

CLINICAL NUTRITION

• emergency medicine education • health care sciences • physical therapy • physician assistant studies • prosthetics-orthotics • radiation therapy • rehabilitation counseling



CLINICAL NUTRITION

■ DEGREE OFFERED

Master of Clinical Nutrition

■ CHAIR

Deborah Clegg, Ph.D.

■ PROGRAM DIRECTOR

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FACULTY

■ PROFESSORS

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Ph.D., UT Austin, 2000

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M.D., Baylor College of Medicine, 1960;
Ph.D., Rockefeller University, 1968

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Ph.D., Louisiana State University
Medical Center, 1979

■ ASSOCIATE PROFESSORS

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Ph.D., University of Georgia, 2000
Program Director, Health Professions Track

Elizabeth J. Parks

Ph.D., University of California, Davis, 1995

■ ASSISTANT PROFESSORS

Linda Michalsky

Ph.D., University of Texas at Austin, 2002

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M.Ed., University of Texas at Brownsville, 2002



Deborah Clegg, Ph.D.
Chair, Graduate Program

■ ADJUNCT FACULTY

Bernadette Latson

M.S., University of Florida, 1981

Lora Day, Clinical Instructor

M.A., UT Austin, 1987

Susan G. Rodder,

Clinical Assistant Professor

M.S., Texas Woman's University, 1991

DESCRIPTION OF THE PROGRAM

The Master of Clinical Nutrition offers the opportunity to develop an advanced level of knowledge and skill so clinicians can address the complex nutritional issues of healthy and ill individuals at various stages of the life span. Two tracks are available.

The first track, the Master of Clinical Nutrition Coordinated Program, provides didactic course work and supervised practice to meet the knowledge and competency requirements of the

Academy of Nutrition and Dietetics Accreditation Council for Education in Nutrition and Dietetics. Graduates of this Program are eligible to take the Registration Exam for Dietitians and to apply for licensure in Texas. They also are eligible for active membership in the Academy of Nutrition and Dietetics.

The second track, the Master of Clinical Nutrition for Health Professionals, is available to individuals who are already registered dietitians or other licensed health care professionals. Having previously met the academic and clinical requirements to become a licensed clinician, these students do not complete supervised practice, but they do complete academic course work to provide high-level nutritional care with greater emphasis and time devoted to completion of a research project.

MASTER OF CLINICAL NUTRITION COORDINATED PROGRAM

The Program prepares students to address the nutritional and health needs of society as registered dietitians. Registered dietitians individualize nutrition therapy to optimize management of such diseases as diabetes, hypertension, obesity, and cancer. The Program uses the unique resources of the medical center to prepare graduates to become registered dietitians capable of meeting the demands of the changing health care system. Having developed a strong knowledge base in clinical nutrition, graduates use food and nutrition information effectively in prevention and treatment of disease. Individualized experiences facilitate students' pursuit of their own career goals, whether in health care, in research, or as a nutrition authority for the public

■ OBJECTIVES

The goal of the Coordinated Program is to graduate team-oriented clinicians ready to function in acute, chronic, and community settings with evidence-based nutrition therapy. With a concentration in nutrition therapy, the Program builds on a science foundation to develop the skills to:

- 1) Assess the nutritional needs of individuals, based on lifestyle and health status;
- 2) Provide medical nutrition therapy for patients of all ages across a spectrum of settings from intensive care to home care;
- 3) Integrate interpretation of biochemical parameters and medications in the nutrition-care process;
- 4) Adapt nutrition counseling strategies to overcome barriers to lifestyle change;
- 5) Function within interdisciplinary teams to provide nutritional support for patients with complex medical problems;
- 6) Provide culturally competent nutrition education to populations with diverse nutritional needs;
- 7) Incorporate knowledge of functional foods, phytochemicals, and food processing, as well as knowledge of nutrient gene interactions, to serve as a food and nutrition authority for the public through mass media and other nutrition information venues;
- 8) Interpret evidence-based research and formulate research hypotheses to advance evidence-based dietetics practice; and
- 9) Manage human, material, and financial resources in food and nutrition-related businesses

Graduates of the Program may assume positions in hospitals, clinics, nursing-care facilities, and home health care agencies. They may focus on clinical areas such as pediatrics, diabetes, cardiac rehabilitation, or cancer. Others may pursue opportunities in fitness and wellness programs, schools, community health programs, and industry.

■ ACCREDITATION

The coordinated program is granted accreditation with an emphasis in nutrition therapy by the Accreditation Council for Education in Nutrition and Dietetics of the Academy of Nutrition and Dietetics (www.eatright.org/CADE), 120 South Riverside Plaza, Suite 2000, Chicago, IL 60606, 312-899-0040.

■ **COORDINATED PROGRAM IN CLINICAL NUTRITION PREREQUISITE COURSE REQUIREMENTS**

COMPONENT AREAS	COMMON COURSE NUMBERS	CREDIT HOURS
Communication		
English (at least 3 hours of English composition; technical writing also is recommended)	ENGL 1301, 1302, 1311, 1312, 2311, 2314, 2315 or equivalent	6
Mathematics		
College Algebra (or higher-level math course)	MATH 1314 or higher	3
Statistics	MATH 1342 or 2342	3
Natural Sciences		
General Chemistry with laboratory*	CHEM 1411 or 1412 or 1413	4
Organic Chemistry with laboratory*	CHEM 2423	4
Biochemistry*	Must be upper-division course	3
Microbiology*	BIOL 2321 or 2421	3
Human Physiology* (must include all body systems)	BIOL 2401 & 2402 or 2301 & 2302	4
Genetics*	BIOL 2316 or 2416	3
Introduction to Nutrition*	BIOL 1322, NUTR 1322 or HECO 1322	3
Social and Behavioral Sciences		
Sociology, Psychology or Anthropology	PSYC 2301, SOCI 1301, ANTH 1301 or higher	3
Principles of Management or Introduction to Business	BMGT 1303 or equivalent, or BUSI 1301 or equivalent	3
Total Credit Hours		42

* All science prerequisites must be completed upon enrollment with a grade of "C" or higher.

Texas Common Course numbers are provided for guidance. Information is available online at www.tccns.org. Click on "The Academic Course Guide Manual." Applicants should contact academic advisers at their college or university to determine course equivalencies prevailing on their home campus. Applicants are encouraged to contact the UT Southwestern Admissions Office or the academic program about other courses that may satisfy course requirements.

College Level Examination Program and Advanced Placement credit may be accepted for course requirements as long as such credit has previously been accepted and indicated on the applicant's transcript by a previously attended college or university.

■ **REQUIREMENTS FOR ADMISSION**

The Admissions Committee of the Department of Clinical Nutrition determines the admissibility of an applicant into the Program in accordance with the quality of his or her credentials. The Department works in cooperation with the Office of the Registrar of UT Southwestern Medical Center and with the approval of the dean of UT Southwestern School of Health Professions. Admission requirements are:

- 1) Baccalaureate degree from a regionally accredited institution prior to matriculation;
- 2) Completion of all admission course requirements as outlined in the following chart;
- 3) Graduate Record Examination;
- 4) A recommended minimum of a 3.0 prerequisite and a 3.0 overall grade-point average;
- 5) Ability to perform essential functions as described in this chapter;
- 6) Completion of online application and submission of \$50 fee;
- 7) Official transcripts from all schools attended;
- 8) Three letters of recommendation;



- 9) Personal interview;
- 10) Personal statement of career goals; and
- 11) Description of work experience.

Because admission into the Clinical Nutrition Program is competitive and made on a space-available basis, the following are given special consideration in the selection process.

- 1) Overall grade-point average;
- 2) Science grade-point average;
- 3) Last 60 hours GPA;
- 4) The three letters of recommendation;
- 5) Personal interview;
- 6) Personal statement of career goals; and
- 7) Work experience.

■ **INTERNATIONAL APPLICANTS**

Foreign transcripts must be evaluated by a transcript evaluation agency; TOEFL is required.

■ **ESSENTIAL FUNCTIONS**

In addition to essential functions for all students (see Entrance Requirements in the Student

Information chapter), each student in the Clinical Nutrition Program must be able to:

- 1) Participate in supervised practice activities for eight-hour days;
- 2) Demonstrate sufficient problem-solving skills to assess multifactorial aspects of nutritional care and organize and prioritize necessary tasks within time constraints;
- 3) Demonstrate sufficient vision, smell, and taste to evaluate the appearance, aroma, and flavor of food;
- 4) Demonstrate sufficient upper-body strength and manual dexterity to operate and clean household and institutional equipment required for food preparation and food service; and
- 5) Demonstrate sufficient vision to observe compliance with food sanitation and safety codes.

■ **CURRICULUM**

The Master of Clinical Nutrition Coordinated Program is a full-time graduate program

encompassing two years with six semesters. The curriculum includes both academic course work and supervised practice. Supervised practice and some classroom courses are offered during the typical work day; some course work is available online or in the early evening.

Students have supervised practice in prominent Dallas health care facilities under the direction of both staff dietitians and faculty members who are registered dietitians. Current trends in health care are considered as students train in ambulatory and long-term care facilities, home-health agencies, work site wellness programs, schools and community settings, and acute-care hospitals.

■ PROGRAM OF INSTRUCTION

Year One

FALL	HOURS
CN 5002 Special Topics	1
CN 5310 Nutrition Care Process	3
CN 5422 Nutrition in Health Promotion	4
CN 5331 Food Science and Technology	3
CN 5340 Nutrition in Metabolism	3
HCS 5106 Professional Development	1
CN 5250 Nutrition Care Process Practicum	2
<i>Total</i>	<i>17</i>

SPRING	HOURS
CN 5311 Medical Nutrition Therapy in Chronic Care	3
CN 5332 Food Service Management	3
CN 5341 Nutrition in Growth and Development	3
CN 5002 Special Topics	1
HCS 5330 Health Care Research	3
CN 5351 Chronic Care Medical Nutrition Therapy Practicum	3
<i>Total</i>	<i>16</i>

SUMMER	HOURS
CN 5312 Medical Nutrition Therapy in Acute Care	3
CN 5242 Nutrition in Aging	2
CN 5452 Acute Care Medical Nutrition Therapy Practicum	4
<i>Total</i>	<i>9</i>

Year Two

FALL	HOURS
CN 5313 Medical Nutrition Therapy in Pediatrics	3
CN 5353 Advanced Medical Nutrition Therapy Practicum	3
CN 5360 Education and Community Nutrition Practicum	3
CN 5370 Food Service Practicum	3
<i>Total</i>	<i>12</i>

SPRING	HOURS
CN 5223 Nutrition in Media Communications	2
CN 5233 Business of Health Care	2
CN 5954 Integrated Nutrition Practicum	9
<i>Total</i>	<i>13</i>

SUMMER	HOURS
CN 5390 Nutrition Research	3
CN 5002 Special Topics	1
<i>Total</i>	<i>4</i>
<i>Program total</i>	<i>71</i>

■ SPECIAL REQUIREMENTS

For a student to enroll in any required course in the curriculum, all prerequisite courses must be completed with a grade of C or better. Failure to meet the specifications of a student's degree plan may prohibit that student from enrolling in the subsequent semester or from graduating from the Program.

■ GRADUATION REQUIREMENTS

A candidate for the degree of Master of Clinical Nutrition at UT Southwestern School of Health Professions must meet all of the following requirements:

- 1) The student must demonstrate a high order of scholarly achievement in clinical nutrition, including appropriate research and professional competencies. The program's Student Progress Committee determines whether adequate mastery has been acquired.
- 2) The student must complete satisfactorily the minimum semester hours at UT Southwestern School of Health Professions. For the Master of Clinical Nutrition Coordinated Program,

the minimum is 71 semester hours. For the Master of Clinical Nutrition for Health Professionals, the minimum is 36 semester hours.

- 3) The student must discharge all financial obligations to the Medical Center. In the event of nonpayment, one or more actions may be taken by the Dean: a) readmission may be denied; b) a student's grades and official transcript may be withheld; and c) the degree to which the student would otherwise be entitled may be withheld.
- 4) The student must maintain at least a 2.75 cumulative grade-point average, have no academic deficiencies, and have no incompletes.
- 5) The student must complete the academic requirements listed on his or her degree plan, including completion of any academic deficiencies in prerequisite courses, by the time stated in the student's official letter of acceptance. The student is responsible for submitting official documentation of successful completion of the prerequisites to the Office of the Registrar.
- 6) The student must complete all required courses in the degree plan with a grade of C or higher (P for Pass/Fail courses) while maintaining at least a 2.75 cumulative grade-point average. Students in the Coordinated Program must receive practical evaluations reflecting an acceptable level of performance and professional conduct and complete all required supervised practice.
- 7) The student must successfully complete a graduate project.

MASTER OF CLINICAL NUTRITION FOR HEALTH PROFESSIONALS

The Master of Clinical Nutrition for Health Professionals is designed to advance the skills and knowledge in nutrition of registered dietitians and other health professionals. Available to part-time students, this graduate degree program builds on current professional skills and exposes students to the latest clinical nutrition research. The degree is designed to

prepare graduates for the growing challenges of caring for the health care needs of people in America.

■ OBJECTIVES

This graduate degree Program offers the opportunity to strengthen and extend professional health care skills to enhance opportunities for job flexibility and upward mobility. It includes opportunities to develop or refine the health care professional's ability to:

- 1) Use the nutrition diagnoses and other components of the nutrition care process in patient care and documentation;
- 2) Provide nutritional care in multiple health care settings, from pediatrics to geriatrics;
- 3) Collaborate within interdisciplinary teams to provide nutritional support for patients with complex medical problems;
- 4) Provide culturally competent nutrition education to populations with diverse nutritional needs;
- 5) Serve as an authority on food and nutrition information for the public through mass media and other nutrition information venues; and
- 6) Conduct evidence-based research to support the practice of clinical nutrition.

Classes and research opportunities reflect the rich research and clinical care environment of UT Southwestern Medical Center. Students are exposed to current nutrition research. They interact with practicing health care professionals and researchers as they learn about evidence-based care and cost-effective treatment options. Classroom and research experiences facilitate students' pursuit of individual career goals in health care, research, or nutrition communications.

■ REQUIREMENTS FOR ADMISSION

Admission requirements for the Master of Clinical Nutrition for Health Professionals are the same as those listed for the Master of Clinical Nutrition Coordinated Program (see earlier section) plus evidence of being a registered dietitian or a licensed health professional in a

profession recognized by the Texas Department of State Health Services.

■ **CURRICULUM**

Students in the program complete 36 semester hours. They may enroll as part-time or full-time students to complete the degree within a minimum of 15 months and a maximum of six years. Some classroom courses are offered during the typical work day; others are available online or scheduled in the early evening.

■ **PROGRAM OF INSTRUCTION**

REQUIRED COURSES	HOURS
CN 5310 Nutrition Care Process	3
CN 5311 Medical Nutrition Therapy in Chronic Care	3
CN 5312 Medical Nutrition Therapy in Acute Care	3
CN 5340 Nutrition in Metabolism	3
CN 5390 Nutrition Research	3
HCS 5330 Health Care Research	3
<i>Total</i>	<i>18</i>

In addition, students must take six semester hours of Clinical Nutrition electives and 12 semester hours of general electives, for a total of 36 semester hours. General electives may be selected from CN courses and courses offered by other departments and schools within UT Southwestern Medical Center, as well as the School of Public Health of the UT Health Science Center at Houston.

■ **SAMPLE CURRICULUM SEQUENCE**

Year One

FALL	HOURS
CN 5310 Nutrition Care Process	3
CN 5340 Nutrition in Metabolism	3
CN 5002 Special Topics	1
<i>Total</i>	<i>7</i>

SPRING	HOURS
CN 5311 Medical Nutrition Therapy in Chronic Care	3
HCS 5330 Health Care Research	3
CN 5002 Special Topics	1
<i>Total</i>	<i>7</i>

SUMMER	HOURS
CN 5312 Medical Nutrition Therapy in Acute Care	3
CN 5002 Special Topics	1
<i>Total</i>	<i>4</i>

Year Two

FALL	HOURS
CN 5390 Nutrition Research	3
Clinical Nutrition Elective	3
General Elective	3
<i>Total</i>	<i>9</i>

SPRING	HOURS
CN 5390 Nutrition Research	3
General Electives	6
<i>Total</i>	<i>9</i>

SUMMER	HOURS
General Elective	3
<i>Total</i>	<i>3</i>

■ **SPECIAL REQUIREMENTS**

See requirements listed under Master of Clinical Nutrition Coordinated Program.

■ **GRADUATION REQUIREMENTS**

The Master of Clinical Nutrition for Health Professionals requires satisfactory completion of 36 semester credit hours and other criteria listed under graduation requirements for the Master of Clinical Nutrition Coordinated Program.

COURSE DESCRIPTIONS

CN 5002 SPECIAL TOPICS

1-3 SEMESTER HOURS

This course is designed to provide the most recent scientific information on issues of current concern, such as weight management, women's health, critical care, or metabolism.

CN 5202 SPECIAL TOPICS IN SPORTS NUTRITION

2 SEMESTER HOURS

This course covers nutritional aspects for the elite athlete and the active adult or adolescent. Topics include fluids, carbohydrates, protein, health assessment, weight management, vitamins, minerals, and dietary supplements. Issues related to special populations are addressed, including vegetarianism, diabetes, and the female athlete triad.

**CN 5422 NUTRITION IN HEALTH PROMOTION
4 SEMESTER HOURS**

This course will explore theories that explain health- and nutrition-related behaviors coupled with strategies for promoting behavior change among varying age groups. Students will also build skills in interpreting health and nutrition data for assessing, planning, implementing, and evaluating health and nutrition interventions at the community level. Public health nutrition surveillance systems and food programs will be emphasized.

**CN 5223 NUTRITION IN MEDIA COMMUNICATIONS
2 SEMESTER HOURS**

Students develop skills in translating scientific nutrition statements into meaningful messages for the mass media and the lay consumer. They produce written educational materials that promote health, wellness, and positive lifestyle choices.

**CN 5233 BUSINESS OF HEALTH CARE
2 SEMESTER HOURS**

This course applies principles of management and business theory to the delivery of health care. Content covered includes cost-benefit analysis, billing and reimbursement for health care services, analysis of financial data, fiscal accountability, and development of business plans and budgets.

**CN 5242 NUTRITION IN AGING
2 SEMESTER HOURS**

This course presents overall biologic, social, and behavioral aspects of aging, in addition to prevention and treatment of age-related chronic diseases and conditions. Nutritional needs in aging, altered by physiology, lifestyle, and sociocultural factors, are studied. The continuum of health services emerging to meet the needs of aging adults are reviewed, along with the integration of nutrition services in promoting optimal interdisciplinary health outcomes.

**CN 5250 NUTRITION CARE PROCESS PRACTICUM
2 SEMESTER HOURS**

In this introductory practicum course, students gather data from electronic health records. Students perform the nutrition care process on

clients, including conducting nutrition physical examinations and developing nutrition diagnoses.

**CN 5310 NUTRITION CARE PROCESS
3 SEMESTER HOURS**

This course introduces the role of registered dietitian in the nutrition care process and evidence-based practice. The Scope of Practice and Code of Ethics are covered. Assessment of nutritional status, differentiation of nutrition diagnoses, and creation of problem, etiology, signs, and symptoms statements are included. Students may develop skills in basing interventions and evaluation on the nutrition diagnoses. The use of standardized nutrition language and the medical record are included.

**CN 5311 MEDICAL NUTRITION THERAPY
IN CHRONIC CARE
3 SEMESTER HOURS**

The role of food, nutrition, and lifestyle choices in health promotion and disease prevention is discussed. The focus is on obesity, cardiovascular disease, diabetes, and some gastrointestinal disorders. Related pathophysiology and pharmacology are covered.

Prerequisite: CN 5310 or consent of instructor

**CN 5312 MEDICAL NUTRITION THERAPY
IN ACUTE CARE
3 SEMESTER HOURS**

Students apply the nutrition care process in providing evidence-based medical nutrition therapy for patients with significant needs for nutrition support, including those with diseases of the gastrointestinal and renal systems, HIV, cancer, or trauma. Related pathophysiology and pharmacology are covered.

Prerequisite: CN 5311 or consent of instructor

**CN 5313 MEDICAL NUTRITION THERAPY
IN PEDIATRICS
3 SEMESTER HOURS**

This course applies principles of medical nutrition therapy to the care of infants, children, and adolescents. Students use growth charts to assess and interpret growth status of pediatric patients. Selection and use of specialized infant formulas to promote appropriate growth in children with a variety of chronic and acute

conditions, including genetic disorders, are covered.

Prerequisites: CN 5312 and CN 5341; or consent of instructor

CN 5321 COMMUNICATION AND BEHAVIOR CHANGE
3 SEMESTER HOURS

Theories of behavior change and principles of counseling to promote lifestyle change are covered in the context of nutrition issues. A system for planning nutrition education and communication with individuals and groups is introduced.

CN 5331 FOOD SCIENCE AND TECHNOLOGY
3 SEMESTER HOURS

Principles of food science are applied to the development of food products that appeal to consumers based on appearance, texture, flavor, and nutritional content. The roles of various ingredients in processed foods and functional foods are covered. Other topics include food irradiation, genetically modified foods, organic foods, food safety, and sustainable agriculture. (2 credits lecture; 1 credit lab)

CN 5332 FOOD SERVICE MANAGEMENT
3 SEMESTER HOURS

This course covers management of resources in the procurement, production, distribution, and service in food-service systems. Development of menus for a variety of group settings is presented with attention to culture, nutritional needs, culinary skills, and resource allocation. Policies and procedures, marketing, and government regulations are included.

CN 5340 NUTRITION IN METABOLISM
3 SEMESTER HOURS

Nutritional science concepts are presented within the context of human metabolism. In providing the scientific foundation for nutrition therapy, this course covers nutrient functions, bioavailability, clinical signs of inadequate and excessive intake, and biochemical methods of evaluating status. Achieving nutritional requirements from food and/or supplements is addressed, with attention to emerging issues related to nutrigenomics.



CN 5341 NUTRITION IN GROWTH AND DEVELOPMENT**3 SEMESTER HOURS**

Normal nutrition needs during growth and development from preconception through adolescence are covered. Sociological and environmental aspects that influence the outcome of pregnancy are explored. Students have the opportunity to become acquainted with the benefits of breast-feeding and to learn how to promote breast-feeding by recognizing reliable resources for new mothers. Appropriate progression of feeding from infancy throughout childhood is addressed, with an introduction to use of growth charts for assessing growth of infants and children.

CN 5351 CHRONIC CARE MEDICAL NUTRITION THERAPY PRACTICUM**3 SEMESTER HOURS**

Students provide evidence-based nutrition therapy for clients in wellness and clinic settings. Nutrition for prevention and treatment of obesity, cardiovascular disease, diabetes, and some gastrointestinal disorders is addressed.
Prerequisite: CN 5250

CN 5353 ADVANCED MEDICAL NUTRITION THERAPY PRACTICUM**3 SEMESTER HOURS**

The student provides medical nutrition therapy to specific populations, including pediatric clients.
Prerequisite: CN 5452

CN 5360 EDUCATION AND COMMUNITY NUTRITION PRACTICUM**3 SEMESTER HOURS**

The student is afforded the opportunity to practice nutrition education and counseling in community settings, such as community clinics and public health programs.
Prerequisite: CN 5250, CN 5321

CN 5370 FOOD SERVICE PRACTICUM**3 SEMESTER HOURS**

Within a food service operation, the student coordinates procurement, production, distribution, and service of food. Attention is given to the organizational structure of the food

service unit, quality management, employee training, and safety programs.

Prerequisite: CN 5332

CN 5390 NUTRITION RESEARCH**3 SEMESTER HOURS**

This course meets the research requirement for the Master of Clinical Nutrition. In this course, students complete one of three types of research projects: 1) a clinical study, usually in conjunction with a larger, ongoing research study; 2) an evidence-based review of literature that results in recommendations for clinical practice; or 3) a clinical outcomes study. The research may be completed individually or by a small group of students.

Prerequisite: HCS 5330

CN 5452 ACUTE CARE MEDICAL NUTRITION THERAPY PRACTICUM**4 SEMESTER HOURS**

The student provides evidence-based medical nutrition therapy to clients with renal disease, cancer, traumatic injuries, and other complex medical problems.

Prerequisite: CN 5351; concurrent enrollment in CN 5312

CN 5954 INTEGRATED NUTRITION PRACTICUM**9 SEMESTER HOURS**

Students integrate knowledge and skill in medical nutrition therapy and management in applying the nutrition-care process to care of clients with complex medical and social histories. Students apply management skills in team communication, reimbursement procedures, and quality improvement. The practicum includes a block in which students function independently in patient care and one in which they gain insights into applied research in clinical nutrition.

Prerequisites: CN 5313, CN 5351, CN 5360, CN 5370