NUTRITION AND FOOD SCIENCE MAJOR

Program Director: Sara Kao

The department offers three areas of concentration: dietetics, food science, and nutritional science. Each concentration provides for competencies in several areas of work; however, each concentration is designed specifically for certain professional careers.

The dietetics concentration develops an understanding and competency in food, nutrition, dietetics management, clinical nutritional care, community nutrition, counseling and education. The dietetics concentration is approved by the Accreditation Council for Education in Nutrition and Dietetics (ACEND). Dietetics program graduates must apply and complete a post-baccalaureate internship prior to taking a national exam to become a registered dietitian. The course work in the dietetics option provides a strong foundation in science. Students share classes with undergraduate students majoring in biology, chemistry, biochemistry, food science; graduate students in nutrition; and those on pre-med or pre-health track.

The food science concentration is concerned with the application of the fundamental principles of the physical, biological, and behavioral sciences and engineering to understand the complex and heterogeneous materials recognized as food. The food science concentration is approved by the Institute of Food Technologists and prepares students for careers in food industry and food safety.

The nutritional science concentration emphasizes the physical and biological sciences in relation to nutrition and the development of laboratory skills in these areas. Students in this concentration frequently elect to go on to graduate or medical school.

Admission to the Major

The major in Nutrition and Food Science is not a Limited Enrollment Program (LEP). Students may either declare the major at the time of application or transfer into the major at any time thereafter. If interested in transferring into the NFSC major, please contact the departmental office and ask to speak with an advisor.

Program Learning Outcomes

1. Competency in integrating laboratory skills into analysis of food.
2. Competency in assessing the nutritional status of a patient and in developing an appropriate nutrition treatment plan for the patient.

Requirements

All students are required to earn a grade of "C-" or better in courses applied toward satisfaction of the major. This includes all required courses with a prefix of NFSC, as well as certain required courses in supporting fields. A list of these courses for each program may be obtained from the department office.

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<thead>
<tr>
<th>Course</th>
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<th>Credits</th>
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<tbody>
<tr>
<td>BSCI170</td>
<td>Principles of Molecular &amp; Cellular Biology</td>
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<td>&amp; BSCI171</td>
<td>and Principles of Molecular &amp; Cellular Biology Laboratory</td>
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<td>BSCI223</td>
<td>General Microbiology</td>
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<td>CHEM131</td>
<td>Chemistry I - Fundamentals of General Chemistry</td>
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<td>CHEM132</td>
<td>General Chemistry I Laboratory</td>
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<td>CHEM231</td>
<td>Organic Chemistry I</td>
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<td>CHEM232</td>
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<td>CHEM241</td>
<td>Organic Chemistry II</td>
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<td>CHEM242</td>
<td>Organic Chemistry Laboratory II</td>
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<td>CHEM271</td>
<td>General Chemistry and Energetics</td>
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<td>CHEM272</td>
<td>General Bioanalytical Chemistry Laboratory</td>
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<td>ENGL101</td>
<td>Academic Writing</td>
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<tr>
<td>ENGL391</td>
<td>Advanced Composition</td>
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<tr>
<td>or ENGL393</td>
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Concentration Requirements (select one of the following): 50-66

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<tr>
<th>Dietetics</th>
<th>Food Science</th>
<th>Nutritional Science</th>
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<tbody>
<tr>
<td>Total Credits</td>
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Concentrations:

Dietetics

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<td>NFSC315</td>
<td>Nutrition During the Life Cycle</td>
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<td>NFSC350</td>
<td>Foodservice Operations</td>
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<td>NFSC380</td>
<td>Methods of Nutritional Assessment</td>
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<td>NFSC440</td>
<td>Advanced Human Nutrition</td>
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<td>Community Nutrition</td>
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<td>NFSC455</td>
<td>Medical Nutrition Therapy I</td>
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<td>NFSC456</td>
<td>Medical Nutrition Therapy II</td>
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<tr>
<td>NFSC491</td>
<td>Professional Issues and Opportunities in Dietetics</td>
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<td>BCHM461</td>
<td>Biochemistry I</td>
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<td>BCHM462</td>
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<tr>
<td>BMGT364</td>
<td>Managing People and Organizations</td>
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<tr>
<td>BSCI330</td>
<td>Cell Biology and Physiology</td>
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<td>Mammalian Systems Physiology</td>
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<td>or MATH115</td>
<td>Precalculus</td>
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<tr>
<td>PSYC100</td>
<td>Introduction to Psychology (SB)</td>
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<td>EDMS451</td>
<td>Introduction to Educational Statistics</td>
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<td>or BIOM301</td>
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<td>SOCY100</td>
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<td>COMM200</td>
<td>Critical Thinking and Speaking (HL/HA/HO)</td>
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Dietetics Restricted Elective (Choose from list below) 12

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<td>Principles of Immunology</td>
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<td>COMM200</td>
<td>Critical Thinking and Speaking (HL/HA/HO)</td>
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<td>Peer Counseling Theory and Skills</td>
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### Nutrition and Food Science Major

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<tr>
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<tr>
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<tr>
<td>NFSC421</td>
<td>Food Chemistry</td>
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<td>NFSC425</td>
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<tr>
<td>NFSC430</td>
<td>Food Microbiology</td>
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<tr>
<td>NFSC498</td>
<td>Selected Topics</td>
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<tr>
<td>NFSC450</td>
<td>Food and Nutrient Analysis</td>
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Alternate course by approval of advisor

**Total Credits** 72

#### Food Science

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<td>NFSC412</td>
<td>Food Processing Technology</td>
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<td>NFSC414</td>
<td>Mechanics of Food Processing</td>
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<td>NFSC421</td>
<td>Food Chemistry</td>
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<td>NFSC422</td>
<td>Food Product Research and Development</td>
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<td>NFSC423</td>
<td>Food Chemistry Laboratory</td>
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<td>NFSC430</td>
<td>Food Microbiology</td>
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<td>NFSC431</td>
<td>Food Quality Control</td>
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<td>NFSC434</td>
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<td>BCHM463</td>
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<td>PHYS121</td>
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**Food Science Restricted Elective (Choose from list below)** 3

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<td>NFSC425</td>
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Alternate course by approval of advisor

**Total Credits** 49

#### Nutritional Science restricted elective list

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<td>BSCI447</td>
<td>General Endocrinology</td>
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Alternate course by approval of advisor

**Total Credits** 53

### Four Year Plan

Click here ([https://agnr.umd.edu/academics/advising/four-year-plans/](https://agnr.umd.edu/academics/advising/four-year-plans/)) for roadmaps for four-year plans in the College of Agricultural and Natural Resources.

Additional information on developing a four-year academic plan can be found on the following pages:

- [4yearplans.umd.edu](http://4yearplans.umd.edu)
- the Student Academic Success-Degree Completion Policy ([https://academiccatalog.umd.edu/undergraduate/registration-academic-requirements-regulations/academic-advising/](https://academiccatalog.umd.edu/undergraduate/registration-academic-requirements-regulations/academic-advising/)) section of this catalog