The Nutrition Department at ARC offers an academically rich, inclusive environment that inspires critical thinking, learning, and achievement. Students learn to apply evidence-based nutrition principles to improve health and quality of life. The Nutrition Associate’s Degree prepares students for transfer into programs such as Dietetics, Community Nutrition, and the Health Sciences. The Department also offers a wide variety of Nutrition courses to satisfy general education requirements.

Nutrition is a multi-dimensional field of study, and can lead to careers in:

1. Research – Academics, government
2. Clinical Nutrition and Counseling – Registered Dietitians (RD), Dietetic Technician, Registered (DTR)
3. Food Industry – Develop new foods, marketing and communications
4. Education – Develop programs, direct education to the public
5. Public Health – Create nutrition related policies, develop and promote nutrition education
6. Food Service – Dietary Manager, menu development, regulation and compliance with food safety

Associate Degree for Transfer

A.S.-T. in Nutrition and Dietetics

The Associate in Science in Nutrition and Dietetics for Transfer degree provides students with a major that fulfills the general requirements of the California State University for transfer. Students with this degree will receive priority admission with junior status to the California State University system. The Associate in Science in Nutrition and Dietetics for Transfer (AS-T) degree may be obtained by the completion of 60 transferable, semester units with a minimum 2.0 GPA, including (a) the major or area of emphasis described in the Required Program outlined below (earning a C or better in these courses) and (b) either the Intersegmental General Education Transfer Curriculum (IGETC) or the California State University General Education Breadth Requirements.

Degree Requirements

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
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<tbody>
<tr>
<td>BIOL 440</td>
<td>General Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 400</td>
<td>General Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>NUTRI 300</td>
<td>Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>PSYC 300</td>
<td>General Principles (3)</td>
<td>3</td>
</tr>
<tr>
<td>or PSYC 480</td>
<td>Honors General Principles (3)</td>
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A minimum of 8 units from the following:

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
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</thead>
<tbody>
<tr>
<td>CHEM 401</td>
<td>General Chemistry II</td>
<td>8</td>
</tr>
<tr>
<td>CHEM 423</td>
<td>Organic Chemistry - Short Survey</td>
<td>5</td>
</tr>
<tr>
<td>or CHEM 420</td>
<td>Organic Chemistry I</td>
<td>5</td>
</tr>
<tr>
<td>STAT 300</td>
<td>Introduction to Probability and Statistics</td>
<td>4</td>
</tr>
<tr>
<td>or PSYC 330</td>
<td>Introductory Statistics for the Behavioral Sciences</td>
<td>3</td>
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</table>

A minimum of 3 units from the following:

<table>
<thead>
<tr>
<th>COURSE CODE</th>
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<tbody>
<tr>
<td>ACCT 301</td>
<td>Financial Accounting</td>
</tr>
<tr>
<td>CHEM 423</td>
<td>Organic Chemistry - Short Survey</td>
</tr>
<tr>
<td>HM 310</td>
<td>Sanitation, Safety and Equipment</td>
</tr>
<tr>
<td>HM 315</td>
<td>Food Theory and Preparation</td>
</tr>
<tr>
<td>NUTRI 310</td>
<td>Cultural Foods of the World</td>
</tr>
<tr>
<td>POLS 301</td>
<td>Introduction to Government: United States</td>
</tr>
<tr>
<td>POLS 481</td>
<td>Introduction to Government: United States - Honors</td>
</tr>
<tr>
<td>SOC 300</td>
<td>Introductory Sociology</td>
</tr>
<tr>
<td>SOC 480</td>
<td>Introductory Sociology - Honors</td>
</tr>
<tr>
<td>SPEECH 301</td>
<td>Public Speaking</td>
</tr>
</tbody>
</table>

Total Units: 26

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 2.0 GPA, including (a) 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 overall health status and chronic disease risk.
- analyze nutritional adequacy of a diet and recommend dietary changes to meet nutrition guidelines.
- demonstrate an understanding of the relationships between chemistry, biology, and nutrition.
- assess the validity of sources of nutrition information.
- interpret the findings of current nutrition research.

Career Information
This degree is designed to facilitate students’ successful transfer to four-year colleges that prepare them to become registered dietitians. Organizations or companies that employ registered dietitians include hospitals, nursing homes, school food services, other health related facilities, college food service departments, restaurants, public health agencies, nutrition programs, WIC programs, Meals on Wheels, health clubs, weight management clinics, community wellness centers, food companies, contract food management companies, and food distribution companies.

Certificate of Achievement

Dietary Manager/Dietary Service Supervisor Certificate
The Dietary Manager/Dietary Service Supervisor Certificate provides certification for employment in nutritional care and dietary management within a health-care facility, such as a skilled nursing facility. This certificate program meets the California State Department of Health Service's requirements for certification.

### Certificate Requirements

<table>
<thead>
<tr>
<th>COURSE CODE</th>
<th>COURSE TITLE</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HM 310</td>
<td>Sanitation, Safety and Equipment</td>
<td>3</td>
</tr>
<tr>
<td>HM 315</td>
<td>Food Theory and Preparation</td>
<td>4</td>
</tr>
<tr>
<td>NUTRI 130</td>
<td>Introduction to Dietary Management</td>
<td>2</td>
</tr>
<tr>
<td>NUTRI 132</td>
<td>Management of the Dietary Department in Health Care Facilities</td>
<td>3</td>
</tr>
<tr>
<td>NUTRI 133</td>
<td>Clinical Experience in Health Care Facilities</td>
<td>2.5</td>
</tr>
<tr>
<td>NUTRI 134</td>
<td>Nutritional Care Management</td>
<td>3</td>
</tr>
<tr>
<td>NUTRI 135</td>
<td>Clinical Experience in Nutritional Care Management</td>
<td>2.5</td>
</tr>
<tr>
<td>Total Units:</td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

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

- identify the location of applicable laws and regulations and determine compliance to regulatory requirements (state and federal), and determine acceptable standards of care in dietary services.

- identify the role and limitations (no scope of practice) of the Dietary Service Supervisor under law (Title 22) for the Operation of Food Service.

- participate with the Registered Dietitian (RD) in the timely review and revision of the facility's policies and procedures to ensure that they are in compliance with regulations and standards of practice.

- assist in the orientation of new employees. Assist in the ongoing, planned development of seasoned employees to ensure that they are competent to carry out the functions of the dietary service and trained in approved policies.

- assist in the development of Quality Assurance Programs to monitor staff practices for compliance, to determine training needs, and to evaluate resident/patient satisfaction.

- assist in the development of planned and disaster menus to meet the nutritional needs of resident/patient in accordance with the Recommended Dietary Allowances (RDAs).

- ensure that therapeutic menus and standardized recipes are followed, served and consumed in their appropriate form, as approved by RD.

- ensure that food is served by methods that conserve nutritive value, flavor and appearance. Ensure that food is prepared in a form designed to meet individual needs and substitutions are of similar nutritive value.

- maintain current profile cards, and provide assistive devices as needed.

- ensure that food is stored, prepared, distributed, and served under sanitary conditions to prevent food borne illness. This includes the sanitation oversight of equipment such as internal components of the ice machine, nurse pantry refrigerators and trash disposal systems.

- ensure that the food department runs smoothly, including food ordering and storage, according to applicable state requirements, staffing schedules, employee health, labor relations, safety programs and other duties as assigned by administration.

### Career Information

Certified Dietary Manager in a Long Term Care Facility.
NUTRI 130 Introduction to Dietary Management

Units: 2  
Hours: 36 hours LEC  
Prerequisite: None.  
Advisory: Eligible for ENGRD 310 or ENGRD 312 AND ENGWR 300; OR ESLR 340 AND ESLW 340.

This course provides an introduction to the profession of dietetics, with emphasis on a career as a dietary services supervisor (DSS). It examines current public policy and legislation related to the profession. It also includes the fundamentals of basic nutrition, individual’s nutritional needs throughout the life cycle, health promotion, and disease prevention.

Student Learning Outcomes
Upon completion of this course, the student will be able to:

- explain the roles that dietetic professionals play in the health care setting
- describe the role and limitations of the dietary service supervisor under law (Title 22 and Omnibus Budget Reconciliation Act (OBRA))
- determine acceptable standards of care in dietary services and evaluate compliance to regulatory requirements (county, state, and federal)
- describe the relationship of food service and nutrition care to the operation of the total facility
- categorize the known nutrients, their functions and food sources, and apply this knowledge to individual needs
- distinguish between the various requirements and recommendations of nutrients for individuals during various stages of the life cycle
- identify food patterns as related to religious practices, cultural customs, psychological and family structure, and health beliefs
- identify reliable sources of nutrition information

NUTRI 132 Management of the Dietary Department in Health Care Facilities

Units: 3  
Hours: 54 hours LEC  
Prerequisite: NUTRI 130 with a grade of "C" or better
Corequisite: NUTRI 133
Enrollment Limitation: Current ServSafe Certification

This course reviews the standards of management and food preparation as they apply to the quantity of food production in health care facilities. Topics include types and components of food production systems, work flow, menu implementation, emergency planning, maintenance of equipment, food production procedures, dietary staff schedules, and management.

Student Learning Outcomes
Upon completion of this course, the student will be able to:

- describe the organization of the food service department, including management principles and responsibilities
- develop employee schedules according to menu needs, preparation work, and meal hours
- describe methods of effective verbal and written communication
- assist in the development of training techniques and evaluation of staff
- describe a total food production system, including a convenience food system and a combination of systems, and compare advantages and
disadvantages of each

- develop production guides, complete production records, and requisition food according to menu needs
- formulate policies and procedures for buying, receiving, storing, and managing inventory with respect to budget
- develop standardized recipes, determine yields and costs, and apply appropriate terminology
- supervise quantity production of meals that meet nutrition guidelines, cost parameters, and consumer acceptance

NUTRI 133 Clinical Experience in Health Care Facilities

<table>
<thead>
<tr>
<th>Units:</th>
<th>2.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours:</td>
<td>18 hours LEC; 90 hours LAB</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>NUTRI 130 with a grade of &quot;C&quot; or better</td>
</tr>
<tr>
<td>Corequisite:</td>
<td>NUTRI 132</td>
</tr>
<tr>
<td>Enrollment Limitation:</td>
<td>Current TB clearance and other immunizations required by clinical facility.</td>
</tr>
</tbody>
</table>

This course offers clinical experience in health care facilities and is performed under professional supervision. Topics include residents' rights in food service, disaster relief feeding programs, getting ready for state inspection, and injury and illness prevention programs. A portion of this course may be offered in a TBA component of 90 hours which will include professionally supervised clinical experience in dietary departments of acute care hospitals and long term care facilities.

Student Learning Outcomes

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

- chart the flow of food from receiving to service in a health care facility
- write a clear, inclusive job description of each staff member within a facility
- assign duties for each staff member and schedule hours of work for one week
- implement an in-service training session for a specific task
- identify local markets and purveyors
- demonstrate ability to receive, weigh, count, store, locate, and inventory food and supplies received
- analyze cost of food through waste studies, convenience foods versus foods made from basic ingredients, avoiding repetition of leftovers
- develop standardized recipes to prepare food requisite for one day's menu, including cost
- demonstrate the operation, care, and cleaning of standard commercial kitchen equipment to meet federal, state and local regulations
- prepare time sheets, payroll records, and other employee records
- demonstrate the procedure for handling accidents and complete an accident report form
- determine vulnerable aspects in terms of microbial or other contamination in a food service operation
- develop techniques for attractive presentation of food
- plan menus and manage resources during emergencies and/or crisis situations
NUTRI 134 Nutritional Care Management

This course is a study of nutrition therapeutic diets used in health care facilities. It emphasizes the modification of diets for various dietary needs of the long-term care resident.

Student Learning Outcomes
Upon completion of this course, the student will be able to:

- apply appropriate nutrition care regulations for long-term care (LTC) residents
- assess food needs related to registered dietitians' (RD) assessment
- compare various therapeutic diets
- assist in the implementation of planned and disaster menus to meet the nutritional needs of residents/patients in accordance with recommended dietary allowances (RDA)
- accurately follow a physician's diet order
- maintain patient dietary files and complete minimum data set (MDS) forms
- choose nutritionally appropriate food substitutes in menus for residents representing diverse cultures and/or religious beliefs

NUTRI 135 Clinical Experience in Nutritional Care Management

This course provides clinical experience in nutritional care management. Topics include disorders of the gastrointestinal tract, diabetes, wasting disorders, nutrition, and mental health. A portion of this course may be offered in a TBA component of 90 hours which will include professionally supervised clinical experience in dietary departments of acute care hospitals and long term care facilities.

Student Learning Outcomes
Upon completion of this course, the student will be able to:

- assist registered dietitians (RD) in the development of regular and therapeutic diets according to the recommended dietary allowances (RDA)
- accurately follow a physician's diet order and provide appropriate support
- maintain patients dietary files, and complete minimum data set (MDS) forms
- develop effective interviewing skills to gather information on patients' food preferences
- recognize potential problems that need to be reported immediately to RD
- serve food by methods that conserve nutritive value, flavor, and appearance
- ensure that foods are consumed in the appropriate form as prescribed by a clinical professional
- select nutritionally appropriate food substitutes
- modify diet texture and consistency to meet resident/patients' needs and food preferences
- compare administrative policies and procedures from various health care facilities
- implement an in-service training session

NUTRI 294 Topics in Nutrition and Foods

<table>
<thead>
<tr>
<th>Units:</th>
<th>0.5 - 4</th>
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</thead>
<tbody>
<tr>
<td>Hours:</td>
<td>9 - 54 hours LEC</td>
</tr>
<tr>
<td>Prerequisite:</td>
<td>None.</td>
</tr>
</tbody>
</table>

This course provides opportunities to study current, controversial topics in nutrition which are either not included in current offerings or require emphasis beyond that offered in existing courses. A portion of this course may be offered in a TBA component of 4.5-27 hours which may include reading peer-reviewed research studies regarding a particular nutrition issue and formulating conclusions based upon study results and/or evaluating the scientific validity of a supplement claim.

Student Learning Outcomes
Upon completion of this course, the student will be able to:

- Apply basic nutrition concepts to gain a greater understanding of contemporary nutrition issues
- Analyze nutrition topics from various perspectives
- Discriminate among various nutrition research findings
- Develop conclusions regarding particular nutrition issues

NUTRI 295 Independent Studies in Nutrition and Foods

<table>
<thead>
<tr>
<th>Units:</th>
<th>1 - 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite:</td>
<td>None.</td>
</tr>
</tbody>
</table>

Independent Study is an opportunity for the student to extend classroom experience in this subject, while working independently of a formal classroom situation. Independent study is an extension of work offered in a specific class in the college catalog. To be eligible for independent study, students must have completed the basic regular catalog course at American River College. They must also discuss the study with a professor in this subject and secure approval. Only one independent study for each catalog course will be allowed.

NUTRI 300 Nutrition

<table>
<thead>
<tr>
<th>Units:</th>
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<tbody>
<tr>
<td>Hours:</td>
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</tr>
<tr>
<td>Prerequisite:</td>
<td>None.</td>
</tr>
<tr>
<td>Advisory:</td>
<td>Eligible for ENGRD 310 or ENGRD 312 AND ENGWR 300; OR ESLR 340 AND ESLW 340.</td>
</tr>
<tr>
<td>Transferable:</td>
<td>CSU; UC</td>
</tr>
<tr>
<td>General Education:</td>
<td>AA/AS Area III(b); AA/AS Area IV; CSU Area E1</td>
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<tr>
<td>C-ID:</td>
<td>C-ID NUTR 110</td>
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</table>
This course is an in-depth study of the essential nutrients and their functions, and the chemical compositions of foods and their utilization in the body. It includes discussion of the nutritional values of foods, current topics in nutrition, and an individual's nutrition needs throughout the life cycle.

**Student Learning Outcomes**
Upon completion of this course, the student will be able to:

- explain the physiological function of the gastrointestinal tract including how the digestive system breaks down food, absorbs and transports the nutrients, and excretes undigested material.
- describe the metabolic functions of the six classes of nutrients and the physiological complications resulting from dietary deficiencies or toxicities.
- identify nutrient-dense food sources for the six classes of nutrients.
- explain how nutrients and non-nutrients interact to influence digestion, absorption, metabolism, and excretion.
- distinguish between the changes in nutrient requirements and dietary recommendations from infancy through old age, including pregnancy and lactation.
- explain the components of an individual's energy/calorie needs and the effects of energy/calorie imbalance on body weight.
- analyze nutritional adequacy of a diet and make changes to meet nutrition guidelines.
- utilize the claims, nutrition facts, and the ingredient list on food packages to make healthier food choices.
- apply scientific principles to analyze and evaluate nutrition information available in print and electronic media, the Internet, dietary supplements, and weight loss programs to distinguish between reliable and unreliable sources.
- discuss the relationship between food intake and nutrition, weight management, human physiology, athletic performance, overall health, and chronic disease risk.

**NUTRI 302 Nutrition for Physical Performance**

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<tr>
<th>Units:</th>
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<tbody>
<tr>
<td>Hours:</td>
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<tr>
<td>Prerequisite:</td>
<td>None.</td>
</tr>
<tr>
<td>Transferable:</td>
<td>CSU</td>
</tr>
<tr>
<td>General Education:</td>
<td>AA/AS Area III(b); AA/AS Area IV</td>
</tr>
</tbody>
</table>

This course presents a comprehensive study of nutrition and fitness as they apply to fitness, sport skill training, and athletic performance. It includes an in-depth study of essential nutrients and functions, chemical compositions of foods and their use in the body as they relate to physical performance, muscle strength development, cardiovascular fitness, and body composition.

**Student Learning Outcomes**
Upon completion of this course, the student will be able to:

- describe the interrelationship of nutrition, fitness, and the physiological effects of exercise.
- explain how progressive fitness training is influenced by nutritional intake and alters nutritional requirements.
- identify the known nutrients, their functions, and food sources.
- identify food sources of energy-yielding nutrients used as fuels by the human body and estimate the energy requirements for various sports and activities.
- explain how anaerobic and aerobic energy systems are utilized during exercise and affected by fitness training.
- explain the special nutritional requirements pre-exercise, during exercise, and post-exercise.
• analyze the importance of proper water intake, hydration status, and electrolyte balance in physical activities.

• analyze the diet in terms of nutrient and energy content, and using accepted scientific nutrition principles design a diet recommended for an individual's optimal physical performance.

• evaluate sources of information for validity and reliability in relation to nutrition and exercise.

• evaluate the effectiveness and recognize the safety concerns of various nutritional supplements.

• apply nutrition knowledge to individual needs as they relate to both the recreational and competitive athlete.

NUTRI 305 Nutrition for Health

| Units: | 2 |
| Hours: | 36 hours LEC |
| Prerequisite: | None. |
| Advisory: | Eligible for ENGRD 310 or ENGRD 312 AND ENGWR 300: OR ESLR 340 AND ESLW 340. |
| Transferable: | CSU |
| General Education: | AA/AS Area III(b) |

This course presents a study of nutrition and fitness designed to increase an awareness of food, nutrition, and physical activity and their interrelationships. Topics include diet selection and food preparation. This course is designed for those interested in general wellness.

Student Learning Outcomes
Upon completion of this course, the student will be able to:

• list the six major nutrients and their relationship to the U.S.D.A. Dietary Guidelines for Americans.

• analyze individual dietary intake and identify areas of excess or deficiency.

• compare intake of specific nutrients with the current Dietary Reference Intakes (DRIs) and correlate dietary intake with recommendations for optimal health.

• apply principles of food selection and preparation for planning healthy diets.

• evaluate the relationships between nutrition and fitness.

NUTRI 307 Nutrition for Fitness

| Same As: | KINES 402 |
| Units: | 2 |
| Hours: | 36 hours LEC |
| Prerequisite: | None. |
| Transferable: | CSU |

This course covers the basic principles of nutrition and the ramifications of nutrition on fitness training. Topics in this course include dietary practices and nutrient intake modifications that impact physical performance, including intake of energy nutrients, vitamins, water, electrolytes, and dietary supplements. This course also includes the study of body weight and body composition, as well as factors that affect body weight and the impact of body weight on physical performance. This course is not open to students who have completed KINES 402, formerly known as PET 402.

Student Learning Outcomes
Upon completion of this course, the student will be able to:
• describe the basic principles of nutrition, including classification of essential nutrients and identification of key nutrients of various foods.

• explain the role of nutrients for achieving optimal fuel and energy utilization for physical performance.

• critique dietary programs for weight control.

• evaluate the effectiveness and recognize the safety concerns of various nutritional supplements.

• explain how nutrient intake relates to health status and the development of chronic disease.

• incorporate current dietary recommendations into planning healthy diets for physically active persons.

• describe the importance of proper water and electrolyte regulation in terms of safety, health, and exercise performance.

• explain the causes and symptoms of nutrient deficiency and toxicity.

NUTRI 310 Cultural Foods of the World

This course offers an anthropological perspective of traditional and contemporary food customs and cultures. Western and non-western food customs are compared including their social, religious, economic, and aesthetic significance. Included are ethnocentrism, gender-related stereotypes, and racism as they relate to the availability, distribution, and preparation of food throughout the world. The nutritional status of various cultures as it relates to geographic, agricultural and socioeconomic factors is studied. This course is not open to students who have completed NUTRI 481.

Student Learning Outcomes

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

• compare the traditional food habits, common foods, meal patterns, special occasion foods, food taboos, and the role of food from various regions of the world.

• identify food species important to geographic areas of the world.

• compare traditional food habits with contemporary food habits of the major cultural groups in the United States.

• analyze similarities and differences in the nutritional contributions from comparative ethnic foods.

• identify food patterns as related to religious practices, cultural customs, and health beliefs.

• research other cultures' beliefs and food practices.

• compare regional food in the United States to migration routes and food from around the world.

• analyze development of personal food habits and health beliefs derived from one's cultural background.

• analyze nutritional contributions from comparative cultural foods and their relationships to health and disease.

• examine food practices of various cultural groups and relate those to personal beliefs and practices.
NUTRI 320 Children's Health, Safety and Nutrition

This course examines basic nutrition, health, and safety needs of children from the prenatal period through school age. Topics include introduction to early childhood curriculum, laws, regulations, standards, policies, and procedures related to child health, safety, and nutrition. It emphasizes integrating and maintaining the optimal health, safety, and nutritional concepts in everyday planning and program development for all children, along with the importance of collaboration with families and health professionals. This course is not open to students who have taken ECE 415.

Student Learning Outcomes
Upon completion of this course, the student will be able to:

- analyze the interrelationship between health, safety, and nutrition as it relates to the well-being of children.
- develop various methods of collaboration with families and teachers that promote the health, safety, and nutrition of children.
- identify community resources that promote the health, safety, and nutrition of children.
- evaluate assessment tools and policies that protect the health, safety, and nutrition of children in child care settings.
- employ safe food handling techniques for preventing food-borne illnesses.
- assess the general symptoms and management of common infectious diseases that may occur in childhood.
- identify potential hazards in children's environments and describe how to make them safer.
- identify nutrient needs during fetal development, infancy, and childhood.
- identify and explain the major nutrients and their food sources.
- evaluate a child's nutrient intake by comparing it with current nutrition standards and recommendations.
- compare nutrition, health, and safety practices from the perspective of culturally diverse communities.

NUTRI 321 Nutrition and Biochemistry of Human Lactation

This course addresses dietary recommendations for lactating women and for infants and young children with an emphasis on breastfeeding as the evidence-based norm. It also covers cultural and physiologic weaning practices and appropriate complementary foods. Primary topics include comparison of human milk with milks of other mammals and with other products and artificial baby milks, the array of individual biochemical and biological components in human milk, and their multiple nutritional and bioactive functions with a focus on immunologic components. Toxicology and pharmacology related to human milk and lactation are addressed. This course is not open to students who have completed HLACT 322.
Upon completion of this course, the student will be able to:

- recommend dietary choices for lactating women with consideration of health status and cultural or lifestyle preferences and evaluate the need for further lactational or nutritional services.
- evaluate infant and young child intake based on international standards for best practices with reference to caloric and volume requirements and adequacy of key nutrients and determine the need for further lactational or nutritional services.
- explain the rationale for current breastfeeding recommendations and the health and nutritional effects for both mother and child.
- correlate maternal dietary intake with the possible effects on milk volume and composition and describe the adaptive nature of human milk as well as the range of causes for variability.
- describe the detrimental effects of unclear definitions of breastfeeding on development of a sound evidence base for infant and young child feeding recommendations.
- compare human milk with milks of other mammals and with other products and artificial baby milks, discuss the array of individual components in human milk, and explain their multiple nutritional and bioactive functions.
- discuss principles of lactational pharmacology and toxicology as they relate to medications, vaccination, environmental chemicals, and drugs of abuse.

### NUTRI 324 Nutrition for Healthy Aging

This course focuses on the nutrition of older adults. Topics include the effects of nutrition on health and well-being and the physiologic changes in aging, the effects of smell and taste on nutritional status, age-related changes in the gastrointestinal tract, risk factors for cardiovascular disease, and cancer and nutrition. This course is not open to students who have completed GERON 340.

**Student Learning Outcomes**

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

- explain the role of nutrition in the health and well-being of older adults.
- discuss strategies for the prevention of disease and chronic conditions in older adults.
- describe the physiological changes to the body that may occur as a result of the aging process.
- list and describe the major food-assistance programs for older adults.
- discuss the purpose and objectives of nutrition screening methods.
- outline the benefits, list the necessary components, and list the nutritional considerations of an exercise regimen for an older adult.
- illustrate how cultural values influence food choices made by older adults.
- discuss the nutrient needs of older adults as a result of physiological changes.
NUTRI 481 Honors - Cultural Foods of the World

This seminar-style course offers an in-depth anthropological perspective of traditional and contemporary food customs and cultures. Western and non-western food customs are compared including their social, religious, economic, and aesthetic significance. Included are ethnocentrism, gender-related stereotypes, and racism as they relate to the availability, distribution, and preparation of food throughout the world. The nutritional status of various cultures as it relates to geographic, agricultural, and socioeconomic factors is studied. The specific cultural groups included are driven by student interests. This course is not open to students who have completed NUTRI 310.

Student Learning Outcomes
Upon completion of this course, the student will be able to:

- compare the traditional food habits, common foods, meal patterns, special-occasion foods, food taboos, and the roles of food from various regions of the world.
- identify core foods important to geographic areas of the world.
- analyze similarities and differences in the nutritional contributions from ethnic foods.
- identify food patterns as related to religious practices, cultural customs, and health beliefs.
- research other cultures' beliefs and food practices.
- compare regional food in the United States to migration routes and food from around the world.
- analyze development of personal food habits and health beliefs derived from one's cultural background.
- analyze nutritional contributions from comparative cultural foods and their relationships to health and disease.
- examine food practices of various cultural groups and relate those to personal beliefs and practices.

NUTRI 495 Independent Studies in Nutrition and Foods

Independent Study is an opportunity for the student to extend classroom experience in this subject, while working independently of a formal classroom situation. Independent study is an extension of work offered in a specific class in the college catalog. To be eligible for independent study, students must have completed the basic regular catalog course at American River College. They must also discuss the study with a professor in this subject and secure approval. Only one independent study for each catalog course will be allowed.

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