NUTRITIONAL SCIENCES (NUTR SCI)

NUTR SCI 1 — COOPERATIVE EDUCATION/CO-OP IN NUTRITIONAL SCIENCE
1 credit.

Full-time off-campus work experience which combines classroom theory with practical knowledge of operations to provide students with a background upon which to base a professional career. Students receive credit only for the term in which they are actively enrolled and working. The same work experience may not count towards credit in Nutr Sci 399.
Requisites: Departmental approval
Repeatable for Credit: Yes, unlimited number of completions

NUTR SCI 132 — NUTRITION TODAY
3 credits.

Nutrition and its relationship to humans and their biological, social, and physical environment; current issues and concerns that affect the nutritional status of various population groups. Open to Fr
Requisites: Not open to students eligible for Nutr Sci 332.
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

NUTR SCI 200 — THE PROFESSIONS OF DIETETICS AND NUTRITION
1 credit.

An overview of the nutrition and dietetics professions: career options; professional and portfolio development; professional references and resources; credentialing; and professional issues.
Requisites: Must have either Pre-Dietetics (PDI) or Dietetics (ADI) major classification
Repeatable for Credit: No

NUTR SCI/AGRONOMY/ENTOM 203 — INTRODUCTION TO GLOBAL HEALTH
3 credits.

Introduces students to global health concepts through multidisciplinary speakers dedicated to improving health through their unique training. It targets students with an interest in public health and those who wish to learn how their field impacts their global issues.
Requisites: None
Course Designation: Breadth - Social Science
Level - Elementary
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

NUTR SCI 289 — HONORS INDEPENDENT STUDY
1-2 credits.

Inter-Ag 288
Requisites: Enrolled in the CALS Honors Prgm Sophomore or Junior standing.
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: Yes, unlimited number of completions

NUTR SCI 299 — INDEPENDENT STUDY
1-3 credits.

Requisites: Open to Freshmen, Sophomore or Junior standing written consent of instructor
Repeatable for Credit: Yes, unlimited number of completions

NUTR SCI/AN SCI/DY SCI 311 — COMPARATIVE ANIMAL NUTRITION
3 credits.

Nutrients and their source, assimilation, function and requirement.
Requisites: BmolChem 314 or CHEM 341 or CHEM 343 or cons inst
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

NUTR SCI 332 — HUMAN NUTRITIONAL NEEDS
3 credits.

Lectures, discussion. Biological basis of the nutritional requirements of humans and the influence of psychological and societal factors on the manner of their fulfillment.
Requisites: CHEM 103 and BIOLOGY/BOTANY/ZOOLOGY/BIOLOGY/BOTANY 151, BIOLOGY/ZOOLOGY/BIOLOGY 101, or BIOCORE 381
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

NUTR SCI/A E/AGRONOMY/INTER-AG 350 — WORLD HUNGER AND MALNUTRITION
3 credits.

Hunger and poverty in developing countries and the United States. Topics include: nutrition and health, population, food production and availability, and income distribution and employment.
Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No

NUTR SCI 375 — SPECIAL TOPICS
1-4 credits.

Subjects of current interest to undergraduates.
Requisites: None
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2018
NUTR SCI 399 — COORDINATIVE INTERNSHIP/COOPERATIVE EDUCATION
1-8 credits.

**Requisites:** So or Jr or Sr st cons supervising inst, advisor internship program coordinator

**Course Designation:** Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** Yes, unlimited number of completions

NUTR SCI 400 — STUDY ABROAD IN NUTRITIONAL SCIENCES
1-6 credits.

Provides an area equivalency for courses taken on Madison Study Abroad Programs that do not equate to existing UW courses. Enroll Info: Current enrollment in a UW-Madison study abroad program

**Requisites:** None

**Repeatable for Credit:** Yes, unlimited number of completions

NUTR SCI/INTER-AG 421 — GLOBAL HEALTH FIELD EXPERIENCE
1-4 credits.

Undergraduate global health field experiences address a broad range of health topics including nutrition, primary health care, water and sanitation, climate change, sustainable agriculture, and economic development. These field experiences take place in sites around the world including locations in Africa, Asia, Latin America, Europe, and the United States. Engaged learning will include participation in applied public health activities and service learning projects with communities and partner organizations. Students will gain knowledge about health and disease and explore interdisciplinary approaches to health. Field experiences are designed to meet the requirement for the Undergraduate Certificate in Global Health. Students who are not planning to complete the Certificate in Global Health may enroll as space permits.

**Requisites:** Consent of instructor

**Repeatable for Credit:** Yes, unlimited number of completions

**Last Taught:** Spring 2018

NUTR SCI 431 — NUTRITION IN THE LIFE SPAN
3 credits.

Influence of nutrition on growth and development; physiological basis of nutritional requirements throughout the life span, including the relationship of food habits and nutrition to selected chronic diseases; principles of nutritional intervention in community programs.

**Requisites:** Students must have junior standing or higher and a final grade of C or higher in both Physiology 335 and Nutritional Sciences 332

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

NUTR SCI 499 — CAPSTONE IN NUTRITION
2 credits.

Capstone in the nutritional sciences, emphasis is on the integration of nutritional knowledge and the interpretation and application of nutrition-oriented research.

**Requisites:** Sr st Nutr Sci 431; Nutr Sci 510 or con reg

**Course Designation:** Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S

**Repeatable for Credit:** No

**Last Taught:** Fall 2014

NUTR SCI 500 — UNDERGRADUATE CAPSTONE SEMINAR LABORATORY
1 credit.

Current topics in Nutritional Sciences and undergraduate research presentations. Enrollment limited to Nutritional Sciences majors.

**Requisites:** Nutr Sci 431 and Nutr Sci 510 (or con reg) and Sr st or second sem Jr st in Nutritional Sciences major or cons inst

**Repeatable for Credit:** No

NUTR SCI/BIOCHEM 510 — BIOCHEMICAL PRINCIPLES OF HUMAN AND ANIMAL NUTRITION
3 credits.

Lectures in nutrition for students with a substantial background in biochemistry. Emphasis on biochemical and physiological fundamentals of nutrition. Discussion of protein, fat, carbohydrate, energy, minerals and vitamins and their roles and interrelationships in nutrition and metabolism.

**Requisites:** (BMOLCHEM 314 or 503) or (BIOCHEM 501 or 507)

**Course Designation:** Breadth - Biological Sci. Counts toward the Natural Sci req

Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S

Grad 50% - Counts toward 50% graduate coursework requirement

**Repeatable for Credit:** No

NUTR SCI 520 — APPLICATIONS IN CLINICAL NUTRITION
3 credits.

Capstone course includes clinical problem solving, assessing medical record data, evaluating food intake, planning modified diets, and reviewing medical and research literature. Develops critical thinking, teamwork and communication skills needed by the dietetic intern and dietitian.

**Requisites:** Nutr Sci 631 Nutr Sci 500 (or con reg) Sr in Dietetics major-Didactic Prgm or Sr in Nutr Sci Major, Nat Sci opt cons inst

**Repeatable for Credit:** No

NUTR SCI/KINES 525 — NUTRITION IN PHYSICAL ACTIVITY AND HEALTH
3 credits.

The purpose of this course is to provide undergraduate and graduate students with both scientific knowledge and application of nutrition related to exercise, health, and sports.

**Requisites:** Admission to Kinesiology(Athletic Training, Exercise and Movement Science, or Physical Education Teacher Education) or Nutritional Science major and Physiology 335

**Repeatable for Credit:** No
NUTR SCI 540 — COMMUNITY NUTRITION PROGRAMS AND POLICY ISSUES
1 credit.

Students will increase their understanding of community-based nutrition needs, intervention programs and policy issues in the U.S. Written assignments will demonstrate students' positions on related issues.

Requisites: NUTR SCI 431
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

NUTR SCI 600 — INTRODUCTORY SEMINAR IN NUTRITION
1 credit.

Presentation of reports from current journals of nutritional sciences.

Requisites: None
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Intermediate
L&S Credit - Counts as Liberal Arts and Science credit in L&S Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

NUTR SCI/BIOCHEM 619 — ADVANCED NUTRITION: INTERMEDIARY METABOLISM OF MACRONUTRIENTS
3 credits.

Discuss metabolic control; gastrointestinal physiology, nutrient absorption; molecular, cellular, organismal aspects of glucose transport, metabolism, regulation; fuel sensing; molecular regulation of fatty acid, lipid metabolism; cellular, organismal aspects of protein metabolism; hormonal control of metabolism; experimental approaches for studying metabolism.

Requisites: Grad st; Nutr Sci 510 or BIOCHEM 507 508 or BMOLCHEM 503 (or con reg) or cons inst
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

NUTR SCI/POP HLTH 621 — INTRODUCTION TO NUTRITIONAL EPIDEMIOLOGY
1 credit.

Techniques used to evaluate relationships of diet to health and disease in human populations; integration of knowledge gained with results of animal and clinical studies toward understanding dietary risk or protective factors for disease. Includes advanced diet assessment and basic epidemiologic approaches.

Requisites: STAT 301 or equiv Nutr Sci 332 or cons inst
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

NUTR SCI/M&ENVTOX 623 — ADVANCED NUTRITION: MINERALS
1 credit.

Topics discussed in regard to minerals are: metabolic roles; absorption, excretion, transport and cellular metabolism; nutritional and toxicological standards for humans and animal models; bioavailability; genetic interactions; and research methodologies.

Requisites: BIOCHEM/NUTR SCI/BIOCHEM 510, PHYSIOL 335 and graduate standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2016

NUTR SCI 625 — ADVANCED NUTRITION: OBESITY AND DIABETES
1 credit.

Physiology, biochemistry and genetics of human obesity and diabetes. Critical review of current research on their etiology and treatment.

Requisites: Grad st; Nutr Sci 619 or con reg PHYSIOL 335 or equiv or cons inst
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017

NUTR SCI/AN SCI 626 — EXPERIMENTAL DIET DESIGN
1 credit.

Discuss nutrient requirements, composition of ingredients used to meet requirements and the mathematical steps involved in diet formulation with emphasis on research animals and human subjects.

Requisites: Graduate student; Stats 301 or equivalent Nutr Sci 510 or concurrent enrollment or consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

NUTR SCI 627 — ADVANCED NUTRITION: VITAMINS
1 credit.

Scientific knowledge of the metabolic functions, metabolism and nutritional requirements for some of the water soluble vitamins and all of the fat soluble vitamins.

Requisites: Graduate student; Nutr Sci 510 Physiology 335 or equivalent or concurrent enrollment or consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Spring 2017
NUTR SCI 631 — CLINICAL NUTRITION
4 credits.

Body systems in relation to the alterations in nutrition and metabolism that accompany disease states. Research related to therapeutic nutrition. 
Requisites: Nutr Sci 332, 431, BIOCHEM 501 or BmolChem 314, ADI classification or consent of instructor
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

NUTR SCI 635 — ADVANCED CLINICAL NUTRITION
1 credit.

Clinical nutrition and rationale for medical nutrition therapy in relation to the pathophysiology of specific disease states. Lectures, case studies and discussion of current research.
Requisites: Must have Nutritional Science 431 and Nutritional Science 631 (or current enrollment in Nutri Sci 631), and one of the following: Biochemistry 501 or Biomolecular Chemistry 314 or Biomolecular Chemistry 503.
Repeatable for Credit: No

NUTR SCI/BIOCHEM 645 — MOLECULAR CONTROL OF METABOLISM AND METABOLIC DISEASE
3 credits.

Examination of various physiological states and how they affect metabolic pathways. Discussion of a number of special topics related to the unique roles of various tissues and to metabolic pathways in disease states, including adipocyte biology, beta-cell biology, epigenetics, inflammation, and aging related diseases.
Requisites: BIOCHEM 501 or 508 or graduate standing
Course Designation: Breadth - Biological Sci. Counts toward the Natural Sci req
Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: No
Last Taught: Fall 2017

NUTR SCI 650 — ADVANCED CLINICAL NUTRITION: CRITICAL CARE AND NUTRITION SUPPORT
3 credits.

This course provides advanced study of the metabolic demands of critical illness and how these alterations influence the nutritional needs of critical care patients in various disease states. Using an evidence-based medical approach, students will assess nutrient requirements and determine best methods of nutrient delivery in various disease states. Anthropometric measures and hematological indices will be incorporated to assess nutritional status and monitor response to nutritional therapies.
Requisites: Declared in the Capstone Certificate in Clinical Nutrition, or the Capstone Certificate in Clinical Nutrition - Dietetic Internship
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

NUTR SCI 651 — ADVANCED CLINICAL NUTRITION - PEDIATRICS
3 credits.

Pediatric nutritional requirements with emphasis on issues related to evidence-based medical nutrition therapy.
Requisites: Declared in the Capstone Certificate in Clinical Nutrition, or the Capstone Certificate in Clinical Nutrition - Dietetic Internship
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Summer 2017

NUTR SCI 652 — ADVANCED NUTRITION COUNSELING AND EDUCATION
3 credits.

Application of current theories and techniques of counseling and education to the field of nutrition and dietetics. Practical application of communication techniques, client-centered counseling methods, motivational interviewing, learning theories and behavior change techniques, and factors affecting eating patterns. Nutrition psychology and the psychoanalytic approach to nutrition counseling will be emphasized in the class. Principles of group counseling/facilitation and instructional material/media design.
Requisites: Declared in the Capstone Certificate in Clinical Nutrition, or the Capstone Certificate in Clinical Nutrition - Dietetic Internship
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

NUTR SCI 653 — CLINICAL NUTRITION RESEARCH
3 credits.

Research use and development as it applies to clinical nutrition practice: effective use of the literature in evidence based practice and research development, problem development, methodology, analysis and reporting of results and conclusions.
Requisites: Declared in the Capstone Certificate in Clinical Nutrition of the Capstone Certificate in Clinical Nutrition - Dietetic Internship
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

NUTR SCI 670 — NUTRITION AND DIETETICS PRACTICUM I
3 credits.

The first of two supervised practice experiences in nutrition and dietetics at University of Wisconsin Hospital and Clinics and affiliated sites. Dietetic interns apply their academic training, furthering their competency in: clinical nutrition, food systems management, research, and community experiences.
Requisites: Admission to the Capstone Certificate in Clinical Nutrition - Dietetic Internship
Repeatable for Credit: No
Last Taught: Fall 2017
NUTR SCI 671 — NUTRITION AND DIETETICS PRACTICUM II
3 credits.

The second of two supervised practice experiences in nutrition and dietetics at University of Wisconsin Hospital and Clinics and affiliated sites. Dietetic interns apply their academic training, furthering their competency in: clinical nutrition, food systems management, research, and community experiences.
Requisites: Admission to the Capstone Certificate in Clinical Nutrition - Dietetic Internship
Repeatable for Credit: No

NUTR SCI/PHM PRAC 672 — HERBALS, HOMEOPATHY, AND DIETARY SUPPLEMENTS
2-3 credits.

Covers regulations and clinical science regarding the use of herbals, homeopathic remedies, and dietary supplements, focusing on peer-reviewed studies and integration with allopathic drugs; includes discussion of marketing issues.
Requisites: (PHM SCI 432 or BIOCHEM 501 or BMOLCHEM 314) and PHYSIOL 335
Repeatable for Credit: No
Last Taught: Spring 2016

NUTR SCI 681 — SENIOR HONORS THESIS
2-4 credits.

Requisites: Honors candidacy
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No

NUTR SCI 682 — SENIOR HONORS THESIS
2-4 credits.

Continuation of 681.
Requisites: Nutr Sci 681 and honors candidacy
Course Designation: Honors - Honors Only Courses (H)
Repeatable for Credit: No

NUTR SCI 691 — SENIOR THESIS-NUTRITION
1-4 credits.

Requisites: Senior standing consent of instructor
Repeatable for Credit: No

NUTR SCI 692 — SENIOR THESIS
1-4 credits.

Requisites: Nutr Sci 691; Sr st cons inst
Repeatable for Credit: No

NUTR SCI 699 — SPECIAL PROBLEMS
1-3 credits.

Requisites: Consent of instructor
Course Designation: Level - Advanced
L&S Credit - Counts as Liberal Arts and Science credit in L&S
Repeatable for Credit: Yes, unlimited number of completions

NUTR SCI 710 — HUMAN ENERGY METABOLISM
2 credits.

Requisites: Declared in M.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

NUTR SCI 711 — PERSONALIZED NUTRITION: GENETICS, GENOMICS, AND METAGENOMICS
1 credit.

Genetic factors that modulate the relationships between diet, health, and disease risks, including the effects of differences in our genetic makeup (Nutrigenetics), the regulation of gene expression by nutrients and dietary patterns (Nutrigenomics), and the interactions between diet, gut microbiome, and human hosts (Metagenomics). S. - Clinical Nutrition degree program
Requisites: Declared in M.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017

NUTR SCI 715 — MICRONUTRIENTS: HUMAN PHYSIOLOGY AND DISEASE
3 credits.

Micronutrients explores the function of vitamins and essential mineral nutrients from the biochemical and nutritional perspective with emphasis on issues essential for clinical nutrition. S. - Clinical Nutrition degree program
Requisites: Declared in M.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

NUTR SCI 720 — ADVANCED NUTRITION ASSESSMENT
1 credit.

Advanced skills and evolving methods of nutritional assessment. Measurement and interpretation of physical examination and laboratory parameters. Diagnosing malnutrition and nutrient deficiencies, including clinical characteristics used to identify and label the degree of malnutrition.
Requisites: Graduate or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No
Last Taught: Fall 2017
NUTR SCI 721 — NUTRITION INFORMATICS
1 credit.

The emerging role of the electronic storage, retrieval and dissemination of food and nutrition related data and the effective use of information for problem solving and decision-making for the dietetics professional.
Requisites: Graduate or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

NUTR SCI 725 — ADVANCED COMMUNITY NUTRITION
1 credit.

Community nutrition as it applies to clinical nutrition practice: programs, resources and issues supporting clinical nutrition practice in the community. S. - Clinical Nutrition degree program
Requisites: Declared in M.
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement.
Repeatable for Credit: No

NUTR SCI 799 — PRACTICUM IN NUTRITIONAL SCIENCES TEACHING
1-3 credits.

Instructional orientation to teaching at the higher education level in the agricultural and life sciences, direct teaching experience under faculty supervision, experience in testing and evaluation of students, and the analysis of teaching performance.
Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: No

NUTR SCI 875 — SPECIAL TOPICS
1-4 credits.

Subjects of current interest to Grads.
Requisites: Graduate or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2018

NUTR SCI/BIOCHEM 901 — SEMINAR-NUTRITION AND METABOLISM (ADVANCED)
1 credit.

Presentation of original research results; discussion of recent articles in animal metabolism and nutrition.
Requisites: Graduate or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Fall 2017

NUTR SCI 931 — SEMINAR-NUTRITION
1 credit.

Seminar features expert presentations of current research and issue-based applications that represent the breadth of nutritional sciences; topics investigate problems "from molecules to communities".
Requisites: Graduate or professional standing
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions

NUTR SCI 991 — RESEARCH NUTRITION
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions

NUTR SCI 993 — INDEPENDENT STUDY IN NUTRITION
1-12 credits.

Requisites: Consent of instructor
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions

NUTR SCI 881 — SEMINAR-TOPICS IN HUMAN AND CLINICAL NUTRITION
1 credit.

Varied topics in clinical and human nutrition.
Requisites: NUTRI SCI 600
Course Designation: Grad 50% - Counts toward 50% graduate coursework requirement
Repeatable for Credit: Yes, unlimited number of completions
Last Taught: Spring 2018