2023-2024 Catalog

Nutrition and Food Science

Overview

Sacramento City College's Nutrition and Food Science Department offers Associate Degrees in:

Nutrition

Best suited for students interested in:

- nutrition-related research
- dietetics
- any of the many health-related professions (such as becoming a medical doctor, a nurse or a dental professional)

Food Science

Best suited for students interested in careers related to:

- how food is grown, harvested, processed, packaged, shipped, and advertised
- new food products being developed

Degrees Offered

A.S.-T. in Nutrition and Dietetics

A.S. in Food Science and Technology

A.S. in Nutrition

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Associate Degrees for Transfer

A.S.-T. in Nutrition and Dietetics

The Associate in Science in Nutrition and Dietetics for Transfer (AS-T) degree in Nutrition and Dietetics at Sacramento City College allows students interested in pursuing a degree in Nutrition and Dietetics to complete their first two years of requirements at the community college before transferring to a California State University, which offers a Bachelor of Science degree.

Each California State University may have slightly different requirements for transfer so it is critical for students interested in this major to work with their counselor to develop an individual academic plan.

The Associate Degree for Transfer (ADT) student completion requirements (as stated in SB1440 law):

(1) Completion of 60 semester units or 90 quarter units that are eligible for transfer to the California State University, including both of the following:

(A) The Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements (CSU GE-Breadth).

(B) A minimum of 18 semester units or 27 quarter units in a major or area of emphasis, as determined by the community college district.

(2) Obtainment of a minimum grade point average of 2.0.

ADTs also require that students must earn a “C” or better in all courses required for the major or area of emphasis.

A ”P” (Pass) grade is also an acceptable grade for courses in the major if the course is taken on a Pass/No Pass basis.

Catalog Date: January 1, 2024

Degree Requirements

COURSE CODE	COURSE TITLE	UNITS
BIOL 440	General Microbiology	4
CHEM 400	General Chemistry I	5
CHEM 401	General Chemistry II	5
NUTRI 300	Nutrition (3)	3
or NUTRI 480	Nutrition Honors (3)	
PSYC 300	General Principles (3)	3
or PSYC 480	Honors General Principles (3)	
A minimum of 4 units from the following:		4
BIOL 430	Anatomy and Physiology (5)	
and BIOL 431	Anatomy and Physiology (5)	
CHEM 420	Organic Chemistry I (5)	
STAT 300	Introduction to Probability and Statistics (4)	
or STAT 480	Introduction to Probability and Statistics - Honors (4)	
A minimum of 3 units from the following:		3
KINES 300	Introduction to Kinesiology (3)	
NUTRI 302	Nutrition for Physical Performance (3)	
or KINES 418	Nutrition for Physical Performance (3)	
NUTRI 310	Cultural Foods of the World (3)	
NUTRI 330	Food Theory and Preparation (4)	
SOC 300	Introductory Sociology (3)	
Total Units:		**27**

The Associate in Science in Nutrition and Dietetics for Transfer (AS-T) degree may be obtained by completion of 60 transferable, semester units with a minimum overall grade point average (GPA) of 2.0, including (a) a minimum grade of "C" (or "P") for each course in the major or area of emphasis described in the Required Program, and (b) either the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- explain the principles of nutrition and their effects on health.
- assess the various sources of nutrition information and demonstrate where to find reliable nutrition information.
- analyze a diet for adequacy, balance, and moderation.
- demonstrate an understanding of the relationships between chemistry, biology, and nutrition.

Associate Degrees

A.S. in Food Science and Technology

Students majoring in Food Science spend the first two years of study developing the scientific and general background necessary for upper division courses. The science courses include chemistry, biology, physics, and mathematics. General background is also provided by course offerings in the social science/humanities area and by a course in Introductory Food Science. At the upper division level, students take

courses in nutrition, food microbiology, food chemistry, food analysis, food commodities, food processing, and food engineering. At some institutions specialties such as beer brewing are offered in the junior and senior years of study.

Upon transfer and completion of the Bachelor's Degree, a Food Science graduate will be prepared to enter the food industry and/or for post-graduate studies leading to careers in research. Food science industry and research are directed towards topics such as: improving the nutritional value of food, understanding the interactions of food components essential to safety and physical properties, improving packaging with attention to environmental concerns, and improving methods of problem detection. Food Scientists are also focused on maximizing the utilization of agricultural resources.

Catalog Date: January 1, 2024

Degree Requirements

COURSE CODE	COURSE TITLE	UNITS
BIOL 440	General Microbiology	4
BIOL 402	Cell and Molecular Biology	5
CHEM 400	General Chemistry I (5)	10
and CHEM 401	General Chemistry II (5)	
CHEM 423	Organic Chemistry - Short Survey	5
MATH 400	Calculus I (5)	10
and MATH 401	Calculus II (5)	
NUTRI 300	Nutrition (3)	3
or NUTRI 480	Nutrition Honors (3)	
NUTRI 335	Principles of Food Science	3
PHYS 350	General Physics (4)	8
and PHYS 360	General Physics (4)	
STAT 300	Introduction to Probability and Statistics (4)	3 - 4
or STAT 480	Introduction to Probability and Statistics - Honors (4)	
or PSYC 330	Introductory Statistics for the Behavioral Sciences (3)	
or ECON 310	Statistics for Business and Economics (3)	
Total Units:		**51 - 52**

The Food Science and Technology Associate in Science (A.S.) degree may be obtained by completion of 60 transferable, semester units with a minimum overall grade point average (GPA) of 2.0, including (a) a minimum grade of "C" (or "P") for each course in the major or area of emphasis described in the Required Program, and (b) either the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education-Breadth Requirements.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- understand the chemistry underlying the properties and reactions of various food components.
- identify the important pathogens and spoilage microorganisms in foods and the conditions under which they will grow.
- explain the operations required to produce a food product.
- apply and incorporate the principles of food science in practical, real-world situations and problems.

Career Information

A degree in the Food Science area can be the launch pad to many career options. You can start as a technician, go on to supervisor, and pursue research (which may require a graduate degree). Some graduates have also gone on to obtain an MBA. On the other hand, you could follow a career path into technical sales, marketing, distribution, plant supervision, product development. You might even form your own company.

A.S. in Nutrition

Sacramento City College's Nutrition Department offers a rigorous nutrition degree program that is broad enough to prepare the student for further study in a variety of nutrition areas including: nutrition science research, food science and technology, dietetics, industry, and many other evolving nutrition-related fields.

All students must complete the Required Program plus either the CSU Path or the UC Path.

It is important to note that each four-year college or university has slightly different requirements for transfer so it is critical for students interested in this major to map out their academic plan with a counselor.

Catalog Date: January 1, 2024

Degree Requirements

COURSE CODE	COURSE TITLE	UNITS
CHEM 400	General Chemistry I (5)	5
or CHEM 305	Introduction to Chemistry (5)	
or CHEM 309	Integrated General, Organic, and Biological Chemistry (5)	
NUTRI 300	Nutrition (3)	3
or NUTRI 480	Nutrition Honors (3)	
STAT 300	Introduction to Probability and Statistics (4)	4
or STAT 480	Introduction to Probability and Statistics - Honors (4)	
Subtotal Units:		**12**

CSU Path

COURSE CODE	COURSE TITLE	UNITS
BIOL 440	General Microbiology	4
PSYC 300	General Principles (3)	3
or PSYC 480	Honors General Principles (3)	
CSU Path Units:		7
Total Units:		**19**

UC Path

COURSE CODE	COURSE TITLE	UNITS
BIOL 402	Cell and Molecular Biology	5
CHEM 420	Organic Chemistry I	5
UC Path Units:		10
Total Units:		**22**

The Nutrition Associate in Science (A.S.) degree may be obtained by completion of the required program, plus general education requirements, plus sufficient electives to meet a 60-unit total. See SCC graduation requirements.

Student Learning Outcomes

Upon completion of this program, the student will be able to:

- explain the principles of nutrition and their effects on health.
- assess the various sources of nutrition information and demonstrate where to find reliable nutrition information.
- analyze a diet for adequacy, balance, and moderation.
- demonstrate an understanding of the relationships between chemistry, biology, and nutrition.

Nutrition (NUTRI) Courses

NUTRI 300 Nutrition

Units: 3
Hours: 54 hours LEC
Prerequisite: None.
Transferable: CSU; UC
General Education: AA/AS Area III(b); AA/AS Area IV; CSU Area E1
C-ID: C-ID NUTR 110
Catalog Date: January 1, 2024

Students will study the basic principles of nutrition, food sources, biologic functions of the nutrients in human physiology and all stages of the life cycle, energy metabolism, nutrition as a world problem, and consumer problems related to food. Course topics such as weight loss, sports nutrition, food safety, the diet-disease relationship, global nutrition, and analysis of special nutritional requirements and needs during the life cycle are emphasized. An evaluation of personal dietary habits using current dietary guidelines and nutritional assessment methods will also be completed to help students assess their own nutritional health. Credit will be awarded for either NUTRI 480 or NUTRI 300, not both.

NUTRI 302 Nutrition for Physical Performance

Same As: KINES 418
Units: 3
Hours: 54 hours LEC
Prerequisite: None.
Transferable: CSU; UC
General Education: AA/AS Area III(b); CSU Area E1
Catalog Date: January 1, 2024

This course will explore nutrition and fitness with emphasis on the relationship between nutrition, physical activity, lifelong fitness, and health. Credit will be awarded for NUTRI 302 or KINES 418 but not both.

NUTRI 310 Cultural Foods of the World

Units: 3
Hours: 54 hours LEC
Prerequisite: None.
Transferable: CSU; UC
General Education: AA/AS Area III(b); AA/AS Area VI; CSU Area D; IGETC Area 4
Catalog Date: January 1, 2024

Students will explore the typical food customs and meal patterns of various cultures throughout the world. Students will be introduced to the social, religious, economic, and aesthetic significance of these cultures and examine how geographical, agricultural, and socioeconomic factors influence their nutritional status. Students will also explore the preparation and evaluation of the food products.

NUTRI 322 Nutrition Issues Throughout Life

Units: 3
Hours: 54 hours LEC
Prerequisite: None.
Transferable: CSU; UC
General Education: AA/AS Area III(b)
Catalog Date: January 1, 2024

This course is a study of the nutritive needs of persons at various stages of the life cycle with emphasis on special periods such as pregnancy, preschool, adolescence, and aging. This course is particularly helpful to Kinesiology and Early Childhood Education majors as well as those working in social agencies, such as nursing and gerontology.

NUTRI 330 Food Theory and Preparation

Units: 4
Hours: 54 hours LEC; 54 hours LAB
Prerequisite: None.
Transferable: CSU
General Education: AA/AS Area III(b); CSU Area E1
C-ID: C-ID NUTR 120
Catalog Date: January 1, 2024

This course provides a comprehensive study of food ingredients and the basic principles and techniques involved in food preparation. Students will examine the factors that influence taste and the changes that occur in foods during preparation. Basic cooking skills and theories will be explored. Additionally, emphasis will be placed on cooking methodologies and their applications.

NUTRI 333 Food Safety and Sanitation

Units: 3
Hours: 54 hours LEC
Prerequisite: None.
General Education: AA/AS Area III(b)
C-ID: C-ID HOSP 110
Catalog Date: January 1, 2024

This course encompasses all phases of food sanitation: food safety principles and application, causes of food borne illnesses, sanitary practices in food preparation, microbiology of food safety, sanitation of kitchen and dining areas, infection control, and kitchen safety issues. Laws and regulations related to consumer and foodservice operations will also be examined. Lastly, this course will prepare students for the national foodservice sanitation certification exam (Servesafe).

NUTRI 335 Principles of Food Science

Units: 3
Hours: 54 hours LEC
Prerequisite: None.
Transferable: CSU; UC
General Education: AA/AS Area III(b); AA/AS Area IV
Catalog Date: January 1, 2024

This course is designed to introduce students to the fundamentals of food science and underlying technology associated with providing a safe, nutritious, and abundant supply of fresh and processed foods to humans. Students are introduced to the nature and scope of the world food problem as well as the solutions that have been proposed. This is followed by an introduction to looking at foods and food systems in

scientific terms and how understanding basic scientific principles explains how and why we process, prepare, and store foods for human consumption. Students will be introduced to how the food industry and regulatory agencies deal with potential health hazards associated with toxic chemicals and disease-causing organisms that can be present in foods, and how food preservation and processing can extend food availability from times of plenty to times of scarcity and from regions of surplus to regions of deficiency.

NUTRI 336 Introduction to Beer and Brewing

Units: 3
Hours: 54 hours LEC
Prerequisite: None.
Enrollment Limitation: Must be at least 21 years of age.
Transferable: CSU; UC
General Education: AA/AS Area IV
Catalog Date: January 1, 2024

This course introduces students to the art and science of beer and brewing. It will provide an overview of the selection of grain(s), the processes of malting and brewing, analysis of beer styles and quality and speculation about the future of malting and brewing.

NUTRI 480 Nutrition Honors

Units: 3
Hours: 54 hours LEC
Prerequisite: None.
Transferable: CSU; UC
General Education: AA/AS Area III(b); AA/AS Area IV; CSU Area E1
C-ID: C-ID NUTR 110
Catalog Date: January 1, 2024

This is an enriched study of nutrition for honors students. This course will examine dietary nutrients, their physiological functions, and their relationship to chronic diseases. Current issues such as food safety, vegetarian diets, world hunger, trans fats, and vitamin and mineral supplementation are examined. Students analyze and evaluate their diets and physical activities using diet analysis software. Scientific research methods are studied in journal articles for weekly discussions. Debates encourage critical thinking from opposing points of view. Students will research and present portions of the course material. This Honors section uses an intensive instructional methodology designed to challenge motivated students. Credit will be awarded for either NUTRI 480 or NUTRI 300, not both.

NUTRI 499 Experimental Offering in Nutrition and Foods

Units: 0.5 - 4
Prerequisite: None.
Transferable: CSU
Catalog Date: January 1, 2024

This is the experimental courses description.

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