MPH
- UNC’s Eschelman School of Pharmacy, Chapel Hill, NC
- Yale School of Epidemiology
- National Institute of Health
- Binghamton University
- American University Film MA program
Research

- Cornell Medical School
- New York University School of Medicine
- Manhattan Eye, Ear, and Throat Hospital
- National Institutes of Health
- North Shore University Hospital
- University of Maryland Medical center
- National Heart, Lung and Blood Institute; Washington DC
- Harvard Medical School Children's Hospital
- Boston Children’s Hospital
- Polish Academy of Sciences
- Rockefeller University
- MIT/Harvard’s Broad Institute
- WIC Program, NYC
- National Institute of Health
- Brown University Sleep and Chronobiology Research Lab
- Johns Hopkins Medical Institute in Pediatric Surgery
- Fulbright Research Scholarship
- Stanford School of Medicine

Employment (examples of placement immediately after graduation):

Amway Nutrilite
Lab Technician, sports medicine soft tissue research, Hospital for Special Surgery, New York, NY
Stockbroker, D.M.G. Securities, Clearwater, FL
Research Assistant, obesity research, University of Maryland Medical Center, Baltimore, MD
Home Health Aide, Classen Home Health Associates, Ithaca, NY
Clinical Research Associate, dermatology company, Parsippany, NJ
Assistant Football Coach, Cornell University, Ithaca, NY
Management Development Trainee, Nestle, USA
Management Trainee, Smith Barney, New York, NY
Management Trainee, Price Waterhouse, San Francisco, NY
Research Assistant, surgical intensive care unit, Cornell Medical Center/New York Hospital, New York, NY
Administrator, migrant clinic, Rochester, NY
Research Assistant, neurology, Massachusetts General Hospital
Equity Research Assistant, Suffolk Capital Management Inc., New York, NY
Assistant Embryologist with Reproductive Science Associates, Long Island, NY
Peace Corps
AmeriCorps in Boston and Brooklyn
Algomod Technologies, IT Recruiter
Medical Research at Harvard Medical School Beth Israel Deaconess Center in Boston
Women and Infant Care (WIC), Washington, DC
National Institute of Child Health and Development, NIH, Bethesda, MD, (research fellow and immunology)
Research Assistant, AIDS Cellular Immunology—Research on South African AIDS strain, Harvard Medical School and Massachusetts General Hospital, Boston, MA
Health Promotion Assistant, Gannett Clinic, Cornell University, Ithaca, NY
Project Manager, E-commerce Group, Capital One, Richmond, VA
Research Project Coordinator for Neonatal Sepsis—Study at Valley Children's Hospital, Madera, CA
Public Education and Advocacy, Tennessee Donor Services
Emergency Medical Technician, Philadelphia, PA
Christian Missionary
Health Clinic in rural Ecuador
Social, Environmental and Political Advocacy, MASSPIRG (non-profit org)
Research Assistant in Clinical Trials Unit, Johns Hopkins School of Medicine
Teach for America (Los Angeles and Rio Grande Valley)
Research Assistant, biochemical immune mechanisms, Einstein Medical School
Professional Hockey
Tuberculosis Research, Cornell Medical Center
Division of Rheumatology, Cornell Medical School for Special Surgery
High School Math Teacher
Research Assistant at National Institute of Health
Teach for America – New York City – Secondary School Science Teacher
University of Alberta, Department of Surgery (lab technician)
WIC
Montefiore’s Care Management Organization, Bronx, NY
Chicago Teaching Fellows
Hudson Global: account coordinator
Memorial Sloan-Kettering Cancer Center, NY: hospital administration
City Year Corps
Healthcare consulting in the Center for Aging and Disability Policy at the Lewin Group
The H.J. Heinz Company, Pittsburgh, PA
Midwives for Haiti
Baldor Foods Inc.
Hewlett-Packard
Office of the Global AIDS Coordinator, United States Department of State
KEY RESOURCES for ACADEMIC POLICIES

Among DNS students, major requirements do not differ by College—i.e., a CALS and a CHE student in Nutritional Sciences have the same major requirements. However, requirements between the two Colleges differ in several ways. These differences and their related resources are summarized in the table below, and most are also found within each College’s Graduation Requirements:

**CHE Graduation Requirements 2017-2018:**

**CALS Graduation Requirements 2017-2018:**

<table>
<thead>
<tr>
<th></th>
<th>CHE</th>
<th>CALS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Required College elective credits</strong></td>
<td>43 required. DNS requires 9 of these to be non-NS.</td>
<td>55 required. DNS requires 9 of these to be non-NS.</td>
</tr>
<tr>
<td><strong>Humanities and Social Science requirements</strong></td>
<td>9 credits required; two from a closed list of options, and a third with the attribute HA, LA, or CA.</td>
<td>12 credits required; must span 3 different categories, and at least 1 course with the attribute D.</td>
</tr>
<tr>
<td><strong>Freshman Writing Seminars</strong></td>
<td>Two (6 cr total) required, must be taken freshman year. Students may use one AP English score of 5 to fulfill one FWS (but will forfeit the AP credit if a second FWS is taken).</td>
<td>Students often—but do not have to—use two Freshman Writing Seminars to fulfill some of their communication requirement (9 cr, at least 6 of which must be written communication). Credits can be completed after freshman year.</td>
</tr>
<tr>
<td><strong>Grade option requirements</strong></td>
<td>CHE students must take any course used for a College or major requirement for a grade.</td>
<td>Although CALS students are allowed to take required courses S/U, DNS policy holds CALS students to the same standard as CHE students, and they also must take required courses for a grade.</td>
</tr>
<tr>
<td><strong>Using AP credits to fulfill requirements</strong></td>
<td>See this page for a description of AP credit policies in CHE: <a href="http://www.human.cornell.edu/registrar/upload/AP-Cheat-Sheet-Fa16-entering-freshmen-06-29-16-2.pdf">http://www.human.cornell.edu/registrar/upload/AP-Cheat-Sheet-Fa16-entering-freshmen-06-29-16-2.pdf</a></td>
<td>See this page for a complete table of whether and how AP credit fills CALS students’ requirements or impacts their credits: <a href="https://cals.cornell.edu/sites/cals.cornell.edu/files/shared/documents/academics/Advanced-Placement.pdf">https://cals.cornell.edu/sites/cals.cornell.edu/files/shared/documents/academics/Advanced-Placement.pdf</a></td>
</tr>
<tr>
<td><strong>Academic petitions</strong></td>
<td>CHE students submit petitions through CHE Student Pages, here: <a href="http://www.human.cornell.edu/registrar/forms-and-petitions.cfm">http://www.human.cornell.edu/registrar/forms-and-petitions.cfm</a></td>
<td>CALS students submit petitions through their Chatter under the “Forms and Tools” section. Students who wish to withdraw from a course after the Drop deadline must schedule an appointment with a CALS Student Services advisor at <a href="https://onlinesched.cals.cornell.edu">https://onlinesched.cals.cornell.edu</a>, 607-255-2257, or in person at 140 Roberts Hall.</td>
</tr>
<tr>
<td><strong>Double Majors</strong></td>
<td>CHE students may not have a second major.</td>
<td>CALS students may have a second major only if it is also in CALS.</td>
</tr>
</tbody>
</table>
SUBSTITUTING non-CORNELL COURSES for MAJOR/COLLEGE REQUIREMENTS

Why Take a Course at Another College or University?

Sometimes students want or need to take a course at another college or university during a summer or winter term to facilitate their progress toward their Cornell degrees. For example, students involved in athletics, students planning to study abroad, students who have entered the NS or HBHS majors late (i.e., as an internal or external transfer student), and students pursuing one or more pre-professional paths (e.g., pre-health or the Didactic Program in Dietetics) sometimes take summer or winter courses. Many courses are offered at Cornell, but studying at another college or university may be a valuable option after considering tuition charges, financial aid, housing arrangements, or the need to be at home or someplace else during the summer.

Choosing a Course to Take

Courses at 4-year and community colleges may be accepted for credit. Students who plan to take a course at another college or university should be sure to understand how the course will fit into their Cornell graduation plan. Students should meet with their faculty advisors to discuss college and major requirements as well as recommended course sequences in their program. Students are responsible for finding the college and the course(s) that meet their needs.

Students often find that it is wisest to choose an elective course or course that meets a college distribution requirement. Introductory courses in humanities, social sciences, and statistics are often good choices. Many universities do not have the specialized courses in nutrition, health, agriculture, policy, or human development and other subjects that are required for these majors.

Taking biology and chemistry courses away from Cornell is not generally recommended. However, some students in NS, HBHS, and GPHS must do this to keep up with important course sequences. Students must pay careful attention to evaluating potential courses in introductory biology, introductory chemistry, organic chemistry, biochemistry, or physiology. Detailed information about substitutions for these courses is summarized at the end of this information sheet.

***Before students petition to substitute a course, they must***:

1. Obtain a syllabus for the course they are proposing to substitute.
2. Compare the course description and syllabus to those of the analogous Cornell course or to the description of the relevant College distribution requirement.
3. Evaluate how the proposed substitute course generally fits in comparison with the Cornell equivalent—e.g., the level of the course, the presence of any prerequisites, and number of credit hours.

Important Notes for Pre-Health Students

It is generally recommended that pre-health students complete courses in introductory biology, introductory chemistry, organic chemistry, introductory physics, and other science courses at Cornell and during the regular academic year. Taking these courses at Cornell helps medical admissions committees evaluate your credentials, and many programs may not accept transfer credits (with the exception of students who were external transfers). However, pre-health students may have important reasons for taking summer courses at other colleges. For more information, see The Pre-Health Track as a DNS Undergraduate.
Petitioning for Approval for Courses at Other Colleges and Universities

The procedures for obtaining approval for substituting courses at another school toward Cornell degree vary according to the student’s College, as described below. (No approval is required for studying at Cornell in the winter or summer terms.)

The College of Human Ecology

The College of Human Ecology requires prior approval for courses taken away from Cornell via the “In Absentia Petition” on the CHE Registrar’s Forms and Petitions website: http://www.human.cornell.edu/registrar/forms-and-petitions.cfm

Complete the form, including 1) a description of the course from the college’s catalog or web pages and 2) a full syllabus (i.e., one that includes a list of topics taught at each lecture).

Other important notes include:

- Students should obtain approval before registering in a course at another school to be sure that the credit will be accepted by both the College and the major. Students should start early, as some summer courses fill up quickly and the approval process may take a few weeks.
- Students who are undecided about the course or college at which they will study should get all potential courses approved in advance. This will allow the student to decide which course to take, but will not commit the student to taking any course.
- All courses in biology, chemistry, or physics and courses used to meet major (vs. College distribution) requirements must be approved by the DNS Associate Director of Undergraduate Studies. See the information below for criteria for applying biology and chemistry course at other schools to your major. If you are unsure about which course meets your needs, speak with the Associate Director of Undergraduate Studies.
- The Human Ecology Registrar approves all courses that are taken to fulfill college distribution requirements, makes the final approval on all petitions.

After the course is completed, the student must send an official transcript to the Human Ecology Registrar.

The College of Agriculture and Life Sciences

The College of Agriculture and Life Sciences requires prior approval for courses taken away from Cornell via the “Pre-Approval Form for Non-Cornell Credit” form found in students’ DUST under the transfer equivalency link. The Pre-Approval Form will specify how many transfer credits will be accepted and which graduation requirements they will be applied to. Guidelines for using courses at other universities toward biology and chemistry courses at other schools to your major. If you are unsure about which course meets your needs, speak with the CALS Registrar’s Office if they are considering taking classes away from Cornell.

After the course is completed, the student must have the college send an official transcript to the Human Ecology Registrar.

Important Notes about Substituting Specific Courses

Introductory Chemistry

Substitute courses must be at least equivalent to CHEM 2070-2080. When selecting courses at other institutions, choose the introductory chemistry sequence approved for science majors, biology majors, or pre-med majors. Chemistry courses for non-science majors will not provide sufficient preparation for advanced courses at Cornell. Online course may not be accepted.
**Introductory Biology**

When selecting courses at other institutions, choose the introductory biology sequence approved for science majors, biology majors, or pre-health majors. Biology courses for non-science majors at other institutions may not provide adequate preparation for advanced courses at Cornell. A key issue in selecting biology courses at other institutions is that whereas all introductory sequences generally cover the same material, they cover the material in different order. Therefore, to get exposure to the breadth of introductory biology, it is often better to complete a two-course sequence at one place than try to match a term elsewhere with a term at Cornell. Online courses may not be accepted.

**Organic Chemistry**

Pre-med students who choose to take organic chemistry at another university (generally not recommended) should take the course for premed students. At least eight credits of organic chemistry lecture and lab equivalent to CHEM 3570-3580 and CHEM 2510 are required. Such courses are often called “Organic I and II”, and the lecture and lab may be combined in the same course. Students who are not pre-med may take a one-semester course equivalent to CHEM 1570 and CHEM 2510. Some students choose only to take the lecture elsewhere and take the lab course at Cornell. Online courses may not be accepted.

**Biochemistry**

Students who need to take biochemistry at another university must be sure that the course is equivalent to the courses required at Cornell. The course must have organic chemistry as a prerequisite, cover all three required topical areas (i.e., proteins, metabolism, and molecular biology) and involve 4 semester credit hours. The course must be equivalent to NS 3200 (4 cr), BIOMG 3300 (4 cr), BIOMG 3350 (4 cr), or (BIOBM 3310 and 3320 (5 cr)). The best sources of suitable courses are medical schools and the biology and chemistry departments in four-year colleges and universities. Online courses may not be accepted.

**Physiology**

Physiology courses at other colleges must have a full year of introductory chemistry and biology as prerequisites in order for these courses to substitute for NS 3410 or BIOAP 3110. Many colleges offer two-semester anatomy and physiology courses that do not have these prerequisites. These courses are usually taught at the level of introductory biology and will not be satisfactory to meet the physiology requirement for NS and HBHS majors. Medical schools and biology departments in four-year colleges will be the best places to find the types of courses needed to substitute for NS 3410 or BIOAP 3110. Online courses may not be accepted.
CHANGING/ADDING a MAJOR or MINOR

It is common for a student’s interests to evolve after they begin taking classes at Cornell. The process of exploring a new area of interest can be exciting—but also overwhelming if it also means a change in academic track. This page summarizes the options and procedures available to students in this situation.

Changing a Major

- If students DON’T KNOW what major they want to change to:
  - Visit Career Exploration resources available at Cornell. They can help you discover the major that best suits your interests.
  - Investigate admissions requirements for Colleges and majors of potential interest. When you find a major that interests you, visit the contact person listed below. Talk about career possibilities and your progress toward completion of major requirements in relation to the time you have left at Cornell.
  - Consider taking some classes in the major first. Once they decide to enter the major, these courses would count toward requirements.

- If students KNOW what major they want to change to:
  - Students who are switching colleges within Cornell (e.g. from CALS to CHE or vice versa, from another college into CALS or CHE) must first review the internal transfer eligibility requirements and procedures for their college of choice, found on this page: http://internaltransfer.cornell.edu/application-requirements/colleges-and-schools/
  - Students wishing to switch into GPHS (CHE or CALS) should contact Terry Mingle (tpm2@cornell.edu) to obtain and fill out a request form. Terry will send it to Jeanne Moseley, who reviews it and meets with the student to authorize or deny the switch. Once authorized, students should follow the procedure for their college described below.
  - Students switching into a CALS major within DNS (NS-CALS or GPHS-CALS): Meet with Dr. Julia Felice (julia.felice@cornell.edu) as soon as possible to review transcripts and major requirements and to obtain authorization to switch into the major. If authorized, Dr. Felice will notify Terry Mingle (tpm2@cornell.edu), who will assign a new DNS faculty advisor.
  - Students switching into a CHE major within DNS (NS-CHE, HBHS, or GPHS-CHE):
    - Meet with Dr. Julia Felice (julia.felice@cornell.edu) as soon as possible to review transcripts and major requirements and to obtain authorization to switch into the major.
    - Students who have been authorized to switch majors and are already in CHE must fill out the CHE Change of Major form, found on this page: http://www.human.cornell.edu/registrar/upload/Change-of-Major-Form-2017.pdf
    - Students who have been authorized to switch majors but are not yet in CHE must first be accepted into CHE. At that point, authorized students may declare their major of choice in CHE.
  - Students switching to a major outside of DNS must talk to that department for policies and procedures.

Declaring or Dropping a Second Major

- Students in CHE may not have a second major.
- Students in CALS may have a second major only if both majors are in CALS. Students should contact the department of interest to discuss requirements and identify a second faculty advisor. Students must complete the requirements set forth by both departments in order to graduate with a double major. It is the student’s responsibility to keep both faculty advisors informed. It is the student’s responsibility to obtain signatures from each faculty advisor on the Application to Graduate.
Declaring a Minor

Minors are controlled, tracked, and audited by the academic department or unit in which they are offered.

- DNS undergraduates (NS, HBHS, and GPHS majors) may pursue a within-DNS minor in Global Health or Applied Exercise Science.
- DNS undergraduates also may pursue any one of 70 approved minors offered by Cornell, which can be viewed on this page under the “Undergraduate Minors” tab: http://www.cornell.edu/academics/fields.cfm
  - For both CALS and CHE students, it is not necessary to file paperwork with their home College to add a minor.
  - For CHE students, information completion of requirements must be reported by the unit sponsoring the minor to the CHE Registrar for it to be noted on the transcript.
  - For CALS students, when filing Part II of the Application to Graduate, it is the student’s responsibility to identify the minor and to obtain signatures from all major and minor advisors. Minors are added to the record just prior to degree completion and will appear on the final transcript post-graduation.
SCHEDULING for TRANSFER STUDENTS

DNS welcomes transfer students into the NS (CHE and CALS) and HBHS (CHE only) majors. However, as a result of course sequencing in the GPHS major beginning in the freshman year, it is not possible at this time to transfer into the GPHS major. Transfer students are assigned a faculty advisor during orientation, and are welcome to direct questions to Dr. Julia Felice (julia.felice@cornell.edu) before that point.

Transfer students come from diverse backgrounds and have a wide range of goals for their time during and after Cornell, so there is no common or recommended first-term schedule for transfer students, even within the same major. Each transfer student must develop a schedule that:

- builds on previous academic experiences,
- allows adjustment to Cornell's learning environment,
- enables the exploration of new academic options, and
- keeps the student on track to meet college and major graduation requirements.

IMPORTANT NOTES:
1. Students can transfer in a maximum of 60 credits to Cornell. Students with more than 60 credits must choose which to transfer so as to best work toward their degree at Cornell.
2. Transfer students must complete 60 credits at Cornell.
3. CHE transfers must complete 43 credits in CHE, and CALS transfers must complete 55 credits in CALS. Transfer students may use courses from past schools toward CHE and CALS credits if these courses are approved as substitutes by the CHE and CALS registrars.

Designing the First Cornell Semester and Beyond

Arranging an academic schedule that works for the individual student is very important. Below is a list of important things for transfer students to consider when making their schedules:

1. **Which major (i.e., NS-CHE, NS-CALS, or HBHS) interests you? What special career interests (e.g., pre-health, dietetics) do you have?** Review relevant sections in the Survival Guide, starting with Choosing a Major in DNS, and including pages describing available minor fields, pre-professional paths, and opportunities for DNS undergraduates. Most questions can and will be answered during the DNS Orientation.

2. **How do the courses you have already taken meet your Cornell requirements?** In general, The College Registrar and/or the DNS Associate Director of Undergraduate Studies (Dr. Felice) determine whether and how previous courses meet major and College requirements. The equivalency of some transfer credits to Cornell requirements may not be determined until the first semester at Cornell begins (students can request this record can be revised as their most recent grades are returned). However, it is still possible to determine an appropriate list of first semester courses ahead of time by 1) reviewing NS or HBHS major requirements, 2) identifying which previous courses may be adequate substitutes for major requirements, 3) obtaining full syllabi for these courses, and 4) contacting Dr. Felice (julia.felice@cornell.edu).

3. **How much of the required biology and chemistry sequences have you completed?** This is a key starting point in planning your schedule. Both the NS and HBHS majors require two semesters of introductory biology, an introductory biology lab, and two semesters of introductory inorganic chemistry. These courses are prerequisites for many of the other courses required in these majors. Students should review the section on Substituting Courses from Other Schools in this Survival Guide, the Cornell Courses of Study, and their transcripts, make a list of their specific questions, and contact the College Registrar (CHE or CALS).

4. **(For NS majors and students interested in dietetics) Where are you in terms of any nutritional sciences courses that may be required for your major?** Which NS courses must you still take or are you unsure about? Transfer students should be sure that you understand the required sequences of
NS courses, and students interested in dietetics should review the section in this Survival Guide on The Didactic Program in Dietetics.

5. **What other courses are you interested in taking?** Students should make a list of the courses that they would like to take, and use the Class Roster (classes.cornell.edu), which lists the courses actively available in the following two semesters, to find the descriptions and times and terms that these courses are offered to be sure how they may fit.

6. **What other courses must you take to fulfill your intended major, career preparation, or college graduation requirements?** Most transfer students have already taken introductory courses in the social sciences, written communications, and humanities, and many have also taken quantitative and analytical course(s) at your previous college(s). However, transfer students should be sure to review the complete requirements for a student in their major and College within this Survival Guide. The CHE and CALS Registrars also have summary sheets describing College requirements.

7. **Make a tentative schedule for the first Cornell term and plans for the upcoming terms, and review it with Dr. Felice or the assigned faculty advisor.** Most new Cornell transfer students should aim for 13-15 in their first semester, particularly if they are taking an advanced science course such as biochemistry or organic chemistry. Most new students should avoid taking two advanced science courses in the first term. Thinking ahead and developing tentative schedules for the remaining semesters at Cornell is strongly recommended. This strategy helps students to assess whether their plans are realistic and to identify any important conflicts in course scheduling. Proposed schedules should be reviewed regularly with faculty advisors, and revised over time as students' needs and interests evolve.

### Important Information for Pre-Health Transfer Students

According to the Health Career Evaluation Committee (HCEC) at Cornell HCEC:

"Transfer students with less than 30 letter-graded credit hours in Cornell courses should register at the usual time and submit transcript(s) from other institution(s) to the HCEC. [The HCEC will obtain a copy of your Cornell transcript.] However, an interviewer will be assigned only after thirty credit hours at Cornell have been completed and all non-Cornell transcripts have been received. For juniors who have completed two semesters with less than 30 credits, the options include: 1) taking a Cornell course during the 3-week summer session in late May - June, 2) getting a letter from your previous institution, or 3) waiting until your senior year to register with the HCEC and apply to medical school. Interviews for transfer students are typically conducted during the late spring, in Ithaca, at the convenience of the interviewer. Transfer students may contact the HCEC via email to determine eligibility and deadlines."

Transfer students planning to pursue the pre-health track at Cornell should see a pre-health advisor to discuss:

1. the pros and cons of using Cornell's HCEC or of using the committee at your previous institution
2. suitable sources of letters of recommendation and supplementary letters
3. issues to consider in deciding the optimum time to apply
4. procedures for postponing your interview when you have completed your semester credit hours
5. proceeding with an HCEC Letter without an HCEC interview

A list of Cornell pre-health advisors may be found on this page:
http://www.career.cornell.edu/paths/health/advisors.cfm
Student Record Privacy Statement
Annual Notification Under FERPA

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. Further details may be found in Cornell Policy 4.5 Access to Student Information. These rights include those listed below. For more information, visit: http://courses.cornell.edu/content.php?catoid=28&navoid=7247

1. The right to inspect and review the student’s education records within 45 days of the day the university receives a request for access.

Students should submit to the office of the university registrar, written requests that identify the record(s) they wish to inspect. The university official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the university official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to consent to disclosures of personally identifiable information contained in the student’s education records, except to the extent that FERPA authorizes disclosure without consent:

- Disclosure to school officials with legitimate educational interests. A school official is a person employed by the university in an administrative, supervisory, academic (including emeritus faculty), research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the university has contracted (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks. A school official has a legitimate educational interest if the official needs to review an education record to fulfill his or her professional responsibility.
- Upon request, to officials of another school in which a student seeks or intends to enroll.
- To parents or legal guardians of dependent students as that term is defined in the Internal Revenue Code. In general, the university does not make education records available to the parents of a student. However, where the university believes that it is in a dependent student's best interest, information from the student's education records may, at the university's discretion, be released to the parents or legal guardians of such a dependent student. Such disclosure generally will be limited to information about a student's official status at the university, but parents or legal guardians of a dependent student may also be notified upon the authorization of the dean of the student's college, or the Vice President for Student and Academic Services, or the Dean of Students, or their designees in the following cases:
  o when a student has voluntarily withdrawn from the university or has been required by the university to withdraw;
  o when a student has been placed on academic warning;
  o when the student’s academic good standing or promotion is at issue;
  o when a student engages in alcohol-or-drug-related behavior that violates Cornell policies;
  o when a student has been placed on disciplinary probation or restriction.
  o in exceptional cases when a student otherwise engages in behavior calling into question the appropriateness of the student's continued enrollment in the university.
- Disclosure of directory information. Cornell University has defined directory information to include the following: name, photograph, major field of study and college attended, dates of attendance, enrollment status, participation in officially recognized activities and sports, weight and height (of members of athletic teams), and any degrees earned and awards received. Directory information may be released unless the student updates his/her privacy settings (under personal information) on Student Center. Students who wish to suppress their directory information from the electronic directory must perform this update within 10 days of the date of official university registration. Students may rescind their no-release request at any time by writing to the Office of the University Registrar or on Student Center.

3. The right to request the amendment of the student’s education record that the student believes is inaccurate.

Students may ask the office of the university registrar to amend a record that they believe is inaccurate. They should write the university official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate.
If the university decides not to amend the record as requested by the student, the university will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Cornell University to comply with the requirements of FERPA. The name and address of the office that administers FERPA is:

   Family Policy Compliance Office  
   U.S. Department of Education  
   400 Maryland Avenue, SW  
   Washington, DC 20202-5901

Unless otherwise indicated in writing by the student at the time of registration, or thereafter, the university will presume that a full-time undergraduate student is a dependent as that term is defined in the Internal Revenue Code. Undergraduate students who are not financially dependent and do not wish to permit their parents or legal guardian access to their education records should advise the Office of the University Registrar in writing and provide evidence of financial independence. Graduate and professional students are not assumed to be financially dependent upon their parents or legal guardian for these purposes.
Cornell is an equal opportunity, affirmative action employer/educator.