NUTR 805 Research Methods
Prerequisites: Graduate standing
Description: Philosophy, goals, and methodologies related to research in nutritional science. Survey and application of basic research tools.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 806 Advanced Teaching Strategies
Crosslisted with: ALEC 805, TEAC 805
Description: Contemporary and innovative teaching strategies, emphasizing learner-centered instruction, suitable to teaching in college and postsecondary institutions, outreach programs public schools, and other settings. Students participate in active learning as they apply learning theory in practice, prepare and demonstrate teaching methods, and plan for instruction in discipline areas of their choice.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 807 Principles of Epidemiology for Nutrition and Public Health
Crosslisted with: NUTR 407
Prerequisites: NUTR 250 and 3 cr hrs Statistics.
Description: Application of basic concepts of epidemiology to nutrition and public health to include epidemiological research design, estimating outcome measures and determining cause and effect and effectiveness of interventions to prevent and treat disease.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 810 Transdisciplinary Obesity Prevention
Crosslisted with: CYAF 810
Prerequisites: NUTR 455 or equivalent; Graduate standing
Description: Using a transdisciplinary team of faculty and guest lecturers, students will be introduced to the interrelationship of obesity and dietary components, behavior, exercise and sports science, physical activity, health promotion, genetics, nutrigenomics, child development, family dynamics, cultural issues, epidemiology, population disparity, educational leadership, public policy and other related topics.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
Prerequisite for: NUTR 910, CYAF 910

NUTR 812 Multimedia Applications for Education and Training
Crosslisted with: ALEC 412, ALEC 812
Description: Practical applications in developing and evaluating multimedia resources for students. Surveys new applications, creates and develops various instructional materials, and reviews current practice against relevant theory. Use current software packages to develop materials for various audiences.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 820 Molecular Nutrition
Prerequisites: BIOC 831
Description: Roles for nutrients in signal transduction, gene expression, intracellular trafficking and cell death.
Credit Hours: 2
Max credits per semester: 2
Max credits per degree: 2
Format: LEC

NUTR 821 Molecular Nutrition Techniques
Prerequisites: BIOC 831
Notes: NUTR 820 recommended.
Description: Basic techniques for molecular studies in nutritional sciences.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 829A Food Security: A Global Perspective
Description: Overview of the technical and sociocultural dimensions of global food insecurity.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 830 Nutritional Anthropology
Crosslisted with: ANTH 430, ANTH 830, NUTR 430
Prerequisites: ANTH 242 or equivalent.
Description: Anthropological approaches to the study of nutrition. Background to nutrition science; bio-cultural aspects of obesity, fertility, lactose intolerance, and infant feeding practices; biological differences in nutritional requirements, fertility, and mortality; interpretation of nutritional deficiencies in skeletal remains; reconstructing prehistoric diets from archaeological evidence; and evaluation of relationships between dietary patterns and dental remains in fossil record.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
Groups: Biological Anthropology
NUTR 834 Food and Nutrition in Biocultural Perspective
Description: This seminar-style course takes a multidisciplinary, holistic, comparative approach to examine the complex transformation of biological hunger into what is culturally defined as cuisine. Because food patterns are the result of unique combinations of elements, including ecological, historical, cultural, political, colonial, and illness and disease factors, a broad approach is essential. We consider how edibles are transformed and examine the impact of dietary patterns on health, growth and development, and rates of malnutrition globally.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 841 Functional Properties of Food
Crosslisted with: FDST 441, FDST 841, NUTR 441
Prerequisites: NUTR 245 and BIOC 321; or FDST 448.
Description: Relationship of structure and functionality of ingredients in food systems.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 845 Experimental Foods
Crosslisted with: FDST 445, FDST 845, NUTR 445
Prerequisites: NUTR 244 and 245; BIOC 321.
Description: Introduction to food research. Application of research techniques to selected problems.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 846 Foundations of Health Behavior
Crosslisted with: EDPS 846
Description: The epidemiological, developmental and cognitive foundation of health-related behaviors and identifies opportunities for health promotion and education.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 847 Theoretical Models of Health Behavior Change
Crosslisted with: EDPS 847
Description: Application of widely used theoretical models of health behavior change. Specification of behaviors and development and evaluation of theory-based interventions to reduce health-related risks.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 855 Teaching Learners to Learn
Crosslisted with: EDAD 855, EDPS 855, SPED 855, TEAC 855
Description: Effective teachers facilitate student learning. Facilitating student learning depends on understanding learning principles and on designing instruction that is compatible with learning principles. Instructors can provide learning-compatible instruction that helps students learn more effectively and ultimately teaches them how to learn. Assists teachers to teach in learning-compatible ways and helps them embed within their curriculum a program for teaching learners to learn.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 856 Clinical Exercise Physiology
Crosslisted with: NUTR 456
Prerequisites: BIOS 214; NUTR/BIOS 484/884; NUTR 486/886.
Description: Cardiovascular, pulmonary, metabolic, pharmacologic, endocrinologic, renal, neurologic, inflammatory, and orthopedic aspects of clinical exercise physiology as they relate to exercise testing and programming.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 857 Classroom and Outreach Experiences in Food and Nutrition
Description: Supervised classroom or outreach experiences in educational or community settings.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: FLD

NUTR 858 Nutrition and Exercise
Prerequisites: BIOS/NUTR 484/884.
Description: Synergistic effects of proper nutrition and exercise on health and physical performance. Normal nutrition provides the basis for exploring the influence of dietary components and exercise on chronic disease development.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 859 Nutrition: A Focus on Life Stages
Prerequisites: 3 hours undergraduate nutrition and 6 hours undergraduate natural sciences
Description: Nutritional needs throughout the life span including pregnancy, lactation, growth and aging. Approaches to nutrition education for different ages.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Credit Hours</th>
<th>Max credits per semester</th>
<th>Max credits per degree</th>
<th>Format</th>
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</thead>
<tbody>
<tr>
<td>NUTR 860</td>
<td>Health Behavior Theories and Approaches</td>
<td>Foundation course for developing expertise in public health theory as it applies to physical activity and nutrition and related core practices as an essential means to addressing today's public health issues. Consideration of approaches for complex social problems. Exposure to behavioral theories and models as well as examples of their use in research and application. Understanding and positively influencing health behaviors with a focus on improving nutrition and physical activity, while gaining an appreciation for the gap and limitations that exist between theory and practice.</td>
<td>NUTR 370</td>
<td>3</td>
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<td>LEC</td>
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<tr>
<td>NUTR 862</td>
<td>Health Policy</td>
<td>Critical thinking about policy issues related to health. Identify and define policy issues and problems, formulate different policy options, predict factors that may affect implementation.</td>
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<td>LEC</td>
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<tr>
<td>NUTR 870</td>
<td>Cost Control for Foodservice</td>
<td>Principles of cost control for foodservice. Integration of cost control and foodservice/restaurant management principles which influence financial integrity. Utilization of the computer as a tool to enhance decision making capabilities.</td>
<td>NUTR 470</td>
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<tr>
<td>NUTR 871</td>
<td>Vines, Wines and You</td>
<td>Origin, botany, historical and cultural significance of the grapevine and related species. Principles and practices of vineyard establishment, management and processing of grape products, importance and/or scope of grape and wine industry; global and local significance. Culinary applications, health, environmental and safety-related issues, business and industry relations and experience.</td>
<td>HORT 471, HORT 871, NUTR 471, HRTM 471, HRTM 871</td>
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<td>NUTR 873</td>
<td>Organization and Administration of Foodservice</td>
<td>Organizational, administrative, and human relations concepts to foodservice. Utilization of computer applications in administration of a foodservice facility.</td>
<td>NUTR 473</td>
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<td>NUTR 875</td>
<td>Applied Dietetic Practice and Concepts</td>
<td>Scientific basis for clinical and community practice and current developments in foodservice systems in professional settings. Documenting professional development.</td>
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<tr>
<td>NUTR 880</td>
<td>Introduction to Functional Electrocardiography</td>
<td>Theory and application of electrocardiography in graded exercise testing.</td>
<td>NUTR 480</td>
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<tr>
<td>NUTR 884</td>
<td>Physiology of Exercise</td>
<td>Effects of physical activity on the circulatory, respiratory, and other physiological processes.</td>
<td>BIOS 484, BIOS 884</td>
<td>3</td>
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<td>NUTR 886</td>
<td>Exercise Testing and Exercise Programming in Adult Fitness and Cardiac Rehabilitation</td>
<td>In-depth analysis and development of the techniques and knowledge prerequisite for certification in adult fitness and cardiac rehabilitation as prescribed by the American College of Sports Medicine.</td>
<td>NUTR 486</td>
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<td>NUTR 888</td>
<td>Special Topics in Human Sciences</td>
<td>Aspects of human sciences not covered elsewhere in the curriculum.</td>
<td>NUTR 480</td>
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<td>LEC</td>
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<tr>
<td>NUTR 891</td>
<td>Crosslisted with: HUMS 891, SLPA 891, TEAC 891, TMFD 891, CYAF 891</td>
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NUTR 894 Essentials of Strength Training & Conditioning
Crosslisted with: NUTR 494
Prerequisites: NUTR 384; 484 or concurrent.
Description: Overview of the scientific principles and practical applications of strength and conditioning that integrate physiological responses, adaptations, testing, exercise techniques, program design, and periodization for athletic performance.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 896 Independent Study
Crosslisted with: NUTR 496
Prerequisites: 12 hrs in major related areas; permission.
Notes: Supervised and evaluated by departmental faculty members.
Description: Individual projects in research, literature review, or creative production.
Credit Hours: 1-5
Min credits per semester: 1
Max credits per semester: 5
Max credits per degree: 5
Format: IND

NUTR 899 Masters Thesis
Prerequisites: Admission to masters degree program and permission of major adviser
Credit Hours: 1-10
Min credits per semester: 1
Max credits per semester: 10
Max credits per degree: 99
Format: IND

NUTR 905 Research and Evaluation Literature on Health Promotion
Crosslisted with: EDPS 905
Description: Philosophical and empirical review and critique of contemporary literature on school, community, workplace and health care-based health promotion and education programs.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 910 Research Planning and Grant Writing for Childhood Obesity
Crosslisted with: CYAF 910
Prerequisites: NUTR 810 or CYAF 810
Description: The purpose of this course is to examine the philosophy, goals, and methodologies related within the concept of childhood obesity research and to apply the principles of the transdisciplinary nature of childhood obesity prevention and treatment in transdisciplinary obesity prevention research and evaluation. The course will include acquisition of resources to address childhood obesity issues, exposure to funding opportunities, research design and grant development, translation of research or programmatic findings to community and professional audiences.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
Prerequisite for: NUTR 911, CYAF 911

NUTR 911 Practicum: Experiential Learning Experiences in Childhood Obesity Prevention
Crosslisted with: CYAF 911
Prerequisites: NUTR 910 or CYAF 910 or concurrent
Notes: Practicum: Experiential Learning Experiences in Childhood Obesity Prevention is a section of the Nutrition and Health Sciences Practicum course.
Description: An applied, monitored, and supervised field based learning experience. Gain practical experience as they follow a negotiated and/or directed plan of study. The purpose of this course is to provide students with transdisciplinary experiential learning experiences related to childhood obesity prevention or treatment. Students will work with the course instructor to determine a practicum site that meets the student’s interests and the requirements of the course. Students will work collaboratively with a transdisciplinary team of individuals at the practicum site to meet the course student learning outcomes through hands on experiences.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Format: FLD

NUTR 920 Teaching Practicum
Crosslisted with: CYAF 920, TMFD 920
Prerequisites: CYAF 918 or permission of department chair
Description: Supervised classroom experiences designed to develop competencies in teaching at the college level.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: FLD

NUTR 921 Interdepartmental Nutrition Seminar
Crosslisted with: ASCI 921
Prerequisites: Permission
Description: Presentation and discussion of current literature and research in the field of nutrition.
Credit Hours: 1
Max credits per semester: 1
Max credits per degree: 1
Format: LEC

NUTR 922 Lipid Metabolism and Metabolic Syndrome
Description: Concepts of lipid and lipoprotein metabolism; impact of genetic and nutrient factors on energy metabolism and homeostasis; development and prevention of metabolic disorders.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
NUTR 925 Energy Metabolism
Crosslisted with: ASCI 925
Prerequisites: ASCI 821, BIOC 831, or NUTR 455 or 950; or permission
Notes: Offered odd-numbered calendar years.
Description: Critically evaluate how research in bioenergetics has contributed to scientific discoveries in the fields of nutrition, biochemistry, and physiology. Methodologies for determination of human and animal energy expenditure and body composition. Specifically, direct calorimetry, indirect calorimetry and comparative slaughter techniques. Emphasis on components of organ and tissue energy expenditures. Background information important in other nutrition courses.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 926 Carbohydrate and Lipid Nutrition
Crosslisted with: ASCI 926
Prerequisites: BIOC 831, ASCI 821 or NUTR 455 or 950
Notes: Offered even-numbered calendar years.
Description: Nutrition and metabolism of carbohydrates and lipids by animals and humans. Emphasis on fundamental principles and current concepts.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 927 Protein and Amino Acid Nutrition
Crosslisted with: ASCI 927
Prerequisites: ASCI 421/821 or NUTR 455 or 950; BIOC/BIOS/ CHEM 431/831
Description: Nutrition and metabolism of proteins and amino acids by animals and humans. Fundamental principles and current concepts.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 930 Sociological/Anthropological Research Methods in Education
Crosslisted with: CYAF 930, EDPS 930, TEAC 930
Description: Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 930A Ethnographic Methods
Crosslisted with: CYAF 930A, EDPS 930A, TEAC 930A, ANTH 930A
Description: Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 930B Special Topics in Qualitative and/or Quantitative Research Methods
Crosslisted with: CYAF 930B, EDPS 930B, TEAC 930B
Description: Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 9
Format: LEC

NUTR 930D Discourse Analysis Across School, Home and Community Settings
Crosslisted with: CYAF 930D, EDPS 930D, TEAC 930D
Description: Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 930E Introduction to Linguistic Analysis of Classroom Interaction
Crosslisted with: CYAF 930E, EDPS 930E, TEAC 930E
Description: Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 930J Hermeneutic Traditions in Education
Crosslisted with: CYAF 930J, EDPS 930J, TEAC 930J
Description: Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 930K Quantitative Research Traditions in Education
Crosslisted with: CYAF 930K, EDPS 930K, TEAC 930K
Description: Empirical and theoretical research into the sociocultural problems and the lived experiences of people across educational, family and community settings.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: LEC
NUTR 949 Biochemistry of Nutrition
Crosslisted with: ASCI 949, BIOC 949, BIOS 949
Prerequisites: BIOC 832 or 839, or permission
Notes: Offered odd-numbered calendar years.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 950 Integrated Principles of Human Nutrition
Prerequisites: 12 hours of biological sciences which includes biochemistry and physiology
Description: Integration of concepts of nutrient metabolism with food intake recommendations.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 952 Advanced Clinical Nutrition
Prerequisites: 6 hrs medical nutrition therapy or clinical nutrition
Description: Interrelationships between diet intervention and disease. Current theories.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 954 Fundamentals of Nutrition Counseling
Prerequisites: 12 hours NUTR and 6 hrs social science
Description: Theories of behavior change and application to nutrition counseling. Practice in development of nutrition counseling skills. Current nutrition problems and applications to diverse clients.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 956 Community Nutrition
Prerequisites: NUTR 356 or permission
Description: Historical perspectives, research methodology, and assessment techniques.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 960 Nutrient Function During Exercise
Prerequisites: NUTR 950 or 350 or 858, HHPG 884, BIOC 831 or equivalents of these courses
Description: Exercise and its influence upon human nutrition via biochemical and physiological functions. Interrelationships between exercise and energy, macro- and micro-nutrients will be examined.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 973 Organizational Administration in Food Service and Restaurant Management
Prerequisites: NUTR 873 or permission
Description: Investigation of foodservice/restaurant organizations and administration. Critical evaluation of current literature.
Credit Hours: 3
Max credits per semester: 3
Max credits per degree: 3
Format: LEC

NUTR 986 Graduate Seminar
Prerequisites: Permission
Credit Hours: 1-2
Min credits per semester: 1
Max credits per semester: 2
Max credits per degree: 2
Format: LEC

NUTR 991 Field Studies in Education
Crosslisted with: EDAD 991, TEAC 991
Prerequisites: Permission
Description: Identification and solutions of problems associated with program planning; organizational, administrative, and instructional procedures within an institutional setting. Designing, implementing, and evaluating new or modified patterns of operation and teaching within a public school, postsecondary institution, or adult education agency.
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 3
Format: FLD

NUTR 992 Advanced Human Nutrition Topics
Prerequisites: Permission
Description: In-depth evaluation of current human nutrition issues.
Credit Hours: 1-6
Min credits per semester: 1
Max credits per semester: 6
Max credits per degree: 6
Format: IND

NUTR 994 Advanced Food Topics
Prerequisites: Permission
Description: In-depth evaluation of food studies, culinology, and research issues.
Credit Hours: 1-6
Min credits per semester: 1
Max credits per semester: 6
Max credits per degree: 6
Format: IND

NUTR 995 Doctoral Colloquium
Prerequisites: Permission
Description: Intended primarily for doctoral students, although non-doctoral students are admitted with permission. Work with a faculty mentor, either on an individualized or on a small group basis. Outcome-based scholarly activities. The interaction between research and practice.
Credit Hours: 1-6
Min credits per semester: 1
Max credits per semester: 6
Max credits per degree: 18
Format: IND
NUTR 996 Research Other Than Thesis
Prerequisites: Permission
Credit Hours: 1-8
Min credits per semester: 1
Max credits per semester: 8
Max credits per degree: 8
Format: IND

NUTR 998 Special Topics in Human Sciences
Crosslisted with: CYAF 998, TMFD 998
Prerequisites: Permission
Credit Hours: 1-3
Min credits per semester: 1
Max credits per semester: 3
Max credits per degree: 6
Format: IND

NUTR 999 Doctoral Dissertation
Prerequisites: Admission to doctoral degree program and permission of supervisory committee chair
Credit Hours: 1-24
Min credits per semester: 1
Max credits per semester: 24
Max credits per degree: 99
Format: IND