

Department of Food Science and Human Nutrition

Fall 2003 Undergraduate Student Handbook

Dietetics

Food Industry & Business

Food Science

Hospitality Management

Human Nutrition

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INTRODUCTION

A. Organization of the Department

The Department of Food Science and Human Nutrition has achieved an outstanding record of eminence in education, research, and outreach, as reflected in the achievements of its faculty and students both past and present. Many of our faculty are noted for their contributions in various areas of food science, human nutrition, dietetics, and hospitality management, and have held high office in national and international professional organizations. Many have won awards for their teaching and research activities. A substantial portion of our research budget comes from federal and state agencies; this money is usually obtained on a competitive merit basis. The Department has a significant commitment to international activities, particularly in the area of food technology. The Department is recognized nationally and internationally as one of the best of its kind, and this ranking is based primarily on the quality of our undergraduate and graduate programs and research output. This recognition enables our graduates to obtain top positions in academia, industry, and government service.

The Department is housed in six separate buildings: Agricultural Bioprocess Laboratory (ABL), Agricultural Engineering Sciences Building (AESB), Animal Sciences Laboratory (ASL), Bevier Hall (BH), National Soybean Research Center (NSRC) and the Edward R. Madigan Laboratory (ERML). The office of the Department Head is located in 260 Bevier Hall.

The diversity inherent in the fields of food science and human nutrition and also in our faculty and students is deliberately maintained in our programs. The quality of our programs is achieved and maintained in three ways: (1) admission standards, where applicants are judged on previous academic performance, career goals, and professional potential; (2) faculty and staff, who are recruited for well-recognized excellence in their fields, high standards of teaching and research, and dedication to service; and (3) structure of the curriculum which, as outlined later, provides for flexibility within a strong framework of basic courses.

Information about the Department of Food Science and Human Nutrition is available on the World Wide Web. The address is <http://www.fshn.uiuc.edu>.

B. Programs

The Department of Food Science and Human Nutrition offers programs leading to B.S., M.S., and Ph.D. degrees in Food Science and Human Nutrition. In addition, a graduate program is also offered leading to M.S. and Ph.D. degrees in Nutritional Sciences under an interdepartmental Division of Nutritional Sciences. This Handbook is concerned only with undergraduate programs in Food Science and Human Nutrition. The information contained in this handbook is for general guidance on matters of interest to faculty, staff and students in the Department of Food Science and Human Nutrition at the University of Illinois at Urbana-Champaign. The handbook summarizes campus/university policies as a convenient reference tool. However, information on campus and university policies contained herein is for informational purposes only and is subject to change without notice. For the most current information, please see the official campus/university versions of these policies as posted on official web sites. These can be accessed through the Campus Policies and Procedures home page at the following url: http://www.uiuc.edu/admin_manuals.html

C. Sources of Guidance and Information

In order to be admitted to the University of Illinois, academic credentials must indicate a strong likelihood of academic success on this campus. Strong entering credentials, however, do not ensure success. The adjustments to college and campus life are by no means easy. Adapting to new environments, new freedoms, and new demands without the security of family and old friends can sometimes be uncomfortable and demanding.

Many students select their academic majors before enrolling, while others enroll without well-defined educational and career goals. This lack of direction is not a serious handicap at the beginning of a college career, but it can become a serious problem if you do not attempt to establish goals in line with your capabilities and interests soon

after your initial enrollment. ACES 100 is an orientation course offered to all freshmen each fall and is designed to acquaint you with the University and to facilitate the exploration of the College of Agricultural, Consumer and Environmental Sciences, both as a field of study and for career opportunities. It is also designed to acquaint you with key issues facing agriculture today. Additionally, all freshmen are required to enroll in one ACES core course each semester to further the exploration process.

Your academic advisor will be assigned to you based on your curriculum choice, matching your career interests with the professional interests of the advisor. You should become acquainted with your advisor as soon as possible, since he or she can be a valuable source of help. The advisor helps you select courses each semester and is your contact for assistance in solving University-related problems. In addition to your faculty advisor, the following individuals and offices are available to help you:

The Associate Dean and Assistant Deans of the College and their staff are responsible for administering student programs and for keeping records. The Office of Academic Programs is the principal center for information about College and University regulations, grade requirements, credits to be earned, honors, employment opportunities, and many other facts concerning your educational progress. You should feel free to ask this office (104 Mumford Hall, 333-3380) for help in obtaining information and solving problems.

The instructor is a specialist in his or her own field and is well acquainted with the subject matter and its related employment opportunities. In addition to providing classroom instruction, the instructor is also available to help you solve problems and find new opportunities. Instructors generally have office hours when they are available for student appointments. The schedules for each semester are generally announced during the first class, and are included in the course syllabus.

The Student Counseling Service (206 Fred H. Turner Student Services Building, 333-3704, and 337 McKinley Health Center, 333-8360) administers and interprets tests concerning your abilities, interests, and personality. Professional help with study habits, reading skills, and personal problems is also available.

The Office of the Dean of Students (300 Fred H. Turner Student Services Building, 333-0050), the **Housing Division** (200 Clark Hall, 333-0610), **Office of Student Financial Aid** (fourth floor, Fred H. Turner Student Services Building, 333-0100), and the **McKinley Health Center** housing the student health service (1109 S. Lincoln Ave., 333-2701) are ready to help students with personal problems outside the area of formal education.

Students should obtain a copy of the latest edition of *Code on Campus Affairs and Regulations Applying to All Students*, which provides complete information concerning conditions governing attendance at the University. Copies are available at the Office of Admissions and Records and the Information Center at the Illini Union.

D. Computation of Grade-Point Average

The student's cumulative grade point average is based on all courses attempted for which Grade-Point Average credit is granted toward graduation, excluding grades of credit/no credit, and S/U (satisfactory/unsatisfactory). Grades of F or absent (AB) are included, even when the student repeats the course. When a course is repeated, both the original and subsequent grades are included in the average. This computation method is used to determine honors, probation and drop status, financial aid and awards, and qualifications for graduation, except as noted in the Minimum Scholarship Requirements for a Degree information (see below).

E. Credit Restrictions

The following list of credit restrictions applies when calculating the total credit-hours which can be used toward an Agricultural, Consumer and Environmental Sciences (ACES) degree:

1. Zero credit toward graduation is allowed for MATH 102, 103, 104, 111, 112; only two hours of credit will be allowed for MATH 116.
2. No more than ten hours of credit in courses offered by campus religious foundations may be counted toward a degree.

3. No more than four hours of credit in music ensemble courses, including band, may be used toward a degree.
4. No more than 12 hours of credit in individual studies and seminar courses (295, 296, 298, and 399) may be counted toward graduation. International experience and internship courses are not included in this restriction. Courses offered experimentally (must be identified as such) under the 199-course rubric are excluded from this 12-hour restriction.
5. No more than three hours of basic activities courses in kinesiology (physical education) may be used toward a degree. Current one-credit-hour basic courses are KINES 100 through 110 and KINES 199. There is no limit on the number of hours of professional courses that can be applied toward graduation.
6. No more than 12 hours of credit earned in LAS 110 may be applied toward graduation.
7. ACES will use campus-wide cutoff scores (see Undergraduate Programs Bulletin for scores) to recognize Advanced Placement (AP) test credit.
8. ACES courses used to fulfill non-ACES requirements cannot be counted toward the minimum number of ACES hours required.

F. Minimum Scholastic Requirements for a Degree

1. Candidates for a degree must have at least a 2.0 (C) average for all work done at the University of Illinois and at least a 2.0 average for combined transfer and University of Illinois work. Some curricula require a higher average.
2. A student who does not meet the above requirements may graduate if he or she has the minimum grade-point average calculated by either of the following methods:
 - a. Excluding the courses in which grades of D or F have been recorded, not to exceed a total of ten semester hours completed before the last 30 hours of work at the University of Illinois at Urbana-Champaign and counted for graduation requirements.
 - b. A grade-point average of no less than 2.1 for the last 60 semester hours of work counted for graduation requirements and completed at the University of Illinois at Urbana-Champaign.
3. A student who receives an E in a course required for graduation in their curriculum must repeat the course and obtain a grade of D or higher.

G. Course Selection and Registration

At approximately the midpoint of each semester you can select courses for the following semester. During this early registration period, you will meet with your academic advisor to discuss your remaining degree requirements and to schedule classes using the University of Illinois Direct Registration system. You will receive confirmation of your requested schedule two to three weeks before classes begin. Registration instructions are detailed in the University Timetable. An itemized assessment of tuition and fee charges is mailed to each student on the first day of classes.

The deadline for adding a semester-length course is the end of the second week of classes; the end of the eighth week is the deadline for dropping a semester-length course. A schedule and list of half-session courses can be seen in the Timetable. A course may be dropped because of illness or other circumstances which make it impossible to complete assigned work.

If you wish to take courses at other institutions and have the credits transferred to the University of Illinois, consult the Office of Academic Programs before enrolling to make sure that each course can be transferred and is also applicable to your program of study.

It is advisable to complete as many of the required 100-level courses as possible before the end of the second year. Many of the 100-level courses are prerequisites for other required courses, and some are the first in a sequence of as many as eight courses. You should check the Courses Catalog and/or Timetable for prerequisites of courses before planning a four-year schedule.

Freshmen enrolled in ACES are required to take at least one College of ACES subject matter course each semester (excluding ACES 100). These courses are listed under the following titles: Agricultural Communications, Agricultural and Consumer Economics, Agricultural Engineering, Agricultural Mechanization, Animal Sciences,

Crop Sciences, Food Science and Human Nutrition, Forestry, Horticulture, Human Development and Family Studies, Natural Resources and Environmental Sciences, Plant Pathology, and Soils. Entomology 120 is also included. Freshmen should take between 14 and 17 hours during the first semester. It is recommended that during each semester of study you continue to choose the types and varieties of courses that make a balanced program. The suggested four-year sequence of required courses is a guide to the order in which courses may be taken.

H. General Education Requirements

To appropriately balance specialized education with general education aims, the UIUC adopted a revised set of General Education requirements in 1989. The eight categories included in these requirements are noted below. Newly approved courses are added each semester; therefore, it is advisable to refer to the website listing of General Education courses prior to your selection. www.provost.uiuc.edu/gened/

Summary of Minimum Requirements in Programs of Study

In all Food Science and Human Nutrition options, the minimum requirements are as follows:

1. ACES 100, Contemporary Issues in Agricultural, Consumer and Environmental Sciences.
2. ACES major courses - 30 hours of at least 14 hours at the 200- and 300-level.
3. Campus General Education Requirements.

1. English Composition.

- a. **Composition I:** This requirement may be fulfilled by the satisfactory completion of one of the following selections or an equivalent: RHET 105, or RHET 108, or RHET 100 and 101 and 102, or RHET 103 and 104, or SPCOM 111 and 112, or ESL 114 and 115. The SPCOM 111 and 112 sequence also fulfills the speech requirement of all College of ACES curricula.
- b. **Composition II:** This requirement is met by completing an approved writing-intensive course. Some College of ACES curricula require specific courses from the list. An approved list appears at <http://www.provost.uiuc.edu/gened/>.

2. **Quantitative Reasoning.** Students in Food Science and Human Nutrition must take a calculus course. See the individual options for course choices.
3. **Cultural Studies.** The University requires that a minimum of two courses be completed in the Cultural Studies area. One course must be approved and designated as concentrating on Western Culture and one must focus on either non-Western culture or American subcultures and minority groups. These courses may fulfill other curricular requirements (or be "double dipped"; i.e., a course may fulfill two separate requirements at once).
4. **Natural Sciences.** See the individual options for course choices.
5. **Humanities and Arts.** See the individual options for course choices. Humanities courses are defined as courses that broaden an understanding of aesthetics and enhance the appreciation of human life, ideas, and values. Courses excluded from fulfilling the humanities requirement are those that concentrate on skills, such as painting or language acquisition. A minimum of 6-9 hours is required in all curricula. Specific humanities courses prescribed in certain curricula may be counted toward the 6-9 hour requirement.
6. **Social and Behavioral Sciences.** See the individual options for course choices. Social sciences are defined as courses concerned with the understanding of human society and its elements--individuals, families, groups, and others--and of developments, relations, and institutions involved in human existence and well-being. Courses that concentrate on skills, such as research methods, have been excluded. A minimum of 6-9 hours is required in all curricula of the College. Specific social science courses, prescribed in certain curricula, may be counted toward the 6-9 hour total.
7. **Foreign Language.** Beginning with the academic year of Fall 2000, two years of the same foreign language are required for admission into ACES with a third year of high school (or one semester of UIUC) foreign language required for graduation.

Note that the completion of the campus Composition I General Education requirement is the prerequisite for all the above courses. Refer to the Courses Catalog for additional prerequisites for specific courses. Only those courses or sections of courses designated as Composition II will fulfill this requirement.

At the current time, all University of Illinois students are subject to certain minimum requirements in the social sciences, humanities, and natural sciences. All College of ACES students are required to complete a minimum of 6-9 hours of social sciences and 6-9 hours of humanities courses. For FSHN curricula in the College, the natural science requirement is completed through courses already prescribed within the curriculum. You should consult with your academic advisor regarding the selection of approved courses to fulfill the Cultural Studies requirement. Additional courses will be added to the lists as they are certified by the General Education Board. Courses that appear on multiple lists may not be used to fulfill more than one requirement, except in the case of Composition II and Cultural Studies courses where a course can fulfill both the Composition II or Cultural Studies requirement and any other requirement. Furthermore, College of ACES courses may not be used to fulfill both major and Quantitative Reasoning I, social sciences, humanities, or natural science requirements.

I. Kinesiology (Physical Education Requirements)

The College will allow up to three semester hours of credit toward graduation for basic activities program courses in physical education (KINES 100 through 110, including KINES 199 courses). There is no limit on the number of hours of professional courses that can be applied toward graduation. The hours and grades earned in these courses will be counted in the semester grade average and the cumulative grade average.

J. Special Problems Courses

Courses offered by the FSHN department under the classification of special problems may serve one or more of the following purposes:

1. An opportunity for students to test their abilities in research and individual study;
2. An opportunity to study a subject area or problem not covered by a formal course offering;
3. An opportunity to make a limited contribution to the departmental research program.

Special problems courses require the written approval of the instructor before advance enrollment and registration. No more than twelve hours of credit in special problems courses may be counted toward graduation. Courses offered experimentally (must be identified as such) under the 199 course rubric are excluded from this 12-hour restriction.

K. Internships

Students are encouraged to obtain work experience related to their major fields of study. An internship can be a valuable means of exploring career interests. A student who wishes to receive academic credit for concurrent work experience should discuss the possibility with a faculty member knowledgeable about the particular area in which the student will be working. An internship is conducted much like a special problems course; the faculty member and student plan the objectives and activities to be associated with the internship before the experience begins.

Students register for an internship course in the term when the work is undertaken. Students use the Internships FSHN 293 (off-campus) or FSHN 294 (on-campus) as an approved internship. Most internships are limited to junior- or senior-level students with good academic standing and will be worth 1-4 credit hours.

L. Proficiency Examinations

If you feel sufficiently knowledgeable about a subject covered in one of the courses at the University, you may request that the Head of the Department offering the course let you take a proficiency examination. There is no fee. If you do well enough to receive the equivalent of a C grade, the grade of Pass is given and you receive full credit in the course. No official record is made of failures. Passing a proficiency examination has no effect on your grade-point average. You may get information on the time and the place of proficiency examinations for 100-level freshman and sophomore courses from the department office concerned or from the instructor of the course.

M. Changes in College and Curriculum

Students admitted to ACES as freshmen are expected to follow an ACES curriculum while enrolled in the College. Freshman cannot request a change of college until just prior to early registration for the fall semester of their sophomore year. A change of curriculum within the College may be requested from the Admissions Officer in the Office of Academic Programs at this same time. Admission into another curriculum in the College is dependent upon space availability and grade-point average. If you are contemplating a change, you may want to discuss your plans with the advisor-coordinator in your proposed new department to find out if the change is consistent with your educational and career objectives. Students in the Core Curriculum are asked to declare majors by the end of their sophomore year. Options within the Department of FSHN can be changed only during official transfer periods (two weeks prior to early registration; or the week before and the first full week of classes each semester).

N. Academic Regulations

Students should become familiar with all of the regulations of the University. Students are responsible for complying with the regulations of the University and those of the colleges and departments in which they take courses. It is also the responsibility of the student to see that all academic requirements of his/her curriculum are met prior to graduation.

Requests to make substitutions for required courses may be made by petition. Forms are available in 104 Mumford Hall. Approval of requested substitutions must be granted by the student's advisor and by the Associate Dean *before* the student takes the substitute course.

Students should obtain a copy of the latest edition of *Code on Campus Affairs and Regulations Applying to All Students*, which provides complete information concerning conditions governing attendance at the University. Copies are available at the Office of Admissions and Records and the Information Center at the Illini Union.

O. Credit/No-Credit Option

The credit/no-credit grading option (CR/NC) is designed to encourage students to take courses in areas that they might avoid because of concern about the effect of the grade earned on their overall grade-point average. If you are considering this option, you should note that many graduate and professional schools prefer applicants who take very few or no credit/no-credit courses to those who use this option frequently.

The decision to take a course on the credit/no-credit option, or to remove the option, must be made by the end of the eighth week of the semester. Instructors are not notified when students take a course under this option. The following regulations apply:

1. A student must be in good academic standing.
2. A minimum grade of C must be earned to receive credit.
3. A maximum of 18 credit hours earned in this option may be applied toward a degree.
4. Full-time students can take a maximum of two courses under this option in any one semester; part-time students can take one course per semester.
5. In general, the option can be used only for courses that are open electives in a given curriculum.
 - a. The credit/no-credit option may not be used in courses designated by name and number as specific requirements in a student's curriculum, major, or option.
 - b. ACES courses taken on a credit/no-credit basis cannot be counted toward the minimum number of ACES hours required in the student's curriculum.
 - c. The option may not be used to satisfy the University's current General Education requirements, which are Composition I and II, Quantitative Reasoning I and II, and nine hours each of humanities, social sciences, biological sciences, and physical sciences.

P. Minors and Interdisciplinary Minors

The University offers a formal system of minors which may be completed in conjunction with a major in the FSHN curriculum. A minor is a coherent program of study (generally 16-21 hours) requiring some depth in the subject, but is not as extensive as the major. Students must take the specified courses listed for each minor. No course substitutions are allowed. Minors are optional but must be completed in conjunction with a major.

While the minor does not replace other requirements, courses may be used both for the minor and to meet other degree requirements as appropriate. Students are advised to consult with the department offering the minor as early as possible for information on the courses that will fulfill the requirements. Students must see their FSHN advisor by the first semester of their senior year if they want to declare a minor for graduation. For current information see: <http://www.provost.uiuc.edu/advising/minor/>

Q. Information Sheet for D.A.R.S. Audit

D.A.R.S. reports are produced for all students who have earned 45 hours or more of credit. Whereas ACES has made an effort to verify the accuracy of this document, it should be viewed as an advisory tool only. To view a copy of your D.A.R.S go to <http://www.oar.uiuc.edu> and click on current students. Then log in with your netid and password. Detail explanations of your D.A.R.S report can be found on this website by clicking on "Explanation of the Audit" found near the bottom of the bottom of the first page. A sample copy of D.A.R.S report can also be viewed at this site.

R. Requirements for Graduation

It is your responsibility to see that you satisfy all the requirements for graduation in the curriculum in which you are enrolled. Any substitutions for required courses must be cleared by your advisor and by the Associate Dean's office before the substitution course is taken. Petition forms are in the Associate Dean's office. Transfer students and students who change curriculum must request any course substitutions before their senior year.

Students who have transferred to the University of Illinois from other educational institutions, and who are candidates for the degree of Bachelor of Science in an ACES curriculum, must complete at least half of the required hours of ACES courses in residence. A transfer student from a four-year college must also complete his/her senior year (not less than 30 semester hours) in residence at the University of Illinois. A transfer student from a community college must complete at least 60 hours at a four-year institution and the last 30 hours at the University of Illinois.

A student who has received one bachelor's degree may be permitted to receive a second bachelor's degree from the University of Illinois at Urbana-Champaign under the following conditions: (1) all specified requirements for both degrees must be met; (2) the curriculum offered for the second degree includes at least the final 30 semester hours earned in residence at the Urbana-Champaign campus and not counted toward the other degree. The second bachelor's degree may be earned either concurrently with or subsequent to the first degree.

S. Rules for Remedial Action

All colleges find it necessary to establish standards of successful performance. The faculty of ACES have established the following rules for remedial action in cases where the level of performance is not commensurate with the expenditure of time and money by the student and the provision of facilities and faculty by the University.

1. College of ACES Probation Rules

The following regulations are used to determine a student's probationary status when drop rules do not apply:

Beginning Freshmen with Fewer than 12 Semester Hours Completed

- P1. A beginning freshman who does not earn at least a 2.0 (C) average in the first semester or summer session in which he or she is registered is placed on probation.

Students Other than Beginning Freshmen

- P2. A student whose cumulative average is 2.0 or better, and who does not earn at least a 2.0 average in any semester or summer session, is placed on 2.0 probation for the next semester or summer session for which he or she is registered.
- P3. A student whose cumulative average is 1.75 to 1.99 is placed on a minimum 2.25 probation.
- P4. A student whose cumulative average is less than 1.75 is placed on a minimum 2.33 probation.
- P5. A student may be placed on probationary status at any time when, in the judgment of the College, the student's scholastic record warrants such action. Likewise, the probation rules may be waived when, in the judgment of the College, the student's scholastic record indicates that the warning provided by the probationary status is unwarranted.

Clearance from Probation

If, at the end of a semester on probation, a student has carried at least 12 semester hours, and has met or exceeded all minimum conditions as outlined above, the student shall be removed from probation. A student who completes less than six semester hours in the summer session may not clear probation by attending the summer session.

Drop Rules Dismissal for Scholastic Deficiency

Any student who fails to make satisfactory academic progress may be dismissed from the College and University, in accordance with the following rules:

- D1. Failure to attain an average of 1.0 (D) or better in any semester or summer session.
- D2. Failure to attain an average which clears the probation level established by the Associate Dean.
- D3. Failure to make satisfactory progress toward a degree. (An example would be repeated failure in a required course.)
- D4. Failure on the part of a non-degree or part-time student to meet the conditions of admission or continuation. The Drop Rules may be waived when, in the judgment of the student's college, his/her scholastic record warrants such action.

Students who are placed on academic drop status at the end of their freshman year must remain out of the College for one year before applying for readmission.

2. Admission or Readmission on Probation

Any student who has been placed on probation or dropped from any other college or university or who has been dropped from ACES for poor scholarship, may be admitted or readmitted only by petitioning the Associate Dean. Immediate readmission will be granted only in exceptional cases, when there is good evidence that the cause of poor scholarship has been corrected.

If a student is granted admission or readmission, he or she shall be on probation - the terms of probation to be fixed by the Associate Dean. Appeals of the Associate Dean's rulings may be made in writing to the Faculty Executive Committee of the College.

Students dropped or placed on probation at the University of Illinois cannot clear their drop or probation status by attending another college or university.

T. Academic Honors

Students who graduate with an outstanding cumulative grade-point average may receive the following honors:

Bronze Tablet. Rank in the top three percent of students in an ACES graduating class with at least a 3.5 grade-point average for all work done on this campus through the semester before graduation. Transfer students must have earned at least 40 semester hours at this University before the semester of graduation and have a campus average and total cumulative average as high as the lowest eligible student who did all of his/her work on this campus.

Graduation with Honors. Highest Honors requires a 3.8 cumulative grade-point average; High Honors, 3.5; and Honors, 3.2.

Dean's List. Each Fall and Spring Semester, a Dean's List is published of those students who have met all of the following criteria: (1) completed 14 or more semester hours of work, including grades of A, B, C, D, F, CR, DF, S, U, and EX but excluding AB and hours of proficiency credit and advanced placement (graduating seniors will not be required to meet the 14-hour minimum); (2) completed 12 hours of letter grades of A, B, C, D, F; (3) earned a grade-point average placing the student in the top 20 percent of all students that semester in the student's freshman, sophomore, junior, or senior class in the College; (4) earned at least a B (3.0) average. Although the cutoff varies from semester to semester, the minimum averages in the past have been as follows: freshman, 3.25; sophomore, 3.28; junior, 3.30; and senior, 3.43.

U. The Chancellor's Scholars Program

The Campus Honors Program selects 100 entering freshmen each fall from all colleges across campus to be Chancellor's Scholars. In most recent years, eight to ten students per class in ACES have been selected to participate in this program. Chancellor's Scholars are expected to take one course offered by the Campus Honors Program per semester for their first two years in the program. In the junior and senior years, students enroll in Interdisciplinary Honors Seminars. More specific information is available from the Campus Honors Program, 1205 West Oregon Street, Urbana.

V. The James Scholar Program

The James Scholar Program in ACES is designed for undergraduate agriculture students who have attained sophomore standing and who have demonstrated exceptional ability through superior academic performance. It provides opportunities for these students to use their time and talents in ways that can further enrich their educational experience. Students may obtain specific information about the program from the Office of Academic Programs. The principal features are as follows:

1. **Nominations.** Students nominate themselves as James Scholars by completing the form available in the Office of Academic Programs, 104 Mumford Hall. Freshmen may nominate themselves in their second semester and register for James Scholar work during advance enrollment in their second semester.
2. **Qualifying.** To qualify as a James Scholar and have this designation entered on the student's record and transcript each year (for example, James Scholar 1996-97), the student must:
 - a. Have completed the freshman year with 30 or more semester hours;
 - b. Have a cumulative grade-point average of 3.3;
 - c. Carry 15 or more hours each semester; and
 - d. Do one or more of the following during an academic year:
 - i. Add a one-hour special problem supplement to any regular course in ACES and receive an A in the supplement. As usual, the advisor must sign and the instructor of the course must approve.
 - ii. Complete, with a grade of A, a special problem course (one to five hours) with approval of the instructor and the student's advisor.

- iii. Receive no less than a B in a 400-level (graduate) course. Approval of the Office of Academic Programs is required for an undergraduate to register in a 400-level course.
- iv. Complete other honors work with a grade of B or better; for example, take an honors course or section marked "&" in the Timetable.

W. The ACES Honors Program

The Honors Program in ACES embodies the University of Illinois' long-standing commitment to providing programs of study that attract and challenge unusually talented students. The ACES Undergraduate Honors Program provides a challenging educational experience for students with exceptional academic skills. Members of the ACES Undergraduate Honors Program benefit from participating in honors courses, retreats, independent research, laboratory activities, and design projects. Students in the ACES Undergraduate Honors Program take maximum advantage of the College's distinguished array of teaching talent and research facilities, and are able to interact with distinguished faculty, enhance their education and gain a competitive advantage for the future. Successful completion of this program is recognized in the ACES' Commencement Program, and is noted on transcripts sent to graduate schools and potential employers.

The ACES Undergraduate Honors Program aspires to serve and benefit the University community by focusing attention on outstanding undergraduate education and academic excellence by contributing to the recruitment and retention of high-achieving students, and by enhancing the public perception of the University of Illinois as a place where superior scholarship, both at the undergraduate level and among faculty, is recognized and encouraged. The ACES Undergraduate Honors Program reflects the University of Illinois' commitment to involving undergraduate students in faculty research.

The ACES Undergraduate Honors Program is part of the University James Scholar program and has been established to recognize and encourage the talents of academically outstanding students. The ACES Undergraduate Honors Program is distinct yet complementary to the College of ACES' Jonathan Baldwin Turner (JBT) Agricultural Scholarship Program (see "Y" below). These honors programs are open to outstanding individuals enrolling in agriculture, consumer, and environmental fields. The ACES Undergraduate Honors Program is student achievement driven. Students are not selected for participation through a subjective review of applications. Instead, any student meeting objective, published standards of academic achievement may choose to join the ACES Undergraduate Honors Program. Students in the program are expected to perform at a superior level throughout their undergraduate careers. They are recognized on their academic record for their accomplishments. Scholarly excellence, good citizenship, and demonstrated leadership attributes represent precious commodities in contemporary society, especially when combined with the energy and initiative of youth. Today, the great complexity and rapidly changing character of world society underline the importance of developing sound leadership for the future. Particularly in the crucial areas of food production, marketing, nutrition, and related human services, the demand for new knowledge and expertise is great.

ACES' Honors Program is built around two phases. The first phase, the Freshman ACES James Scholar Program, serves freshman students, and the second phase, the Upperclass ACES James Scholar Program, is a coordinated set of honors activities spread over the sophomore, junior, and senior years. College of ACES James Scholars are assigned to honors advisors in their respective departments and are eligible for early registration and a library stack pass. For complete information, see the FSHN Honors Program Coordinator, 260 Bevier Hall; or the ACES website: <http://w3.aces.uiuc.edu/Acad-Prog/honor.html>

X. Scholarship Information

For more information on what scholarships are available and how to apply, contact your advisor, the ACES Scholarship Office (115 LIAC), or the Department of Food Science and Human Nutrition (258 or 386 Bevier Hall). You can also check our website <http://www.fshn.uiuc.edu>

Y. Jonathan Baldwin Turner Undergraduate Research/Scholarship Program

The Jonathan Baldwin Turner Undergraduate Research/Scholarship Program was created in 1982 to provide a genuine research experience for upper-level undergraduates who demonstrate superior academic ability and a strong interest in the agricultural and human sciences. Approved undergraduate research projects are conducted under the

close supervision of faculty members of ACES, who provide the type of professional guidance normally afforded graduate students pursuing the Master of Science degree.

To be eligible for the program, a student must meet the following requirements:

1. junior or senior status in the undergraduate degree program at the time the proposed research project will be conducted;
2. officially enrolled with a declared academic major in a unit of the College;
3. minimum cumulative grade-point average of 3.0 to qualify for undergraduate research support and merit scholarship monies.

Research and Scholarship Support

Research support for junior- or senior-level students accepted into the Jonathan Baldwin Turner Undergraduate Research/Scholarship Program is based on a projected budget submitted at the time of application. A maximum stipend of \$1,000 is allocated for each approved research project. Merit scholarship support under the program is \$300 to \$500 over and above any other scholarships held by the student.

Prospective applicants identify and define an appropriate research project and then submit requests via the application form approved for the program. Application deadlines of April 1, and November 1, respectively, exist for potential projects beginning in the succeeding fall or spring semester. Additional information on the program is available from the Office of Academic Programs, 104 Mumford Hall.

Z. Study Abroad

Students who are interested in studying in foreign countries as part of their undergraduate programs are urged to contact the ACES' Study Abroad Coordinator in 109 Mumford Hall, as well as the Campus Study Abroad Office, 115 International Studies Building. Staff members at both locations assist students in defining their academic interests and in narrowing the possible choices of Study Abroad locations. Length of stay (year, semester, or summer) and amount of credit to be sought are other decisions the Study Abroad bound student must make.

Arrangements for room and board, travel, terms of payment, health certification, and passport/visa information should be handled with the Study Abroad Office. Students prepare Study Abroad forms for each course in which they plan to enroll. A Study Abroad advisor has been identified for most major fields of study and will sign the forms, indicating how the courses will compare to University of Illinois courses. The student's academic advisor and Dean's Office personnel sign the materials to acknowledge how the course will be used following transfer of the credit to UIUC.

The College of ACES Study Abroad student is registered for ACES 299 (0 credit) while absent from campus. If this registration is maintained, an application for readmission is not needed when the student is ready to return to campus. At the conclusion of the experience, an official transcript will be forwarded from the foreign institution to the Study Abroad Office for evaluation. The transcript is then referred to the College Office for official acceptance and determination of credit. (The amount of credit earned should be the same as the proposed amount of credit indicated on the pre-trip forms if the courses taken abroad are the same as the ones planned.) A College of ACES student can earn up to 36 semester hours of credit for a year-long (two semesters and summer) experience abroad.

There are many overseas universities that take part in Study Abroad programs with the University of Illinois. Where no formal program exists, Study Abroad advisors can often assist in the discovery of an appropriate institution. ACES' Study Abroad Coordinator focuses most efforts on arranging experiences specifically related to the fields of study offered by our College. College-based programs are currently being held in Russia, Japan, Argentina, France, Lithuania, Puerto Rico, and the Netherlands.

AA. Department of Food Science and Human Nutrition Clubs

Association of Food Technologists (AFT). The Association of Food Technologists provides an informal means for students to gain information related to food science and campus leadership experiences. Membership is open to all majors. This group is also the Illinois Student Chapter of the professional organization of the Institute of Food Technologists (IFT).

Student Dietetic Association (SDA). SDA provides an opportunity for undergraduate and graduate students to meet and discuss issues and opportunities in nutrition and nutrition-related fields.

Hospitality Management Club. The Hospitality Management Club serves to promote the hospitality and tourism industry as a viable career for students.

BB. Career Planning and Employment Information

The College of ACES Student Development and Career Services Office is located in 115 ACES Library, Information, and Alumni Center (LIAC). Under the direction of Assistant Dean Charles Olson and Career Services Coordinator, Jennifer Neef, the office assists students in all aspects of professional and career development from exploration to placement. Students are encouraged to visit the office early in their academic career and use the services often. Please visit the ACES Student Development and Career Services web site for more information <http://www.aces.uiuc.edu/academics/sdcs/index.html>

An additional student service is the UIUC Career Center (715 S. Wright St., 333-0820). It offers programs and services to assist all UIUC students with career planning and job search strategies. On-campus recruiting, career conferences, job fairs, resume writing, interviewing-skills workshops, and job vacancy resources are just a few of the services offered. Graduates from the University of Illinois College of ACES have been very successful in finding employment. They are well represented in business, industry, research, education, government, and human-service professions. Limited examples of job titles and types of employers for the Department's various programs are listed later in this Handbook. Expanded lists also are included in brochures available in 115 LIAC.

CC. Departmental Facilities

1. Department Head Office

The Department of Food Science and Human Nutrition head office is located in room 260 Bevier Hall. The Department Head and support staff are located in this office.

2. Advising Locations

Specific options have faculty coordinators. The coordinators for each option are:

- Dietetics: Ms. Karen Plawecki, 345 Bevier, 244-2884, plawecki@uiuc.edu
- Food Science; Food Industry and Business: Ms. Terri Cummings, 258 Bevier, 244-4405, tcumming@uiuc.edu
- Hospitality Management: Ms. Beth Reutter, 363 Bevier, 333-2024, breutter@uiuc.edu
- Human Nutrition: Ms. Linda Garrow, 399A Bevier, 333-9011, garrow@uiuc.edu

3. World Wide Web

Information about the Department of Food Science and Human Nutrition is available on the World Wide Web. The address is: <http://www.fshn.uiuc.edu>

Placement Opportunities for Food Science and Human Nutrition Graduates

OPTION	Job Title	Prospective Employers	Employer Examples
Dietetics	Clinical nutrition specialist Corporate nutritionist Dietitian Sport nutritionist Nutrition educator Wellness coordinator Clinical Manager food service	Healthcare Industries Public health districts Clinics Fitness centers/Athletic Teams Pharmaceutical companies Nursing homes	Carle Clinic C.H. Health Technologies Hines V.A. Hospital Marriott Corporation Sysco Food Services Parkside Sport & Fitness Center
Food Industry and Business	Food broker Food editor Food stylist Production manager Sales representative Test kitchen managers	Food and appliance manufacturers Food processing corporations Food wholesale brokers Ingredient companies Magazine and book publishers Restaurants and food service	Backas Communications Better Homes and Gardens Federated Foods Kraft General Foods Meadow Gold OSI Industries
Food Science	Food chemist Food manufacturing manager Food microbiologist Food product research and development coordinator Quality assurance technician	Breweries/wineries Commercial laboratories Pharmaceutical/cosmetic Food processing companies Starch processing companies	Anheuser-Busch Dean Foods General Mills Kraft General Foods Mars, Inc. The Quaker Oats Co.
Human Nutrition	Account executive Broker representative Food cost accountant Food stylist Public health nutritionist Product development supervisor Flavor technician Production Chemist	Cooperative Extension Service Food distribution firms Hospitality and food service Trade and commodity associations Food manufacturing and processing firms Biotechnology	American Egg Board Bernard Food Industries IL Dept. of Public Health Kraft Foods National Dairy Council The Quaker Oats Co. Concept Food Brokers Federated Foods BioRad Laboratories
Hospitality Management	Account executive Banquet manager Convention services manager Training manager Food and beverage director Operations manager	Catering companies Theme parks Country clubs Food distributors Grocery stores Hotels/F&B	ARAMARK Four Seasons' Hotel Resorts Walt Disney World Sysco Distributors Lettuce Entertain You Restaurants Darden Restaurants

Options In The Department Of Food Science And Human Nutrition

Faculty in the Department of Food Science and Human Nutrition have developed five options in Food Science and Human Nutrition. The **five options** in the Department are: Food Science, Human Nutrition, Dietetics, Food Industry and Business, and Hospitality Management. One degree, a Bachelor of Science in Food Science and Human Nutrition, will be granted for all students. The four-year curriculum in FSHN, College of ACES, is designed for students who want to pursue careers in one of the five options offered by our department. All curricula provide a strong scientific background for graduate study. The Food Science option is accredited by the IFT, and the Dietetics option is approved by the Commission of Accreditation for Dietetics Education of the American Dietetic Association.

Dietetics

This option is an approved Didactic Program in Dietetics (DPD) that meets the standards as set by Commission of Accreditation for Dietetics Education (CADE) (Accreditation, Education Program, Student Operations Team; 120 South Riverside Plaza, Suite 2000; Chicago, IL 60606-6995) of the American Dietetic Association (ADA). This program qualifies students for competitive dietetic internships. Upon completion of a postgraduate internship, students selecting this option may take the examination to become Registered Dietitians. Students choosing this option who do not complete an internship will be prepared for entry-level supervisory positions in food service facilities and in the food and pharmaceutical industries. A minimum of 126 hours of credit is required for graduation.

Dietetics is the high-tech science of applying food and nutrition to health. It's a vital, growing field open to creativity and opportunity and the possibilities are endless. Health, nutrition, and fitness have become a way of life. People want to feel good and look good. Learning about good nutrition and eating right to live better are top priorities, and people are eager to learn even more. These changes mean increased opportunities in the field of dietetics. According to the U.S. Bureau of Labor Statistics, employment of dietitians is expected to grow faster than the average profession into the 21st century, especially in the areas of public health, consulting, and business.¹

DIETETICS: A GALAXY OF OPPORTUNITIES

Dietetics is a dynamic profession offering many different opportunities for practice. Today's dietetics professionals work in healthcare, education, and research; they work in sales, marketing, and public relations; they work in government, restaurant management, fitness, food companies, and in private practice. The direction you take, and how far you take it, are your choices.

DIETETICS: A PROFESSION THAT CAN TAKE YOU ANYWHERE

A dietitian is a highly qualified professional, recognized as an expert on food and nutrition and the link to nutrition and health. Dietitians can be found in a variety of settings.

Management dietitians work in healthcare institutions, schools, cafeterias, and restaurants. They are responsible for personnel management, menu planning, budgeting, and purchasing. With more and more Americans recognizing the importance of good nutrition, management dietitians play an increasingly key role wherever food is served.

Clinical dietitians are a vital part of the medical team in hospitals, nursing homes, health maintenance organizations, and other healthcare facilities. They work with doctors, nurses, and therapists to help speed patients' recoveries and lay the groundwork for long-term health. Opportunities for advancement are available by choosing a particular area of nutrition, such as diabetes, cardiovascular, or pediatrics.

Community dietitians work in public and home health agencies, daycare centers, health and recreation clubs, and in government-funded programs that feed and counsel families, the elderly, pregnant women, children, and disabled or underprivileged individuals. Wherever proper nutrition can help improve quality of life, they reach out to the public to teach, monitor, and advise.

Educator dietitians work in colleges, universities, and community or technical schools, teaching future doctors, nurses, dietitians, and dietetic technicians the sophisticated science of foods and nutrition. Many say they enjoy their role as mentors who bring qualified students into the exciting field of dietetics.

Research dietitians work in government agencies, food and pharmaceutical companies, and in major universities and medical centers. They conduct or direct experiments to answer critical nutrition questions, and find alternative foods or dietary recommendations for the public.

Consultant dietitians work full- or part-time, usually under contract with a healthcare facility or in his/her own private practice. Consultant dietitians in private practice perform nutrition screening and assessment of his/her own

¹ Taken from *Set Your Sights: Your Future in Dietetics*, The American Dietetics Association, 216 West Jackson Boulevard, Chicago, IL 60606-6995

clients and of those referred to them by a physician. They offer advice on weight loss, cholesterol reduction, and a variety of other diet-related concerns. Those under contract with healthcare facilities often consult with food service managers, providing expertise on sanitation and safety procedures, budgeting, and portion control. Other clients include athletes, company employees, and nursing home residents.

Business dietitians work in food- and nutrition-related industries. They work in product development, sales, marketing, advertising, public relations, purchasing, and in many other capacities that enable companies to satisfy consumers' growing interests in nutrition.

EXPECTATIONS WHEN APPLYING TO DIETETIC INTERNSHIPS

Applying to a dietetic internship (DI) is a very competitive process. The dietetics option within FSHN is consistently higher than the national average in placing students into internships. With this competitive process, the student needs to have a competitive application portfolio. The student's portfolio is addressed throughout the program in courses and advising sessions.

To build the portfolio, focus on three areas:

- Grades: A majority of internships require a 3.0/4.0 GPA. Some internships will accept applications from students with a GPA between 2.85 and 3.0. Students with a GPA under 2.85 are discouraged from applying.
- Experience: both paid and volunteer experiences related to dietetics are beneficial. Focus on areas within clinical, community, fitness, management, research or business.
- Extracurricular activities: get involved with campus organizations (e.g., Student Dietetic Association).

By focusing on these three areas, a student will build leadership, communication, critical thinking, teambuilding, conflict resolution and many other skills that are needed in dietetics.

FINANCIAL AID: GETTING HELP TO GET THROUGH SCHOOL

There are many resources available to help college students. You may be able to obtain a grant or scholarship from corporations, community or civic groups, philanthropic and religious organizations, or directly from the college or university that you are attending. Federal grants and low-interest loans are also available.

The ADA also offers scholarships to encourage eligible students, including under-represented groups, to enter the field of dietetics. Students enrolled in an undergraduate dietetics program during their junior year, or those in the first year of a dietetic technician program, may apply for an ADA scholarship. Scholarships are also available for students in internships, Approved Preprofessional Practice programs, and graduate studies.

PATHWAYS TO BECOMING A DIETITIAN

There are two different pathways you can take to become a dietitian.

Pathway 1: You can enroll in an ADA accredited Coordinated Program, which is a Bachelor's or Master's degree program combining classroom and supervised practical experience. This pathway is available at the University of Illinois, Chicago.

Pathway 2: You can enroll in an ADA-approved Bachelor's degree program. After you receive your degree, you will then need supervised practical experience by completing either an approved Preprofessional Practice Program or an accredited Dietetic Internship. This pathway is available at the University of Illinois, Urbana-Champaign.

After you complete either pathway, you're eligible to take the Registration Examination for Dietitians. When you pass, you become a Registered Dietitian, and can use the initials "RD" after your name, signifying that you're an expert on food and nutrition.

Dietetics Option Course Requirements

PRESCRIBED COURSES INCLUDING CAMPUS GENERAL EDUCATION

English Composition and Speech Hours

SPCOM 111	Verbal Communication	3
and		
SPCOM 112	Verbal Communication	3

or

SPCOM 101	Principles of Effective Speaking	3
and one of the two following courses:		
RHET 105	Principles of Composition	4
RHET 108	Forms of Composition	4

Composition II		3
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Quantitative Reasoning

MATH 134	Calculus for Social Scientists, I	4
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Statistics:

Choose from STAT 100, ACE 261; CPSC 141; ECON 172; MATH 161; PSYCH 235; SOC 185 or STAT 100	3-4
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Humanities/Social Science/Cultural Studies

Humanities: Nine hours from approved campus list	9
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Cultural Studies:

Non-Western and Western---three hours of each (for complete list of available Cultural Studies courses, visit http://www.provost.uiuc.edu/gened)	6
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Social Sciences: Nine hours must include:

HDFS 105	Introduction to Human Development	3
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or

HDFS 203	Infancy and Early Development	4
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PSYCH 100	Introduction to Psychology	4
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or

PSYCH 103	Introduction to Experimental Psychology	4
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ECON 102	Microeconomic Principles	3
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or

ECON 103	Macroeconomic Principles	3
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Natural Science

CHEM 101/105	General Chemistry and Laboratory	4
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CHEM 102/106	General Chemistry and Laboratory	4
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CHEM 231	Elementary Organic Chemistry	3
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CHEM 234	Elementary Organic Chemistry Laboratory	2
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MCBIO 100	Introductory Microbiology	3
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MCBIO 101	Introductory Experimental Microbiology	2
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PHYSL 103	Introduction to Human Physiology	3
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PHYSL 104	Introduction to Human Physiology Laboratory	1
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BIOCH 350	Introductory Biochemistry	3
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OTHER PRESCRIBED COURSES

ACE 161	Microcomputer Use in Agriculture	3
BADM 210	Management and Organizational Behavior	3
BADM 321	Individual Behavior in Organizations	3
or		
PSYCH 245	Industrial Organizational Psychology	3

AGRICULTURE PRESCRIBED COURSES

ACES 100*	Contemporary Issues in the Agriculture, Consumer and Natural Resource Systems	2
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FOOD SCIENCE AND HUMAN NUTRITION COURSES

FSHN 101	Introduction to FSHN	3
FSHN 131	Introductory Food Laboratory	3
FSHN 149	Applied Food Service Sanitation	1
FSHN 220*	Principles of Nutrition	3
FSHN 229*	Communication Techniques in Nutrition	3
FSHN 231	Food Systems	3
FSHN 240	Management of Quality Food Production and Service	4
FSHN 245*	Purchasing for the Hospitality Industry	3
FSHN 298*	Seminar in Dietetics	1
FSHN 320*	Nutritional Aspects of Disease	3
FSHN 326*	Human Nutritional Biochemistry I	3
FSHN 327*	Human Nutritional Biochemistry II	3
FSHN 329*	Therapeutic Nutrition and Assessment	3

Choose one of the following

FSHN 322*	Nutrition Through the Life Cycle	3
FSHN 328*	Community Nutrition	3

and two courses from the following Professional Electives:

FSHN 202*	Sensory Evaluation of Foods	3
FSHN 321*	Pediatric Clinical Nutrition	3
FSHN 350*	Hospitality Management Skills and Applications	3
FSHN 371*	Food and Industrial Microbiology	3
FSHN 380*	Basic Toxicology	3
FSHN 399	Special Problems	1-5
BIOCH 355	Biochemistry Laboratory	3
KINES 252	Bioenergetics of Human Movement	3
CHLTH 204	Foundations of Health Behavior	4
CHLTH 210	Health Program Development	2
CHLTH 250	Health Care Systems	3

*Course is offered only once/year during designated semester

Minimum of 126 hours required for graduation

**B.S. Degree in Food Science and Human Nutrition
Dietetics Option: Eight Semester Plan of Study**

FALL		SPRING	
Freshman year			
FSHN 101	3	PSYCH 100	4
FSHN 199 ^{‡*}	1	FSHN 131	3
ACES 100*	2	CHEM 101 and CHEM 105	4
SPCOM 101 or RHET 105	3-4	SPCOM 101 or RHET 105	3-4
MATH 134	4	HDFS 105	<u>3</u>
ACE 161	<u>3</u>		
Total	16-17	Total	17-18
Sophomore year			
PHYSL 103 and PHYSL 104	4	FSHN 220*	3
MCBIO 100	3	FSHN 231	3
MCBIO 101	2	CHEM 231	3
CHEM 102 and CHEM 106	4	CHEM 234	2
Humanities/CS	<u>3-4</u>	Elective	<u>3</u>
Total	16-17	Total	16
Junior year			
FSHN 149	1	FSHN 229*	3
FSHN 240	4	BIOCH 350	3
FSHN 245*	3	Statistics ¹	3
Economics	3	Professional elective ²	<u>3</u>
BADM 210	3		
Humanities/CS	<u>3</u>		
Total	17	Total	12
Senior year			
FSHN 298*	1	FSHN 327*	3
FSHN 320*	3	BADM 321, 351 or PSYCH 245	3
FSHN 326*	3	Humanities/CS	6
FSHN 329*	3	Electives	<u>3-6</u>
Professional elective ³	3		
Composition II	<u>3</u>		
Total	16	Total	15-18

¹Select from STAT 100; ACE 261; ECON 172; MATH 161; PSYCH 235; or SOC 185

²Select FSHN 322 or other professional elective

³Select FSHN 328 or other professional elective

[‡]Section KP

*Course is offered only once/year during designated semester

FSHN 322 or FSHN 328 is required; both can be taken for credit. Additional open electives may be required beyond the courses listed above to meet the minimum amount necessary for graduation. Please work with your advisor to determine the best way to fulfill graduation requirements.

Total hours required (minimum) 126

Food Industry and Business Option

The Foods Industry and Business option is designed for students interested in integrating science, technology, business, and communications with the goal of pursuing professional and management careers in food and food-related industries. The core program is comprised of science, nutrition, business, and communications, and is supplemented by a 12 credit hour specialization in a recommended area, such as food quality and safety, nutrition, business, or communications. Special emphasis is placed on areas of concern to consumers and to the food industry, such as quality assurance, food safety, sensory evaluation, nutrition, and health. The total number of hours required for graduation is 126.

WORK PERFORMED

Food Industry and Business majors study physical, microbiological, and chemical makeup of food and study the business and marketing side of the food industry. Some students continue on to obtain a MBA degree.

The Food Industry and Business curriculum generally places more emphasis on the business and managerial aspects of the food industry, as compared to the Food Science curriculum, which places more emphasis on the scientific aspects of the discipline. The Food Industry and Business curriculum is excellent preparation for students interested in production management, quality assurance, and technical sales.

About 40,000 food scientists and food industry and business graduates work throughout the United States; approximately 75% of them work in the food processing industry. Others work in federal agencies such as the Food and Drug Administration, the U.S. Department of Agriculture, the United Nations, the World Health Organization, and other international groups. Many work in food and consumer services and in marketing and inspection services.

Food industry and business students can specialize in production, managing the day to day food processing operations in a food processing plant. The position combines aspects of personnel management with the technical aspects of food production on a large scale.

Food industry and business students who specialize in quality assurance work with production departments. They sample and check raw products to see if they are of high quality and conform to purchasing specifications. They work with operators to monitor each processing step to make sure the products meet government, company, and industry standards. They check warehouses and storage space for sanitation, temperature, and humidity.

Food Industry and Business personnel advise people in management on new equipment and new sources of supplies. They work with the marketing department to test public acceptance of new products.

Food Industry and Business personnel can work in technical sales. Technical sales in the food industry is very different from retail sales. Food companies can be differentiated into two types; one type that sells products directly to consumers (e.g., Kraft) and one that sell products to other food companies (e.g., Cargill). Food companies that make products for consumers will often need to buy a variety of components from other food companies. These components include coloring agents, spices and flavorings, emulsifiers, sweeteners, thickeners, stabilizers, and preservatives. A technically trained sales staff is needed to advise potential food company clients on how these component products might best be used in their food products. It is more akin to a consultant position, rather than a pure sales position. Generally, the company will need to provide substantial additional training to the sales staff to fully familiarize them with their products and their applications. In addition, research staff support is typically provided to assist with particularly challenging technical problems.

HOURS AND EARNINGS

The work week for Food Industry and Business majors is 40 to 50 hours. The number of hours, however, varies with the employer. Since some work in the food processing industry is seasonal, employees may work overtime in peak periods. They may get extra pay for overtime, although many do not. Managerial positions generally pay a straight salary, rather than pay by the hour. Employers typically offer hospital and medical insurance and pension plans. Some firms have profit-sharing plans.

PROFESSIONAL ASSOCIATIONS

The IFT is the main professional group for food scientists, and food industry and business majors. IFT has an active student membership. The Institute, with more than 25,000 members, promotes the use of science and engineering in the production, processing, evaluation, packaging, preparation, and use of food. About 60% of its members work in research and development, quality assurance, technical sales, or management.

PERSONAL QUALIFICATIONS

Food Industry and Business employees should have a business-focused and inquisitive mind. They should be detail-oriented and enjoy working with people. They should respect the judgment and views of other experts in this career. They must use tact. They must be able to express their ideas in both speaking and writing, and should have the self-confidence to make decisions and to stick with them.

Occupations can be adapted for workers with disabilities. Persons should contact their school or employment counselors, their state office of vocational rehabilitation, or their state department of labor to explore fully their individual needs and requirements as well as the requirements of the occupation.

EMPLOYMENT OUTLOOK

The food industry, which serves a basic human need, is fairly steady; it does not have sharp economic ups and downs. Food processing is a top industry in the United States. The need for graduates in the Food Science or Food Industry and Business area is increasing because of the growing need to improve the quantity, quality, variety, and safety of foods. A growing public awareness of the importance of healthful diet is causing food scientists to search for ways to produce foods with less sodium, sugar, fat, cholesterol, and other substances. Private households, chain restaurants, hospitals, and airlines will demand more convenience foods. Employment for food science and business majors may expand somewhat as the industry supplies healthful foods that meet the changing needs and tastes of a constantly increasing population.

ENTRY METHODS

College students about to graduate may get help in their job search from their college placement office and from our department. They can send resumes to food processing companies or to government agencies that hire food scientists.

Many food industry and business graduates start as quality assurance workers or as production managers. Other graduates may begin in technical sales, human resources, or marketing.

Many students take advantage of the departmental food industry summer internship program and the numerous paid positions available during the summer the department has arranged with several companies, primarily in the Chicago area, but also in other cities throughout the U.S.A. Generally, if a student does well during their summer internship, the student may be offered a permanent position upon graduation. Students may also receive course credit through registration in FSHN 293, Off-Campus Internship, with approval from an FSHN advisor or faculty member.

ADVANCEMENT

Advancement may take the form of a promotion to work with more responsibility and higher earnings. Scientists may, for instance, go from quality assurance to product research. Others advance to management positions. Some enter marketing and sales where their own efforts may produce higher earnings.

Many professional food scientists advance to research and corporate management; some may become vice presidents or presidents of food processing companies.

Food Industry and Business Course Requirements

PRESCRIBED COURSES INCLUDING CAMPUS GENERAL EDUCATION

<u>English Composition and Speech</u>	Hours
SPCOM 111 Verbal Communication	3
AND	
SPCOM 112 Verbal Communication	3
OR	
SPCOM 101 Principles of Effective Speaking	3
AND	
RHET 105 Principles of Composition	4
 Composition II	3
 <u>Quantitative Reasoning</u>	
MATH 134 Calculus for Social Scientists, I	4
 Statistics: Choose from ACE 261; CPSC 141; ECON 172; MATH 161; PSYCH 235; SOC 185 or STAT 100	3-4
 <u>Humanities/Social Science/Cultural Studies</u>	
Humanities: Nine hours from approved campus list	9
Cultural studies: Non-Western and Western ---three hours of each	6
 For a complete list of available Cultural Studies courses, visit http://www.provost.uiuc.edu/gened/	
 Social Sciences: Nine hours from approved list and must include:	9
PSYCH 100 Introduction to Psychology	4
OR	
PSYCH 103 Introduction to Experimental Psychology	4
 ACE 100 Introductory Agricultural Economics	4
OR	
ECON 102 Microeconomic Principles	3
 <u>Natural Science</u>	
CHEM 101/105 General Chemistry (Biological Section)/Laboratory	4
CHEM 102/106 General Chemistry (Biological Section)/Laboratory	4
CHEM 231 Elementary Organic Chemistry	3
MCBIO 100 Introductory Microbiology	3
MCBIO 101 Introductory Experimental Microbiology	2
MCBIO 312* Techniques of Applied Microbiology	2
 Select one course from the following selections:	
IB 104 Animal Biology	4
MCB 150 Molecular and Cellular Basis of Life	4
and	
MCB 151 Molecular and Cellular Biology Laboratory	1
IB 103* Plant Biology	4
PHYSL 103 Introduction to Human Physiology	3
 AGRICULTURE PRESCRIBED COURSES	
ACES 100 Contemporary Issues in the Agriculture, Consumer and Natural Resource Systems	2

OTHER PRESCRIBED COURSES

ACE 222	Marketing Commodity and Food Products	3
OR		
BADM 202	Principles of Marketing	3
ACE 231	Food and Agribusiness Management	3
OR		
BADM 210	Management and Organizational Behavior	3

At least one course from the following suggested electives:

ACCY 201	Principles of Accounting, I	3
BADM 200	The Legal Environment of Business	3
BADM 212	Principles of Retailing	3
BADM 320	Marketing Research	3
BADM 337	Promotion Management	3
BADM 344	Buyer Behavior	3
ACE 233*	Agribusiness Market Planning	3
ACE 243*	Agricultural Finance	3
ACE 325*	Economics of Food Marketing	4
ACE 331*	Strategic Marketing in Food and Agribusiness	3
ACE 333*	Practicum in Food and Agribusiness Management	4

FOOD SCIENCE AND HUMAN NUTRITION PRESCRIBED COURSES

FSHN 101	Introduction to Food Science and Human Nutrition	3
FSHN 120	Contemporary Nutrition	3
FSHN 131	Introductory Food Laboratory	3
FSHN 202	Sensory Evaluation of Foods	3
FSHN 231	Food Systems	3
FSHN 260	Raw Materials for Processing	4
FSHN 298	Undergraduate Seminar	1
FSHN 365*	Principles of Food Technology	3
FSHN 366*	Product Development	3
FSHN 371	Food and Industrial Microbiology	3
FSHN 372	Sanitation in Food Processing	2

12 hours of specialization

A minimum of 12 hours from courses, approved by the advisor, in specialty area. At least six of the hours must be in 200- or 300-level courses. During the semester the student expects to graduate, he or she must submit to the College a statement, signed by his/her major advisor, that indicates that the courses taken in the area of secondary specialization are appropriate.

Minimum of 126 hours required for graduation.

*Course offered only once/year during designated semester.

B.S. Degree in Food Science and Human Nutrition
Food Industry and Business Option: Eight Semester Plan of Study

FALL		SPRING	
Freshman year			
ACES 100*	2	CHEM 101	3
FSHN 199‡*	1	CHEM 105	1
FSHN 101	3	SPCOM 101 or RHET 105	3-4
MATH 134	4	FSHN 131	3
SPCOM 101 or RHET 105	3-4	PSYCH 100 or 103	<u>4</u>
CHEM 100 or HUM/SS/CS	<u>3</u>		
Total	16-17	Total	14-15
Sophomore year			
MCBIO 100	3	FSHN 260*	4
MCBIO 101	2	CHEM 231	3
CHEM 102	3	ACE 222* or BADM 202	3
CHEM 106	1	Statistics ¹	3-4
FSHN 120	3	HUM/SS/CS	<u>3</u>
FSHN 298*	<u>1</u>		
Total	13	Total	16-17
Junior year			
FSHN 202	3	ACE 231* or BADM 210	3
FSHN 231	3	FSHN 371*	3
Business ³	3-4	MCBIO 312*	2
HUM/SS/CS	3	HUM/SS/CS	3-4
Biological Science ²	<u>4-5</u>	Elective or Specialization	<u>3-4</u>
Total	16-18	Total	14-16
Senior year			
FSHN 365 ⁴	3	Composition II†	3
FSHN 366	3	FSHN 372*	2
Humanities or Social Science	6	Humanities or Social Science	3-6
Elective or Specialization	<u>3-5</u>	Elective or specialization	<u>5-6</u>
Total	15-17	Total	13-17

¹Select from ACE261, CPSC141, ECON172, MATH161, PSYCH235, SOC185

²Select from IB104, MCB150, MCB151, IB103, PHYS103

³Select from ACCY201, ACE233, ACE243, ACE325, ACE331, ACE333, BADM200, BADM212, BADM320, BADM337, BADM344

⁴Offered odd-numbered falls only

‡Section TPC

*Course is offered only once/year during designated semester

†Each student must fulfill their "Composition II" course requirement with a course found on the list on the web site maintained by the Office of the Provost, <http://www.provost.uiuc.edu/gened/acp.asp>, such as B&TW 250, 253, 263 or preferably 261.

Additional open electives may be required beyond the courses listed above to meet the minimum amount necessary for graduation. Please work with your advisor to determine the best way to fulfill graduation requirements.

Total hours required (minimum) 126

Food Science

The Food Science option exposes students to all components of food processing: harvesting and raw-product handling, food-processing procedures and techniques, packaging, product development, sensory evaluation, and quality assurance. Students selecting this option are prepared for careers in many areas of the food industry. A minimum of 130 hours of credit is required for graduation.

WORK PERFORMED

Food scientists study physical, microbiological, and chemical makeup of food, and develop ways to process, preserve, package, and store it, according to the specifications and regulations of industry and government.

Supermarket shelves hold thousands of kinds of food: meat and fish, fresh fruits and vegetables, milk, cheese, eggs, soup, ice cream, bread, and cereals. Americans buy food in jars, cans, boxes, cartons, and plastic containers. Yet they seldom think of the vast food industry and the researchers who develop the means to deliver tasty, nutritious, convenient, and safe foods.

Food processing has a long history. For thousands of years people salted, dried, smoked, pickled, and chilled their foods. Canned and frozen foods are a fairly recent development. Dried and freeze-dried foods are now common. Researchers over the years have found new and better ways to process, package, and preserve foods from the time of harvest to the time the food goes on the table.

The food processing industry is vital to the economy. Food scientists hold an important place in their field. Their efforts make more nutritious food available to the public, to developing countries, and to countries suffering from famine.

About 40,000 food scientists work throughout the United States; about 75% of them work in the food processing industry. Others work in federal agencies such as the Food and Drug Administration, the U.S. Department of Agriculture, the United Nations, the World Health Organization, and other international groups. Many work in food and consumer services and in marketing and inspection services.

Food scientists use the laws of science and engineering to produce, process, evaluate, package, and distribute foods. The kind of work they do depends on the firm they work for and the products they work on. Food scientists may concentrate on basic research, product development, quality assurance, processing, packaging, labeling, technical sales, or market research. They may work in production or technical management. They check for food standards, laws, and safety. They look into sanitation, water supply, and waste management.

Food scientists in basic research study the sensory, chemical, physical, and microbiological properties of foods and their ingredients. They test samples for bacteria, yeasts, and molds that may make products unsafe or reduce their shelf life. They test the texture, color, flavor, and nutritive value of food products. These specialists create new foods and find new or better ways to process foods to improve the quality or to make them more economical.

Most large food processing companies have test kitchens. During product development, food scientists work closely with test kitchen staff. In devising food production processes food scientists also work with engineers, microbiologists, flavor experts, sensory evaluation experts, packaging specialists, statisticians, and the marketing staff. They also work with field buyers, production line people, and warehouse staff. After they develop a product, food scientists set up methods to produce the food in wholesale quantities at a low cost, and to set quality and safety standards.

Food scientists in quality assurance work with production departments. They sample and check raw products to see if they are fresh and conform to purchasing specifications. They see that operators monitor each processing step to make sure the products meet government, company, and industry standards. They check warehouses and storage space for sanitation, temperature, and humidity.

Production lines turn out items such as packaged meat, baked goods, canned or frozen vegetables, candies, and spices. Food scientists check items and assess them against processing guidelines. They correct procedures to insure that the quality of the product meets standards established by consumer testing. They test foods for sugar, starch, protein, fat, vitamin, mineral, and water content.

Food scientists may study grains, dairy products, meat and poultry, fats and oils, or fish and seafoods. Others may work with prepared foods, beverages, or vegetable products. Some food scientists conduct research into stabilizers, antioxidants, acidulants, flavors, and food additives.

Food scientists advise people in management on new equipment and new sources of supplies. They work with the marketing department to test public acceptance of new products.

WORKING CONDITIONS

Food scientists work in laboratories, offices, and production departments. Both quality assurance and research laboratories are clean and well-ventilated or air-conditioned. Food scientists in production departments work with hot, cold, or frozen goods.

HOURS AND EARNINGS

The workweek for food scientists is 40 to 50 hours. The number of hours, however, varies with the employer. Since some work in the food processing industry is seasonal; food scientists may work overtime in peak periods. As a rule, they get extra pay for overtime. Employers typically offer hospital and medical insurance and pension plans. Some firms have profit-sharing plans.

EDUCATION AND TRAINING

Food scientists must have at least a Bachelor's degree with a major in food science, food engineering, or food technology. About half of all food scientists have an advanced degree. A Master's degree is usually required for research and upper-level management positions.

The IFT has set minimum standards for undergraduate college programs of study in food science and technology. Besides taking physics, biology, chemistry, nutrition, and mathematics and statistics, students are required to take food chemistry, food analysis, food microbiology, food processing operations, and food engineering. The study of economics, business management, and marketing will prove helpful for those who want a career in industry. Students may find the study of a foreign language especially useful.

PROFESSIONAL ASSOCIATIONS

The IFT is the main professional group for food scientists. IFT has an active student membership. The Institute, with more than 25,000 members, promotes the use of science and engineering in the production, processing, evaluation, packaging, preparation, and use of food. About 60% of its members work in research and development, quality assurance, technical sales, or management.

PERSONAL QUALIFICATIONS

Food scientists should have an analytical and inquisitive mind. They should be detail oriented and should like technical work. Food scientists should respect the judgment and views of other experts in this work. They must use tact. They must be able to express their ideas well in both speaking and writing and should have the self-confidence to make decisions and to stick with them.

Occupations can be adapted for workers with disabilities. Persons should contact their school or employment counselors, their state office of vocational rehabilitation, or their state department of labor to explore fully their individual needs and requirements as well as the requirements of the occupation.

EMPLOYMENT OUTLOOK

The food industry, which serves a basic human need, is fairly steady; it does not have sharp economic ups and downs. Food processing is a top industry in the United States. The need for food scientists is increasing because of the growing need to improve the quantity, quality, variety, and safety of foods. A growing public awareness of the importance of healthful diet is causing food scientists to search for ways to produce foods with less sodium, sugar,

fat, cholesterol, and other substances. Private households, chain restaurants, hospitals, and airlines will demand more convenience foods. Employment for food scientists may expand somewhat as the industry supplies healthful foods that meet the changing needs and tastes of a constantly increasing population.

ENTRY METHODS

College students about to graduate may get help in their job search from their college placement office. They may send resumes to food processing companies or to government agencies that hire food scientists.

Many food scientists start as quality assurance workers or as aides to production managers. Some begin as scientists in a research and development laboratory of a food company. Others may begin in technical sales and marketing. Those with a Master's degree may start as food chemists in research. Those with a Doctoral degree may begin their career in basic research or in teaching.

Many students take advantage of the departmental food industry summer internship program and the numerous paid positions available during the summer the department has arranged with several companies, primarily in the Chicago area, but also in other cities throughout the U.S.A. Generally, if a student does well during their summer internship, the student will be offered a permanent position upon graduation.

ADVANCEMENT

Advancement may take the form of a promotion to work with more responsibility and higher earnings. Scientists may, for instance, go from quality assurance to product research. Others advance to management positions. Some enter marketing and sales where their own efforts may produce higher earnings.

Many professional food scientists advance to research and corporate management; some may become vice presidents or presidents of food processing companies.

RELATED OCCUPATIONS*

The Employment and Training Administration of the U.S. Department of Labor classifies food scientists with other workers in life sciences. In this group also are food chemists, dairy scientists, research dietitians, plant breeders, biologists, bioscientists, and microbiologists.

The U.S. Department of Labor also classifies food scientists with other people in biological sciences occupations. In this group are biochemists, botanists, geneticists, microbiologists, pharmacologists, and public health microbiologists.

Individuals interested in food science might look into the work of agronomists, horticulturists, toxicologists, or dairy herd improvement supervisors. They might consider the occupations of medical scientists, health physicists, industrial hygienists, environmental health sanitarians, or dietitians.

*from *Chronicle Guidance Publications*, October, 1991, Moravia, NY 13118

Food Science Course Requirements

PRESCRIBED COURSES INCLUDING CAMPUS GENERAL EDUCATION

English Composition and Speech		Hours	
SPCOM 111	Verbal Communication		3
AND			
SPCOM 112	Verbal Communication		3
OR			
SPCOM 101	Principles of Effective Speaking		3
RHET 105	Principles of Composition		4
Composition II			3
Quantitative Reasoning			
MATH 134	Calculus for Social Scientists, I		4
Statistics: Choose from ACE 261; CPSC 141; ECON 172; MATH 161; PSYCH 235; SOC 185; or STAT 100			3-4
Humanities, Social Science, and Cultural Studies			
Humanities: Six hours from approved list			6
Cultural Studies: Non-Western and Western---three hours of each			6
Social Sciences: Six hours from approved campus list			6
complete list of available Humanities, Social Science, and Cultural Studies courses: http://www.provost.uiuc.edu/gened/			
Natural Science			
CHEM 101/105	General Chemistry/Laboratory		4
CHEM 102/106	General Chemistry/Laboratory		4
CHEM 231	Elementary Organic Chemistry		3
CHEM 234	Elementary Organic Chemistry Laboratory		2
MCBIO 100	Introductory Microbiology		3
MCBIO 101	Introductory Experimental Microbiology		2
MCBIO 312*	Techniques of Applied Microbiology		2
PHYCS 101	General Physics (Mechanics, Heat and Sound)		5
PHYCS 102	General Physics (Light, Electricity, Magnetism and Modern Physics)		5

Select one course from the following selections:

IB 104	Animal Biology	4
MCB 150	Molecular and Cellular Basis of Life	4
MCB 151	Molecular and Cellular Biology Laboratory	1
IB103*	Plant Biology	4
PHYSL 103	Introduction to Human Physiology	3

AGRICULTURE PRESCRIBED COURSES

ACES 100	Contemporary Issues in the Agricultural, Consumer and Environmental Sciences	2
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OTHER PRESCRIBED COURSES

ANSCI 290	Introduction to Metabolism in Domestic Animals	3
or		
BIOCH 350	Introductory Biochemistry	3

FOOD SCIENCE AND HUMAN NUTRITION PRESCRIBED COURSES

FSHN 101	Introduction to Food Science and Human Nutrition	3
FSHN 120	Contemporary Nutrition	3
FSHN 131	Introductory Food Laboratory	3
FSHN 199*	Undergraduate Open Seminar	1
FSHN 202*	Sensory Evaluation of Foods	3
FSHN 260*	Raw Materials for Processing	4
FSHN 298*	Undergraduate Seminar	1
FSHN 314*	Food Chemistry	4
FSHN 316*	Food Chemistry Laboratory	2
FSHN 318*	Food Analysis	4
FSHN 360*	Food Engineering	3
FSHN 361*	Food Processing I	3
FSHN 362*	Food Processing II	3
FSHN 366*	Product Development	3
FSHN 371*	Food and Industrial Microbiology	3
FSHN 372*	Sanitation in Food Processing	2

OPEN ELECTIVES 12-22

Minimum of 130 hours required for graduation.

*Course offered only once/year during designated semester.

**BS Degree in Food Science and Human Nutrition
Food Science Option: Eight Semester Plan of Study**

FALL		SPRING	
Freshman year			
ACES 100*	2	Natural Science ¹	5
FSHN 199‡*	1	FSHN 131	3
FSHN 101	3	CHEM 101	3
MATH 134	4	CHEM 105	1
SPCOM 101 or RHET 105	3-4	SPCOM 101 or RHET 105	<u>3-4</u>
CHEM 100 or HUM/SS/CS	<u>3</u>		
Total	16-17	Total	15-16
Sophomore year			
FSHN 120	3	FSHN 260 ²	4
FSHN 298*	1	CHEM 231	3
MCBIO 100	3	CHEM 234	2
MCBIO 101	2	Statistics ³	3-4
CHEM 102	3	Humanities/Social Science/CS	<u>3</u>
CHEM 106	<u>1</u>		
Total	13	Total	15-16
Junior Year			
FSHN 202*	3	FSHN 318*	4
FSHN 314*	3	FSHN 360*	3
FSHN 316*	2	FSHN 371*	3
PHYCS 101	5	MCBIO 312*	2
ANSCI 290 or BIOCH 350	<u>3</u>	Open Electives	<u>3-6</u>
Total	16	Total	15-18
Senior Year			
FSHN 361*	3	FSHN 362*	4
Humanities/Social Science/CS	3	FSHN 372*	2
Composition II†	3	Humanities/Social Science/CS	3
FSHN 366*	3	Open Electives	<u>6-8</u>
PHYCS 102	<u>5</u>		
Total	17	Total	15-17

¹Choose from IB 104, MCB 150, MCB 151, IB 103*, PHYSL 103

³Choose from ACE 261, CPSC 141, ECON 172, MATH 161, PSYCH 235, SOC 185

*Course offered only once/year during designated semester.

‡Section TPC

†Each student must fulfill their "Composition II" course requirement with a course found on the list on the web site maintained by the Office of the Provost, <http://www.provost.uiuc.edu/gened/acp.asp>, such as B&TW 250, 253, 263 or preferably 261.

Additional open electives may be required beyond the courses listed above to meet the minimum amount necessary for graduation. Please work with your advisor to determine the best way to fulfill graduation requirements.

Total hours required (minimum) 130

Hospitality Management

The Hospitality Management option integrates the basic principles of business and hospitality management with the goal of pursuing management careers in food services, lodging services, recreation services, and travel-related services. Constituting 126 hours for graduation, the core program consists of 35 hours of hospitality-related course work, including food science, food management, nutrition, sanitation, purchasing, and the management of institutional, commercial, and fine dining facilities. In addition, the option is supplemented by a 21 hour concentration in business through the College of Commerce. Hands-on experience is provided through the management of Bevier Café and the Spice Box, as well as through the completion of practical and professional work experiences consisting of 320 hours each. This option is unique to other hospitality management programs in that it is science-based, further enhancing the student's knowledge in the management and handling of food, as well as providing a competitive edge upon graduation.

EMPLOYMENT OPPORTUNITIES

While the different segments of the industry have their own unique characteristics, they all share the same mission and heritage - serving the guest. They also possess a common future as one of the most dynamic employment and career fields available throughout the 21st Century.

Food services include: quick service, carry-out, family-style, specialty, and fine dining restaurants; private clubs; banquet operations, coffee shops, and dining rooms in hotels and lodging facilities; pubs; delis; gourmet shops; nightclubs; catering companies; commercial airlines; and foodservice operations in businesses, schools, colleges and universities, stadiums, convention centers, state and national parks, hospitals and other health care facilities, and just about any place food is served.

Lodging services include: luxury, full-service convention, all-suite, mid-scale, and budget hotels; motels; resorts; conference centers; inns; and bed and breakfast operations.

Recreation services include: theme parks and attractions; marinas; sports and leisure management; campgrounds; and parks.

Travel-related services include: domestic and international air travel; cruise lines; railroads; bus lines; tour operators; travel agencies; convention management and meeting planning; and tourism marketing.

Graduates frequently start their careers as management trainees, assistant managers, or supervisors. Starting salaries compare favorably with those in other business-related occupations, and the potential for advancement is excellent for the capable individual who is willing to work hard. Advancement opportunities extend far beyond the management of individual businesses. There are many opportunities for advancement to multi-unit management or corporate staffs in major companies. The industry also hires graduates into accounting, marketing and sales, finance, and human resource management. In addition to these positions, many of the vendors who supply products and services for the industry also hire graduates of Hospitality Management.

Hospitality Management Option Course Requirements

PRESCRIBED COURSES INCLUDING CAMPUS GENERAL EDUCATION

English Composition and Speech Hours

SPCOM 111	Verbal Communication	3
and		
SPCOM 112	Verbal Communication	3

or

SPCOM 101	Principles of Effective Speaking	3
and		
RHET 105	Principles of Composition	4
or		
RHET 108	Forms of Composition	4

Composition II

B&TW 250	Principles of Business Writing	3
or		
	other Advanced Composition	

Quantitative Reasoning

MATH 134	Calculus for Social Scientists, I	4
Statistics: Choose from ACE 261; CPSC 141; ECON 172; MATH 161; PSYCH 235; SOC 185; or STAT 100		3-4

Humanities/Social Science/Cultural Studies

Humanities: Nine hours from approved campus list	9
Cultural studies: Non-Western and Western---three hours of each	6
for complete list of available Cultural Studies courses, visit http://www.provost.uiuc.edu/gened/	

Social Sciences: Nine hours must include:

ACE 100	Introductory Agricultural Economics	4
or		
ECON 102	Microeconomic Principles	3
SOC 100	Introduction to Sociology	4
PSYCH 100	Introduction to Psychology	4
or		
PSYCH 103	Introduction to Experimental Psychology	4

Natural Science

CHEM 101/105	General Chemistry (Biological Version [recommended by college])/Laboratory	4
CHEM 102/106	General Chemistry (Biological Version [recommended by college])/Laboratory	4
MCBIO 100	Introductory Microbiology	3
MCBIO 101	Introductory Experimental Microbiology	2

OTHER PRESCRIBED COURSES

BADM 200	The Legal Environment of Business	3
or		
BADM 202	Principles of Marketing	3
BADM 210	Management and Organizational Behavior	3
BADM 321	Individual Behavior in Organizations	3
or		
PSYCH 245	Industrial Organizational Psychology	3
HRE 387	Training Programs in Business and Industry	4
ACCY 200*	Fundamentals of Accounting	3
ACE 161	Microcomputer Use in Agriculture	3
ANSCI 109**	Meat Purchasing and Preparation	2

AGRICULTURE PRESCRIBED COURSES

ACES 100*	Contemporary Issues in the Food, Consumer and Natural Resource Systems	2
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FOOD SCIENCE AND HUMAN NUTRITION PRESCRIBED COURSES

FSHN 101	Introduction to Food Science and Human Nutrition	3
FSHN 120	Contemporary Nutrition	3
FSHN 131	Introductory Food Laboratory	3
FSHN 140*	Introduction to the Hospitality Industry	3
FSHN 145	Introduction to Hospitality Management	2
FSHN 149	Applied Food Service Sanitation	1
FSHN 231	Food Systems	3
FSHN 240	Management of Quantity Food Production	4
FSHN 245*	Purchasing for the Hospitality Industry	3
FSHN 293	Professional Work Experience	4
FSHN 350*	Hospitality Management: Skills and Applications	3
FSHN 355*	Management of Fine Dining	4

*Course is offered only once/year during designated semester

**Offered odd years only

Minimum of 126 hours required for graduation

B.S. Degree in Food Science and Human Nutrition
Hospitality Management Option: Eight Semester Plan of Study

	FALL		SPRING
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Freshman year			
FSHN 140*	3	FSHN 145	3
ACES 100*	2	SPCOM 101/RHET 105	3-4
MATH 134	4	PSYCH 100 or 103	4
SPCOM 101/RHET 105	3-4	ACE 161	3
SOC 100	<u>4</u>	Humanities/(HP or LA)	<u>3</u>
Total	16-17	Total	16-17

Summer: Practical Work Experience, 0 credit hours

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Sophomore year			
FSHN 101	3	FSHN 131	3
CHEM 101 and CHEM 105	4	CHEM 102 and CHEM 106	4
ACE 100 or ECON 102	3	Statistics ¹	3
ANSCI 109**	2	Humanities/Western	3
Humanities/Non Western-US (HP or LA & NW or US)	<u>3</u>	(HP or LA & W)	
		Open electives	<u>3</u>
Total	15	Total	16

¹Select from ACE 261; CPSC 141; ECON 172; MATH 161; PSYCH 235; SOC 185; or STAT 100

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Junior year			
FSHN 231	3	FSHN 149	1
FSHN 245*	3	FSHN 240	4
ACCY 200*	3	MCBIO 100	3
BADM 210	3	MCBIO 101	2
B&TW 250 (or other ACP)	<u>3</u>	BADM 200	3
		Open Electives	<u>3</u>
Total	15	Total	16

Summer: FSHN 293 Professional Work Experience, 4 credit hours

<hr/>			
Senior year			
FSHN 120	3	FSHN 350*	3
BADM 321 or PSYCH 245	3	FSHN 355*	4
BADM 202	3	HRE 387*	4
Open electives	<u>4</u>	Open electives	<u>3</u>
Total	13	Total	14

*Course is offered only once/year during designated semester

**Odd years only

Additional open electives may be required beyond the courses listed above to meet the minimum amount necessary for graduation. Please work with your advisor to determine the best way to fulfill graduation requirements.

Total hours required (minimum) 126

Human Nutrition

This option focuses on the field of human nutrition and reflects the growing need to prepare individuals for careers in health, research and industry, and nutrition. The Human Nutrition option is best suited for those students who expect to pursue advance degrees in nutritional sciences, or professional degrees in medicine, dentistry, or law. The option emphasizes a strong science background and allows students to obtain a strong human nutrition preparation that is not available elsewhere on campus. The total number of hours required for graduation is 126.

An understanding of human nutrition requires an in-depth knowledge of the physiological and biochemical aspects of metabolism coupled with an appreciation of the nutrient composition of foods and the role of social and economic factors as determinants of food selection. The role of nutrition in human health and disease has gained greater appreciation in the past decade. The Human Nutrition option provides an excellent background for students who plan to pursue careers in the rapidly growing field of nutrition and related health sciences. The curriculum provides a strong foundation in basic sciences, including chemistry, biochemistry, physiology, and microbiology. Additional lecture and laboratory courses in food science and nutritional biochemistry round out the core curriculum. An advantage of the Human Nutrition option is that it provides the flexibility for students to select three to five courses in areas of specialization, including preparation for professional or graduate school, public health and community nutrition, or sports nutrition. These courses are flexible, but must be approved by the student's advisor and the advising coordinator prior to enrollment.

WORK PERFORMED

The Human Nutrition option can be the start to a career in medicine and allied medical specialties, public health, dentistry, veterinary medicine, and laboratory research in industry, academia, and government. Graduates often find employment in food and pharmaceutical sales. Some graduates are employed as nutrition educators in private practice or in public health and community center settings. However, it is recommended that students desiring a career in nutrition education and counseling in a clinical setting should choose the Dietetics option.

EDUCATION AND TRAINING

Depending upon the ultimate career choice, the undergraduate option in Human Nutrition can be complemented with advanced training in professional degree programs (medicine, dentistry, public health, dietetics), graduate programs, business, journalism, law, or research.

PROFESSIONAL ASSOCIATIONS

The American Society for Nutritional Sciences (3500+ members) is the premier research society dedicated to improving the quality of life through the science of nutrition. The Society fosters and enhances research in animal and human nutrition, and provides opportunities for disseminating nutrition research results at its annual meeting and in its official publication, the *Journal of Nutrition*. It also provides opportunities for fellowship and support among nutritionists, and brings scientific knowledge to nutrition issues through communication and influence in the public domain. The Society for Nutrition Education is the main professional association for nutritionists working in community nutrition and nutrition education.

Human Nutrition Option Course Requirements

PRESCRIBED COURSES INCLUDING CAMPUS GENERAL EDUCATION

English Composition and Speech Hours

SPCOM 111	Verbal Communication	3
and		
SPCOM 112	Verbal Communication	3
OR		
SPCOM 101	Principles of Effective Speaking	3
and one of the two following courses:		
RHET 105	Principles of Composition	4
RHET 108	Forms of Composition	4
Composition II		3

Quantitative Reasoning

MATH 120**	Calculus and Analytical Geometry, I	5
or		
MATH 134	Calculus for Social Scientists, I	4
or		
MATH 135	Calculus	5

Statistics: Choose from ACE 261; CPSC 141; ECON 172;
MATH 161; PSYCH 235; SOC 185; or STAT 100 3-4

Humanities, Social Science, and Cultural Studies

Humanities: Nine hours from approved list	9
Cultural Studies: Non-Western and Western---three hours of each	6
Social Sciences: Nine hours from approved campus list	9

(complete list of available Humanities, Social Science, and Cultural Studies courses: <http://www.provost.uiuc.edu/gened/>)

Natural Science

CHEM 101/105	General Chemistry/Laboratory	4
CHEM 102/106	General Chemistry (Biological or Physical Version)/Laboratory	4
CHEM 231	Elementary Organic Chemistry	3
CHEM 234	Elementary Organic Chemistry Laboratory	2
BIOCH 350	Introductory Biochemistry	3
or		
BIOCH 352/353	General Biochemistry	4
MCBIO 100	Introductory Microbiology	3
MCBIO 101	Introductory Experimental Microbiology	2
PHYSL 103	Introduction to Human Physiology	4
PHYSL 103	Introduction to Human Physiology	3
PHYSL 104	Introduction to Human Physiology Laboratory	1

Department of Food Science and Human Nutrition
Course Descriptions

Course Numbering

Classes numbered from

- *01 to *09: Introductory level courses
- *11 to *19: Food chemistry courses
- *20 to *29: Nutrition course
- *30 to *39: Foods courses
- *40 to *59: Hospitality management courses
- *60 to *69: Food processing/engineering courses
- *70 to *79: Food microbiology courses
- *90 to 399: Undergraduate special courses
- 490 to 499: Graduate special courses

Course descriptions at:

<http://www.fshn.uiuc.edu/academics/classes.html>

Department of Food Science and Human Nutrition Faculty Directory

Artz, William E. Associate Professor wartz@uiuc.edu 382B AESB, MC-646 333-9337	De Mejia, Elvira Assistant Professor edemejia@uiuc.edu 228 ERML, MC-051 244-3196	Hasler, Clare Assistant Professor c-hasler@uiuc.edu 105 ABL, MC-640 244-9764	Padua, Graciela W. Assistant Professor gwpadua@uiuc.edu 382L AESB, MC-646 333-9336
Baianu, Ion C. Professor i-baianu@uiuc.edu 567 BH, MC-182 244-6630	Dong, Faye M. Department Head fayedong@uiuc.edu 260 BH, MC-182 244-4487	Helferich, William G. Professor helferic@uiuc.edu 580 BH, MC-182 244-5414	Plawecki, Karen L. Teaching Associate plawecki@uiuc.edu 345 BH, MC-182 244-2884
Blaschek, Hans P. Professor blaschek@uiuc.edu 486 ASL, MC-630 333-8224	Donovan, Sharon M. Professor sdonovan@uiuc.edu 457 BH, MC-182 333-2289	Jeffery, Elizabeth H. Associate Professor ejeffery@uiuc.edu 499 BH, MC-182 333-3820	Reber, Robert J. Associate Professor reberr@mail.aces.uiuc.edu 339 BH, MC-182 244-2851
Brewer, M. Susan Associate Professor msbrewer@uiuc.edu 202 ABL, MC-640 244-2867	Engeseth, Nicki J. Assistant Professor engeseth@uiuc.edu 259 ERML, MC-051 244-6788	Layman, Donald K. Professor d-layman@uiuc.edu 439 BH, MC-182 333-1616	Reutter, Elizabeth F. Teaching Associate breutter@uiuc.edu 363 BH, MC-182 333-2024
Cadwallader, Keith Associate Professor cadwllldr@uiuc.edu 205A ABL, MC-640 333-5803	Erdman, John W., Jr. Professor jwerdman@uiuc.edu 451 BH, MC-182 333-2527	Lee, Soo Assistant Professor soolee@uiuc.edu 351 BH, MC-182 244-9435	Schmidt, Shelly J. Professor sjs@uiuc.edu 367 BH, MC-182 333-6369
Chapman-Novakofski, Karen Associate Professor kmc@uiuc.edu 343 BH, MC-182 244-2852	Feng, Hao Assistant Professor haofeng@staff.uiuc.edu 382E AESB, MC-646 244-2571	Martin, Scott E. Professor semartn@uiuc.edu 486 ASL, MC-630 244-2877	Singletary, Keith W. Professor kws@uiuc.edu 467 BH, MC-182 333-5549
Cheryan, Munir Professor mcheryan@uiuc.edu 110 ABL, MC-640 333-9332	Garrow, Linda Visiting Teaching Assoc garrow@uiuc.edu 399A BH, MC-182 333-9011	Morris, Scott A. Associate Professor smorris@uiuc.edu 382G AESB, MC-646 333-9330	Tappenden, Kelly A. Assistant Professor tappende@uiuc.edu 443 BH, MC-182 333-2987
Cummings, Terri Advising Coordinator tcumming@uiuc.edu 258 BH, MC-182 244-4405	Garrow, Timothy A. Associate Professor tagarrow@uiuc.edu 463 BH, MC-182 333-3845	Nakamura, Manabu Assistant Professor 439 BH BH, MC-182 333-1267	Weingartner, Karl Senior Food Scientist kweingar@uiuc.edu 38 NSRC, MC-637 333-4088

Key to Building Names

ABL: Agriculture Bioprocess Laboratory, 1302 W. Pennsylvania Avenue, Urbana, IL 61801
 AESB: Agriculture Engineering Sciences Building, 1304 W. Pennsylvania Avenue, Urbana, IL 61801
 ASL: Animal Sciences Laboratory, 1207 W. Gregory Drive, Urbana, IL 61801
 BH: Bevier Hall, 905 S. Goodwin Avenue, Urbana, IL 61801
 ERML: Edward R. Madigan Lab, 1201 W. Gregory Drive, Urbana, IL 61801
 NSRC: National Soybean Research Laboratory, 1101 W. Peabody Drive, Urbana, IL 61801

FSHN Secretarial Staff

Maureen Airsman Secretary 382D AESB, MC-646	333-9328	Crystal Howard Graduate Office Secretary 386 Bevier, MC-182	333-1326
Diane Frerichs Extension Secretary 537 Bevier, MC-184	333-0521	Marsha Poff Secretary to the Head 260 Bevier, MC-182	244-8467
Vicki Hamilton Grad. Seminar, Newsletter 200 ABL, MC-640	333-0516	Barb Vandeventer Undergraduate Office Secretary 386 Bevier, MC-182	333-1324

Important Contact Information

Absence from class, excused; Absence from final exams		Financial Aid	
Assistant Dean, 104 Mumford	333-3380	420 Student Services Building	333-0100
Advising Coordinators:		FSHN Main Office	
Dietetics option		Dr. Faye Dong, Head	
Karen Plawecki, 345 Bevier	244-2884	260 Bevier	244-4498
		FSHN Website: http://www.fshn.uiuc.edu	
Food Science option		Guided Individual Study	
Terri Cummings, 258 Bevier	244-4405	302 E. John Street, Suite 1406	333-1321
Food Industry and Business option		Health service	
Terri Cummings, 258 Bevier	244-4405	McKinley Health Center	333-2701
Hospitality Management option		Housing problems	
Beth Reutter, 363 Bevier	333-2024	200 Clark Hall	333-0610
Human Nutrition option		Petitions	
Linda Garrow, 399A Bevier	333-9011	104 Mumford	333-3380
Career planning		Probation, drops, readmission	
ACES Student Development and Career Services		Assistant Dean	
115 LIAC	244-4540	104 Mumford	333-3380
Career Services Center		Study Abroad	
715 South Wright Street	333-0820	Study Abroad Office	
FSHN Student Career Center		115 International Services Building	333-6322
258 Bevier	244-4405	ACES Study Abroad Office	
Counseling Center		109 Mumford	333-6420
610 E. John Street		Summer school	
Student Services Center	333-3704	Admissions Officer	
Degree progress		104 Mumford	333-3380
ACES Records Officer		Transfer of credits	
104 Mumford	333-3380	Admissions Officer	
Employment on campus		104 Mumford	333-3380
Work study			
420 Student Services Building	333-0100		

Faculty Research Interests

<http://www.fshn.uiuc.edu/dept/people.cfm>

General Academic Calendar

The 2003-2004 academic year shall commence on August 21, 2003, and conclude on May 20, 2004.

Fall Semester 2003

Instruction Begins	Wednesday, August 27 (to be treated as a Monday)
Labor Day	Monday, September 1 (no classes)
Thanksgiving Vacation Begins	Saturday, November 22, 1 p.m.
Instruction Resumes	Monday, December 1, 7 a.m.
Instruction Ends	Friday, December 12
Reading Day	Saturday, December 13
Final Examinations Begin	Monday, December 15
Final Examinations End	Saturday, December 20

Spring Semester 2004

M. L. King Day	Monday, January 19 (no classes)
Instruction Begins	Tuesday, January 20
Spring Vacation Begins	Saturday, March 20, 1 p.m.
Instruction Resumes	Monday, March 29, 7 a.m.
Instruction Ends	Wednesday, May 5
Reading Day	Thursday, May 6
Final Examinations Begin	Friday, May 7
Final Examinations End	Friday, May 14
Commencement	Sunday, May 16

Summer Sessions 2004

SUMMER TERM 1

Instruction begins	Monday, May 17
Memorial Day	Monday, May 31 (no classes)
Final examinations (final class day or following day) must end Saturday, June 12	

SUMMER TERM 2

Instruction begins	Monday, June 14
Independence Day	Monday, July 5 (no classes)
Beginning of second 4-week period of instruction	Monday, July 12
Instruction ends	Thursday, August 5, 12 noon
Reading Day	Thursday, August 5, 1 p.m.
Final Examinations Begin	Friday, August 6
Final Examinations End	Saturday, August 7