University of Illinois at Urbana-Champaign

Department of Food Science and Human Nutrition

http://www.fshn.illinois.edu/

AY 2017-2018 Online Master of Science in Food Science Program Student Handbook

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ACES College of Agricultural, Consumer and Environmental Sciences

Dawn Bohn – January 2018

Dear Master of Science Student in the Off---Campus Program:

Congratulations on your decision to complete the Off---Campus Master of Science (MS) Program in the Department of Food Science and Human Nutrition (FSHN) at the University of Illinois, Urbana Champaign! This program was one of the first extramural programs created at the University of Illinois, and it has undergone many changes and updates to remain current and relevant for today's students who continue working in their professional positions while seeking an advanced degree. You will find that the Online Food Science MS Program uses a lecture-based format delivered via distance education technologies. This provides you with the ability to access courses, even when your work and travel schedule or residential location may change.

The University of Illinois, Urbana-Champaign, is a Research I institution, and as such, faculty members participating in the Online Food Science MS Program are conducting innovative and critical studies that are leading the food sciences forward. These same faculty members are award--winning instructors, and they will share their discoveries, fundamental knowledge and professional experiences with you in interesting and engaging ways. Guest lecturers also may be involved, depending on the topic and desire to introduce you to additional experts in various areas. During your participation in the Online Food Science MS Program, you will build a network of contacts as you virtually interact with peer students who also are working professionals.

As described in this guide, the Online Food Science MS Program requires 32 hours of rigorous course work. Your challenge will be to organize and manage your course requirements and learning experiences with your other roles, including professional, family and social responsibilities. This may be tough at times, and the rewards in earning an advanced degree that comes from expanding your knowledge, thinking critically about the current and future state of food sciences and solving existing and emerging professional problems will be worth your efforts.

The Online Food Science MS Program Guide is to be used as an informational and navigational tool. Sections on program requirements, courses, grading policies, student advising, the University of Illinois Graduate College policies and procedures on admissions and enrollment, as well as other policies, procedures and guidelines applicable to the program are included. For further information on University policies and procedures, please also see the University of Illinois at Urbana-Champaign Handbook for Graduate Students. This Online Food Science MS Program Guide will help lead you and provide advice as you progress through the program. Because policies and procedures are modified from time---to---time at the University, please consult with the Director of the Online Food Science MS Program for final rulings or decisions.

Additional information for the Off-Campus Program may be found on the FSHN Department website (http://fshn.illinois.edu/online). Please peruse the website content as this changes frequently. If you have questions, please contact Dr. Dawn Bohn, Director of the Online Food Science MS Program, or Ms. Audra Martin, Office Manager.

Again, congratulations and welcome to the program! We are pleased that you have accepted this challenge and have joined the FSHN Department for your advanced studies.

Sincerely,
Sharon M. Nickols---Richardson, PhD, RD
Professor and Head, Department of Food Science and Human Nutrition
University of Illinois at Urbana-Champaign

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DEPARTMENT OF FOOD SCIENCE AND HUMAN NUTRITION, UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

The Department of Food Science and Human Nutrition at the University of Illinois at Urbana-Champaign is highly regarded in the areas of Food Science, Human Nutrition, Dietetics, and Hospitality Management. More information about the department can be found at https://fshn.illinois.edu. A link to the department's strategic plan can be found at https://fshn.illinois.edu/files/documents/fshn-strategic-plan.pdf.

Master of Science Program - Online

The Department of Food Science and Human Nutrition (FSHN) offers an online Master of Science Degree in Food Science. Beyond minimum requirements in food science, the program focuses on fields such as biochemistry, chemistry, microbiology, nutrition, engineering, processing, and similar areas related to foods.

The off-campus M.S in Food Science and Human Nutrition program began in 1973 at the request of representatives of the food industry in Chicago. The first off-campus M.S. degree was granted in 1977 and since then, hundreds of people have earned M.S. degrees in Food Science and Human Nutrition through this program. Starting in the fall of 2010, the program transitioned to an online format. All courses are delivered via live (synchronous) online sessions, using online course management and course delivery systems available through Blackboard Education Technology and Services. The technologies allow instructors to provide live lectures; and for students to ask questions, interact with other students, and even give presentations.

Center for Innovation and Teaching in Learning (CITL)

On the Urbana campus, the Center for Innovation and Teaching in Learning (CITL) works closely with FSHN to coordinate this degree program. In addition to FSHN and the College of Agricultural, Consumer and Environmental Sciences (ACES), CITL also works with the Colleges of Education, Engineering, Applied Life Studies, Liberal Arts and Sciences, and the Schools of Library and Information Science and Social Work to offer graduate credit courses and programs for adults all over the world.

Policies Applying to All Graduate Students

The policies and procedures for all graduate students, including those enrolled in an online program, can be found in following Graduate College and University of Illinois publications:

The Graduate College Handbook for Students, Faculty and Staff
Student Code
Policy and Procedures on Academic Integrity in Research and Publication

These publications are available on the University website *http://www.illinois.edu* or the Graduate College website *http://www.grad.illinois.edu*.

The policies and procedures described herein pertain to all students in the FSHN graduate program. *The Graduate College Handbook for Students, Faculty and Staff* is available at *http://www.grad.illinois.edu/gradhandbook/*. It explains your privileges and responsibilities as a graduate student, describes many of the services provided to you by the University, and summarizes the Graduate College regulations that apply to all graduate students. Much of the handbook deals with rules and regulations, but it also suggests ways in which exceptions can be requested for good reasons. The Graduate College strongly recommends that students visit the above website to utilize the on-line handbook.

The *Student Code* is available in a searchable format at *http://www.illinois.edu/admin_manual/code/*.

Requirements for admission to the Master of Science program

For admission to the Graduate College, a student is required to have a baccalaureate degree. It is desirable, but not required, that this degree be related to physical, biological, agricultural or engineering sciences. Necessary background courses include calculus (1 semester), general chemistry (2 semesters), organic chemistry (1 semester), physics (2 semesters) and microbiology (1 semester). If your background is deficient in these areas of study, you will be expected to remedy these deficiencies prior to applying to the program. Correspondence courses, other distance education courses, or traditional classroom courses can be taken to satisfy prerequisite requirements. Credit earned to satisfy background requirements is not applied towards an advanced degree. The minimum undergraduate grade-point average (GPA) required for admission to the online master's program is 3.0 (A = 4.0). If your undergraduate GPA is less than 3.0, you *may be* admitted on *limited status* with the completion of a competitive GRE score. Students on limited status must have a minimum graduate GPA of 3.00/4.00 by the end of the first semester. The GRE may be required as a part of your application. Applicants that have held a full-time professional position (in the food industry or other fields) for less than 3 years are required to complete the GRE. Or, regardless of years of professional experience, if your cumulative undergraduate GPA is less than the university graduate requirement of 3.0, you are required to complete the GRE. Students must also submit a statement of purpose, resume, and three supporting letters of recommendation. These materials can be uploaded directly to the *application portal*.

All students whose native language is not English must take the Test of English as a Foreign Language (TOEFL) exam. Minimum score requirements can be found on the *Graduate College website*.

Deadlines for application for admission to the online master's program in FSHN are as follow:

Fall – May 1
Spring – October 1

ALL materials must be submitted by this deadline in order to be considered for the respective semester.

Grading System

The University of Illinois awards letter grades on the A through F scale. For graduate students, only courses taken for graduate credit and graded on the A through F scale are included in the GPA calculation. Any repeated course is ignored when computing the GPA and the accumulated credits toward a degree. Credit for a course in which a student has received an F cannot be counted toward the degree; however, a zero is used in calculating the GPA. Grades are evaluated numerically on a four-point scale for the computation of GPA as follows:

A+ = 4.00	A = 4.00	A- = 3.67
B+ = 3.33	B = 3.00	B- = 2.67
C+ = 2.33	C = 2.00	C- = 1.67
D+ = 1.33	D = 1.00	D- = 0.67
no + for F	F = 0.00	no - for F

Other symbols used by the University grading system can be found in the *Graduate College Handbook*.

The GPA includes all hours of course work with grades A through F and ABS. The GPA does not include course work transferred from other universities, with the exception of the other UI campuses. Students in the FSHN M.S. program are required to maintain a GPA of at least 3.00/4.00. If your GPA falls below this minimum, you will be placed on *probation*, and will have one semester to raise your GPA to 3.00/4.00.

Minimum Requirements for the Non-Thesis Master's Degree

In summary:

1. Thirty-two (32) hours of course work at the 400- and 500-levels. Up to 8 hours of FSHN 598 may be used to fulfill this requirement. More than two hours of S/U graded sections of FSHN 598 require approval by the Graduate Program Committee.

2. A GPA of at least 3.0 (4.0=A) for all graded courses taken during the student's enrollment in the M.S. degree program.

3. Pass a final oral examination administered by three FSHN faculty members, all of whom are members of the Graduate College.

4. Completion of all requirements within five (5) years of initial registration in the Graduate College.

A minimum of **32 hours** of credit at the 400 or 500 level is required for the M.S. Degree in Food Science and Human Nutrition. FSHN 414 (food chemistry), FSHN 461 (Food Processing I), and FSHN 471 (food and industrial microbiology) are all required courses. If FSHN 414, 461, or 471 were previously taken at the University of Illinois at Urbana-Champaign, or similar courses were taken at an accredited institution, the student is eligible to forego taking those courses again. In addition, if FSHN 414, 461, or 471 were taken more than 5 years ago, consideration should be given to taking them again; however, credit will not be given for taking FSHN 414, 461, or 471 (or equivalents) again. **At least 12 hours of coursework must be at the 500 level**. After completion of coursework, you must satisfactorily complete an oral examination covering your area of specialization (if you choose one) and the general field of food science.

Transfer of Credit

Per the Graduate College, courses taken as a non-degree student and courses taken at other accredited institutions may be transferable, subject to Departmental and Graduate College approval. All transfer credits are handled by *petition* to the Graduate College. The Graduate College will not consider transfer of courses for credit if those courses were completed more than five calendar years prior to the date of transfer. Only those courses with grades of "B" or better will be considered.

Letter grades of courses transferred from another accredited institution do not enter into the computation of the grade point average (GPA). Letter grades of courses taken as a non-degree student, or courses taken at the University of Illinois at Chicago or the University of Illinois at Springfield, are included in your GPA. If you have completed graduate work at a recognized institution, but have not applied these courses to an advanced degree at that institution, you may petition to obtain credit toward the M.S. degree.

Additional information regarding transferable coursework, from the Graduate College Handbook for Faculty, Staff, and Students:

> *Generally, a maximum of 12 semester hours of graduate work completed **outside** the University of Illinois at Urbana-Champaign as well as 12 hours of coursework as a non-degree student may be counted towards the master's degree. Transferable coursework includes these types:*

1. *Graduate level work taken at another accredited institution, but not used toward a degree,*
2. *Graduate level work done while enrolled as a non-degree student at the University of Illinois at Urbana-Champaign.*

Advising

Once admitted to the Food Science and Human Nutrition M.S. degree program, Dr. Dawn Bohn, Director of the program, will serve as your academic advisor while you are completing your coursework. Prior to scheduling your oral examination, you will be required to ask a faculty member, typically one that has provided instruction in the program, to serve as your oral examination chair.

Oral Examination

Upon completion of the course requirements, you must satisfactorily pass a final oral examination administered by an advisory committee. In addition to your committee chair, you will ask at least *two members* of the University of Illinois at Urbana-Champaign Graduate Faculty to serve on your committee. These members should be of various areas of specialization. Please see the table on page 13 for areas of specialization

The oral examination is a comprehensive oral examination focusing on course work as well as any special projects (i.e. FSHN 598 projects). **Prior to scheduling your oral examination, you must contact Dr. Bohn for committee review and academic history evaluation. Dr. Bohn will also provide you with detailed instructions regarding the arrangement of your oral examination.**

Students must provide a copy of his/her academic history to each member of the committee at the examination. It is the student's responsibility to assure that they have met all degree requirements prior to the scheduling of their final exam.

The advisory committee must reach a unanimous decision about the performance on the final examination. Its decision of "pass," "decision deferred," or "fail" is communicated to the Graduate College. Students should provide a copy of the M.S. Final Examination Certification to their committee.

Academic Integrity

The University is committed to learning and research, and hence is committed to truth and accuracy. Integrity and intellectual honesty in scholarship and scientific investigation are, therefore, of paramount importance. Academic misconduct includes, but is not limited to:

1. Fabrication or falsification of data, including intentionally misleading, selective, or deliberately false reporting of credentials information.

2. Unacknowledged appropriation of the work of others, including plagiarism, the abuse of confidentiality with respect to unpublished materials, or misappropriation of physical materials.

3. Evasion of, or intentional failure to comply with research regulations or requirements, including but not limited to those applying to human subjects, laboratory animals, new drugs, radioactive materials, genetically altered organisms, and standards of safety.

Differences of interpretation or judgment, or honest error, do not constitute academic misconduct. Any member of the University community who becomes aware of an apparent instance of fraud or other academic misconduct relating to research or scholarship has the responsibility to try to resolve the issue, if possible, in consultation with those directly involved. If consultation is inappropriate or unsuccessful, it is incumbent upon the individual to report the suspicious circumstances to the Department Head (or comparable administrator) of the unit concerned, or to the person appointed by the vice-chancellor for research as the research standards officer.

The unit executive officers, deans, other administrators involved, and the entire academic community are charged with protecting the academic careers of persons who have in good faith reported possible fraud or misconduct in scholarship or research.

Graduate students are expected to adhere to the highest standards of academic integrity in all areas of their training. Typical areas in which graduate students have concerns about infractions of academic integrity (called academic misconduct) include honesty in the classroom and laboratory, fabrication or falsification of data, plagiarism, lack of compliance with research regulations, allocation of credit, authorship of publications, and priority of discovery. Plagiarism is often a sensitive issue because all nations do not have the same legal restrictions on the unacknowledged use of the work of others. Questions on academic integrity should be directed to your advisor.

You are responsible for knowledge of, and compliance with, *University of Illinois policies on academic integrity*, which describes University policy and prescribes procedures for fact-finding and adjudication of allegations of academic misconduct. Although it focuses upon deterring and penalizing unacceptable conduct, its purpose is to promote compliance with the highest scholarly standards.

Technology Requirements

In an effort to better serve our students, the program is offered via the Blackboard Collaborate Synchronous Online Delivery tool. By utilizing Blackboard Collaborate, all students, regardless of where they reside or where their travel schedule may take them, can participate in the program. As noted, Blackboard Collaborate is a synchronous technology, meaning that instruction and attendance take place simultaneously. This online program is not a traditional, self-paced on-line program. Essentially, it is exactly like a regular classroom-based program, except that the classroom is virtual. All students are required to download the Blackboard Collaborate program onto their computer. If you intend to use a work computer to attend class, please meet with your technical service representative to ensure that your company does not have a firewall that blocks the Blackboard Collaborate web-based program.

All students are required to have a reliable microphone in order to participate in the program (preferably one that is noise reducing). You will be asked questions during the courses and will need a clear microphone in order to answer the questions. In addition, students are also required to have scanning ability for assignments and on the days of exams.

Library

The University of Illinois at Urbana-Champaign CITL Library provides students with convenient access to course library materials, so off-campus students will have similar access to library materials as on-campus students.

To use the University of Illinois Library system, you will need to be issued an I-Card. A photo-less I-Card can be sent to you by filling out the webform HERE. Please allow three weeks to process. If you need immediate assistance with the Library, feel free to contact the Library directly at 217-333-8400 or circlib@library.illinois.edu.

Grievance Policy

All members of the University community are expected to observe high standards of professional conduct and ethical behavior in graduate education (Guiding Standards for Faculty Supervision of Graduate Students). Although infrequent, in a large and heterogeneous scholarly community, problems may arise.

University policy strongly encourages all students who believe they have a grievance to use all appropriate avenues for informal resolution before initiating a formal grievance. Students in Food Science and Human Nutrition are encouraged to discuss the issue with the faculty or staff member with whom the problem has arisen. If a satisfactory solution is

not forthcoming, the student should discuss the issue with his or her advisor, the director of graduate studies, or the head of the department, who shall attempt to find a resolution acceptable to both parties. The student may also consult with the Graduate College, the Office of the Dean of Students, the Ombuds Office, the Office of International Student Affairs, or other sources.

The formal procedures for grievances recognized by FSHN are outlined in the annual *FSHN graduate handbook*.

Other Information

Food Science and Human Nutrition graduate students are encouraged to participate in professional organizations, such as The Institute of Food Technologists, The American Oil Chemists' Society, The American Association of Cereal Chemists, The American Chemical Society, or other professional organizations.

Helpful Contact Information

The Internet address for The University of Illinois at Urbana-Champaign is http://illinois.edu/

Campus Directory Assistance: 217-333-1000

Center for Innovation in Teaching and Learning: 1-800-252-1360 or 217-333-1462 (8 a.m. to noon and 1-5 p.m.). Other campus numbers can be accessed by requesting the last five digits of the phone number.

Online Masters in Food Science and Human Nutrition Program - Contact Information List

Name	Position/Service Provided	Phone Number and Email
Dr. Dawn Bohn	Director, Off-Campus Programs; Teaching Assistant Professor	(217) 333-0881 dbrehart@illinois.edu
Terri Cummings	Director of Student Services	(217) 244-4405 tcumming@illinois.edu
Audra Martin	FSHN Office Manager	(217) 300-1875 mart@illinois.edu
Barbara Vandeventer	FSHN Office Administrator	(217) 333-1324 vandvntr@illinois.edu
Tracie Gant	Online Program Coordinator Center for Innovation in Teaching & Learning (CITL)	tdalexa@illinois.edu mailto:Hmiller1@uiuc.edu

Online Instructors		
Dr. William Artz	Professor Emeritus	217-333-9337; wartz@illinois.edu
Dr. Dawn Bohn	Director, Off-Campus Programs; Teaching Assistant Professor	217-333-0881 dbrehart@illinois.edu
Dr. Keith Cadwallader	Professor of Food Chemistry	217-333-5803; cadwlldr@illinois.edu
Dr. Hao Feng	Professor of Food and Bioprocess Engineering; Site Director of Center for Advanced Research in Drying (CARD)	217-244-2571 haofeng@illinois.edu
Dr. Yong-Su Jin	Associate Professor of Food Microbiology	(217) 333-7981 ysjin@illinois.edu
Dr. Soo-Yeun Lee	Professor of Food Science – Sensory Science	217-244-9435 soolee@illinois.edu
Dr. Youngsoo Lee	Assistant Professor of Food Science – Food Engineering	(217) 333-9335 leeys@illinois.edu
Dr. Michael Miller	Associate Professor of Food Microbiology	217-244-1973 mille216@illinois.edu
Dr. Scott Morris	Associate Professor of Food Science – Food and Package Engineering	217-333-9330 smorris@illinois.edu
Dr. Shelly Schmidt	Professor of Food Chemistry; Director of Assessment for the Undergraduate Food Science Program	217-333-6369 sjs@illinois.edu
Dr. Matthew Stasiewicz	Assistant Professor of Food Microbiology	(217) 265-0963 mstasie@illinois.edu

Graduate Admissions Policies and Enrollment Procedures

The following are a series of questions and answers intended to provide students with information on admission and enrollment policies.

MUST A PERSON BE ADMITTED TO THE GRADUATE COLLEGE BEFORE ENROLLING IN AN ONLINE COURSE?

No. Persons are permitted to enroll in a course as a non-degree student if course eligibility requirements are met and space is available. However, priority is given to Graduate College degree students.

WHO IS ELIGIBLE TO ENROLL IN AN ONLINE COURSE?

CITL courses at the 100, 200, 300 and 400 levels are open to undergraduates who can meet course prerequisites. CITL courses at the 500 level are open only to persons who have a baccalaureate degree from an accredited institution of higher education and also meet course prerequisites.

Persons may enroll in a course as a non-degree student by paying the regular tuition and fees. Enrollment as a non-degree student is noted on the permanent University record and is subject to space availability and instructor permission. Non-degree credit may be petitioned towards the M.S. degree. A maximum of 12 hours of non-degree credit is allowed.

DOES ENROLLMENT IN AN ONLINE COURSE AUTOMATICALLY INDICATE APPLICATION FOR ADMISSION TO THE GRADUATE COLLEGE?

No. Enrollment in a course and application for admission to the Graduate College are two separate and distinct processes. Applying for admission to the Graduate College requires that the student: a) complete and submit the application for admission to the Graduate College and the application fee to the Office of Admissions and Records, b) submit all required supporting credentials to the proposed major department and c) be accepted for study by the graduate department. See the answer to the question, "Where can I obtain an application for admission or readmission to the Graduate College?" for further information about application for admission to the Graduate College.

IF I PLAN TO PURSUE AN ADVANCED DEGREE IN WHOLE OR IN PART THROUGH CITL STUDY, WHEN SHOULD I APPLY TO THE GRADUATE COLLEGE FOR ADMISSION?

Persons who plan to pursue an advanced degree are strongly encouraged to apply for admission to the Graduate College during the semester in which they take their first course. Taking one or two University of Illinois at Urbana-Champaign graduate level courses prior to applying to the Graduate College *may be* advantageous for students, especially those with an undergraduate GPA between 2.5 and 3.0 (those with an undergraduate GPA below 2.5 will not be admitted under any circumstances). Please note that no more than 12 hours can be taken as a non-degree student, so please plan the timing of your application accordingly.

WHAT HAPPENS IF I WANT TO PURSUE AN ADVANCED DEGREE, BUT DID NOT APPLY FOR ADMISSION TO THE GRADUATE COLLEGE DURING THE SEMESTER IN WHICH I ENROLLED IN MY FIRST COURSE?

Persons who did not apply for admission to the Graduate College during the semester in which they took their first CITL course are automatically classified as non-degree students. This classification permits students to enroll in CITL courses without being admitted to the Graduate College, as long as course eligibility requirements are met and space is available.

Persons who decide that they want to pursue an advanced degree after taking one or more courses as a non-degree student: a) first must apply for admission to the Graduate College and be admitted; and b) then petition for acceptance a maximum of **12 hours** of UIUC non-degree credit earned prior to admission. Students can also petition for transfer of credit from other universities. The Graduate College will not accept more than **12 hours** of non-degree credit and **12 hours** credit from another accredited institution.

Students should remember that a well-planned program is much more than the mere accumulation of credits. Therefore, persons interested in pursuing a degree should apply for admission early and have a program of study approved to insure that credits earned in courses are applicable to their programs.

WHERE CAN I OBTAIN AN APPLICATION FOR ADMISSION OR READMISSION TO THE GRADUATE COLLEGE?

Forms and information on admission to the program may be obtained at:

http://www.grad.illinois.edu/admissions

WHAT IF I AM NOT ADMITTED BY THE GRADUATE COLLEGE AFTER ENROLLING IN AN ONLINE COURSE?

Persons not admitted to the Graduate College are permitted to enroll in CITL courses for professional development purposes. Credit earned in these courses is not applicable to a degree unless the person is eventually admitted to the Graduate College, at which time a maximum of 12 hours of non-degree graduate-level UIUC courses can be applied toward a degree program (but only after successful petition of such courses to the Graduate College.)

ONCE I HAVE BEEN ADMITTED TO THE GRADUATE COLLEGE, MUST I ENROLL IN COURSES DURING EACH SUCCESSIVE SEMESTER IN ORDER TO MAINTAIN THAT STATUS?

Yes and no. A person who is admitted to the graduate program must be enrolled in a course the semester that he/she is admitted. After that semester, he/she is not required to enroll in courses each successive semester in order to maintain eligibility to take such courses. There are time limits, though, for completing an advanced degree program. See the answer to the question, "What is the time limitation for pursuing an advanced degree?" for further information.

The University email system will inactivate a student account after one semester of no course enrollment. This does not mean that you are no longer part of the online program. The department will need to reactivate your account before you are able to register for classes after an absence. Contact Barb Vandeventer if you find you find your student account has become inactive after an absence.

WHAT IS THE TIME LIMITATION FOR PURSUING AN ADVANCED DEGREE?

All graduate students are subject to University requirements governing time limitations for pursuing an advanced degree. A candidate for a M.S. degree must complete all requirements for the degree within five calendar years after initial registration in the Graduate College. Extensions are permitted for extenuating circumstances.

ONCE I HAVE COMPLETED AN ADVANCED DEGREE, MAY I CONTINUE TO ENROLL IN ONLINE COURSES?

Yes. Persons who have completed a degree may continue to enroll in courses. These persons can register as a non-degree student.

WILL THIS DEGREE PREPARE ME TO TAKE THE COMMISSION ON DIETETICS REGISTRATION (i.e., REGISTERED DIETICIAN) EXAM?

No. While students in this program do graduate with a Master of Science in Food Science and Human Nutrition due to the name of the department that grants the degree, this is truly a food science master of science program, and it will not prepare you to take the commission on dietetics registration exam.

WHAT DAY AND TIMES DO CLASSES TYPICALLY MEET?

Classes typically meet one evening per week, Monday through Thursday, between 5:30pm and 10:00pm central time.

IF MY QUESTIONS ABOUT GRADUATE COLLEGE ADMISSIONS POLICIES AND ENROLLMENT PROCEDURES HAVE NOT BEEN ANSWERED IN THIS MATERIAL, WHERE CAN I OBTAIN ADDITIONAL INFORMATION?

Please contact Dr. Dawn Bohn, Director of Off-Campus Programs via email at dbrehart@illinois.edu or via phone at 217-333-0881.

Food Science and Human Nutrition Graduate Credit Courses Offered in Online

The following courses are offered on a rotational basis. Other courses from allied fields, such as Crop Sciences, Natural Resources and Environmental Sciences, and others, are offered periodically. A class may be cancelled if registration falls below 10 students. New courses are always being developed, so this course may not include all offerings.

FSHN 414 Food Chemistry
Examines the chemical aspects of major food components: water, carbohydrates, proteins, and lipids; properties of pigments, salts, and food dispersions. Prerequisite: Organic chemistry. 3 hours.

FSHN 440 Applied Statistical Methods
Statistical methods involving relationships between populations and samples; collection, organization and analysis of data; and techniques in testing hypotheses with an introduction to regression, correlation, and analyses of variance limited to the completely randomized design and the randomized complete-block design. Prerequisite: Algebra. 4 hours.

FSHN 460 Food Processing Engineering
Examines application of process engineering principles to the conversion of raw agricultural materials into finished food products. Topics include units and dimensions, materials balances, energy balances, thermodynamics, heat transfer, psychrometry, refrigeration and mechanical separations. Prerequisites: Physics and calculus. 3 hours.

FSHN 461 Food Processing, I.
Principles, unit operations, and applications of food preservation and processing by high temperature, refrigeration, and freezing processes; includes heat transfer, kinetics, chemical and microbial changes in food as a result of processing. Also, principles and applications of food processing unit operations based upon the combination of heat and/or mass transfer, including such unit operations as evaporation, freeze-concentration, membrane separation, dehydration, centrifugation, extrusion, as well as water activity control. Lecture-based course. 4 hours.

FSHN 464 Beverage Science & Technology

Explores the research, science and technology of the production of safe, high quality beverages through the application of food chemistry, food microbiology, and food processing principles. 2 hours.

FSHN 469 Package Engineering

Cross-disciplinary study of the materials, machinery, research, design, techniques, environmental considerations, ethics and economics used in the global packaging industry with emphasis on the implementation of improved technologies for the problems unique to food packaging. An emphasis on the broad, systems-based nature of packaging will be maintained throughout the course. Prerequisite: chemistry, physics, calculus. 3 hours.

FSHN 471 Food and Industrial Microbiology

Relationship of microorganisms to food manufacture and preservation, to industrial fermentation and processing, and to sanitation. Prerequisite: Organic chemistry and experimental microbiology. 3 hours.

FSHN 517 Fermented and Distilled Beverages

The production technology, microbiology and chemistry (including the compositional chemistry, flavor chemistry, and chemistry of aging) of fermented and distilled beverages. Prerequisite: Graduate student status, or a food microbiology course and a food chemistry or biochemistry course. 2 hours.

FSHN 518 Chemistry of Lipids in Foods

Detailed examination of the chemical and physical properties of lipids in foods. Prerequisite: food chemistry. 3 hours.

FSHN 519 Flavor Chemistry & Analysis

Provides graduate students with the tools and understanding necessary for the study of complex food flavor systems. Students will learn: 1) modern techniques of analysis used in the chemical evaluation of food flavor systems, 2) acceptable techniques for the sensory evaluation of food flavor, 3) approaches for combined sensory-analytical evaluation of food flavor and 4) principles of food flavor chemistry with emphasis places on some well-understood flavor systems. 4 hours.

FSHN 595 Food Science Advanced Topics

Detailed lectures and/or laboratory studies of selected topics in Food Science. Study may be specialized topics in anyone of the following fields: (A) Food Chemistry; (B) Food Microbiology; (C) Nutrition; (D) Food Processing/Engineering. 1 to 4 hours. Topics to be offered include (but are not limited to):

Advanced Topics in Sensory Science. This course will deal with more in-depth and current topics in Sensory Science beyond the scope of an undergraduate introductory sensory course. The main course topics to be discussed are the physiological and psychological basis for sensory

evaluation, Thurstonian Modeling in Difference Tests, multivariate statistical methods for sensory studies. Students will discuss and critique current research papers in sensory science and develop a proposal for sensory evaluation research. 3 hours.

Food Enzymology. Principles of enzymatic reactions, factors affecting enzyme activity, and use of enzymes in analytical and food processing applications. Discusses the influence of parameters such as concentration of substrate and enzyme, pH, temperature and inhibitors on enzymatic activity. Provides specificity and mechanism of action of enzymes in the context of their roles in foods by considering examples selected from enzymes of importance to food science. The course involves lectures and exercises commonly used in basic and applied research in food enzymology. Regular discussions of recent peer-reviewed papers dealing with major classes of enzymes. Prerequisite Biochemistry. 3 hours.

Food Safety for Global Food Security. How can food safety promote the availability and access of culturally appropriate foods for all people? Students will explore that question by engaging with literature on the burden of foodborne disease, risk assessment and management technologies, and commodity specific food safety risks.

Nutrition for Health & Fitness. Students will examine macro- and micro-nutrient needs, energy systems, nutrition and sport supplements, weight management, health enhancement and disease prevention. The course will emphasize nutrients and food components available or in development designed to enhance health and sport performance with a focus on how to integrate this information into food science industries. Produce & Vegetable Technology. Students will explore the safety and utilization of fruit and vegetable raw materials from harvest to incorporation into a final consumable good.

Water Relations in Foods. Advanced study of the behavior of water and solids in ingredient and real foods systems, specifically in relation to food safety and stability. Major topics covered include properties of water, water activity, water mobility, and solids mobility (e.g., the glass transition). Practical techniques to measure these parameters, including sorption isotherms, nuclear magnetic resonance spectroscopy and imaging, and differential scanning calorimetry, are discussed in detail. 4 hours.

FSHN 598 Advanced Special Problems

Supervised research on special problems in Food Science. 1 to 8 hours. Project must be approved by topic advisor prior to the beginning of the semester.

M.S. Final Examination Certification (non-thesis)

Name of Candidate _____ UIN _____

This is to certify that we have administered to the above student an appropriate final examination for the Master of Science degree. The result of the examination is:

☐ Pass.

☐ Decision deferred. The committee is considered to be in temporary adjournment until _____ (a specified date that must be within six months of the first defense date). *This category should be used only if the committee intends to hold another defense. Registration is required during the semester when the second defense is held.*

☐ Fail. Students who fail the first exam may, at the discretion of the committee and according to departmental rules, be granted another opportunity to take the examination after completing additional work. The chair will inform the Department Head if the student is allowed a second examination.

_____
Chair

_____
Member

_____
Member

_____
Member

_____
Date