Nutrition and Food Science Major, Food Science Concentration (B.S.)

The B.S. in Nutrition and Food Science with concentration in Food Science prepares students for careers in the food and beverage, agricultural, and processing industries as well as food regulatory agencies such as the U.S. Food and Drug Administration (FDA) and U.S. Department of Agriculture (USDA). Food science is a multidisciplinary field with the overarching goals of improving the safety and quality of food products, developing new food products, and designing new, safer and more energy-efficient food preservation methods. Food scientists strive to improve the microbial and chemical safety of foods as well as to enhance the quality of foods through traditional and emerging technologies.

Students in the Food Science concentration will gain in-depth knowledge of the physical, chemical, and biochemical nature of food and the standards of nutritional processing, safety, food quality, and food security and develop their aptitudes in areas such as food processing, food accessibility, food quality, food safety, food sensory experiences, and food regulations.

Private industry has increased its demand for food scientists because their expertise is necessary for developing healthy food products and increasing crop yields, along with assuring quality and safety. Research in food genomics and agricultural sustainability is also expected to increase the number of available food science positions. Also, many food scientists are expected to retire in the next 10 years, creating even more job availability in private industry and regulatory agencies such as the FDA and USDA.

Graduates from the Food Science concentration can pursue careers in food science, quality assurance, food chemistry, food product development, food processing and production, food corporation management, food safety, research and development, and sensory analysis.

Program Requirements

Students must complete 42 credits of General Education requirements (http://catalog.montclair.edu/undergraduate-graduate-degree-requirements/general-ed-ba-bs) and 3-9 credits of World Languages and Cultures Requirements (http://catalog.montclair.edu/undergraduate-graduate-degree-requirements/world-languages-cultures-requirement).

Nutrition and Food Science Core

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUFD 130</td>
<td>Introduction to Nutrition and Food Science</td>
<td>1</td>
</tr>
<tr>
<td>NUFD 150</td>
<td>Food Composition and Scientific Preparation</td>
<td>3</td>
</tr>
<tr>
<td>NUFD 153</td>
<td>Dynamics of Food and Society</td>
<td>3</td>
</tr>
<tr>
<td>NUFD 192</td>
<td>Nutrition with Laboratory</td>
<td>4</td>
</tr>
<tr>
<td>NUFD 240</td>
<td>Sanitation Management and Food Microbiology: Certification</td>
<td>1</td>
</tr>
<tr>
<td>NUFD 282</td>
<td>Applied Nutrition in the Lifecycle</td>
<td>3</td>
</tr>
<tr>
<td>NUFD 304</td>
<td>Introduction to Research</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUFD 352</td>
<td>Organization and Management of Foodservice Systems</td>
<td>3</td>
</tr>
<tr>
<td>NUFD 357</td>
<td>Experimental Food Science</td>
<td>3</td>
</tr>
</tbody>
</table>

Food Science Concentration Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>NUFD 253</td>
<td>Quantity Food Purchasing and Production</td>
<td>3</td>
</tr>
<tr>
<td>NUFD 257</td>
<td>Principles of Food Science</td>
<td>3</td>
</tr>
<tr>
<td>NUFD 299</td>
<td>Professional Development for Careers in Nutrition and Food</td>
<td>2</td>
</tr>
<tr>
<td>NUFD 367</td>
<td>Fundamentals of Food Processing and Preservation</td>
<td>3</td>
</tr>
<tr>
<td>NUFD 377</td>
<td>Sensory Evaluation of Foods</td>
<td>3</td>
</tr>
<tr>
<td>NUFD 409</td>
<td>Internship in Nutrition and Food Science</td>
<td>4</td>
</tr>
<tr>
<td>or COED 401</td>
<td>Cooperative Education Experience I</td>
<td></td>
</tr>
<tr>
<td>NUFD 456</td>
<td>Research in Foods</td>
<td>3</td>
</tr>
<tr>
<td>NUFD 466</td>
<td>Food Product Development</td>
<td>3</td>
</tr>
</tbody>
</table>

Collateral Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 100</td>
<td>Biological Sciences</td>
<td>4</td>
</tr>
<tr>
<td>BIOL 254</td>
<td>Applied Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>CHEM 113</td>
<td>Fundamentals of Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 130</td>
<td>Fundamentals of Organic Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 270</td>
<td>Fundamentals of Biochemistry</td>
<td>5</td>
</tr>
<tr>
<td>ECON 101</td>
<td>Applied Macroeconomics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 109</td>
<td>Statistics</td>
<td>3</td>
</tr>
<tr>
<td>MKTG 240</td>
<td>Introduction to Marketing</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

Total Credits 80