

# NUTRITION (NUT)

## College of Agricultural & Environmental Sciences

### NUT 010 – Discoveries & Concepts in Nutrition (3 units)

*Course Description:* Nutrition as a science; historical development of nutrition concepts; properties of nutrients and foods.

*Learning Activities:* Lecture 3 hour(s), Project.

*Credit Limitation(s):* No credit will be granted to students who have completed NUT 010Y or NUT 010V or an upper division Nutrition (NUT) course.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Scientific Literacy (SL).

### NUT 010V – Discoveries & Concepts in Nutrition (3 units)

*Course Description:* Nutrition as a science; historical development of nutrition concepts; properties of nutrients and foods.

*Learning Activities:* Web Virtual Lecture 3 hour(s), Project.

*Credit Limitation(s):* No credit will be granted to students who have completed NUT 010 or NUT 010Y or an upper division Nutrition (NUT) course.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Scientific Literacy (SL).

### NUT 010Y – Discoveries & Concepts in Nutrition (3 units)

*Course Description:* Nutrition as a science; historical development of nutrition concepts; properties of nutrients and foods.

*Learning Activities:* Web Virtual Lecture 3 hour(s), Project.

*Credit Limitation(s):* No credit granted to students who have completed NUT 010 or NUT 010V or an upper division Nutrition (NUT) course.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Scientific Literacy (SL).

### NUT 011 – Current Topics & Controversies in Nutrition (2 units)

This version has ended; see updated course, below.

*Course Description:* Exploration of current applications and controversies in nutrition. Read scientific journal articles and write summaries, as well as give brief oral presentations. Topics change to reflect current interests and issues.

*Learning Activities:* Discussion 1.50 hour(s), Term Paper.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Oral Skills (OL); Writing Experience (WE).

### NUT 011 – Current Topics & Controversies in Nutrition (2 units)

*Course Description:* Exploration of current applications and controversies in nutrition. Read scientific journal articles and write summaries, as well as give brief oral presentations. Topics change to reflect current interests and issues.

*Learning Activities:* Discussion 1.50 hour(s), Term Paper.

*Enrollment Restriction(s):* On-time attendance on the first day of class is mandatory to stay enrolled in this course.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Oral Skills (OL); Writing Experience (WE).

This course version is effective from, and including: Fall Quarter 2026.

### NUT 099 – Individual Study for Undergraduates (1-5 units)

*Course Description:* Individual study for undergraduates.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Variable.

*Grade Mode:* Pass/No Pass only.

*General Education:* Science & Engineering (SE).

### NUT 104 – Environmental & Nutritional Factors in Cellular Regulation & Nutritional Toxicants (4 units)

*Course Description:* Cellular regulation from nutritional/toxicological perspective. Emphasis: role of biofactors on modulation of signal transduction pathways, role of specific organelles in organization/regulation of metabolic transformations, major cofactor functions, principles of pharmacology/toxicology important to understanding nutrient/toxicant metabolism.

*Prerequisite(s):* (BIS 101 or BIS 101V); (BIS 103 or ABI 103).

*Learning Activities:* Lecture 3 hour(s), Discussion 1 hour(s).

*Cross Listing:* ETX 104.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Oral Skills (OL); Scientific Literacy (SL).

### NUT 105 – Nutrition through the Life Cycle (3 units)

This version has ended; see updated course, below.

*Course Description:* Unique nutrient needs of people in different stages of the life cycle, including pregnant and lactating women, infants, children, adolescents, adults and the elderly. Physiological changes and conditions that influence nutrient needs, factors that influence food choices and appropriate dietary recommendations, and recent research are discussed.

*Prerequisite(s):* (BIS 103 or ABI 103); NUT 111AY; or consent of instructor.

*Learning Activities:* Lecture 3 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

### NUT 105 – Nutrition through the Life Cycle (3 units)

*Course Description:* Unique nutrient needs of people in different stages of the life cycle, including pregnant and lactating women, infants, children, adolescents, adults and the elderly. Physiological changes and conditions that influence nutrient needs, factors that influence food choices and appropriate dietary recommendations, and recent research are discussed.

*Prerequisite(s):* (BIS 103 or ABI 103); NUT 111AY; or consent of instructor.

*Learning Activities:* Lecture 3 hour(s).

*Enrollment Restriction(s):* Pass One open to senior Nutrition Science and Clinical Nutrition majors.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

This course version is effective from, and including: Fall Quarter 2026.

### **NUT 106 – Food Chemistry for Clinical Nutrition (5 units)**

*Course Description:* Chemical and physical principles that influence functional properties, nutrient content, safety, and sensory aspects of food. Emphasis on the application of these concepts in clinical nutrition.

*Prerequisite(s):* CHE 008B C- or better or CHE 118B C- or better or CHE 128B C- or better; concurrent with FST 100A recommended.

*Learning Activities:* Lecture 3 hour(s), Discussion 1 hour(s), Laboratory 3 hour(s).

*Enrollment Restriction(s):* Only open to Clinical Nutrition majors.

*Credit Limitation(s):* Not open to students who have completed FST 101A and/or FST 101B.

*Cross Listing:* FST 106.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Scientific Literacy (SL); Writing Experience (WE).

### **NUT 108 – Metabolic Regulation & Precision Nutrition (3 units)**

*Course Description:* Role of metabolic transformations on the bioavailability and health effects of dietary and environmental compounds. Key metabolic pathways involved in the metabolism and health effects of dietary and environmental compounds. Contribution of individual variations in these pathways to diverse responses to diet and environmental exposures.

*Prerequisite(s):* CHE 118B or CHE 128B or CHE 008B or ABI 102 or BIS 102 or BIS 102V; or consent of instructor.

*Learning Activities:* Lecture 3 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

### **NUT 111AY – Introduction to Nutrition & Metabolism (3 units)**

This version has ended; see updated course, below.

*Course Description:* Introduction to metabolism of protein, fat and carbohydrate: the biological role of vitamins and minerals; nutrient requirements during the life cycle; assessment of dietary intake and nutritional status.

*Prerequisite(s):* CHE 008B; NPB 101; or the equivalent of NPB 101.

*Learning Activities:* Web Virtual Lecture 2 hour(s), Lecture/Discussion 1 hour(s).

*Enrollment Restriction(s):* Restricted to upper division or graduate level students only.

*Credit Limitation(s):* Not open for credit to students who have completed NUT 101 or NUT 111AV.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

### **NUT 111AY – Introduction to Nutrition & Metabolism (3 units)**

*Course Description:* Introduction to metabolism of protein, fat and carbohydrate: the biological role of vitamins and minerals; nutrient requirements during the life cycle; assessment of dietary intake and nutritional status.

*Prerequisite(s):* CHE 008B; NPB 101; or equivalent of NPB 101.

*Learning Activities:* Web Virtual Lecture 2 hour(s), Lecture/Discussion 1 hour(s).

*Enrollment Restriction(s):* Pass One open to upper division Nutrition Science and Clinical Nutrition majors.

*Credit Limitation(s):* Not open for credit to students who have completed NUT 101 or NUT 111AV.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

This course version is effective from, and including: Fall Quarter 2026.

### **NUT 111B – Recommendations & Standards for Human Nutrition (2 units)**

This version has ended; see updated course, below.

*Course Description:* Critical analysis of the development of nutritional recommendations for humans. Topics include: history of modern recommendations, development of the Recommended Dietary Allowance (RDA) and other food guides; the Dietary Reference Intakes (DRI); administrative structure of regulatory agencies pertinent to nutrition recommendations; introduction to scientific methods used to determine the recommendations; food labeling laws; nutrition recommendations in other countries and cultures.

*Prerequisite(s):* (CHE 008B or CHE 118B or CHE 128B); NUT 111AY; NPB 101 recommended.

*Learning Activities:* Lecture 2 hour(s).

*Credit Limitation(s):* Not open for credit to students who have completed NUT 111.

*Grade Mode:* Letter.

### **NUT 111B – Recommendations & Standards for Human Nutrition (2 units)**

*Course Description:* Critical analysis of the development of nutritional recommendations for humans. Topics include: history of modern recommendations, development of the Recommended Dietary Allowance (RDA) and other food guides; the Dietary Reference Intakes (DRI); administrative structure of regulatory agencies pertinent to nutrition recommendations; introduction to scientific methods used to determine the recommendations; food labeling laws; nutrition recommendations in other countries and cultures.

*Prerequisite(s):* (CHE 008B or CHE 118B or CHE 128B); NUT 111AY; NPB 101 recommended.

*Learning Activities:* Lecture 2 hour(s).

*Enrollment Restriction(s):* Pass One open to upper division Nutrition Science and Clinical Nutrition majors.

*Credit Limitation(s):* Not open for credit to students who have completed NUT 111.

*Grade Mode:* Letter.

This course version is effective from, and including: Fall Quarter 2026.

### **NUT 112 – Nutritional Assessment (4 units)**

This version has ended; see updated course, below.

*Course Description:* Methods of human nutritional assessment, including dietary, anthropometric, biochemical methods. Principles of precision, accuracy, and interpretation of results for individuals and populations.

*Prerequisite(s):* ((ABI 102, ABI 103) or (BIS 102, BIS 103)); NUT 111AY; (STA 013 or STA 013V or STA 013Y or PLS 120).

*Learning Activities:* Lecture 3 hour(s), Laboratory 3 hour(s).

*Enrollment Restriction(s):* Restricted to upper division or graduate level Nutrition students only.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Quantitative Literacy (QL).

### **NUT 112 – Nutritional Assessment (4 units)**

*Course Description:* Methods of human nutritional assessment, including dietary, anthropometric, biochemical methods. Principles of precision, accuracy, and interpretation of results for individuals and populations.

*Prerequisite(s):* ((ABI 102, ABI 103) or (BIS 102, BIS 103)); NUT 111AY; (STA 013 or STA 013V or STA 013Y or PLS 120).

*Learning Activities:* Lecture 3 hour(s), Laboratory 3 hour(s).

*Enrollment Restriction(s):* Open to upper division Nutrition Science and Clinical Nutrition majors.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Quantitative Literacy (QL).

This course version is effective from, and including: Fall Quarter 2026.

### **NUT 113 – Principles of Epidemiology in Nutrition (4 units)**

This version has ended; see updated course, below.

*Course Description:* Introduction to epidemiology as it relates to the field of nutrition, including study design, principles of epidemiologic inference, criteria for causality, and interpreting measures of disease risk.

*Prerequisite(s):* STA 013 or STA 013V or STA 013Y or PLS 120 or STA 100.

*Learning Activities:* Lecture/Discussion 4 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Quantitative Literacy (QL).

### **NUT 113 – Principles of Epidemiology in Nutrition (4 units)**

*Course Description:* Introduction to epidemiology as it relates to the field of nutrition, including study design, principles of epidemiologic inference, criteria for causality, and interpreting measures of disease risk.

*Prerequisite(s):* STA 013 or STA 013V or STA 013Y or PLS 120 or STA 100.

*Learning Activities:* Lecture/Discussion 4 hour(s).

*Enrollment Restriction(s):* Pass One open to junior and senior Nutrition Science majors.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Quantitative Literacy (QL).

This course version is effective from, and including: Fall Quarter 2026.

### **NUT 114 – Developmental Nutrition (4 units)**

*Course Description:* Role of nutritional factors in embryonic and postnatal development.

*Prerequisite(s):* (ABI 102 or BIS 102 or BIS 102V); (ABI 103 or BIS 103); NUT 111AY; NUT 111B.

*Learning Activities:* Lecture 4 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

**NUT 115 – Animal Nutrition (4 units)**

*Course Description:* Comparative differences among animals in digestion and metabolism of nutrients. Nutrient composition of feeds, digestive systems, digestion, absorption, feeding strategies.

*Prerequisite(s):* CHE 008B or CHE 118B; or consent of instructor.

*Learning Activities:* Lecture 3 hour(s), Laboratory 3 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Oral Skills (OL); Quantitative Literacy (QL); Scientific Literacy (SL); Visual Literacy (VL); Writing Experience (WE).

**NUT 116A – Clinical Nutrition (3 units)**

This version has ended; see updated course, below.

*Course Description:* Biochemical and physiological bases for therapeutic diets. Problems in planning diets for normal and pathological conditions.

*Prerequisite(s):* (NUT 111AV or NUT 111AY); NUT 111B; NUT 112;

NPB 101; or the equivalent to NPB 101.

*Learning Activities:* Lecture 3 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

**NUT 116A – Clinical Nutrition (3 units)**

*Course Description:* Biochemical and physiological bases for therapeutic diets. Problems in planning diets for normal and pathological conditions.

*Prerequisite(s):* (NUT 111AV or NUT 111AY); NUT 111B; NUT 112;

NPB 101; or the equivalent to NPB 101.

*Learning Activities:* Lecture 3 hour(s).

*Enrollment Restriction(s):* Pass One open to senior Clinical Nutrition and Nutrition Science majors.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

This course version is effective from, and including: Fall Quarter 2026.

**NUT 116AL – Clinical Nutrition Practicum (3 units)**

This version has ended; see updated course, below.

*Course Description:* Fundamental principles of planning and evaluating therapeutic diets and patient education for pathological conditions covered in 116A.

*Prerequisite(s):* NUT 116A (can be concurrent).

*Learning Activities:* Lecture 1 hour(s), Laboratory 3 hour(s), Discussion 1 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

**NUT 116AL – Clinical Nutrition Practicum (3 units)**

*Course Description:* Fundamental principles of planning and evaluating therapeutic diets and patient education for pathological conditions covered in 116A.

*Prerequisite(s):* NUT 116A (can be concurrent).

*Learning Activities:* Lecture 1 hour(s), Laboratory 3 hour(s), Discussion 1 hour(s).

*Enrollment Restriction(s):* Pass One open to senior Clinical Nutrition majors.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

This course version is effective from, and including: Fall Quarter 2026.

**NUT 116B – Clinical Nutrition (3 units)**

*Course Description:* Biochemical and physiological bases for therapeutic diets. Problems in planning diets for normal and pathological conditions.

*Prerequisite(s):* NUT 111AY; NUT 111B; NUT 112; NUT 116A; NPB 101; or the equivalent to NPB 101.

*Learning Activities:* Lecture 3 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

**NUT 116BL – Clinical Nutrition Practicum (3 units)**

This version has ended; see updated course, below.

*Course Description:* Fundamental principles of planning and evaluating therapeutic diets and patient education for pathological conditions covered in NUT 116B. Continuation of NUT 116AL.

*Prerequisite(s):* NUT 116AL; NUT 116B (can be concurrent).

*Learning Activities:* Lecture 1 hour(s), Laboratory 3 hour(s), Discussion 1 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

**NUT 116BL – Clinical Nutrition Practicum (3 units)**

*Course Description:* Fundamental principles of planning and evaluating therapeutic diets and patient education for pathological conditions covered in NUT 116B. Continuation of NUT 116AL.

*Prerequisite(s):* NUT 116AL;(NUT 116B (can be concurrent) or

NUT 116BY(can be concurrent)).

*Learning Activities:* Lecture 1 hour(s), Laboratory 3 hour(s), Discussion 1 hour(s).

*Enrollment Restriction(s):* Pass One open to senior Clinical Nutrition majors.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

This course version is effective from, and including: Fall Quarter 2026.

**NUT 116BY – Clinical Nutrition (3 units)**

*Course Description:* Biochemical and physiological bases for therapeutic diets. Problems in planning diets for normal and pathological conditions.

*Prerequisite(s):* NUT 111AY; NUT 111B; NUT 112; NUT 116A; (NPB 101 or the equivalent to NPB 101).

*Learning Activities:* Web Virtual Lecture 2 hour(s), Lecture/Discussion 1 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

**NUT 117 – Experimental Nutrition (6 units)**

This version has ended; see updated course, below.

*Course Description:* Methods of assessing nutritional status. Application of chemical, microbiological, chromatographic and enzymatic techniques to current problems in nutrition.

*Prerequisite(s):* NUT 111AY; NUT 111B; NUT 112; (ABI 102 or BIS 102 or BIS 102V); (ABI 103 or BIS 103); MCB 120L or other laboratory course in biochemistry is recommended.

*Learning Activities:* Lecture 3 hour(s), Laboratory 6 hour(s), Extensive Writing.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Writing Experience (WE).

**NUT 117 – Experimental Nutrition (6 units)**

*Course Description:* Methods of assessing nutritional status. Application of chemical, microbiological, chromatographic and enzymatic techniques to current problems in nutrition.

*Prerequisite(s):* NUT 111AY; NUT 111B; NUT 112; (ABI 102 or BIS 102V or BIS 102); (ABI 103 or BIS 103); MCB 120L or other laboratory course in biochemistry is recommended.

*Learning Activities:* Lecture 3 hour(s), Laboratory 6 hour(s), Extensive Writing.

*Enrollment Restriction(s):* Pass One open to senior Nutrition Science majors.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Writing Experience (WE).

This course version is effective from, and including: Fall Quarter 2026.

**NUT 118 – Community Nutrition (4 units)**

This version has ended; see updated course, below.

*Course Description:* Nutrition problems in contemporary communities and of selected target groups in the United States and in developing countries. Nutrition programs and policy, principles of nutrition education.

*Prerequisite(s):* NUT 116A; (NUT 111AV or NUT 111AY); NUT 111B.

*Learning Activities:* Lecture 4 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Scientific Literacy (SL).

**NUT 118 – Community Nutrition (4 units)**

*Course Description:* Nutrition problems in contemporary communities and of selected target groups in the United States and in developing countries. Nutrition programs and policy, principles of nutrition education.

*Prerequisite(s):* NUT 116A; (NUT 111AV or NUT 111AY); NUT 111B.

*Learning Activities:* Lecture 4 hour(s).

*Enrollment Restriction(s):* Pass One open to senior Nutrition Science and Clinical Nutrition majors.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Scientific Literacy (SL).

This course version is effective from, and including: Fall Quarter 2026.

**NUT 119A – Global Nutrition (3 units)**

*Course Description:* Global prevalence, etiology, and consequences of nutrition problems, ranging from under nutrition and food insecurity to overweight and associated chronic diseases; underlying social, environmental, and behavioral factors that contribute to malnutrition; strategies to improve nutritional status, with emphasis on low- and middle-income countries.

*Prerequisite(s):* NUT 111AY; NUT 111B; or consent of instructor.

*Learning Activities:* Lecture/Discussion 3 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Scientific Literacy (SL).

**NUT 119B – International, Community-Based Nutritional Assessment (6 units)**

*Course Description:* A six-week summer course in Peru. Implementation of a community-based nutritional assessment survey, including development of the survey instrument, selection.

*Prerequisite(s):* NUT 119A; and consent of instructor.

*Learning Activities:* Lecture 2 hour(s), Fieldwork 12 hour(s).

*Enrollment Restriction(s):* Restricted to upper division students in Clinical Nutrition, Community Nutrition, Dietetics, and Nutrition Science.

*Grade Mode:* Letter.

**NUT 120AN – Nutritional Anthropology (4 units)**

*Course Description:* Nutritional anthropology from historical and contemporary perspectives; the anthropological approach to food and diet; field work methods; case histories that explore food patterns and their nutritional implications.

*Prerequisite(s):* (NUT 010 or NUT 010Y or NUT 010V); (ANT 002 or SOC 001 or SOC 001V or SOC 003 or SOC 003V); upper-division standing.

*Learning Activities:* Lecture 3 hour(s), Discussion 1 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE) or Social Sciences (SS).

**NUT 120BN – Nutritional Geography (4 units)**

*Course Description:* Nutritional geography from historical and contemporary perspectives; the geographical approach to food and diet; cultural and environmental factors that influence dietary practices; food-related landscapes and patterns.

*Learning Activities:* Lecture 3 hour(s), Discussion 1 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE) or Social Sciences (SS).

**NUT 124 – Nutrition & Feeding of Finfishes (3 units)**

*Course Description:* Principles of nutrition and feeding of fishes under commercial situations; implication of fish nutrition to the environment and conservation of endangered species.

*Prerequisite(s):* BIS 103 or ABI 103.

*Learning Activities:* Lecture 3 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Quantitative Literacy (QL); Scientific Literacy (SL).

### **NUT 127 – Environmental Stress & Development in Marine Organisms (10 units)**

*Course Description:* Taught at Bodega Marine Laboratory. Effects of environmental and nutritional stress, including pollutants, on development and function in embryos and larvae of marine organisms. Emphasis on advanced experimental methods.

*Prerequisite(s):* ETX 101 or BIS 102 or BIS 102V or BIS 104; or equivalent course; ETX 114A or NUT 114 recommended.

*Learning Activities:* Lecture 4 hour(s), Laboratory 12 hour(s), Discussion 2 hour(s).

*Cross Listing:* ETX 127.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Oral Skills (OL); Quantitative Literacy (QL); Scientific Literacy (SL); Visual Literacy (VL); Writing Experience (WE).

### **NUT 129 – Journalistic Practicum in Nutrition (3 units)**

*Course Description:* Critical analysis and discussion of current, controversial issues in nutrition; use of journalistic techniques to interpret scientific findings for the lay public. Students required to write several articles for campus media.

*Prerequisite(s):* (NUT 111AV or NUT 111AY); NUT 111B; or consent of instructor; a course in written or oral expression.

*Learning Activities:* Lecture 2 hour(s), Discussion 1 hour(s).

*Repeat Credit:* May be repeated 1 time(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Oral Skills (OL); Scientific Literacy (SL); Writing Experience (WE).

### **NUT 130 – Experiments in Nutrition: Design & Execution (2 units)**

*Course Description:* Experiments in current nutritional problems. Experimental design: students choose project and, independently or in groups of two-three, design a protocol, complete the project, and report findings.

*Prerequisite(s):* Consent of instructor; NUT 111AV, NUT 111AY, NUT 111B or NUT 114 recommended.

*Learning Activities:* Laboratory 6 hour(s).

*Repeat Credit:* May be repeated 6 time(s) with consent of instructor (limit of three times per instructor).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE).

### **NUT 141 – Comparative Animal Nutrition & Metabolism (4 units)**

*Course Description:* Foundational principles of nutrition, nutrient composition of feed ingredients, digestive systems of domestic and exotic animals, nutrient digestibility and absorption, nutrient metabolism.

*Prerequisite(s):* ABI 103; (NUT 115 or NUT 116A or NUT 116B); or consent of instructor.

*Learning Activities:* Lecture 3 hour(s), Discussion 1 hour(s).

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Scientific Literacy (SL); Writing Experience (WE).

### **NUT 142 – Companion Animal Nutrition (4 units)**

*Course Description:* Applied companion animal nutrition, focused primarily on dogs and cats. Nutritional considerations specifically related to health and longevity of companion animals. Evaluation of commercial and prescription-type diets with an emphasis on functional ingredients. Impact of physiological status and disease on nutrient requirements of the animal and nutrient utilization in the body.

*Prerequisite(s):* ABI 102; NUT 115; recommend ANS 042.

*Learning Activities:* Lecture 4 hour(s).

*Grade Mode:* Letter.

### **NUT 190 – Proseminar in Nutrition (1 unit)**

This version has ended; see updated course, below.

*Course Description:* Discussion of human nutrition problems. Each term will involve a different emphasis among experimental, clinical, and dietetic problems of community, national and international scope.

*Prerequisite(s):* (NUT 111AV or NUT 111AY); NUT 111B.

*Learning Activities:* Seminar 1 hour(s).

*Enrollment Restriction(s):* Restricted to senior standing.

*Repeat Credit:* May be repeated 2 time(s) with consent of instructor.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Oral Skills (OL); Visual Literacy (VL).

### **NUT 190 – Proseminar in Nutrition (1 units)**

*Course Description:* Discussion of human nutrition problems. Each term will involve a different emphasis among experimental, clinical, and dietetic problems of community, national and international scope.

*Prerequisite(s):* (NUT 111AV or NUT 111AY); NUT 111B.

*Learning Activities:* Seminar 1 hour(s).

*Enrollment Restriction(s):* Pass One open to senior Clinical Nutrition and Nutrition Science majors.

*Repeat Credit:* May be repeated 2 time(s) with consent of instructor.

*Grade Mode:* Letter.

*General Education:* Science & Engineering (SE); Oral Skills (OL); Visual Literacy (VL).

This course version is effective from, and including: Fall Quarter 2026.

### **NUT 190C – Nutrition Research Conference (1 unit)**

*Course Description:* Introduction to research findings and methods in nutrition. Presentation and discussion of research by faculty and students.

*Prerequisite(s):* Consent of instructor; upper division standing in Nutrition or related biological science.

*Learning Activities:* Discussion 1 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Pass/No Pass only.

*General Education:* Science & Engineering (SE).

### **NUT 192 – Internship (1-12 units)**

*Course Description:* Work experience on or off campus in practical application of nutrition, supervised by a faculty member.

*Prerequisite(s):* Consent of instructor; one upper division course in nutrition.

*Learning Activities:* Internship 3-36 hour(s).

*Grade Mode:* Pass/No Pass only.

**NUT 197T – Tutoring in Nutrition (1-2 units)**

*Course Description:* Tutoring of students in nutrition courses, assistance with discussion groups or laboratory sections, weekly conference with instructor in charge of course: written evaluations.

*Prerequisite(s):* Consent of instructor; Nutrition Science, Clinical Nutrition or related major.

*Learning Activities:* Discussion/Laboratory 3-6 hour(s).

*Repeat Credit:* May be repeated when tutoring a different course.

*Grade Mode:* Pass/No Pass only.

**NUT 198 – Directed Group Study (1-5 units)**

*Course Description:* Directed group study.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Variable.

*Grade Mode:* Pass/No Pass only.

**NUT 199 – Special Study for Advanced Undergraduates (1-5 units)**

*Course Description:* Special study for advanced undergraduates.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Variable.

*Grade Mode:* Pass/No Pass only.

*General Education:* Science & Engineering (SE).

**NUT 219A – International Nutrition (3 units)**

*Course Description:* Epidemiology, etiology, and consequences of undernutrition, with particular focus on the nutritional problems of children and women in low income populations.

*Prerequisite(s):* NUT 111AV; NUT 111AY; graduate standing; undergraduates only admitted with consent of instructor.

*Learning Activities:* Lecture 3 hour(s).

*Grade Mode:* Letter.

**NUT 219B – International Nutrition (3 units)**

*Course Description:* Intervention programs to prevent or ameliorate nutritional problems in low-income populations. Planning, implementing, and evaluating nutrition intervention programs.

*Prerequisite(s):* NUT 219A.

*Learning Activities:* Lecture 3 hour(s).

*Grade Mode:* Letter.

**NUT 230 – Experiments in Nutrition: Design & Execution (2 units)**

*Course Description:* Student-selected projects to enhance laboratory skills. Independently, or in groups of two-three students, design a protocol, carry out the project, analyze the results and report the findings.

*Prerequisite(s):* Consent of instructor; NUT 201, NUT 202, NUT 203, NUT 204, or the equivalent recommended.

*Learning Activities:* Laboratory 6 hour(s).

*Repeat Credit:* May be repeated 6 time(s) with consent of instructor (limit of three times per instructor).

*Grade Mode:* Letter.

**NUT 250 – Metabolic Homeostasis (3 units)**

*Course Description:* Regulatory mechanisms of carbohydrate, lipid, and protein homeostasis; mechanisms of metabolic enzyme regulation and of the metabolic hormones; homeostatic mechanisms and interactions; fuel-fuel interactions; nutrition-energy balance.

*Prerequisite(s):* Passing the Nutrition Graduate Group Preliminary Examination or consent of instructor.

*Learning Activities:* Lecture 2 hour(s), Discussion 1.50 hour(s).

*Enrollment Restriction(s):* Preference given to students in advanced standing in the Nutrition Graduate Group.

*Grade Mode:* Letter.

**NUT 251 – Nutrition & Immunity (2 units)**

*Course Description:* Cellular and molecular mechanisms underlying interactions of nutrition and immune function, including modulation of immunocompetence by diet and effects of immune responses on nutritional needs. Lectures and discussion explore implications for resistance to infection, autoimmunity and cancer.

*Prerequisite(s):* PMI 126; ABI 102; MMI 107; or the equivalent to MMI 107.

*Learning Activities:* Lecture/Discussion 2 hour(s).

*Grade Mode:* Letter.

**NUT 252 – Nutrition & Development (3 units)**

*Course Description:* Relationship of nutrition to prenatal and early postnatal development.

*Prerequisite(s):* NUB 210A, NUB 210B, and NUB 210C recommended.

*Learning Activities:* Lecture 3 hour(s).

*Grade Mode:* Letter.

**NUT 253 – Control of Energy Balance & Body Weight (3 units)**

*Course Description:* Comprehensive study of the biochemical, nutritional and physiological mechanisms controlling food intake, body composition and energy expenditure. Subject matter will be approached through lectures and discussions where students and staff will critically evaluate the literature.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Lecture 2 hour(s), Discussion 1 hour(s).

*Grade Mode:* Letter.

**NUT 254 – Applications of Systems Analysis in Nutrition (3 units)**

*Course Description:* Quantitative aspects of digestion and metabolism; principles of systems analysis. Evolution of models of energy metabolism as applied in current feeding systems. Critical evaluations of mechanistic models used analytically in support of nutritional research.

*Prerequisite(s):* NUT 202; or the equivalent.

*Learning Activities:* Lecture 2 hour(s), Discussion 1 hour(s).

*Grade Mode:* Letter.

**NUT 258 – Field Research Methods in International Nutrition (3 units)**

*Course Description:* Issues and problems related to implementation of nutrition field research in less-developed countries, including ethics; relationships with local governments, communities, and scientists; data collection techniques and quality assurance; field logistics; research budgets; and other administrative and personal issues.

*Prerequisite(s):* Graduate standing or consent of instructor.

*Learning Activities:* Lecture/Discussion 3 hour(s).

*Grade Mode:* Letter.

**NUT 259 – Nutrition & Aging (2 units)**

*Course Description:* Interaction between nutrition and aging. Topics include physiological/biochemical basis of aging, age-related changes affecting nutritional requirements, nutrition and mortality rate, assessment of nutritional status in the elderly, and relationship between developmental nutrition and the rate of aging.

*Prerequisite(s):* NUT 201; NUT 202; NUT 203; NUT 204; three of the four courses.

*Learning Activities:* Lecture 2 hour(s).

*Grade Mode:* Letter.

**NUT 270 – Scientific Ethics in Biomedical Studies: Emphasis on Nutrition (3 units)**

*Course Description:* Scientific ethics in biomedical studies, especially nutrition. Discussion and case study presentations on scientific integrity, fraud, misconduct, conflict of interest, human and animal research protections.

*Learning Activities:* Lecture 1 hour(s), Discussion 1 hour(s), Term Paper.

*Enrollment Restriction(s):* Restricted to graduate standing or consent of instructor.

*Credit Limitation(s):* Not open for credit to students who have completed NUT 492B.

*Grade Mode:* Letter.

**NUT 290 – Beginning Nutrition Seminar (2 units)**

This version has ended; see updated course, below.

*Course Description:* Discussion and critical evaluation of topics in nutrition with emphasis on literature review and evaluation in this field. Students give oral presentations on relevant topics.

*Prerequisite(s):* First-year graduate standing.

*Learning Activities:* Lecture/Discussion 1 hour(s), Seminar 1 hour(s).

*Grade Mode:* Letter.

**NUT 290 – Beginning Nutrition Seminar (2 units)**

*Course Description:* Discussion and critical evaluation of topics in nutrition with emphasis on literature review and evaluation in this field. Oral presentations on relevant topics.

*Prerequisite(s):* First-year graduate standing.

*Learning Activities:* Lecture/Discussion 1 hour(s), Seminar 1 hour(s).

*Enrollment Restriction(s):* Open to graduate students.

*Grade Mode:* Letter.

This course version is effective from, and including: Fall Quarter 2026.

**NUT 290C – Research Conference (1 unit)**

*Course Description:* Major professors lead research discussions with their graduate students. Research papers are reviewed and project proposals presented and evaluated. Format will combine seminar and discussion style.

*Prerequisite(s):* Consent of instructor; graduate standing.

*Learning Activities:* Discussion 1 hour(s).

*Grade Mode:* Satisfactory/Unsatisfactory only.

**NUT 291 – Advanced Nutrition Seminar (1 unit)**

*Course Description:* Advanced topics in nutrition research. Multiple sections may be taken concurrently for credit.

*Prerequisite(s):* Second-year graduate standing.

*Learning Activities:* Seminar 1 hour(s).

*Repeat Credit:* May be repeated.

*Grade Mode:* Satisfactory/Unsatisfactory only.

**NUT 293A – Current Topics in Obesity, Food Intake & Energy Balance (3 units)**

*Course Description:* Current research and its evaluation. Principles of experimental design and scientific background for given article. Articles summarized for posting on Internet for use by healthcare professionals.

*Prerequisite(s):* NUT 129; or graduate standing; undergraduates with upper division standing with at least one writing course may enroll with consent of instructor.

*Learning Activities:* Lecture 1 hour(s), Seminar 1 hour(s), Discussion 1 hour(s).

*Repeat Credit:* May be repeated with consent of instructor.

*Grade Mode:* Letter.

**NUT 293B – Current Topics in Obesity, Food Intake, & Energy Balance with Special Topics (3 units)**

*Course Description:* Undergraduates with upper division standing with at least one writing course may enroll with consent of instructor. A continuation of NUT 293A, with additional special topics.

*Prerequisite(s):* NUT 129; Graduate standing.

*Learning Activities:* Lecture 1 hour(s), Seminar 1 hour(s), Discussion 1 hour(s).

*Repeat Credit:* May be repeated 3 time(s) with consent of instructor.

*Grade Mode:* Letter.

**NUT 294A – Current Topics in Developmental Nutrition (2 units)**

*Course Description:* Effects of nutrition on embryology, morphogenesis, and developmental mechanisms.

*Prerequisite(s):* NUT 114 or NUT 252; or consent of instructor.

*Learning Activities:* Seminar 2 hour(s).

*Enrollment Restriction(s):* Restricted to graduate standing or consent of instructor.

*Repeat Credit:* May be repeated when topic differs.

*Grade Mode:* Letter.

**NUT 297T – Supervised Teaching in Nutrition (1-3 units)**

*Course Description:* Practical experience in teaching nutrition at the university level; curriculum design and evaluation; preparation and presentation of material. Assistance in laboratories, discussion sections, and evaluation of student work.

*Prerequisite(s):* Graduate standing in nutrition or consent of instructor.

*Learning Activities:* Variable.

*Repeat Credit:* May be repeated.

*Grade Mode:* Satisfactory/Unsatisfactory only.

**NUT 298 – Group Study (1-5 units)**

*Course Description:* Group study.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Variable.

*Grade Mode:* Letter.

**NUT 299 – Research (1-12 units)**

This version has ended; see updated course, below.

*Course Description:* Research.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Variable.

*Grade Mode:* Satisfactory/Unsatisfactory only.

**NUT 299 – Research (1-12 units)**

*Course Description:* Research.

*Prerequisite(s):* Consent of instructor.

*Learning Activities:* Variable.

*Enrollment Restriction(s):* Open to graduate students.

*Grade Mode:* Satisfactory/Unsatisfactory only.

This course version is effective from, and including: Fall Quarter 2026.

**NUT 492A – Professionalism: An Academic Perspective (2 units)**

*Course Description:* For graduate students in their initial quarter of residence. Professionalism topics are presented and examples drawn from both the biological and social sciences.

*Prerequisite(s):* Graduate standing.

*Learning Activities:* Lecture/Discussion 2 hour(s).

*Grade Mode:* Letter.

**NUT 492C – Grant Writing (3 units)**

*Course Description:* Preparation of grants for governmental agencies (particularly NIH and USDA) and private foundations. Students will write a research grant or fellowship application.

*Prerequisite(s):* Graduate standing in Nutrition or consent of instructor.

*Learning Activities:* Lecture 1.50 hour(s), Discussion 1.50 hour(s).

*Repeat Credit:* May be repeated 1 time(s) with consent of instructor.

*Grade Mode:* Letter.