Program
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 employment of dietitians is expected to increase 10-20% through the year 2010 as a result of increasing emphasis on disease prevention through improved health habits.

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 accredited 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.

Nutrition and Food Sciences
College of Natural Sciences
Dean: James J. Houpis
Nutrition and Food Science Program Coordinator: Kathryn Silliman
Holt Hall 123
530-898-6805
e-mail: nfsc@csuchico.edu
http://www.csuchico.edu/nfsc/

Graduate Adviser:
Kathryn Silliman
Holt Hall 123
530-898-6245
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.

A suggested Major Academic Plan (MAP) has been prepared 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 taken 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” in The University Catalog. These requirements may also 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 below a C- are required to 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 130 (or its equivalent) with a C- or better before you may register for a WP course.

Course Requirements for the Major: 64-65 units

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

NOTE: A maximum of 15 units of internship courses may be applied to a bachelor’s degree at CSU, Chico.

DEGREE CORE: 41 units

13 courses required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 104</td>
<td>Human Physiology</td>
<td>4.0</td>
<td>FS</td>
</tr>
<tr>
<td>BIOL 211</td>
<td>General Microbiology</td>
<td>4.0</td>
<td>FS</td>
</tr>
<tr>
<td>CHEM 107</td>
<td>Gen Chem for Applied Sciences</td>
<td>4.0</td>
<td>FS</td>
</tr>
<tr>
<td>CHEM 108</td>
<td>Organic Chem for Applied Sci</td>
<td>4.0</td>
<td>FS</td>
</tr>
<tr>
<td>NFSC 120</td>
<td>Elementary Food</td>
<td>3.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 230</td>
<td>Intro Food Serv Admin/Sanitation</td>
<td>3.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 240</td>
<td>Human Nutrition</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>NFSC 360</td>
<td>Nutritr Throughout Life Cycle</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>NFSC 429</td>
<td>Cultural Food</td>
<td>3.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 430</td>
<td>Foodservice Procurement &amp; Mgmt</td>
<td>3.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 431</td>
<td>Foodservice Equip/Production</td>
<td>3.0</td>
<td>SP</td>
</tr>
<tr>
<td>NFSC 455</td>
<td>Issues in Nutrition &amp; Food Sci</td>
<td>1.0</td>
<td>FA</td>
</tr>
</tbody>
</table>

Prerequisites: Senior standing.

Major Option Course Requirements: 23-24 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>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCT 201</td>
<td>Intro to Financial Accounting</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>ACCT 202</td>
<td>Intro to Managerial Accounting</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>ECON 103</td>
<td>Principles of Micro Analysis</td>
<td>3.0</td>
<td>SP</td>
</tr>
<tr>
<td>NFSC 432</td>
<td>Adv Foodservice Administration</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>NFSC 430</td>
<td>Internship</td>
<td>1.0-6.0</td>
<td>FS</td>
</tr>
</tbody>
</table>

Students are required to take at least 3 units of internship.

3 courses selected from:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 350</td>
<td>Meat and the Consumer</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>BLAW 413</td>
<td>Employment Law</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>CHEM 350</td>
<td>Introductory Biochemistry</td>
<td>4.0</td>
<td>FS</td>
</tr>
<tr>
<td>CHEM 451</td>
<td>Intro to Managerial Accounting</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>MKTG 305</td>
<td>Survey of Marketing</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>NFSC 499H</td>
<td>Honors Senior Thesis or Proj</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>NFSC 370L</td>
<td>Nutrition Assmt Lab</td>
<td>1.0</td>
<td>SP</td>
</tr>
<tr>
<td>PSYC 101</td>
<td>Principles of Psych</td>
<td>3.0</td>
<td>FS</td>
</tr>
</tbody>
</table>

Prerequisites: At least junior standing.

THE OPTION IN GENERAL DIETETICS: 23 units

9 courses required:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 350</td>
<td>Introductory Biochemistry</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>CHEM 350L</td>
<td>Introductory Biochemistry Lab</td>
<td>1.0</td>
<td>FS</td>
</tr>
<tr>
<td>NFSC 370</td>
<td>Clinical Nutrition</td>
<td>3.0</td>
<td>SP</td>
</tr>
<tr>
<td>NFSC 370L</td>
<td>Nutrition Assessment Lab</td>
<td>1.0</td>
<td>SP</td>
</tr>
<tr>
<td>NFSC 440</td>
<td>Advanced Human Nutrition</td>
<td>3.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 460</td>
<td>Nutrition Counseling &amp; Educ</td>
<td>2.0</td>
<td>FA</td>
</tr>
<tr>
<td>NFSC 470</td>
<td>Sem in Medical Nuttrn Therapy</td>
<td>3.0</td>
<td>SP</td>
</tr>
<tr>
<td>NFSC 497</td>
<td>Portfolio Review</td>
<td>1.0</td>
<td>FS</td>
</tr>
<tr>
<td>PSYC 101</td>
<td>Principles of Psych</td>
<td>3.0</td>
<td>FS</td>
</tr>
</tbody>
</table>

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 possibly 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>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MGMT 304</td>
<td>Human Resource Management</td>
<td>3.0</td>
<td>FS</td>
</tr>
<tr>
<td>NFSC 489</td>
<td>Internship</td>
<td>1.0-6.0</td>
<td>FS</td>
</tr>
</tbody>
</table>
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. Your Honors work will be recognized at your graduation, on your permanent transcripts, and on your diploma. It is often accompanied by letters of commendation from your mentor in the department or the department chair. Most importantly, however, the Honors in the Major program allows you to work closely with a faculty mentor in your area of interest on an original performance or research project. This year-long collaboration allows you to work in your field at a professional level and culminates in 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. You must take 6 units of Honors in the Major course work. At least 3 of these 6 units are independent study (499H) 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 Honors project.

While Honors in the Major is part of the Honors Program, each department administers its own program. Please contact your major department or major adviser for further information.

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 303 Human Genetics 3.0 FS *
Prerequisites: One biological sciences course.
OR (the following course may be substituted for the above)

BIOL 360 Genetics 4.0 FS
Prerequisites: BIOL 152.

BIOL 416 Vertebrate Physiology 4.0 FS
Prerequisites: BIOL 152; CHEM 270. Strongly recommended: BIOL 210.

CHEM 270 Organic Chemistry 4.0 FS
Prerequisites: CHEM 112.

CHEM 320 Quantitative Analysis 4.0 FS
Prerequisites: CHEM 112.

CHEM 370 Organic Chemistry 3.0 FS
Prerequisites: CHEM 270.

CHEM 370L Organic Chemistry Laboratory 1.0 FS
Prerequisites: CHEM 370 may be taken as a prerequisite or concurrently with CHEM 370L.

CHEM 451 Biochemistry 3.0 FS
Prerequisites: CHEM 370.

CHEM 455L Biochemistry Laboratory 2.0 FS
Prerequisites: CHEM 320, CHEM 451, CHEM 370L or CHEM 370M.

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:

- BIOL 211 General Microbiology 4.0 FS
Prerequisites: A college course in biology and in general chemistry.
- NFSC 120 Elementary Food 3.0 FS
- NFSC 100 Basic Nutrition 3.0 FS *
- NFSC 230 Intro Foodserv/Admn/Sanitation 3.0 FA
Prerequisites: NFSC 120.
- NFSC 430 Foodservice Procurement & Mgmt 3.0 FA
Prerequisites: BIOL 211; NFSC 230 or MGMT 303; NFSC 120.
- NFSC 431 Foodservice Equip/Production 3.0 SP
Prerequisites: NFSC 430.

2 courses selected from:

- ANSC 350 Meat and the Consumer 3.0 FS
- NFSC 429 Cultural Food 3.0 SP WP
Prerequisites: ENGL 130 (or its equivalent) with a grade of C- or higher, NFSC 120, NFSC 320, GEOG 102 and ANTH 113 are recommended.
- NFSC 489 Internship 1.0-6.0 FS
You must take NFSC 489 for a minimum of 3 units.

PSSC 305 Introduction to Wines 3.0 FA
Prerequisites: At least junior standing.

PSSC 390 Food Forever 3.0 FS *NW
Prerequisites: RECR 200, RECR 250, successful completion of computer literacy requirement, or faculty permission.

RECR 422 Leisure Services Promotion 3.0 FS
Prerequisites: Successful completion of computer literacy requirement, or faculty permission.

RECR 524 Commercial Recr Operations 3.0 FS
Prerequisites: RECR 200, RECR 420, RECR 422, one course chosen from RECR 220, RECR 240, RECR 250, or RECR 260; successful completion of computer literacy requirement, or faculty permission.

THE MINOR IN NUTRITION

Course Requirements for the Minor: 23-24 units
The following courses, or their approved transfer equivalents, are required of all candidates for this minor.

4 courses required:

- BIOL 104 Human Physiology 4.0 FS *
- CHEM 107 Gen Chem for Applied Sciences 4.0 FS *
Prerequisites: Intermediate Algebra.

- CHEM 108 Organic Chem for Applied Sci 4.0 FS
Prerequisites: CHEM 107 or CHEM 111 or equivalent.

- NFSC 240 Human Nutrition 3.0 FS
Prerequisites: BIOL 104, CHEM 108.

3 courses selected from:

- CHEM 350 Introductory Biochemistry 3.0 FS
Prerequisites: CHEM 108.

- NFSC 120 Elementary Food 3.0 FS
Prerequisites: CHEM 108.

- NFSC 303 Nutrition/Physical Fitness 3.0 FS *
Prerequisites: One lower-division course in biological sciences.

- NFSC 360 Ntrtn Through Life Cycle 3.0 FS
Prerequisites: BIOL 104; NFSC 100 or NFSC 240.

- NFSC 370 Clinical Nutrition 3.0 SP
Prerequisites: BIOL 104, CHEM 108, NFSC 240.

- NFSC 403 Adv Nutrition/Physical Fitness 3.0 FA
Prerequisites: NFSC 303 or NFSC 240; CHEM 108.

- NFSC 460 Nutrition Counseling & Educ 2.0 FA
Prerequisites: NFSC 370, NFSC 370L, NFSC 360.
**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. Specialist 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 Studies, 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 prerequisites course work at the discretion of the Graduate Coordinator after consultation with the student and faculty in the subject matter area(s) 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 Advisor and a faculty member of the student's choice.
2. Completion of 12 departmentally specified units of letter-graded 400/500/600-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 515 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 Studies, to include:

1. Completion of 30 units of approved 400/500/600-level course work as follows:
   (a) Units required for both options:

   **13 units required:**
   - MATH 515: Stat Methods for Grad Research 3.0 S1
   - Prerequisites: MATH 105, MATH 350, MATH 315, or MATH 305 (only one is required).
   - NFSC 600: Res Meth in Nutritional Sci 4.0 Inq
   - Prerequisites: MATH 515 or similar statistics course.
   - NFSC 641: Topics in Macronutrients 3.0 Inq
   - Prerequisites: NFSC 440, biochemistry.
   - NFSC 642: Topics in Vitamins & Minerals 3.0 Inq
   - Prerequisites: NFSC 440, biochemistry.

   **3-6 units required:**
   - NFSC 697P: Professional Paper 3.0 FS
   - NFSC 699T: Master's Thesis 1.0-6.0 FS

   2-6 units selected from:
   - NFSC 620: Food Science 2.0 Inq
   - Prerequisites: NFSC 320, biochemistry.
   - NFSC 661: Top in Development Nutrition 2.0 Inq
   - Prerequisites: NFSC 360, biochemistry.
   - NFSC 665: Topics in Community Nutrition 2.0 Inq
   - NFSC 667: Nutrition: International Iss 2.0 Inq
   - Prerequisites: NFSC 429, biochemistry.
   - NFSC 670: Topics in Clinical Nutrition 2.0 Inq
   - Prerequisites: NFSC 470, biochemistry.
   - NFSC 689: Graduate Internship 1.0-6.0 FS
   - NFSC 697: Independent Study 1.0-3.0 FS

   **Completion of one of the following options:**

   **THE OPTION IN GENERAL NUTRITIONAL SCIENCE**

   **9 units required:**
   - BIOL 416: Vertebrate Physiology 4.0 FS
   - Prerequisites: BIOL 152 or CHEM 270. Strongly recommended: BIOL 210.
   - CHEM 451: Biochemistry 3.0 FS
   - Prerequisites: CHEM 170.
   - CHEM 455L: Biochemistry Laboratory 2.0 FS
   - Prerequisites: CHEM 320, CHEM 451, CHEM 370L or CHEM 370M.

   **THE OPTION IN NUTRITION EDUCATION**

   **9-12 units required:**
   - NFSC 660: Nutrition Education 3.0 Inq
   - Prerequisites: NFSC 465.
   - NFSC 689: Graduate Internship 1.0-6.0 FS
   - PSYC 573: Counseling Psychology 3.0 FS
   - Prerequisites: PSYC 381 or PSYC 382, senior or graduate standing, faculty permission.
   - (b) At least 18 of the units required for the degree must be in 600-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 (697), Professional Paper (697P), and Master’s Thesis (699T); not more than 3 units of Professional Paper (697P) and 6 units of Master’s Thesis (699T).

   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) Registration in NFSC 699T, Master’s Thesis.
   (c) Approval of thesis: Members of the graduate advisory committee shall approve the thesis.
   (d) Oral defense: the candidate's 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 697P, 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 660. For those students not completing NFSC 660 under the Option in General Nutrition Science, a writing portfolio will be evaluated for literacy.

Graduate Grading Requirements:
All courses in the major (with the exceptions of Independent Study - 597/697, Comprehensive Examination - 696, Master's Project - 699P, and Master's Thesis - 699T) must be taken for a letter grade, except those courses specified by the department as ABC/No Credit (400/500-level courses), AB/No Credit (600-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 597/697, 696, 699P, 699T 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 minimum 3.0 grade point average in each of the following three categories: all course work taken at any accredited institution subsequent to admission to the program; all course work taken at CSU, Chico subsequent to admission to the program; and all courses on the approved master's degree program.

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

The Faculty
Faye C. Johnson, 1976, Professor, EdD, RD, UOP.
Barbara A. Kirks, 1976, Professor Emerita, MPH, RD, EdD, Utah St U.
Michelle R. Neyman, 2000, Assoc Professor, PhD, RD, UC Davis.
Kathryn Silliman, 1990, Professor, PhD, RD, UC Berkeley.
Cindy Brittan Wolf, 1987, Professor, MPA, RD, PhD, CO State U.

Nutrition and Food Science Course Offerings
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 unless otherwise stated. Some prerequisites may be waived with faculty permission. Many syllabi are available on the Chico Web.

NFSC 100 Basic Nutrition 3.0 Fa/Spr
Physiological, social, and psychological factors affecting food intake are examined. Relationships of nutrients to health throughout life. This is an approved General Education course. Formerly NFSC 025. CAN FCS 2.

NFSC 100H Basic Nutrition - Honors 3.0 Spring
Physiological, social, and psychological factors affecting food intake are examined. Relationships of nutrients to health throughout life. This is an approved General Education course. Formerly NFSC 025H.

NFSC 120 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 nutrient preservation. 2.0 hours discussion, 3.0 hours laboratory. Formerly NFSC 021.

NFSC 121 Food Industry 2.0 Jan
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. Formerly NFSC 021.

NFSC 198 Special Topics 1.0-3.0 Fa/Spr
This course is for special topics, which may be offered for 1.0 to 3.0 units. 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. Formerly NFSC 098.

NFSC 230 Introduction to Foodservice Administration and Sanitation 3.0 Fall
Organization, 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. Formerly NFSC 160.

NFSC 240 Human Nutrition 3.0 Fa/Spr
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. Formerly NFSC 125.

NFSC 303 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. Formerly NFSC 123.

NFSC 315 Nutrition in Health and Disease 4.0 Fa/Spr
Prerequisites: BIOL 104, CHEM 108.
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. Formerly NFSC 128.

NFSC 320 Science of Food 3.0 Fall
Prerequisites: BIOL 211, CHEM 108, NFSC 120.
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. Formerly NFSC 120.

NFSC 360 Nutrition Throughout the Life Cycle 3.0 Fa/Spr
Prerequisites: BIOL 104, NFSC 160 or NFSC 240.
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. Formerly NFSC 127.

NFSC 370 Clinical Nutrition 3.0 Spring
Prerequisites: BIOL 104, CHEM 108, NFSC 240.
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. Formerly NFSC 126.

NFSC 370L Nutrition Assessment Laboratory 1.0 Spring
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. Formerly NFSC 126L.

NFSC 398 Special Topics 1.0-3.0 Fa/Spr
This course is for special topics offered for 1.0-3.0 units. 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. Formerly NFSC 198.

NFSC 399 Special Problems 1.0-3.0 Fa/Spr
This course is an independent study of special problems offered for 1.0-3.0 units. You must register directly with a supervising faculty member. You may take this course more than once for a maximum of 6.0 units. Credit/no credit grading only. Formerly NFSC 199.

NFSC 403 Advanced Nutrition and Physical Fitness 3.0 Fall
Prerequisites: NFSC 303 or NFSC 240, CHEM 108.
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. Formerly NFSC 223.

NFSC 420 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. Formerly NFSC 220.

NFSC 429 Cultural Food 3.0 Spring
Prerequisites: ENGL 130 (or its equivalent) with a grade of C- or higher, NFSC 120, NFSC 320, GEOG 102 and ANTH 113 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. This is a writing proficiency, WP, course; a grade of C- or better certifies writing proficiency for majors. Formerly NFSC 224.
Nutrition and Food Sciences

NFSC 430  Foodservice Procurement and Management  3.0 Fall
Prerequisites: BIOL 211; NFSC 230 or MGMT 303; NFSC 120.
Principles of purchasing for commercial and institution 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. Formerly NFSC 261.

NFSC 431  Foodservice Equipment and Production Systems  3.0 Spring
Prerequisites: NFSC 430.
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. Formerly NFSC 262.

NFSC 432  Advanced Foodservice Administration  3.0 Spring
Prerequisites: NFSC 430, NFSC 431.
Advanced study and application of foodservice concepts and procedures for accountable management of organizational resources. 2.0 hours seminar, 2.0 hours activity. Formerly NFSC 263.

NFSC 440  Advanced Human Nutrition  3.0 Fall
Prerequisites: NFSC 240; CHEM 350 or CHEM 451.
Theories integrated from physiology, biochemistry, and nutrition with recent developments in the discipline. Emphasis on practical significance of current research and theory. Formerly NFSC 225.

NFSC 455  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. Formerly NFSC 229.

NFSC 460  Nutrition Counseling and Education  2.0 Fall
Prerequisites: NFSC 370, NFSC 370L, NFSC 360.
Communication skills for nutrition counseling and nutrition education; strategies and techniques for nutrition education; development of nutrition care plans; principles of evaluation and documentation. Formerly NFSC 222.

NFSC 465  Community Nutrition  3.0 Fa/Spr
Prerequisites: NFSC 370, NFSC 360, NFSC 460, NFSC 440.
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. Formerly NFSC 227.

NFSC 470  Seminar in Medical Nutrition Therapy  3.0 Spring
Prerequisites: CHEM 320 or CHEM 451; NFSC 370L and NFSC 440.
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. Formerly NFSC 226.

NFSC 489  Internship  1.0-6.0 Fa/Spr
This course is an internship offered for 1.0-6.0 units. You must register directly with a supervising faculty member. The internship is a program designed to provide the student with occupational experience. The internship is designed as a transition to professional practice wherein the student applies learned theory to actual practice. You may take this course more than once for a maximum of 15.0 units. Formerly NFSC 289.

NFSC 497  Portfolio Review  1.0 Fa/Spr
Prerequisites: Senior standing, permission of Didactic Program Director.
Design of a portfolio representative of the skills and abilities required for completion of the Didactic Program in Dietetics according to the competencies set forth by the accrediting body, the American Dietetic Association. Credit/no credit grading only. Formerly NFSC 297.

NFSC 498  Special Topics  3.0 Fa/Spr
This course is for special topics offered for 1.0-3.0 units. 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. Formerly NFSC 298.

NFSC 499H  Honors Senior Thesis or Project  3.0 Fa/Spr
Prerequisites: NFSC 100 or NFSC 240; selected screening courses by content area, all with grades of C or better; senior standing; approval by the advisor. An independent study involving substantial research for a thesis or project culminating in a public presentation. Students will enroll in NFSC 499H twice. You may take this course more than once for a maximum of 6.0 units. Formerly NFSC 299H.

NFSC 600  Research Methods in Nutritional Sciences  4.0 Inquire
Prerequisites: MATH 515 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. Formerly NFSC 300.

NFSC 620  Food Science  2.0 Inquire
Prerequisites: NFSC 240, 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. Formerly NFSC 325D.

NFSC 641  Topics in Macronutrients  3.0 Inquire
Prerequisites: NFSC 440, biochemistry.
Review of current scientific literature in selected aspects of protein, carbohydrates, and lipids, and their use by the body. Formerly NFSC 325B.

NFSC 642  Topics in Vitamins and Minerals  3.0 Inquire
Prerequisites: NFSC 440, biochemistry.
Review of current scientific literature in contemporary issues of selected nutrients. Formerly NFSC 325C.

NFSC 660  Nutrition Education  3.0 Inquire
Prerequisites: NFSC 460.
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. Formerly NFSC 327.

NFSC 661  Topics in Developmental Nutrition  2.0 Inquire
Prerequisites: NFSC 360, 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. Formerly NFSC 325E.

NFSC 665  Topics in Community Nutrition  2.0 Inquire
Prerequisites: NFSC 470, biochemistry.
Overview of international issues that influence nutritional status of individuals and populations, with emphasis on contemporary problems in less developed countries. Formerly NFSC 325G.

NFSC 667  International Issues in Nutrition  2.0 Inquire
Prerequisites: NFSC 429, biochemistry.
Review of international issues that influence nutritional status of individuals and populations, with emphasis on contemporary problems in less developed countries. Formerly NFSC 325F.

NFSC 670  Topics in Clinical Nutrition  2.0 Inquire
Prerequisites: NFSC 470, biochemistry.
A review and application of selected contemporary issues in therapeutic nutrition. Role of dietitian as health care team member is considered and examined. Formerly NFSC 325A.

NFSC 689  Graduate Internship  1.0-6.0 Fa/Spr
This course is an internship offered for 1.0-6.0 units. 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. May be repeated more than once for credit. You may take this course more than once for a maximum of 15.0 units. Credit/no credit grading only. Formerly NFSC 389.

NFSC 697  Independent Study  1.0-3.0 Fa/Spr
This course is a graduate-level independent study offered for 1.0-3.0 units. You must register directly with a supervising faculty member. You may take this course more than once for a maximum of 6.0 units. Formerly NFSC 398.

NFSC 697P  Professional Paper  3.0 Fa/Spr
Culminating activity for the MS degree. A professional paper is written based on original research. You must register directly with a supervising faculty member. You may take this course more than once for a maximum of 6.0 units. Formerly NFSC 398P.

NFSC 699T  Master's Thesis  1.0-6.0 Fa/Spr
Offered for 1.0-6.0 units, the master's thesis is the culminating activity for the MS degree. You must register directly with a supervising faculty member. You may take this course more than once for a maximum of 6.0 units. Formerly NFSC 399T.