

Admission Requirements For This Major

1. New freshmen admitted to USU in good standing qualify for admission to this major.
2. Transfer students from other institutions need a 2.5 total GPA for admission to this major in good standing.
3. Students transferring from other USU majors need a total GPA of 2.5 for admission to this major in good standing.

The Programs and Career Opportunities

The Department of Nutrition and Food Sciences prepares students for careers in food science, human nutrition, or food service management.

Graduates in the **Food Science** emphasis receive an excellent background in chemistry, engineering, food processing, statistics, sensory evaluation, and microbiology. The Food Science program is approved by the Institute of Food Technologists. Graduates are in demand by industry for positions in research, quality control/assurance, product development, and processing. Government laboratories and regulatory agencies also hire food science graduates. With a food science degree, students can also qualify to enter graduate school.

The **Food Technology Management** emphasis gives students a broad background in basic food science and in business administration to be applied to the business-oriented aspects of the food industry. Students also qualify for an Operations Management Minor in the Department of Business Administration. Graduates are sought by private food industry and public institutions in management positions.

The **Nutrition Science** emphasis is for students who are interested in studying the molecular and cellular bases of human health and disease. This is a multi-disciplinary program in which students learn to apply techniques from the fields of molecular and cellular biology, physiology, genetics, and biochemistry to issues in nutrition. Students will gain experience in laboratory, clinical, and epidemiological methods, and may have the opportunity to gain laboratory research experience in nutrition studies being conducted by faculty members. The undergraduate Bachelor of Science degree qualifies a student with the Nutrition Science emphasis to find employment in industry or academic laboratories, as well as in government agencies. It can also be used as preparation for medical or graduate school.

The **Nutrition Science Pre-Medical School** option is for students planning to attend medical school. It meets all undergraduate requirements for entry into most medical schools and may give students an advantage over applicants in other science majors.

The **Biotechnology** emphasis gives students a specialized background in biotechnology with depth training in either **Food Science** or **Nutrition Science**. Graduates of the program will be well-qualified to pursue biotechnology-related positions related to their depth area of choice. (See descriptions for Food Science and Nutrition Science emphasis areas.)

The **Dietetics** emphasis prepares students to become registered dietitians (RDs). Students receive excellent preparation in clinical nutrition, public health/community nutrition, and food service management. RDs are in great demand in the job market. USU offers two programs in Dietetics. The **Coordinated Program in Dietetics (CPD)** and the **Didactic Program in Dietetics (DPD)** are accredited by the Commission on Accreditation for Dietetics Education (CADE) of the American Dietetic Association, 20 South Riverside Plaza Suite 2000, Chicago IL 60606-6995, tel. (312) 899-0040.

- The **CPD** program includes coursework **and** a 1,000-hour supervised internship. The graduate is eligible to take the national registration exam to become an RD upon completion of the BS degree. Students should complete prerequisites and apply by mid-March of their sophomore year.
- The **DPD** program is a four-year academic program meeting all of the requirements for the graduate to apply elsewhere for the supervised internship experience following graduation. The USU-DPD is also specifically affiliated with the USU Distance Internship, for which DPD graduates are eligible to apply. Upon completion of a post-BS internship, graduates are eligible to take the national registration exam. After completing prerequisites, students should apply by mid-March of their sophomore year.

Minor in Food Sciences (16 credits). Students with majors outside of the Nutrition and Food Sciences Department may graduate with a minor in Food Sciences by completing NFS 1020, 3110, 4070, 5020 or 5030, and 5560 with a minimum cumulative GPA of 2.5 for these courses.

Degrees and Programs Offered Through This Department

Nutrition and Food Sciences: Bachelor of Science (BS), Master of Science (MS), and Doctor of Philosophy (PhD)

Areas of Undergraduate Emphasis: **Food Science, Food Technology Management, Nutrition Science, Biotechnology, and Dietetics**

Food Microbiology and Safety:

Master of Food Microbiology and Safety (MFMS)

Dietetics Administration:

Master of Dietetics Administration (MDA)

Academic Advisement

All students should contact their academic advisor for assistance with course selection, program planning, and meeting graduation requirements. If they do not know who their advisor is, students should contact their department, college, or the Office of University Advising.

Graduation Requirements: BS Degree in Nutrition and Food Sciences

Minimum University Requirements*

Total credits	120
Grade point average (most majors require higher GPA)	2.00 GPA
Credits of C- or better	100
Credits of upper-division courses (#3000 or above)	40
USU credits	30
(20 of which must be upper division, including 10 required by major)	
Completion of approved major program of study	See department
Credits in minor (see emphasis requirements)	12
Credits in American Institutions (ECON 1500; HIST 1700, 2700, or 2710; POLS 1100; or USU 1300)	
(see emphasis requirements)	3
University Studies requirements	See next page

*Colleges and departments may require more credits or a higher GPA. See requirements on this sheet.

University Studies Requirements for Nutrition and Food Sciences Major

Note: Approved University Studies courses and requirements are listed in the back section of each semester's *Schedule of Classes*.

General Education Requirements (27-28 credits)

Competency Requirements (9-10 credits)

Communications Literacy (CL1 and CL2) (6 credits)

ENGL 1010 (CL1) (3 credits) or satisfactory AP, CLEP, IBO, ACT, or SAT score

AND

ENGL 2010 (CL2) (3 credits) or satisfactory IBO score

Quantitative Literacy (QL) (3-4 credits)

MATH 1030 or 1050 or STAT 1040 (3-4 credits)

OR

One MATH or STAT course requiring MATH 1050 as a prerequisite

OR

Satisfactory AP, CLEP, IBO, ACT, or SAT score

Computer and Information Literacy (0 credits)

Passing grade on six computer and information literacy related examinations.

Breadth Requirements (18 credits)

Select at least one approved course from each of the following six categories: **American Institutions (BAI)**, **Creative Arts (BCA)**, **Humanities (BHU)**, **Life Sciences (BLS)**, **Physical Sciences (BPS)**, and **Social Sciences (BSS)**. At least two of the six breadth courses must be University Studies courses with a **USU prefix** (excluding USU 1000, 1010, 1100, 3330, 4900, and 6900). (CLEP or AP credit may be used.) NFS 1020 will fulfill the Life Sciences requirement and CHEM 1010, 1110, or 1220 will fulfill the Physical Sciences requirement for students in the Nutrition and Food Sciences major.

Depth Education Requirements

Communications Intensive (CI) (2 courses)

Two courses having CI designation (such as SPCH 2110, NFS 4060, 4560, 4660, 4780, 5110, and 5920) will meet this requirement.

Quantitative Intensive (QI) (1 course)

One course having QI designation (such as BIOL 3060, NFS 3100, 4420, 4440, 4720, 5500, PLSC 4600, STAT 2000, 3000, 5300) will meet this requirement.

Depth Course Requirements (4 credits minimum)

Complete at least 2 credits in approved 3000-level or above courses from each of the following two categories: **Humanities and Creative Arts (DHA)** and **Social Sciences (DSS)**.

Major Requirements

All graduates from the department must have completed one of the five emphases described in this sheet, and must have met the following minimum requirements:

1. Overall Grade Point Average (GPA) must be 2.5 or higher.
2. A grade of *C* or better must be received in every required course offered through the department (i.e., courses having an NFS prefix).
3. Required courses may be repeated only once to improve a grade.
4. Required courses may not be taken as *Pass-D-Fail* credits.

Recommended High School Courses

Students planning to major in Nutrition and Food Sciences should take as much English as possible, math at least through algebra, chemistry, biology, and as much other science as possible in high school.

Nutrition and Food Sciences Major Suggested Semester Schedules

Food Science Emphasis

Courses followed by an asterisk (*) are suggested for fulfilling University Studies Requirements.

Note: Effective Summer Semester 2006, some course numbers changed, due to House Bill 320 (Common Course Numbering). Course numbers used *prior* to Summer Semester 2006 are shown in parentheses, following *formerly*.

Freshman Year

Fall Semester

- | | Credits |
|---|---------|
| <input type="checkbox"/> CHEM 1210 Principles of Chemistry I | 4 |
| <input type="checkbox"/> CHEM 1215 Chemical Principles Laboratory I
(formerly CHEM 1230) | 1 |
| <input type="checkbox"/> MATH 1050 (QL) College Algebra | 4 |
| <input type="checkbox"/> NFS 1000 World of Food and Nutrition | 1 |
| <input type="checkbox"/> USU 1340 (BSS)* Social Systems and Issues | 3 |

Spring Semester

- | | |
|--|---|
| <input type="checkbox"/> CHEM 1220 (BPS) Principles of Chemistry II | 4 |
| <input type="checkbox"/> CHEM 1225 Chemical Principles Laboratory II
(formerly CHEM 1240) | 1 |
| <input type="checkbox"/> ENGL 1010 (CL1) Introduction to Writing: Academic Prose | 3 |
| <input type="checkbox"/> MATH 1060 Trigonometry | 2 |
| <input type="checkbox"/> NFS 1020 (BLS) Science and Application of Human Nutrition | 3 |
| <input type="checkbox"/> NFS 1250 Sanitation and Safety | 3 |

Sophomore Year

Fall Semester

- | | |
|---|---|
| <input type="checkbox"/> BIOL 1610 Biology I
(formerly BIOL 1210) | 4 |
| <input type="checkbox"/> CHEM 2300 Principles of Organic Chemistry | 3 |
| <input type="checkbox"/> CHEM 2315 Organic Chemistry Laboratory I
(formerly CHEM 2330) | 1 |
| <input type="checkbox"/> MATH 1210 (QL) Calculus I | 4 |
| <input type="checkbox"/> NFS 3110 Food, Technology, and Health | 3 |

Spring Semester

- | | |
|---|---|
| <input type="checkbox"/> CHEM 3700 Introductory Biochemistry | 3 |
| <input type="checkbox"/> CHEM 3710 Introductory Biochemistry Laboratory | 1 |
| <input type="checkbox"/> ECON 1500 (BAI)* Introduction to Economic Institutions,
History, and Principles | 3 |
| <input type="checkbox"/> ENGL 2010 (CL2) Intermediate Writing: Research Writing
in a Persuasive Mode | 3 |
| <input type="checkbox"/> NFS 3070 Science of Food Preparation | 4 |
| <input type="checkbox"/> STAT 3000 (QI) Statistics for Scientists | 3 |

Junior Year

Fall Semester

- | | |
|--|---|
| <input type="checkbox"/> BIOL 3300 General Microbiology | 4 |
| <input type="checkbox"/> NFS 5020 Meat Technology and Processing | 4 |
| <input type="checkbox"/> NFS 5560 Food Chemistry | 4 |
| <input type="checkbox"/> PHYS 2110 The Physics of Living Systems I | 4 |

Spring Semester

- | | |
|---|---|
| <input type="checkbox"/> NFS 3100 (QI) Sensory Evaluation of Food | 3 |
| <input type="checkbox"/> NFS 5110 (CI) Food Microbiology | 4 |
| <input type="checkbox"/> NFS 5500 (QI) Food Analysis | 4 |
| <input type="checkbox"/> PLSC 4600 (QI) Cereal Science (may be taken senior year) | 3 |

Summer Semester

- | | |
|--|---|
| <input type="checkbox"/> NFS 5250 Occupational Experiences in Nutrition
and Food Sciences | 2 |
|--|---|

Senior Year

Fall Semester

- | | |
|---|---|
| <input type="checkbox"/> NFS 4440 (QI) Fundamentals of Food Engineering | 4 |
| <input type="checkbox"/> NFS 5030 Dairy Technology and Processing | 4 |
| <input type="checkbox"/> NFS 5920 (CI) Food Product Development | 3 |
| <input type="checkbox"/> USU 1330 (BCA)* Civilization: Creative Arts | 3 |

Spring Semester	Credits
<input type="checkbox"/> NFS 4990 Nutrition and Food Sciences Seminar	1
<input type="checkbox"/> NFS 5510 Food Laws and Regulations (may be taken junior year)	2
<input type="checkbox"/> PHIL 4310 (DHA)* Philosophy of Science	3
<input type="checkbox"/> SPCH 3330 (DSS)* Intercultural Communication	3
<input type="checkbox"/> USU 1320 (BHU)* Civilization: Humanities	3

Food Technology Management Emphasis

Courses followed by an asterisk (*) are suggested for fulfilling University Studies Requirements.

Note: Effective Summer Semester 2006, some course numbers changed, due to House Bill 320 (Common Course Numbering). Course numbers used *prior* to Summer Semester 2006 are shown in parentheses, following *formerly*.

Freshman Year

Fall Semester	Credits
<input type="checkbox"/> CHEM 1110 (BPS) General Chemistry I	4
<input type="checkbox"/> MATH 1050 (QL) College Algebra	4
<input type="checkbox"/> NFS 1000 World of Food and Nutrition	1
<input type="checkbox"/> NFS 1020 (BLS) Science and Application of Human Nutrition	3
<input type="checkbox"/> USU 1330 (BCA)* Civilization: Creative Arts	3

Spring Semester	Credits
<input type="checkbox"/> CHEM 1115 General Chemistry Laboratory	1 (formerly CHEM 1130)
<input type="checkbox"/> CHEM 1120 (BPS) General Chemistry II	4
<input type="checkbox"/> ENGL 1010 (CL1) Introduction to Writing: Academic Prose	3
<input type="checkbox"/> MATH 1100 (QL) Calculus Techniques	3
<input type="checkbox"/> NFS 1250 Sanitation and Safety	3
<input type="checkbox"/> USU 1320 (BHU)* Civilization: Humanities	3

Sophomore Year

Fall Semester	Credits
<input type="checkbox"/> BIOL 2060 Elementary Microbiology	4 (formerly BIOL 1110)
<input type="checkbox"/> MHR 3110 (DSS) Managing Organizations and People	3
<input type="checkbox"/> NFS 1240 Culinary Basics	3
<input type="checkbox"/> NFS 3110 Food, Technology, and Health	3
<input type="checkbox"/> STAT 3000 (QI) Statistics for Scientists	3

Spring Semester	Credits
<input type="checkbox"/> BA 3500 Fundamentals of Marketing	3
<input type="checkbox"/> BA 3700 Operations Management	3
<input type="checkbox"/> ENGL 2010 (CL2) Intermediate Writing: Research Writing in a Persuasive Mode	3
<input type="checkbox"/> NFS 3070 Science of Food Preparation	4
<input type="checkbox"/> PHYS 1200 (BPS) Introduction to Physics by Hands-on Exploration	4

Junior Year

Fall Semester	Credits
<input type="checkbox"/> BA 4720 Production Planning and Control	3
<input type="checkbox"/> NFS 5020 Meat Technology and Processing	4
<input type="checkbox"/> NFS 5560 Food Chemistry	4
<input type="checkbox"/> PSY 1010 (BSS)* General Psychology	3

Spring Semester	Credits
<input type="checkbox"/> NFS 3100 (QI) Sensory Evaluation of Food	3
<input type="checkbox"/> NFS 5110 (CI) Food Microbiology	4
<input type="checkbox"/> NFS 5500 (QI) Food Analysis	4
<input type="checkbox"/> PHIL 4310 (DHA)* Philosophy of Science	3

Summer Semester	Credits
<input type="checkbox"/> NFS 5250 Occupational Experiences in Nutrition and Food Sciences	2

Senior Year

Fall Semester	Credits
<input type="checkbox"/> BA 5730 Process Analysis and Improvement	3
<input type="checkbox"/> ECON 1500 (BAI)* Introduction to Economic Institutions, History, and Principles	3
<input type="checkbox"/> NFS 5030 Dairy Technology and Processing	4
<input type="checkbox"/> NFS 5920 (CI) Food Product Development	3

Spring Semester	Credits
<input type="checkbox"/> ACCT 2010 Survey of Accounting I	3
<input type="checkbox"/> BA 4790 Supply Chain Management	3
<input type="checkbox"/> NFS 4990 Nutrition and Food Sciences Seminar	1
<input type="checkbox"/> NFS 5510 Food Laws and Regulations (may be taken junior year)	2
<input type="checkbox"/> SPCH 2110 (CI) Interpersonal Communication	3 (formerly SPCH 2600)

Nutrition Science Emphasis

Courses followed by an asterisk (*) are suggested for fulfilling University Studies Requirements.

Note: Effective Summer Semester 2006, some course numbers changed, due to House Bill 320 (Common Course Numbering). Course numbers used *prior* to Summer Semester 2006 are shown in parentheses, following *formerly*.

Freshman Year

Fall Semester	Credits
<input type="checkbox"/> BIOL 1610 Biology I	4 (formerly BIOL 1210)
<input type="checkbox"/> CHEM 1210 Principles of Chemistry I	4
<input type="checkbox"/> CHEM 1215 Chemical Principles Laboratory I	1 (formerly CHEM 1230)
<input type="checkbox"/> MATH 1050 (QL) College Algebra	4

Spring Semester	Credits
<input type="checkbox"/> BIOL 1620 (BLS) Biology II	4 (formerly BIOL 1220)
<input type="checkbox"/> CHEM 1220 (BPS) Principles of Chemistry II	4
<input type="checkbox"/> CHEM 1225 Chemical Principles Laboratory II	1 (formerly CHEM 1240)
<input type="checkbox"/> MATH 1060 Trigonometry	2
<input type="checkbox"/> NFS 1020 (BLS) Science and Application of Human Nutrition	3

Sophomore Year

Fall Semester	Credits
<input type="checkbox"/> BIOL 2420 Human Physiology	4 (formerly BIOL 2000)
<input type="checkbox"/> CHEM 2300 Principles of Organic Chemistry (3 cr) or	3 or 4
<input type="checkbox"/> CHEM 2310 Organic Chemistry I (4 cr)	3 or 4
<input type="checkbox"/> CHEM 2315 Organic Chemistry Laboratory I	1 (formerly CHEM 2330)
<input type="checkbox"/> ENGL 1010 (CL1) Introduction to Writing: Academic Prose	3
<input type="checkbox"/> NFS 3110 Food, Technology, and Health	3
<input type="checkbox"/> USU 1330 (BCA)* Civilization: Creative Arts	3

Spring Semester	Credits
<input type="checkbox"/> CHEM 3700 Introductory Biochemistry	3
<input type="checkbox"/> CHEM 3710 Introductory Biochemistry Laboratory	1
<input type="checkbox"/> ECON 1500 (BAI)* Introduction to Economic Institutions, History, and Principles	3
<input type="checkbox"/> MATH 1210 (QL) Calculus I	4
<input type="checkbox"/> NFS 2020 Nutrition Throughout the Life Cycle	3
<input type="checkbox"/> USU 1320 (BHU)* Civilization: Humanities	3

Junior Year

Fall Semester	Credits
<input type="checkbox"/> ENGL 2010 (CL2) Intermediate Writing: Research Writing in a Persuasive Mode	3
<input type="checkbox"/> NFS 4020 Advanced Nutrition	3
<input type="checkbox"/> NFS 4550 Nutrition Assessment/Clinical Nutrition I	4
<input type="checkbox"/> STAT 3000 (QI) Statistics for Scientists	3
<input type="checkbox"/> Univ. Studies Depth Humanities and Creative Arts (DHA) Course	3

Spring Semester	Credits
<input type="checkbox"/> NFS 3070 Science of Food Preparation	4
<input type="checkbox"/> NFS 5210 Advanced Public Health Nutrition	2
<input type="checkbox"/> USU 1340 (BSS)* Social Systems and Issues	3
<input type="checkbox"/> Univ. Studies Communications Intensive (CI) Course	3

Summer Semester	Credits
<input type="checkbox"/> NFS 5250 Occupational Experiences in Nutrition and Food Sciences	2

Senior Year

Fall Semester	Credits
□ NFS 5370 Molecular Methods in Nutrition Science	2
□ Univ. Studies Depth Social Sciences (DSS) Course	3
□ Univ. Studies Communications Intensive (CI) Course	3

Spring Semester

□ NFS 4990 Nutrition and Food Sciences Seminar	1
□ NFS 5220 Endocrine Aspects of Nutrition	2
□ NFS 5300 Advanced Micronutrient Nutrition	3

Electives

Students in the Nutrition Science Emphasis must select 20 credits from the following courses to meet their career objectives.

	Credits
□ BIOL 2320 Human Anatomy (Sp,Su) (formerly BIOL 2010)	4
□ BIOL 3060 (QI) Principles of Genetics (F,Sp,Su) (formerly BIOL 3200)	4
□ BIOL 3100 (CI) Bioethics (Sp)	3
□ BIOL 3300 General Microbiology (F,Sp)	4
□ BIOL 5210 Cell Biology (F)	3
□ BIOL 5230 Developmental Biology (Sp)	3
□ BIOL 5620 Medical Physiology (F)	3
□ CHEM 2320 Organic Chemistry II (Sp)	4
□ MATH 1220 (QL) Calculus II (F,Sp,Su)	4
□ NFS 1250 Sanitation and Safety (Sp)	3
□ NFS 3020 Nutrition and Physical Performance (F)	2
□ NFS 3600 Medical Terminology for Health Care Professionals (F,Sp,Su)	1
□ NFS 4480 Community Nutrition (F)	3
□ NFS 5200 Nutritional Epidemiology (F)	2
□ NFS 5500 (QI) Food Analysis (Sp)	4
□ PHYS 2110 The Physics of Living Systems I	4
□ PHYS 2120 (BPS) The Physics of Living Systems II	4
□ PUBH 4030 Communicable Disease Control (F)	3

Nutrition Science Emphasis Program Requirements for Pre-Medical School Option

Note: The Pre-Medical School Option will meet the pre-medical school requirements. Student transcripts and diplomas will show a Nutrition and Food Sciences major with a Nutrition Science emphasis.

Note: Effective Summer Semester 2006, some course numbers changed, due to House Bill 320 (Common Course Numbering). Course numbers used *prior* to Summer Semester 2006 are shown in parentheses, following *formerly*.

Courses followed by an asterisk (*) are suggested for fulfilling University Studies Requirements.

Freshman Year

Fall Semester	Credits
□ BIOL 1610 Biology I (formerly BIOL 1210)	4
□ CHEM 1210 Principles of Chemistry I	4
□ CHEM 1215 Chemical Principles Laboratory I (formerly CHEM 1230)	1
□ MATH 1050 (QL) College Algebra	4
□ NFS 1000 World of Food and Nutrition	1

Spring Semester

□ BIOL 1620 (BLS) Biology II (formerly BIOL 1220)	4
□ CHEM 1220 (BPS) Principles of Chemistry II	4
□ CHEM 1225 Chemical Principles Laboratory II (formerly CHEM 1240)	1
□ ENGL 1010 (CL1) Introduction to Writing: Academic Prose	3
□ MATH 1060 Trigonometry	2
□ NFS 1020 (BLS) Science and Application of Human Nutrition	3

Sophomore Year

Fall Semester	Credits
□ BIOL 2420 Human Physiology (formerly BIOL 2000)	4
□ CHEM 2310 Organic Chemistry I	4
□ CHEM 2315 Organic Chemistry Laboratory I (formerly CHEM 2330)	1
□ MATH 1210 (QL) Calculus I	4
□ NFS 3110 Food, Technology, and Health	3

Spring Semester

	Credits
□ CHEM 2320 Organic Chemistry II	4
□ CHEM 2325 Organic Chemistry Laboratory II (formerly CHEM 2340)	1
□ CHEM 3700 Introductory Biochemistry	3
□ CHEM 3710 Introductory Biochemistry Laboratory	1
□ NFS 2020 Nutrition Throughout the Life Cycle	3
□ STAT 3000 (QI) Statistics for Scientists	3

Junior Year**Fall Semester**

□ ENGL 2010 (CL2) Intermediate Writing: Research Writing in a Persuasive Mode	3
□ NFS 4020 Advanced Nutrition	3
□ NFS 4550 Nutrition Assessment/Clinical Nutrition I	4
□ PHYS 2110 The Physics of Living Systems I	4

Spring Semester

□ BIOL 3060 (QI) Principles of Genetics	4
□ HIST 3110 (DHA/CI)* Ancient Near East	3
□ NFS 3070 Science of Food Preparation	4
□ PHYS 2120 (BPS) The Physics of Living Systems II	4

Summer Semester

□ NFS 5250 Occupational Experiences in Nutrition and Food Sciences	2
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Senior Year**Fall Semester**

□ NFS 5200 Nutritional Epidemiology	2
□ NFS 5370 Molecular Methods in Nutrition Science	2
□ SCED 3210 (DSS/CI)* Educational and Multicultural Foundations	3
□ USU 1330 (BCA)* Civilization: Creative Arts	3
□ USU 1340 (BSS)* Social Systems and Issues	3

Spring Semester

□ ECON 1500 (BAD)* Introduction to Economic Institutions, History, and Principles	3
□ NFS 4990 Nutrition and Food Sciences Seminar	1
□ NFS 5210 Advanced Public Health Nutrition	2
□ NFS 5220 Endocrine Aspects of Nutrition	2
□ NFS 5300 Advanced Micronutrient Nutrition	3
□ USU 1320 (BHU)* Civilization: Humanities	3

Biotechnology Emphasis

Students selecting the Biotechnology Emphasis must choose either **Depth Training in Food Science** or **Depth Training in Nutrition Science**. Courses followed by an asterisk (*) are suggested for fulfilling University Studies Requirements.

Note: Effective Summer Semester 2006, some course numbers changed, due to House Bill 320 (Common Course Numbering). Course numbers used *prior* to Summer Semester 2006 are shown in parentheses, following *formerly*.

Depth Training in Food Science**Freshman Year**

Fall Semester	Credits
□ CHEM 1210 Principles of Chemistry I	4
□ CHEM 1215 Chemical Principles Laboratory I (formerly CHEM 1230)	1
□ ENGL 1010 (CL1) Introduction to Writing: Academic Prose	3
□ MATH 1050 (QL) College Algebra	4
□ NFS 1000 World of Food and Nutrition	1
□ NFS 1020 (BLS) Science and Application of Human Nutrition	3

Spring Semester

□ CHEM 1220 (BPS) Principles of Chemistry II	4
□ CHEM 1225 Chemical Principles Laboratory II (formerly CHEM 1240)	1
□ ECON 1500 (BAD)* Introduction to Economic Institutions, History, and Principles	3
□ MATH 1100 (QL) Calculus Techniques	3
□ NFS 2040 Introduction to Biotechnology	1
□ USU 1320 (BHU)* Civilization: Humanities	3

Sophomore Year

Fall Semester	Credits
<input type="checkbox"/> BIOL 1610 Biology I (formerly BIOL 1210)	4
<input type="checkbox"/> CHEM 2300 Principles of Organic Chemistry	3
<input type="checkbox"/> CHEM 2315 Organic Chemistry Laboratory I (formerly CHEM 2330)	1
<input type="checkbox"/> ENGL 2010 (CL2) Intermediate Writing: Research Writing in a Persuasive Mode	3
<input type="checkbox"/> NFS 3110 Food, Technology, and Health	3
Spring Semester	
<input type="checkbox"/> BIOL 3060 (QI) Principles of Genetics (formerly BIOL 3200)	4
<input type="checkbox"/> BIOL 3300 General Microbiology	4
<input type="checkbox"/> CHEM 3700 Introductory Biochemistry	3
<input type="checkbox"/> CHEM 3710 Introductory Biochemistry Laboratory	1
<input type="checkbox"/> STAT 3000 (QI) Statistics for Scientists	3

Junior Year

Fall Semester	Credits
<input type="checkbox"/> NFS 5260 Methods in Biotechnology: Molecular Cloning	3
<input type="checkbox"/> NFS 5560 Food Chemistry	4
<input type="checkbox"/> PHYS 2110 The Physics of Living Systems I	4
<input type="checkbox"/> SPC 3330 (DSS)* Intercultural Communication	3
Spring Semester	
<input type="checkbox"/> NFS 3100 (QI) Sensory Evaluation of Food	3
<input type="checkbox"/> NFS 5110 (CI) Food Microbiology	4
<input type="checkbox"/> NFS 5500 (QI) Food Analysis	4
<input type="checkbox"/> NFS 5510 Food Laws and Regulations	2
<input type="checkbox"/> PLSC 4600 (QI) Cereal Science	3
Summer Semester	
<input type="checkbox"/> NFS 5250 Occupational Experiences in Nutrition and Food Sciences	1

Senior Year

Fall Semester	Credits
<input type="checkbox"/> NFS 5020 Meat Technology and Processing (4 cr) or	
<input type="checkbox"/> NFS 5030 Dairy Technology and Processing (4 cr)	4
<input type="checkbox"/> NFS 5370 Molecular Methods in Nutrition Science	2
<input type="checkbox"/> NFS 5920 (CI) Food Product Development	3
<input type="checkbox"/> USU 1340 (BSS)* Social Systems and Issues	3
<input type="checkbox"/> Univ. Studies Depth Humanities and Creative Arts (DHA) Course	3
Spring Semester	
<input type="checkbox"/> ADVS 3200 Ethical Issues in Genetic Engineering and Biotechnology	3
<input type="checkbox"/> NFS 4990 Nutrition and Food Sciences Seminar	1
<input type="checkbox"/> NFS 5160 Methods in Biotechnology: Cell Culture	3
<input type="checkbox"/> NFS 5240 Methods in Biotechnology: Protein Purification Techniques	3
<input type="checkbox"/> STAT 5200 Design of Experiments	3
<input type="checkbox"/> USU 1330 (BCA)* Civilization: Creative Arts	3

Depth Training in Nutrition Science

Freshman Year

Fall Semester	Credits
<input type="checkbox"/> BIOL 1610 Biology I (formerly BIOL 1210)	4
<input type="checkbox"/> CHEM 1210 Principles of Chemistry I	4
<input type="checkbox"/> CHEM 1215 Chemical Principles Laboratory I (formerly CHEM 1230)	1
<input type="checkbox"/> MATH 1050 (QL) College Algebra	4
<input type="checkbox"/> USU 1340 (BSS)* Social Systems and Issues	3
Spring Semester	
<input type="checkbox"/> BIOL 1620 (BLS) Biology II (formerly BIOL 1220)	4
<input type="checkbox"/> CHEM 1220 (BPS) Principles of Chemistry II	4
<input type="checkbox"/> CHEM 1225 Chemical Principles Laboratory II (formerly CHEM 1240)	1
<input type="checkbox"/> MATH 1060 Trigonometry	2
<input type="checkbox"/> NFS 1020 (BLS) Science and Application of Human Nutrition	3
<input type="checkbox"/> NFS 2040 Introduction to Biotechnology	1

Sophomore Year

Fall Semester	Credits
<input type="checkbox"/> BIOL 2420 Human Physiology (formerly BIOL 2000)	4
<input type="checkbox"/> CHEM 2300 Principles of Organic Chemistry	3
<input type="checkbox"/> CHEM 2315 Organic Chemistry Laboratory I (formerly CHEM 2330)	1
<input type="checkbox"/> ENGL 1010 (CL1) Introduction to Writing: Academic Prose	3
<input type="checkbox"/> MATH 1100 (QL) Calculus Techniques	3
Spring Semester	
<input type="checkbox"/> CHEM 3700 Introductory Biochemistry	3
<input type="checkbox"/> CHEM 3710 Introductory Biochemistry Laboratory	1
<input type="checkbox"/> ECON 1500 (BAI)* Introduction to Economic Institutions, History, and Principles	3
<input type="checkbox"/> NFS 2020 Nutrition Throughout the Life Cycle	3
<input type="checkbox"/> USU 1320 (BHU)* Civilization: Humanities	3
<input type="checkbox"/> Univ. Studies Communications Intensive (CI) Course	3

Junior Year

Fall Semester	Credits
<input type="checkbox"/> BIOL 5620 Medical Physiology	3
<input type="checkbox"/> NFS 4020 Advanced Nutrition	3
<input type="checkbox"/> PHYS 2110 The Physics of Living Systems I	4
<input type="checkbox"/> STAT 3000 (QI) Statistics for Scientists	3
<input type="checkbox"/> USU 1330 (BCA)* Civilization: Creative Arts	3
Spring Semester	
<input type="checkbox"/> BIOL 3060 (QI) Principles of Genetics (formerly BIOL 3200)	4
<input type="checkbox"/> ENGL 2010 (CL2) Intermediate Writing: Research Writing in a Persuasive Mode	3
<input type="checkbox"/> Univ. Studies Depth Humanities and Creative Arts (DHA) Course	3
<input type="checkbox"/> Univ. Studies Depth Social Sciences (DSS) Course	3
<input type="checkbox"/> Univ. Studies Communications Intensive (CI) Course	3

Senior Year

Fall Semester	Credits
<input type="checkbox"/> BIOL 3300 General Microbiology	4
<input type="checkbox"/> BIOL 5210 Cell Biology	3
<input type="checkbox"/> NFS 5200 Nutritional Epidemiology	2
<input type="checkbox"/> NFS 5260 Methods in Biotechnology: Molecular Cloning	3
<input type="checkbox"/> NFS 5370 Molecular Methods in Nutrition Science	2
Spring Semester	
<input type="checkbox"/> ADVS 3200 Ethical Issues in Genetic Engineering and Biotechnology	3
<input type="checkbox"/> BIOL 5150 Immunology	3
<input type="checkbox"/> NFS 4990 Nutrition and Food Sciences Seminar	1
<input type="checkbox"/> NFS 5160 Methods in Biotechnology: Cell Culture	3
<input type="checkbox"/> NFS 5220 Endocrine Aspects of Nutrition	2
<input type="checkbox"/> NFS 5240 Methods in Biotechnology: Protein Purification Techniques	3

Dietetics Emphasis

Students selecting the Dietetics Emphasis must choose either the **Coordinated Program in Dietetics (CPD)** or the **Didactic Program in Dietetics (DPD)**.

Note: Effective Summer Semester 2006, some course numbers changed, due to House Bill 320 (Common Course Numbering). Course numbers used *prior* to Summer Semester 2006 are shown in parentheses, following *formerly*.

Coordinated Program in Dietetics (CPD)

Freshman Year

Fall Semester	Credits
<input type="checkbox"/> CHEM 1210 Principles of Chemistry I	4
<input type="checkbox"/> MATH 1050 (QL) College Algebra	4
<input type="checkbox"/> NFS 1020 (BLS) Science and Application of Human Nutrition	3
<input type="checkbox"/> NFS 1240 Culinary Basics	3
<input type="checkbox"/> PSY 1010 (BSS) General Psychology (3 cr) or	
<input type="checkbox"/> SOC 1010 (BSS) Introductory Sociology (3 cr)	3

Spring Semester	Credits
☐ CHEM 1220 (BPS) Principles of Chemistry II	4
☐ ECON 1500 (BAI) Introduction to Economic Institutions, History, and Principles	3
☐ ENGL 1010 (CL1) Introduction to Writing: Academic Prose	3
☐ NFS 2020 Nutrition Throughout the Life Cycle	3
☐ USU 1330 (BCA) Civilization: Creative Arts	3

Sophomore Year

Fall Semester	Credits
☐ BIOL 2420 Human Physiology (formerly BIOL 2000)	4
☐ CHEM 2300 Principles of Organic Chemistry	3
☐ ENGL 2010 (CL2) Intermediate Writing: Research Writing in a Persuasive Mode	3
☐ NFS 3020 Nutrition and Physical Performance	2
☐ STAT 1040 (QL) Introduction to Statistics (acceptable) (3 cr) or	
☐ STAT 2000 (QI) Statistical Methods (preferred) (3 cr) or	
☐ STAT 3000 (QI) Statistics for Scientists (preferred) (3 cr)	3
☐ USU 1320 (BHU) Civilization: Humanities	3

Spring Semester

☐ CHEM 3700 Introductory Biochemistry	3
☐ CHEM 3710 Introductory Biochemistry Laboratory	1
☐ FCHD 3350 (DSS) Family Finance (3 cr) or	
☐ MHR 3110 (DSS) Managing Organizations and People (3 cr)	3
☐ NFS 1250 Sanitation and Safety	3
☐ NFS 3070 Science of Food Preparation	4
☐ NFS 3600 Medical Terminology for Health Care Professionals	1
☐ Univ. Studies Depth Humanities and Creative Arts (DHA) Course	3

Junior Year

Fall Semester

☐ NFS 4020 Advanced Nutrition	3
☐ NFS 4050 (CI) Education and Counseling Methods in Dietetics I	2
☐ NFS 4480 Community Nutrition	3
☐ NFS 4550 Nutrition Assessment/Clinical Nutrition I	4
☐ NFS 4570 Clinical Nutrition Experience I	1
☐ NFS 4710 Quantity Food Preparation	2
☐ NFS 4730 Quantity Food Preparation Lab	2

Spring Semester

☐ NFS 4060 (CI) Education and Counseling Methods in Dietetics II	2
☐ NFS 4560 (CI) Clinical Nutrition II	4
☐ NFS 4580 Clinical Nutrition Experience II	2
☐ NFS 4720 (QI) Food Service Organization and Management	2
☐ NFS 4740 Food Service Organization and Management Lab	2

Senior Year

Fall Semester

☐ NFS 4660 (CI) Medical Dietetics	12
☐ NFS 4780 (CI) Maternal and Child Nutrition	4

Spring Semester

☐ NFS 4420 (QI) Nutrition Research Methodology	2
☐ NFS 4750 Management of Dietetics	3
☐ NFS 4990 Nutrition and Food Sciences Seminar	1
☐ NFS 5210 Advanced Public Health Nutrition	2
☐ NFS 5300 Advanced Micronutrient Nutrition	3
☐ NFS 5750 Advanced Dietetics Practicum	3

Didactic Program in Dietetics (DPD)

Freshman Year

Fall Semester

☐ CHEM 1210 Principles of Chemistry I	4
☐ MATH 1050 (QL) College Algebra	4
☐ NFS 1020 (BLS) Science and Application of Human Nutrition	3
☐ NFS 1240 Culinary Basics	3
☐ PSY 1010 (BSS) General Psychology (3 cr) or	
☐ SOC 1010 (BSS) Introductory Sociology (3 cr)	3

Spring Semester

☐ CHEM 1220 (BPS) Principles of Chemistry II	4
☐ ECON 1500 (BAI) Introduction to Economic Institutions, History, and Principles	3
☐ ENGL 1010 (CL1) Introduction to Writing: Academic Prose	3
☐ NFS 2020 Nutrition Throughout the Life Cycle	3
☐ USU 1330 (BCA) Civilization: Creative Arts	3

Sophomore Year

Fall Semester

Credits	
☐ BIOL 2420 Human Physiology (formerly BIOL 2000)	4
☐ CHEM 2300 Principles of Organic Chemistry	3
☐ ENGL 2010 (CL2) Intermediate Writing: Research Writing in a Persuasive Mode	3
☐ NFS 3020 Nutrition and Physical Performance	2
☐ STAT 1040 (QL) Introduction to Statistics (acceptable) (3 cr) or	
☐ STAT 2000 (QI) Statistical Methods (preferred) (3 cr) or	
☐ STAT 3000 (QI) Statistics for Scientists (preferred) (3 cr)	3
☐ USU 1320 (BHU) Civilization: Humanities	3

Spring Semester

☐ CHEM 3700 Introductory Biochemistry	3
☐ CHEM 3710 Introductory Biochemistry Laboratory	1
☐ FCHD 3350 (DSS) Family Finance (3 cr) or	
☐ MHR 3110 (DSS) Managing Organizations and People (3 cr)	3
☐ NFS 1250 Sanitation and Safety	3
☐ NFS 3070 Science of Food Preparation	4
☐ NFS 3600 Medical Terminology for Health Care Professionals	1
☐ Univ. Studies Depth Humanities and Creative Arts (DHA) Course	3

Junior Year

Fall Semester

☐ NFS 4020 Advanced Nutrition	3
☐ NFS 4050 (CI) Education and Counseling Methods in Dietetics I	2
☐ NFS 4480 Community Nutrition	3
☐ NFS 4550 Nutrition Assessment/Clinical Nutrition I	4
☐ NFS 4710 Quantity Food Preparation	2
☐ NFS 4900 SP: Clinical Nutrition Practicum I	1

Spring Semester

☐ NFS 4060 (CI) Education and Counseling Methods in Dietetics II	2
☐ NFS 4560 (CI) Clinical Nutrition II	4
☐ NFS 4720 (QI) Food Service Organization and Management	2
☐ NFS 4900 SP: Clinical Nutrition Practicum II	1
☐ SPCH 1020 (CI) Public Speaking (3 cr) or (formerly SPCH 1050)	
☐ SPCH 2110 (CI) Interpersonal Communication (3 cr) or (formerly SPCH 2600)	
☐ SPCH 3330 (DSS) Intercultural Communication (3 cr)	3

Senior Year

Fall Semester

☐ ACCT 2010 Survey of Accounting I	3
☐ BA 3500 Fundamentals of Marketing	3
☐ NFS 4780 (CI) Maternal and Child Nutrition	3
☐ NFS 5200 Nutritional Epidemiology	2
☐ NFS 5750 Advanced Dietetics Practicum	3

Spring Semester

☐ NFS 4420 (QI) Nutrition Research Methodology	2
☐ NFS 4750 Management of Dietetics	3
☐ NFS 4900 SP: Clinical Nutrition Practicum III	1
☐ NFS 4990 Nutrition and Food Sciences Seminar	1
☐ NFS 5210 Advanced Public Health Nutrition	2
☐ NFS 5300 Advanced Micronutrient Nutrition	3

Requirement Changes

Graduation requirements shown on this sheet are subject to change. Students should check with their assigned advisor concerning possible changes.

Materials for Persons with Disabilities

This requirement sheet is available in large print, audio, and braille format upon request to the USU Disability Resource Center.

For information contact

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Prepared by Registrar's Office, Utah State University