

# DFCS Nutritional Science: Dietetics Certificate Core, Required and Elective Course Descriptions

- [FCSC 501 Preprofessional Practice: Clinical \(3.0 credits\)](#)  
Supervised practice in clinical nutrition and community nutrition to meet the registration eligibility requirements of the Academy of Nutrition and Dietetics. May be repeated for three hours' credit. Prerequisite: B.S. degree in Food and Nutrition/Dietetics from an approved Didactic Program in Dietetics and admission to the Dietetic Internship.
- [FCSC 502 Preprofessional Practice \(3.0 credits\)](#)  
Supervised practice in food system management to meet the registration eligibility requirements of the Academy of Nutrition and Dietetics. May be repeated for three hours' credit. Prerequisites: B. S. degree in Food and Nutrition/ Dietetics from an approved Didactic Program in Dietetics and admission to the Dietetic Internship.
- [FCSC 503 Advanced Nutrition and Human Metabolism \(3.0 credits\)](#)  
This graduate-level course will examine the advanced metabolism of the six nutrient classes and their role in the development, pathogenesis, progression and treatment of chronic disease. The anthropometric, biochemical, clinical and dietary causes and consequences of nutrient deficiencies and toxicities will be discussed. Detailed attention will be devoted to exploring the metabolic consequences of the four major co-morbidities of hypertension, diabetes mellitus (type II), obesity, and metabolic syndrome.
- [FCSC 504 Nutrigenomics and Nutrigenetics \(3.0 credits\)](#)  
This graduate-level course will explore the understanding and application of genetics and genomics to human nutrition and nutritional status. An interdisciplinary approach will assist the student in understanding the fundamental knowledge and technologies within the field of human nutrition, biology, molecular biology, chemistry, informatics and other relevant disciplines. Virtual laboratory experiments and invited guest lectures from subject matter experts will reinforce concepts acquired in the course.
- [FCSC 505 Public Health Nutrition \(3.0 credits\)](#)  
This graduate-level course will investigate current challenges to public health in relation to nutritional status. The relationship between nutritional intake and health disparities, with an emphasis on the physiological, psychological, socioeconomic and food environment influences on and consumer beliefs and behaviors, will be analyzed using behavioral

theories and evidence-based techniques. Vulnerable, at-risk populations will be discussed to examine the role of community-based strategies in preventing disease, promoting public health and mitigating health disparities.

- **[FCSC 506 Special Topics in Human Nutrition and Food \(1.0 to 3.0 credits\)](#)**

This graduate-level course will examine current and emerging topics related to the food and nutritional sciences and dietetics. Each student will select and more closely explore a nutrition-related topic using evidence-based basic, clinical, and translational sciences. Discussion topics include, but are not limited to, medical nutrition therapy, precision nutrition, telemedicine, and personalized medicine in the prevention of disease and the promotion of health.

- **[FCSC 507 Culinary Medicine \(3.0 credits\)](#)**

This graduate-level course will examine the relationship between diet and disease and food as medicine. In addition, the physiological, psychological, and sociocultural aspects of meal preparation (i.e., cooking) and eating will be investigated. The relationship between the DASH, Mediterranean, Okinawan, Therapeutic Lifestyle Changes, and Western dietary patterns and chronic disease risk will be examined also. Barriers to “healthy eating” and strategies to promote “healthy eating” will be identified through group discussions and evidence-based literature reviews. The application of comprehensive nutrition knowledge and culinary techniques will be employed in the preparation of cardioprotective and disease preventive meals and snacks within the food preparation laboratory and metabolic kitchen.

- **[FCSC 600 Nutritional Sciences: Dietetics Capstone Project \(3.0 credits\)](#)**

This graduate-level course provided students with the opportunity to conduct an evidence-based or practice-based research project in the areas of nutritional science and/or dietetics. Students conducting a research project requiring Institutional Review Board (IRB) Approval, will be required to complete the Protection of Human Research Participants training, an IRB application and be granted IRB approval prior to conducting research. Students will be required to complete a thesis as part of this course. The major components of the thesis are: 1) research proposal, 2) literature review, 3) methodology, 4) results and discussion, and 5) conclusions. Students will also be required to present their research findings during the FCSC Seminar Series. Other opportunities to present (oral or poster presentations) research findings will be available to students. Thesis areas include, but are not limited to, community nutrition, clinical nutrition, and chronic disease and health disparities.