Nutrition and Food Sciences

BS in Nutrition and Food Sciences
Options in:
- General Dietetics
- Food Administration
Minor in Foodservice Administration
Minor in Nutrition
MS in Nutritional Science
Options in:
- General Nutritional Science
- Nutrition Education

The courses and programs in nutrition and food sciences have emerged from and are integrated with the physical and life sciences. The natural resource of food is studied as it exists in nature, is consumed and utilized, and is made available to consumers. The science of nutrition is concerned with the ingestion and utilization of food for the purposes of survival, prevention of disease, and the promotion of positive health. Courses for non-majors, as well as majors, are offered in order to facilitate optimal lifetime nutritional status.

Faculty and Facilities
Faculty members, in addition to teaching and advising, are actively involved in research, writing grants, and other professional activities. Facilities include laboratories for courses and experiments in food science and nutrition. Our computer facilities improve instruction quality with programs for nutrition analyses of diets, food cost control, recipe and menu evaluation, tutorials, and simulations. Internships are coordinated for majors in a variety of community settings.

Career Outlook
Dietetics is the study of the relationship of food to the health and well-being of individuals and groups. Traditional occupations in clinics, hospitals, educational programs, public health agencies, research, and teaching are increasingly available for Nutrition and Food Science majors.

The US Bureau of Labor Statistics projects the opportunities for dietitians and nutritionists will increase approximately twenty-six percent by 2005. Graduates may also work in food service and processing industries, wellness programs, computer systems management, public communication, and product development and promotion. Courses in the Option in General Dietetics meet the requirements of the American Dietetic Association for an approved Didactic Program in Dietetics (DPD).

Nutrition and Food Science majors gain knowledge and skills in medical nutrition, sports nutrition, community nutrition, food science, and foodservice administration.

The Minor in Nutrition offers an area of specialization for majors in exercise physiology, child development, nursing, health and community services, and others. The Minor in Foodservice Administration offers an area of specialization for majors in business administration, management, marketing, recreation, and tourism.

The MS in Nutritional Sciences provides an opportunity for students to increase competence in food and nutrition subject matter in preparation for college teaching, research, administrative positions in public and private agencies, and graduate study beyond the master’s degree. The Option in Nutrition Education is designed specifically to facilitate nutrition professionals in communicating information to promote optimal health and nutritional status.

A post-baccalaureate Dietetic Internship, which is accredited by the American Dietetic Association, is available for graduate students who wish to become eligible to sit for the registration examination to become registered dietitians and who are enrolled in the MS in Nutritional Sciences program. The Dietetic Internship program consists of thirty-two weeks of actual practice at sites in the area. An application to the Dietetic Internship program must be submitted to the program director after completing graduate course work.
THE BACHELOR OF SCIENCE IN NUTRITION AND FOOD SCIENCES

Total Course Requirements for the Bachelor's Degree: 120 units

See “Requirements for the Bachelor's Degree” in The University Catalog for complete details on general degree requirements. A minimum of 40 units, including those required for the major, must be upper division.

The department has prepared a suggested Four Year Advising Plan to help students meet all graduation requirements within four years. Please request a plan from your major adviser or view it and other current advising information on the CSU, Chico Web.

General Education Requirements: 48 units

See “General Education Requirements” in The University Catalog and The Class Schedule for the most current information on General Education Requirements and course offerings. The course requirements marked below with an asterisk (*) may also be applied toward General Education.

Cultural Diversity Course Requirements: 6 units

See “Cultural Diversity” in The University Catalog. Most courses used to satisfy these requirements may also apply to General Education.

American Institutions Requirement: 6 units

See the “American Institutions Requirement” under “Bachelor’s Degree Requirements.” This requirement is normally fulfilled by completing HIST 050 and POLS 055. Courses used to satisfy this requirement do not apply to General Education.

Literacy Requirement:

See “Mathematics and Writing Requirements” in The University Catalog. Writing proficiency in the major is a graduation requirement and may be demonstrated through satisfactory completion of a course in your major which has been designated as the Writing Proficiency (WP) course for the semester in which you take the course. Students who earn a C- or better must repeat the course and earn a C- or better to receive WP credit. See The Class Schedule for the designated WP courses for each semester. You must pass ENGL 001 (or its equivalent) with a C- or better before you may register for a WP course.

Course Requirements for the Major: 62-64 units

The following courses, or their approved transfer equivalents, are required of all candidates for this degree. Additional required courses, dependent upon a selected option or advising pattern, are outlined following the degree core program requirements.

NOTE: A maximum of 15 units of internship (courses numbered 089, 189, 289, 389) may be applied to a bachelor’s degree at CSU, Chico.

DEGREE CORE: 40 units

13 courses required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Type</th>
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</thead>
<tbody>
<tr>
<td>BIO 004</td>
<td>Human Physiology</td>
<td>3.0</td>
<td>FS*</td>
</tr>
<tr>
<td>BIO 011</td>
<td>General Microbiology</td>
<td>4.0</td>
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<tr>
<td>CHEM 027</td>
<td>Gen Chem for Applied Sciences</td>
<td>4.0</td>
<td>FS*</td>
</tr>
<tr>
<td>CHEM 028</td>
<td>Organic Chem for Applied Science</td>
<td>4.0</td>
<td></td>
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<tr>
<td>NFSC 020</td>
<td>Elementary Food</td>
<td>3.0</td>
<td></td>
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<tr>
<td>NFSC 120</td>
<td>Science of Food</td>
<td>3.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 125</td>
<td>Human Nutrition</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td>NFSC 127</td>
<td>Nutrition Throughout Life Cycle</td>
<td>3.0</td>
<td></td>
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<tr>
<td>NFSC 160</td>
<td>Intro Food Service &amp; Sanitation</td>
<td>3.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 224</td>
<td>Cultural Food</td>
<td>3.0</td>
<td>SP</td>
</tr>
<tr>
<td>NFSC 229</td>
<td>Issues in Nutrition &amp; Food Science</td>
<td>1.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 261</td>
<td>Foodservice Procurement &amp; Mgmt</td>
<td>3.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 262</td>
<td>Foodservice Equip/Production</td>
<td>3.0</td>
<td>SP</td>
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</tbody>
</table>

Major Option Course Requirements: 30-31 units

The following courses, or their approved transfer equivalents, are required dependent upon the option chosen. Students must select one of the following options for completion of the major course requirements.

THE OPTION IN FOODSERVICE ADMINISTRATION: 24 units

5 courses required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Type</th>
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<tbody>
<tr>
<td>ACCT 015</td>
<td>Intro to Financial Accounting</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>ACCT 016</td>
<td>Intro to Managerial Accounting</td>
<td>3.0</td>
<td></td>
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<tr>
<td>ECON 003</td>
<td>Principles of Micro Analysis</td>
<td>3.0</td>
<td>FS*</td>
</tr>
<tr>
<td>NFSC 263</td>
<td>Adv Foodservice Administration</td>
<td>3.0</td>
<td>SP</td>
</tr>
<tr>
<td>NFSC 289</td>
<td>Internship</td>
<td>1.0-6.0</td>
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Students are required to take at least 3 units of internship.

3 courses selected from:

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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 019</td>
<td>Meat and the Consumer</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>BLAW 213</td>
<td>Employment Law</td>
<td>3.0</td>
<td></td>
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<tr>
<td>ENGL 001</td>
<td>Principles of Psych</td>
<td>3.0</td>
<td></td>
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<tr>
<td>MGMT 129</td>
<td>Communication in Business</td>
<td>3.0</td>
<td></td>
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<tr>
<td>MGMT 242</td>
<td>Managing Diff Relations</td>
<td>3.0</td>
<td></td>
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<tr>
<td>MINS 110</td>
<td>Corporate Tech Integration</td>
<td>3.0</td>
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<tr>
<td>MKTG 170</td>
<td>Survey of Marketing</td>
<td>3.0</td>
<td></td>
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<tr>
<td>NFSC 299H</td>
<td>Honors Senior Thesis or Project</td>
<td>3.0</td>
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<tr>
<td>PSYC 195</td>
<td>Introduction to Wines</td>
<td>3.0</td>
<td>FA</td>
</tr>
<tr>
<td>RECR 154</td>
<td>Resort/Recreation Development &amp; Mgmt</td>
<td>3.0</td>
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<tr>
<td>RECR 221</td>
<td>Recreation Budget/Finance Mgmt</td>
<td>3.0</td>
<td></td>
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<tr>
<td>RECR 234</td>
<td>Commercial Recreation Operations</td>
<td>3.0</td>
<td></td>
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<tr>
<td>CHEM 004</td>
<td>Introductory Biochemistry</td>
<td>3.0</td>
<td></td>
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<tr>
<td>CHEM 028</td>
<td>Nutrition Analysis</td>
<td>3.0</td>
<td></td>
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<tr>
<td>NFSC 125</td>
<td>Nutrition Assessment Laboratory</td>
<td>3.0</td>
<td></td>
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<tr>
<td>NFSC 126</td>
<td>Nutrition Counseling &amp; Ed</td>
<td>2.0</td>
<td>FA</td>
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<tr>
<td>NFSC 225</td>
<td>Advanced Human Nutrition</td>
<td>3.0</td>
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<tr>
<td>NFSC 226</td>
<td>Sem in Medical Nutrition Therapy</td>
<td>3.0</td>
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<tr>
<td>NFSC 227</td>
<td>Community Nutrition</td>
<td>3.0</td>
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<tr>
<td>PSY 003A</td>
<td>Principles of Psych</td>
<td>3.0</td>
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Electives Requirement:

To complete the total units required for the bachelor's degree, select additional elective courses from the total university offerings. You should consult with an adviser regarding the selection of courses which will provide breadth to your university experience and apply to a supportive second major or minor.

Suggested electives:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Type</th>
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<tbody>
<tr>
<td>MGMT 131</td>
<td>Human Resource Management</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>NFSC 289</td>
<td>Internship</td>
<td>1.0-6.0</td>
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Grading Requirement:

All courses taken to fulfill major course requirements must be taken for a letter grade, except those courses specified by the department as Credit/No Credit grading only.
Advising Requirement:
Advising is mandatory for all majors in this degree program. Consult your undergraduate adviser for specific information.

Honors in the Major
Honors in the Major is a program of independent work in your major. It involves 6 units of honors course work completed over two semesters.

1. You must take 6 units of Honors in the Major course work. At least 3 of these 6 units are independent study (299H) as specified by your department. You must complete each class with a minimum grade of B.
2. You must have completed 9 units of upper-division course work or 21 overall units in your major before you can be admitted to Honors in the Major. Check the requirements carefully, as there may be specific courses that must be included in these units.
3. Your cumulative GPA should be at least 3.5 or within the top 5 percent of majors in your department.
4. Your GPA in your major should be at least 3.5 or within the top 5 percent of majors in your department.
5. Most students apply for or are invited to participate in Honors in the Major during the second semester of their junior year. Then they complete the 6 units of course work over the two semesters of their senior year.
6. Your honors work culminates with a public presentation of your work. Students sometimes take their projects beyond the university for submission in professional journals, presentation at conferences, or competition in shows; such experience is valuable for graduate school and later professional life.

Some common features of Honors in the Major program are:

1. Your honors work culminates with a public presentation of your work. Students sometimes take their projects beyond the university for submission in professional journals, presentation at conferences, or competition in shows; such experience is valuable for graduate school and later professional life.

Clinical Nutrition

Students preparing for advanced degrees or careers in nutrition research should complete the required units of the Option in General Dietetics and also complete the following courses, which include a Chemistry minor.

- BIOL 103 Human Genetics 3.0 FS *
- OR (the following course may be substituted for the above)
  - BIOL 207 Genetics 4.0 FS
  - Prerequisites: BIOL 068.
- OR (the following course may be substituted for the above)
  - BIOL 214 Vertebrate Physiology 4.0 FS
  - Prerequisites: BIOL 068, BIOL 010, CHEM 028 or CHEM 070.
- CHEM 070 Organic Chemistry 4.0 FS
  - Prerequisites: CHEM 038.
- CHEM 105 Quantitative Analysis 4.0 FS
  - Prerequisites: CHEM 140.
- CHEM 170 Organic Chemistry 3.0 FS
  - Prerequisites: CHEM 070.
- CHEM 170L Organic Chemistry Laboratory 1.0 FS
  - Prerequisites: CHEM 170.
- CHEM 250A Biochemistry 3.0 FS
  - Prerequisites: CHEM 170.
- CHEM 251 Biochemistry Laboratory 2.0 FS
  - Prerequisites: CHEM 105, CHEM 250A; or CHEM 170L or CHEM 170M.

The Minor in Nutrition

Course Requirements for the Minor: 22-23 units
The following courses, or their approved transfer equivalents, are required of all candidates for this minor.

6 courses required:
- BIO L 011 General Microbiology 4.0 FS
  - Prerequisites: A college course in biology and in general chemistry.
- NFSC 020 Elementary Food 3.0 FS
- NFSC 025 Basic Nutrition 3.0 FS *
- NFSC 160 Intro Foodserv Adm & Sanitation 3.0 FA
- Prerequisites: NFSC 020.
- NFSC 261 Foodservice Procurement & Mgmt 3.0 FA
  - Prerequisites: BIOL 011; NFSC 160 or MGMT 180; NFSC 020.
- NFSC 262 Foodservice Equip/Production 3.0 SP
  - Prerequisites: NFSC 261.

2 courses selected from:
- ANSC 019 Meat and the Consumer 3.0 FS
- NFSC 224 Cultural Food 3.0 SP
  - Prerequisites: ENGL 003 (or its equivalent) with a grade of C- or higher.

The Minor in Foodservice Administration

Course Requirements for the Minor: 25 units
The following courses, or their approved transfer equivalents, are required of all candidates for this minor.

6 courses required:
- BIO L 011 General Microbiology 4.0 FS
  - Prerequisites: A college course in biology and in general chemistry.
- CHEM 028 Organic Chem for Applied Science 4.0 FS
  - Prerequisites: Intermediate Algebra.
- CHEM 027 Gen Chem for Applied Sciences 4.0 FS *
  - Prerequisites: Intermediate Algebra.
- CHEM 028 Organic Chem for Applied Science 4.0 FS
  - Prerequisites: CHEM 027 or CHEM 037.
- CHEM 153 Introductory Biochemistry 3.0 FS
  - Prerequisites: CHEM 028.
- NFSC 125 Human Nutrition 3.0 FS
  - Prerequisites: BIOL 004, CHEM 028.

2 courses selected from:
- NFSC 123 Nutrition/Physical Fitness 3.0 FS *
  - Prerequisites: One lower-division course in biology sciences.
- NFSC 126 Clinical Nutrition 3.0 SP
  - Prerequisites: CHEM 028, NFSC 125.
- NFSC 127 Nutrition Throughout Life Cycle 3.0 FS
  - Prerequisites: BIOL 004, NFSC 025 or NFSC 123.
- NFSC 222 Nutrition Counseling & Education 2.0 FA
  - Prerequisites: NFSC 126, NFSC 126L, NFSC 127.
- NFSC 223 Adv Nutrition/Physical Fitness 3.0 FA
  - Prerequisites: NFSC 123 or NFSC 125; CHEM 028.
THE MASTER OF SCIENCE
IN NUTRITIONAL SCIENCE

Course Requirements for the Master’s Degree: 30 units
Continuous enrollment is required. A maximum of 9 semester units of transfer credit may be applied toward the degree.

Graduate Time Limit: All requirements for the degree are to be completed within five years of the end of the semester of enrollment in the oldest course applied toward the degree. See “Graduate Education” in The University Catalog for complete details on general degree requirements.

The MS in Nutritional Science provides an opportunity for students to:
1. Specialize in nutrition, food science, clinical nutrition, or community nutrition.
2. Complete a master’s degree and concurrently qualify for membership in the American Dietetic Association.
3. Increase competence in food and nutrition subject matter in preparation for college teaching, research, graduate study beyond the master’s degree, and administrative positions in public and private agencies.

Prerequisites for Admission to Conditionally Classified Status:
1. Satisfactory grade point average as specified in “Admission to Master’s Degree Programs” in The University Catalog.
2. Approval by the department and the Office of Graduate Programs.
3. An acceptable baccalaureate from an accredited institution, or an equivalent approved by the Office of Graduate Programs, which includes a minimum of 24 upper-division units among the subject areas of biochemistry, chemistry, nutrition and food science, mathematics, microbiology, physiology, and statistics. Computer literacy is also required. Students with deficiencies in undergraduate preparation may be required to take prerequisite course work at the discretion of the Graduate Coordinator after consultation with the student and faculty in the subject matter areas considered deficient. In addition, prerequisites for graduate-level courses must have been completed within the five years prior to taking the graduate courses. Outdated prerequisites must be validated either by examination or by registration (credit will not be earned for validating this course work).
4. Approval by the Nutrition and Food Science Graduate Coordinator.

Prerequisites for Admission to Classified Status:
In addition to any requirements listed above:
1. Development and submission of an approved program plan in consultation with the Graduate Adviser and a faculty member of the student’s choice.
2. Completion of 12 departmentally specified units of letter-graded 200/300-level course work (of which 9 units must be in residence and part of the approved program) with a minimum grade point average of 3.0.

Advancement to Candidacy:
In addition to any requirements listed above:
1. Classified graduate standing and completion at the university of at least 15 units of approved course work.
2. Completion of MATH 315 or equivalent.

Requirements for the MS in Nutritional Science:
Completion of all requirements as established by the program graduate committee, the graduate advisory committee, and the Office of Graduate Programs, to include:
1. Completion of 30 units of approved 200/300-level course work as follows:
(a) Units required for both options:
13 units required:
- NFSC 300 Research Meth in Nutritional Sci 4.0 Inq
- NFSC 325B Topics in Macro Nutrients 3.0 Inq
- NFSC 325C Topics in Vitamins and Minerals 3.0 Inq
- MATH 315 Stat Methods for Grad Research 3.0 SI
    Prerequisites: MATH 005, MATH 105A, MATH 215, or MATH 103 (only one is required).
3-6 units required:
- NFSC 398P Professional Paper 3.0 FS
- NFSC 399 Master’s Thesis 1.0-6.0 FS
2-6 units selected from:
- NFSC 325A Topics in Clinical Nutrition 2.0 Inq
- NFSC 325D Food Science 2.0 Inq
- NFSC 325E Topics in Developmental Nutrition 2.0 Inq
- NFSC 325F Nutrition; International Issues 2.0 Inq
- NFSC 389 Graduate Internship 1.0-6.0 FS
- NFSC 398 Independent Study 1.0-3.0 FS

Completion of one of the following options:
THE OPTION IN GENERAL NUTRITIONAL SCIENCE
9 units required:
- BIOL 214 Vertebrate Physiology 4.0 FS
  Prerequisites: BIOL 006B, BIOL 010; CHEM 028 or CHEM 070.
- CHEM 250A Biochemistry 3.0 FS
  Prerequisites: CHEM 170.
- CHEM 251 Biochemistry Laboratory 2.0 FS
  Prerequisites: CHEM 105, CHEM 250A; CHEM 170L or CHEM 170M.

THE OPTION IN NUTRITION EDUCATION
9-12 units required:
- NFSC 327 Nutrition Education 3.0 Inq
  Prerequisites: NFSC 227.
- NFSC 389 Graduate Internship 1.0-6.0 FS
- PSY 273A Counseling Psychology 3.0 FS
  Prerequisites: PSY 225 or PSY 235; senior or graduate standing; faculty permission.
(b) At least 18 of the units required for the degree must be in 300-level courses.
(c) Not more than 9 semester units of transfer and/or extension credit (correspondence courses and U.C. extension course work are not acceptable).
(d) Not more than a total of 10 units of Independent Study (398), Professional Paper (398P), and Master’s Thesis (399); not more than 3 units of Professional Paper (398P) and 6 units of Master’s Thesis (399).
2. Completion and final approval of a thesis or a professional paper as specified by the graduate advisory committee.
3. Completion of a comprehensive final oral examination in the field of study.
4. Approval by the graduate advisory committee and the Graduate Coordinators Committee on behalf of the faculty of the university.

Culminating Activity:
1. Thesis Plan. The candidate shall submit an acceptable thesis based on original research and developed by the student and agreed to by the student’s graduate advisory committee.
   (a) Thesis proposal: A proposal of the thesis must be submitted and approved by the graduate advisory committee before the student begins the research. The proposal includes a literature review, a statement of the problem and purpose or hypothesis of the research, research design, and methods to be used. The proposal is a formal document that must have appropriate attention given to the matters of format, documentation, and quality of writing.
   (b) Approval of thesis: Members of the graduate advisory committee shall approve the thesis.
   (c) Oral defense: Members of the graduate advisory committee shall conduct an oral defense of the thesis. The oral defense is generally limited to matters within the scope of the thesis.
2. Professional Paper Plan. The candidate shall submit an acceptable professional paper based on original research developed by the student and agreed to by the student’s graduate advisory committee.
   (a) Professional paper proposal: A proposal of the professional paper must be submitted and approved by the graduate advisory committee before the student begins the research. The proposal includes a literature review, a statement of the problem and purpose or hypothesis of the research, research design, and methods to be used. The proposal is a formal document that must have appropriate attention given to matters of format, documentation, and quality of writing.
   (b) Registration in NFSC 398P, Professional Paper.
   (c) Approval of professional paper: Members of the graduate advisory committee shall approve the professional paper.
   (d) Oral defense: The candidate’s graduate advisory committee shall conduct an oral defense of the professional paper. The oral defense is generally limited to matters within the scope of the paper.
**Graduate Literacy Requirement:**

Writing proficiency is a graduation requirement.

Nutritional Science majors will demonstrate their writing competence through successful completion of written papers assigned in NFSC 327. For those students not completing NFSC 327 under the Option in General Nutritional Science, a writing portfolio will be evaluated for literacy.

**Graduate Grading Requirements:**

All courses in the major (with the exceptions of Independent Study-398 and Master's Study-399) must be taken for a letter grade, except those courses specified by the department as ABC/No Credit (200-level courses), AB/No Credit (300-level courses), or Credit/No Credit grading only. A maximum of 10 units combined of ABC/No Credit, AB/No Credit, and Credit/No Credit grades may be used on the approved program (including 398, 399, and courses outside the major). While grading standards are determined by individual programs and instructors, it is also the policy of the university that unsatisfactory grades may be given when work fails to reflect achievement of the high standards, including high writing standards, expected of students pursuing graduate study.

Students must maintain a 3.0 grade point average in all course work on the approved master's degree program as well as in all course work taken subsequent to admission to conditionally classified status.

**Graduate Advising Requirement:**

Advising is mandatory each semester for Nutritional Science majors. Consult the Graduate Coordinator for specific information.

**The Faculty**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Institution</th>
</tr>
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<tbody>
<tr>
<td>Barbara A. Kirks</td>
<td>2000, Assist Professor, PhD, UC Davis</td>
</tr>
<tr>
<td>Michelle R. Neuman</td>
<td>1998, Assistant Professor, PhD, UC Davis</td>
</tr>
<tr>
<td>Cindy Brattan Wolff</td>
<td>1990, Graduate Student, UC Davis</td>
</tr>
</tbody>
</table>

**Nutrition and Food Science Course Offerings**

Please see the section on “Course Description Symbols and Terms” in the University Catalog for an explanation of course description terminology and symbols, the course numbering system, and course credit units. All courses are lecture and discussion and employ letter grading as specified. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. The Class Schedule for the specific topic being offered.

**NFSC 020 Elementary Food** 3.0 Fa/Spr

An elementary study of the physical and chemical properties and reactions of foods. An emphasis on food purchasing, storage, preparation, and use as well as safety, sanitation, and nutrition preservation. 2.0 hours discussion, 3.0 hours laboratory. Special fee required; see The Class Schedule.

**NFSC 021 Food Industry** 3.0 Fa/Spr

Study of the production, processing, marketing, and distribution of food products from point of origin to consumer. Factors which affect the cost of food, including governmental regulations, business/industry practices, and consumer expectations are considered. Field trips to several food-related industries in California provide opportunities to observe human environmental scientists working in the food industry. 1.0 hour discussion, 2.0 hours activity. You may take this course more than once for a maximum of 6.0 units.

**NFSC 025 Basic Nutrition** 3.0 Fa/Spr

Physical, social, and psychological factors affecting food intake are examined. Relationships of nutrients to health throughout life. This is an approved General Education course. CAN FCS 8.

**NFSC 025H Basic Nutrition-Honors** 3.0 Spring

Prerequisites: Acceptance into the Honors Program. Physiological, social, and psychological factors affecting food intake are examined. Relationships of nutrients to health throughout life. This is an approved General Education course.

**NFSC 098 Special Topics** 1.0-3.0 Fa/Spr

This course is for special topics offered as 098A-C for 1.0 to 3.0 units respectively. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See The Class Schedule for the specific topic being offered.

**NFSC 120 Science of Food** 3.0 Fall

Prerequisites: BIOL 011, CHEM 028, NFSC 020.

A study of the physical, chemical, and microbiological aspects of foods; the function of and changes in components during preparation and processing of foods. 2.0 hours discussion, 3.0 hours laboratory. Special fee required; see The Class Schedule.

**NFSC 123 Nutrition and Physical Fitness** 3.0 Fa/Spr

Prerequisites: One lower-division course in biological sciences. Analyzes and evaluates current practices and theories regarding nutrition and its relationship to athletics, weight control, and physical exercise. This is an approved General Education course.

**NFSC 125 Human Nutrition** 3.0 Fa/Spr

Prerequisites: BIOL 004, CHEM 028.

Physiological and chemical roles of proteins, lipids, carbohydrates, minerals, vitamins, and water in the functioning of the human body. Factors affecting the digestion of foods, use of nutrients, and the body's need for nutrients.

**NFSC 126 Clinical Nutrition** 3.0 Spring

Prerequisites: BIOL 004, CHEM 028, NFSC 125.

A study of the principles and practices of dietary modification in the treatment of disease. Principles are explored; practice in calculating and writing the various contemporary therapeutic diets is performed.

**NFSC 126L Nutrition Assessment Laboratory** 1.0 Spring

Prerequisites: NFSC 126 (may be taken concurrently).

Active application of tools and techniques used for assessment of nutritional status. Research methodology and application of research findings to nutrition care will be introduced. Majors only. 3.0 hours laboratory. Special fee required; see The Class Schedule.

**NFSC 127 Nutrition Throughout the Life Cycle** 3.0 Fa/Spr

Prerequisites: BIOL 004, NFSC 025 or NFSC 125.

A survey of nutritional needs from conception to death, including the relationship of nutrients to health and well-being and factors which affect food selection of different population groups.

**NFSC 128 Nutrition in Health and Disease** 4.0 Fa/Spr

Prerequisites: BIOL 004, CHEM 028.

The role of various nutrients in the normal function of the human body, including how nutrient needs change throughout the life cycle. Study of the role of nutrition in various disease and stress situations; dietary modifications applied to disease states as partial or total medical treatment.

**NFSC 160 Introduction to Foodservice Administration and Sanitation** 3.0 Fall

Prerequisites: NFSC 020. Organizational, administration, and management of foodservice operations. Includes principles of safe and sanitary food handling and design of retail foodservice establishments. ServSafe Certification is available as part of the course.

**NFSC 198 Special Topics** 1.0-3.0 Fa/Spr

This course is for special topics offered as 198A-C for 1.0 to 3.0 units respectively. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See The Class Schedule for the specific topic being offered.

**NFSC 199 Special Problems** 1.0-3.0 Fa/Spr

This course is an independent study of special problems and is offered as 199A-C for 1.0 to 3.0 units respectively. You must register directly with a supervising faculty member.

**NFSC 220 Experimental Food** 3.0 Spring

Prerequisites: NFSC 120.

Individual research projects will be planned, conducted, evaluated, and discussed in writing; sensory and objective analyses for evaluation of foods; functions of components in food systems. 2.0 hours discussion, 3.0 hours laboratory.

**NFSC 222 Nutrition Counseling and Education** 2.0 Fall

Prerequisites: NFSC 126, NFSC 126L, NFSC 127.

Communication skills for nutrition counseling and nutrition education; strategies and techniques for nutrition education; development of nutrition care plans; principles of evaluation and documentation.

**NFSC 223 Advanced Nutrition and Physical Fitness** 3.0 Fall

Prerequisites: NFSC 122, CHEM 023, CHEM 028.

Integration of nutrition, physiology, and biochemistry in the examination of the relationship among nutrition, fitness, and exercise performance. Emphasis is on the application of current research findings.
NFSC 224 Cultural Food 3.0 Spring
Prerequisites: ENGL 001 (or its equivalent) with a grade of C- or higher; NFSC 020, NFSC 120; GEOG 002 and ANTH 013 are recommended. Study of world food patterns, including food customs of peoples of different ethnic backgrounds. Emphasis upon nutritional significance. Survey of social, economic, religious, and aesthetic aspects of food customs. 2.0 hours discussion, 3.0 hours laboratory. Special fee required; see The Class Schedule. This is a writing proficiency, WP, course; a grade of C- or better certifies writing proficiency for majors.

NFSC 225 Advanced Human Nutrition 3.0 Fall
Prerequisites: NFSC 125; CHEM 153 or CHEM 250A. Theories integrated from physiology, biochemistry, and nutrition with recent developments in the discipline. Emphasis on practical significance of current research and theory.

NFSC 226 Seminar in Medical Nutrition Therapy 3.0 Spring
Prerequisites: CHEM 153 or CHEM 250A; NFSC 126L and NFSC 225. Investigation of the physiological and biochemical changes imposed on the body by certain disorders as well as by dietary modifications, and analysis of nutritive value of diets prescribed for treatment of disease. Adaptation of dietary patterns of individuals to special needs.

NFSC 227 Community Nutrition 3.0 Fa/Spr
Prerequisites: NFSC 126, NFSC 127, NFSC 222, NFSC 225. Acquaints the student with nutrition programs which relate the science of nutrition to the improvement and maintenance of the health status of individuals and groups. Community assessment, program planning and funding emphasized. 2.0 hours seminar, 3.0 hours clinical.

NFSC 229 Issues in Nutrition and Food Science 1.0 Fall
Prerequisites: Senior standing. Overview of career opportunities and application procedures for post-baccalaureate programs in the discipline. 3.0 hours laboratory.

NFSC 261 Foodservice Procurement and Management 3.0 Fall
Prerequisites: BIOL 011; NFSC 160 or MGMT 160; NFSC 020. Principles of purchasing commercial and institutional foodservice. A study of the types of food, their distribution, and laws affecting sales and quality; purchase procedures for other supplies and equipment. Preparation of purchase specifications, factors affecting cost control, and theories of internal control. 2.0 hours lecture, 3.0 hours laboratory.

NFSC 262 Foodservice Equipment and Production Systems 3.0 Spring
Prerequisites: NFSC 261. Application of procedures and principles of menu planning, operation of foodservice equipment, recipe adaptation and costing, employee and production schedules, environmental health control, inservice training, and merchandising techniques. Experience in a variety of foodservice systems. 2.0 hours discussion, 3.0 hours laboratory.

NFSC 263 Advanced Foodservice Administration 3.0 Spring
Prerequisites: NFSC 261, NFSC 262. Advanced study and application of foodservice concepts and procedures for accountable management of organizational resources. 2.0 hours seminar, 2.0 hours laboratory. Formerly NFSC 260.

NFSC 289 Internship 1.0-6.0 Fa/Spr
This course is an internship offered as 289A-F for 1.0 to 6.0 units respectively. You must register directly with a supervising faculty member. This internship is designed to provide semiprofessional field experience for graduates and populations, with emphasis on contemporary issues in less developed countries.

NFSC 298 Special Topics 3.0 Fa/Spr
This course is for special topics offered as 298A-C for 1.0 to 3.0 units respectively. Typically the topic is offered on a one-time-only basis and may vary from term to term and be different for different sections. See The Class Schedule for the specific topic being offered.

NFSC 299H Honors Senior Thesis or Project 3.0 Fa/Spr
Prerequisites: NFSC 025 or NFSC 125; selected screening courses by content area, all with grades which place student in top five percent; interview; faculty permission. An independent study involving substantial research for a thesis or project culminating in a public presentation. Students will enroll in NFSC 299H twice. You may take this course more than once for a maximum of 6.0 units.

NFSC 300 Research Methods in Nutritional Sciences 4.0 Inquire
Prerequisites: MATH 310 or similar statistics course. An examination of quantitative and qualitative research methods via the analysis of secondary data and the design and implementation of original research and evaluation studies. Activities are designed to develop skills in research design, sampling design, instrumentation, data collection, statistics analysis, presentation and interpretation of results, and the presentation of original research via poster boards and journal manuscripts. 3.0 hours lecture, 2.0 hours activity.

NFSC 325A Topics in Clinical Nutrition 2.0 Inquire
Prerequisites: NFSC 225 and biochemistry. A review and application of selected contemporary issues in therapeutic nutrition. Role of dietitian as health care team member is considered and examined.

NFSC 325B Topics in Macronutrients 3.0 Inquire
Prerequisites: NFSC 225, biochemistry. Review of current scientific literature in selected aspects of protein, carbohydrates, and lipids, and their use by the body.

NFSC 325C Topics in Vitamins and Minerals 3.0 Inquire
Prerequisites: NFSC 225, biochemistry. Review of current scientific literature in contemporary issues of selected nutrients.

NFSC 325D Food Science 2.0 Inquire
Prerequisites: NFSC 120, biochemistry. New developments in food processing, techniques of food preservation, chemical additives, sanitation, and other topics to be selected for discussion using current scientific literature.

NFSC 325E Topics in Developmental Nutrition 2.0 Inquire
Prerequisites: NFSC 127, biochemistry. A review of selected contemporary issues of nutritional status in one or more groups in the life cycle; infant nutrition, child nutrition, or geriatric nutrition.

NFSC 325F International Issues in Nutrition 2.0 Inquire
Prerequisites: NFSC 224, biochemistry. Review of international issues that influence nutritional status of individuals and populations, with emphasis on contemporary problems in less developed countries.

NFSC 325G Topics in Community Nutrition 2.0 Inquire
Prerequisites: NFSC 127, biochemistry. This course reinforces principles of community-based organization and evaluation. Oral presentation and critique of research-based interventions, current issues, and strategies for effective grant writing are addressed.

NFSC 327 Nutrition Education 3.0 Inquire
Prerequisites: NFSC 227. An integrated approach to the ways in which individuals and groups use nutrition information. Includes considerations of human development, learning theory, curriculum development, and the evaluation process.

NFSC 389 Graduate Internship 1.0-6.0 Fa/Spr
This course is an internship offered as 389A-F for 1.0 to 6.0 units respectively. You must register directly with a supervising faculty member. The internship is designed to provide semiprofessional field experience for graduate students in agencies which use application of theoretical knowledge in the discipline. This course is offered through Continuing Education for students in the AP4 program. May be repeated more than once for credit.

NFSC 398 Independent Study 1.0-3.0 Fa/Spr
This course is a graduate level independent study offered as 398A-C for 1.0 to 3.0 units respectively. You must register directly with a supervising faculty member.

NFSC 398P Professional Paper 3.0 Fa/Spr
This course is a graduate level independent study offered as 398A-C for 1.0 to 3.0 units respectively. You must register directly with a supervising faculty member.

NFSC 399 Master's Thesis 1.0-6.0 Fa/Spr
Offered as NFSC 399A-F for 1.0-6.0 units respectively, the master’s thesis is the culminating activity for the M.S degree. You must register directly with a supervising faculty member.