

### **Master of Science Program in Clinical Nutrition (MSCN)**

The Department of Dietetics and Nutrition in the College of Health Related Professions of the University of Arkansas for Medical Sciences (UAMS), offers graduate work leading to a Master of Science degree in Clinical Nutrition through the UAMS Graduate School. The program is designed to prepare registered or registry-eligible dietitians or other health professionals to practice as advanced level dietetic specialists. The student may elect one of four possible areas of emphasis as a subspecialty: Geriatric Nutrition, Pediatric Nutrition, Community Nutrition or Health Promotion and Wellness. The intent of the program is to prepare the student to practice at an advanced level, and each emphasis area will prepare the graduate with specialized knowledge and practice skills. The student will be expected to complete the appropriate specialty electives, select a clinical practicum in the appropriate environment, and conduct research in the specialty emphasis.

We offer a combination of traditional and online courses. Traditional classes will usually be scheduled once a week in late afternoon or early evening Monday – Thursday to allow practicing dietitians to participate with the least disruption to their employment. Other formats, such as short, intense courses in the summer months or weekend courses, may be scheduled if a need is demonstrated.

#### **Geriatric Nutrition**

The Geriatric Nutrition emphasis consists of elective specialty courses in geriatric nutrition, independent study in geriatrics, a clinical practicum and a thesis or special project in geriatric nutrition under the direction of researchers and clinicians in the Department of Geriatrics, Donald W. Reynolds Center on Aging, at the Central Arkansas Veterans Healthcare System (CAVHS). Among the first funded of the 22 Geriatric Research, Education, and Clinic Center (GRECC) units in the nation, the CAVHS unit in Little Rock has achieved national recognition for excellence in its research, clinical, and educational programs. The Donald W. Reynolds Center was established to house the Donald W. Reynolds Department of Geriatrics. In less than five years, the program has become one of the most recognized geriatric centers in the nation. U.S. News and World Report has ranked the Department of Geriatrics as one of the top ten academic programs in Geriatric Medicine.

#### **Pediatric Nutrition**

The Pediatric Nutrition emphasis consists of elective specialty courses in nutrition, independent study in pediatric nutrition, and research projects.

Research projects by registered dietitian graduate student investigators may be conducted at Arkansas Children's Hospital, the sixth largest pediatric hospital in the United States. This hospital serves as the primary pediatric teaching facility for the College of Medicine at the University of Arkansas for Medical Sciences and for the College of Health Related Professions. The Department of Clinical Nutrition hospital staff provide nutrition education for health care professionals who complete training at UAMS. Clinical care is provided in a wide range of medical specialties, ranging from developmental pediatrics and general pediatrics to gastroenterology, surgery, organ transplant, neonatology, endocrinology, and metabolic disorders. Outpatient clinics serve over 200,000 children per year in various specialty clinics. The staff works closely with KIDS FIRST, a joint venture of Arkansas Children's Hospital and the University of Arkansas for Medical Sciences Department of Pediatrics. The KIDS FIRST program provides intensive, medically directed, early intervention for children 6 months to 4 years of age.

Other state agencies, such as the Arkansas Department of Health's Children's Medical Services and the WIC program, provide opportunities for community pediatric care and research.

### **Community Nutrition**

Community Nutrition focuses on the interaction between individual's lifestyles and the environment and health care of their community. Students will learn different aspects of community nutrition by understanding (1) the way individuals learn, (2) how they are motivated to change their behaviors, and (3) how to develop health messages within the appropriate context. By understanding and addressing the needs of populations of various cultures, ages, and educational levels, in different types of settings, the nutritionist will be able to develop programs and services that are more successful in meeting the needs of specific populations.

#### **Nutrition and Health Promotion Wellness Emphasis**

The Health Promotion and Wellness emphasis consists of elective specialty courses in health, wellness and sports; independent study in health promotion, nutrition counseling, and sports; a clinical practicum in wellness or health promotion and a research thesis or project involving counseling or education in health promotion, especially aimed at meeting the nutritional needs of Arkansans. Clinical practicum may be done in a variety of settings including ambulatory clinics, Area Health Education Centers (AHECs), State Health Department clinics, various hospitals, fitness centers or other public health settings. Additional opportunities for community-based education and research exist with the University of Arkansas Cooperative Extension Service and the Nutrition, Metabolism, and Exercise Laboratory at the Donald W. Reynolds Center on Aging. The Arkansas Rural Hospital Interactive Compressed Video Network provides technology for the delivery of nutrition counseling and continuing education.

#### **Admission Requirements**

Admission to the degree program includes the completion of a bachelor's degree and other requirements of the UAMS Graduate School. The degree applicant first applies for admission to the UAMS Graduate School by completing the application forms and requesting official transcripts from all colleges attended. The UAMS Graduate School forwards all eligible applications to the Department of Dietetics and Nutrition for an admission decision. Program requirements include: a cumulative grade point average of at least 2.85 on a 4.0 scale, a satisfactory score on the Graduate Record Examination (GRE), and three reference letters from an undergraduate professor in your major, a director of internship or other practice program, or an employer.

All international applicants, including resident and non-resident aliens, whose native language is not English and who do not have a bachelor's or master's degree from a regionally accredited U.S. institution, are required to take the TOEFL. Please see the Graduate School Catalog at [http://www.uams.edu/gradschool/pro\\_students/](http://www.uams.edu/gradschool/pro_students/) for more information about the required minimum score.

Application for graduate study is made through the **Graduate School Office, University of Arkansas for Medical Sciences, 4301 West Markham, #601, Little Rock, AR 72205. Telephone: (501) 686-5454.**

Arkansas residency will be considered during selection for admission. Applicants are considered without regard to race, color, gender, age, sexual orientation, religion, national origin or disability status as a criterion in deciding against any individual in matters of admission, placement, transfer, hiring, dismissal, compensation, fringe benefits, training, tuition assistance, and other personnel or educationally-related actions.

#### **Graduate Courses**

Degree requirements include 19 semester hours of core courses, eight (8) or eleven (11) semester hours of supportive and elective courses, a three (3) semester hour clinical practicum, and either six (6) semester hours of thesis credit (for thesis option) or three (3) hours of research (for non-thesis option), for a total of 36 semester hours. A list of required and potential elective courses appears below. A combined maximum of twelve (12) SC of course work may

be transferred from the UAMS/CAVHS dietetic internship and a maximum of six (6) from other accredited colleges and universities. A specific degree plan will be prepared for each student. Master of Science students seeking admission to the Dietetic Internship Program must use the Dietetic Internship application process. That is, acceptance to the Master of Science Program does not ensure admission to the Dietetic Internship Program.

#### **NUTR 5153—Nutrition and Metabolism Micronutrients (II)**

Reviews the roles of vitamins, minerals, and trace elements in metabolic processes and their roles in human metabolism. Alterations in metabolic processes caused by specific vitamins deficiency diseases will be discussed. Metabolism of common drugs and drug-nutrient interactions will be reviewed. Prerequisites: NUTR 5103 or equivalent.

#### **NUTR 5032—Assessment of Nutritional Status\***

A study of nutritional assessment systems and methodology including the latest technology in dietary, biochemical, anthropometric, and clinical evaluation. Emphasis placed on the design of systems, the interpretation of indices for all age groups in health and disease, and the application of data in nutritional counseling and consultation. Prerequisites: undergraduate courses in biochemistry, anatomy, physiology, nutrition, food science or equivalents.

#### **NUTR 5033—Advanced Clinical Nutrition**

Integration of principles of biochemistry, physiology, pathology, anatomy, psychology, anthropology, epidemiology, nutrition, and food science into therapeutic use of foods and nutrients in disease prevention and treatment through a case-oriented approach. Prerequisites: Biochemistry, Diet in Disease, Nutrition, Anatomy and Physiology, or consent. NUTR 5333 in the Dietetic Internship Program may be substituted for this course.

#### **NUTR 5043—Diet and/or Cancer Prevention**

Focused on clinical and preclinical studies that address how dietary related factors, such as nutrients, bioactive food components and obesity, influence cancer development and cover major mechanisms by which dietary factors modify cancer risk. Prerequisites: A previous course in nutrition, biology, biochemistry, or physiology, and consent.

#### **NUTR 5063—Medical Nutrition Therapy\***

Online course introducing nutrition as a medical specialty from the perspective of disease prevention and treatment including assessment, patient interviewing strategies, medical terminology, nutrition care plan techniques, and prevention strategies. Prerequisites: a course in nutrition and in organic biochemistry or equivalent, and consent.

#### **NUTR 5102—Management Principles in Dietetics**

Application of current higher level management skills in clinical nutrition and dietetics. Emphasis on incorporation of latest technological developments, management theories, and future trends in legal aspects, cost analysis, personnel and resource management, quality control, and reimbursements.

#### **NUTR 5103—Nutrition and Metabolism: Macronutrients\***

Reviews cell function, including acid-base balance, utilization of macronutrients in metabolic processes, and roles of specific nutrients in human metabolism. Relationship of physiology and organ systems functions to nutrition is addressed. Alteration in metabolic processes caused by specific diseases will be discussed.

#### **NUTR 5073—Practicum in Clinical Dietetics**

Supervised learning experience in clinical dietetics designed to meet specific objectives and achieve identified clinical nutrition competencies. Experiences scheduled in a variety of health care and community settings. Elective in MSCN program and core course in internship.

#### **NUTR 5083—Practicum in Administrative Dietetics**

Supervised learning experiences in administrative dietetics to meet specific objectives and achieve identified management competencies. Experiences scheduled in a variety of units within health care facilities. Elective in MSCN program and core course in internship.

### **NUTR 509V—Independent Study in Clinical Nutrition**

Under supervision of a faculty member, the student will design and conduct a research project in clinical nutrition and prepare a written paper including a review of literature, identification of the problem, methodology, results and discussion, summary and citing of references following designated guidelines.

### **NUTR 5112—Nutrition Counseling**

Provides an understanding of the methods, strategies, and evaluation of nutrition and diet counseling to modify eating habits for health promotion and increase compliance with therapeutic regimens. Consideration of learning styles, nutritional anthropology, and instructional technology effectively applied in the health care setting. Prerequisites: NUTR 5033: Advance Clinical Nutrition or equivalent; and consent of faculty.

### **NUTR 5122—Principles of Advanced Nutrition Support**

Advanced study in the art and science of nutrition support explored through a comprehensive review of the literature; discussion of the biochemical, physiological, and medical aspects of nutrition support; and application of principles in clinical practice through case study presentation. Students participate in the literature analysis and case discussions. Prerequisite: NUTR 5033: Advanced Clinical Nutrition or equivalent; NUTR 5103: Nutrition and Metabolism or equivalent; NUTR 5032: Assessment of Nutritional Status or equivalent; and consent of faculty.

### **NUTR 5143—Nutrition Research & Statistical Methods\***

A study of research designs, statistics, and data collection methods used in nutrition research. Emphasis on planning metabolic, epidemiological, educational, and clinical studies including food composition and nutritional assessment surveys with basic and advanced statistical applications. Prerequisite: Graduate level course in Statistics and consent of faculty.

### **NUTR 5161—Advanced Nutrition Seminar**

Graduate seminar of important current research in clinical nutrition to reflect content, application to practice, and study parameters and design. Students will read original papers, write critiques, and make presentations for discussion.

### **NUTR 5203—Geriatric Nutrition\***

Examines the relationships between nutrition and physiologic aging. The impact of aging on nutritional requirements, effects of chronic and acute disease, effects of nutrition on the aging process, and nutrition programs for older adults are explored. Students will actively analyze and discuss research literature. Prerequisite: graduate course in metabolism, nutrition assessment, and advanced clinical nutrition and consent of faculty.

### **NUTR 5213—Pediatric Nutrition\***

Describe the relationship of growth and development to nutrients requirements from infancy to adolescence. The assessment of feeding practices, food habits, and nutritional status in growth problems, health and disease will be discussed. Nutritional interventions and therapies for specific conditions will be planned. Prerequisites: NUTR 5103, 5153, 5033 and consent of faculty.

### **NUTR 5223—Nutrition in Health Promotion, Wellness, and Athletics**

Describe the application of advance principles of normal and preventive nutrition in health and fitness, physical performance, disease prevention, and health promotion in dietetic practice. It relates clinical research in exercise physiology to decision-making in wellness and sports nutrition counseling. Prerequisites: NUTR 5103, 5153, 5033 and consent of faculty.

### **NUTR 5333—Advance Clinical Dietetics**

Integration of scientific principles of nutrition and food science into use of foods and nutrients in disease prevention and treatment in accordance with clinical competencies for the entry-level dietitian. Corequisite: admission to Dietetic Internship and consent of faculty.

### **NUTR 5243—Community Nutrition\***

Community Nutrition is an evolving process, continually faced with new challenges. Students will learn different aspects of community nutrition by understanding (1) the way individuals learn, (2) how they are motivated to change their behaviors, and (3) the interaction of nutrition with lifestyle, environment and health care, the nutritionists can develop their health messages with an appropriate context. By understanding and addressing the needs of populations of various cultures, ages, and educational levels, in different types of settings, the nutritionist will be able to develop programs and services that are successful. Pre-requisites include either Nutr 5103 or Nutr 5153 or Nutr 5333 or Consent of faculty. Off-site activities will be necessary to fulfill requirements for this course.

### **NUTR 523V—Advanced Clinical Practicum (I-III)**

Based on individual needs and prior clinical experiences, the student may elect an area of advanced clinical nutrition practice for in-depth experiences after determining the goals, objectives, and major experiences desired. A total of three (3) hours is required. Prerequisites: NUTR 5033, 5032, 5112, and 5203 or equivalent, and consent of faculty.

### **NUTR 551V—Special Topic in Clinical Nutrition**

Advanced work in selected topics of current interest and investigation in clinical nutrition. Topics may include new research and guidelines in the use of nutrition or selected nutrients to prevent or treat a specific disease state, such as diabetes, digestive diseases, osteoporosis, obesity, or cardiovascular diseases.

### **NUTR 600V—Master's Thesis in Clinical Nutrition**

Under supervision of graduate faculty, an original research study will be designed and conducted with written thesis following graduate college guidelines. Prerequisite: consent of faculty.

### **NUTR 601V—Clinical Nutrition Special Project**

A capstone research project under direction of faculty advisor and project committee. Prerequisite: completion of, or concurrent enrollment in, all core courses in Clinical Nutrition. Corequisite: approval of project advisor. A grade of "R" is given until requirements of all three hours are met.

### **NUTR 608V—Research in Nutrition**

Students will participate in a research project under the supervision of a faculty member.

\*Course offered online.

#### **Financial Aid**

Applicants may request financial aid information, which includes grants, scholarships, and student loans, from the UAMS Student Financial Services Office-Awards Division, 4301 West Markham, #864, Little Rock, AR 72205. Please call (501) 686-5451 or visit [www.uams.edu/studentfinancialservices](http://www.uams.edu/studentfinancialservices) for eligibility requirements.

**Note:** A limited number of competitive graduate assistantships are available. Please contact the department at (501) 686-6166.

This brochure describes the program requirements for the 2011-2012 academic year. While it is expected that most of the requirements will apply to 2012-2013 as well, some changes are likely. You are strongly advised to contact the department/program office to receive the latest information.

Telephone (501) 686-6166

[www.uams.edu/chrp/dietnutrition](http://www.uams.edu/chrp/dietnutrition)

Email: [HakkakReza@uams.edu](mailto:HakkakReza@uams.edu) (Chairman)

or

[D&N@uams.edu](mailto:D&N@uams.edu)

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[www.uams.edu/chrp/dietnutrition](http://www.uams.edu/chrp/dietnutrition)

**UAMS**  
COLLEGE OF  
HEALTH RELATED  
PROFESSIONS

UNIVERSITY OF ARKANSAS  
FOR MEDICAL SCIENCES

2011-2012

A Program Offered by the  
Department of Dietetics and Nutrition of the  
College of Health Related Professions  
through the Graduate School at the  
University of Arkansas for Medical Sciences