Course Descriptions
Master of Science in Applied Nutrition and Dietetics
2021-2022 Academic Catalog

NUTR 05202 Lifecycle Nutrition **3 credit hours**
Develop an in-depth knowledge base of nutrition needs through each stage of life. Nutrition requirements, physical growth, and psychosocial development from preconception through older adulthood are examined. Additionally, select eating problems, nutrition-related conditions, and the consequences of under and over nutrition are explored.
Pre-requisites: N/A

NUTR 06201 Nutritional Science **3 credit hours**
This course presents a detailed study of human biochemistry of micronutrients, their relationship with macronutrients and how nutrition influences metabolism, cells and body function. Vitamins and minerals will be discussed in relation to metabolism and digestion. The clinical signs and symptoms of nutrition related disorders and biochemical and laboratory assessment will be introduced.
Pre-requisites: N/A

NUTR 06102 Natural Therapies: Herbology & Detoxification **3 credit hours**
This course is a detailed investigation of detoxification, herbology, and homeopathic therapies as they relate to human systems. Examination of the issues and trends will be explored through the use of current literature and evidence-based research. Students will obtain evidence-based knowledge of: herbal medicine, clinical guides of herbal medicine, functions of herbs, and safety issues. Specific applications and controversies relating to use of herbs and functional foods and high-dose nutrient supplementation in the management of chronic disorders will be explored. Students will develop skills of identifying strengths and limitations of preventive as well as therapeutic utilization of herbs and supplements.
Pre- requisites: N/A

NUTR 06104 Clinical Nutrition in Human Systems I **3 credit hours**
This course presents a detailed study of the principles of nutrition concentrating on their biochemical, physiological, and pathological relationship to the management of acute and chronic conditions affecting humans. Topics taken into consideration include diet, exercise, lifestyle changes, and supplementation. The signs, symptoms, and diagnostic testing will be discussed for each condition, with special emphasis on homeostasis of the human body and other conditions encountered in clinical practice.
Pre-requisites: NUTR 06201 Nutrition Science

NUTR 05301 Nutrigenetics and Nutrigenomics **3 credit hours**
This course focuses on nutrigenetics, how genetic differences affect nutrient uptake and metabolism, and nutrigenomics, the effect of diet and food components on gene expression. Students will develop an appreciation of genetic mutation and explain how mutations can influence biochemical pathways and alter an individual's metabolic processes. Possible

nutrigenetic and nutrgenomic effects on health and disease will be explored. Genomic testing principles, interpretation and practical application will be provided.

NUTR 06204 Nutrition Epidemiology & Health Promotion 3 credit hours

This course introduces students to epidemiological principles and methodologies relevant to clinical nutrition, research, and educational strategies for wellness and health promotion initiatives. Upon course completion students will be able to identify study designs, analytical epidemiology/ methodology, and health behavior theories/ models appropriate for prevention and health promotion programs.

Pre-requisites: N/A

NUTR 05104 Gut Microbiome, Nutrition, & Behavior 3 credit hours

This course provides a study of basic and emerging literature in respect to the effect of gut microbiome changes on behavior, as well as the effects of nutrition upon the microbiome and gut-brain axis.

Pre-requisites: N/A

NUTR 06301 Geriatric Nutrition 3 credit hours

Advanced study of nutrition in the aging individual in health and disease. Special emphasis on interactions of physiological stages, age, lifestyle, health, disease, and nutrition. Examination of research findings focusing on the relationship of nutrition to the structural and functional changes associated with the aging process.

Pre-requisites: NUTR 05202 Lifecycle Nutrition and NUTR06201 Nutritional Science

RMET 05101 Research Methods in Healthcare 3 credit hours

In this course, students will learn to evaluate the scientific/clinical literature for reliability and validity as well as the potential clinical significance of research results. Students will learn how to: identify limitations of research findings and recognize the multiple sources of research design error and researcher bias, how to evaluate reliable research study designs and experiments, how to create the various types of study designs and understand when each design is appropriate, how to write and test hypotheses, and how to find, correctly cite, and analyze peer-reviewed literature.

Pre-requisites: Students in the MSAND program must complete 4 courses prior to taking this course.

RDSL06104 Clinical Nutrition I Lab 1 credit hour

This course is intended for Master of Science in Applied Nutrition & Dietetics (MSAND) students only and is a pre-requisite for RDSL08201 Supervised Experiential Learning I and RDSL08202 Supervised Experiential Learning II. This one-credit hour lab is designed to be taken at the same time as NUTR06104 Clinical Nutrition in Human Systems I. Students will apply foundational clinical nutrition knowledge and navigate relevant tools and resources to meet the needs of individuals, coinciding with Clinical Nutrition I modules. Using the Nutrition Care Process, students will apply patient-centered principles and manage medical nutrition therapy for patients through weekly discussions/activities.

Pre-requisites: N/A; Co-requisites: NUTR06104 Clinical Nutrition in Human Systems I

RDSL 06105 Food Science and Management Lab 2 credit hours

This course is intended for MSAND (Master of Science in Applied Nutrition & Dietetics) students only and is a pre-requisite for RDSL08201 Supervised Experiential Learning I and RDSL08202 Supervised Experiential Learning II. The food lab is designed to prepare students for foodservice management rotations and the correlated RD exam topics. It will cover food science, food safety and sanitation, and foodservice systems. Students will apply financial management and foodservice calculations and formulas.

Pre-requisites: N/A

RDSL 06202 Medical Nutrition Therapy Lab 2 credit hours

This course is intended for Master of Science in Applied Nutrition & Dietetics (MSAND) students and is a pre-requisite for RDSL08201 Supervised Experiential Learning I and RDSL08202 Supervised Experiential Learning II. During this two-credit hour lab students will apply and integrate understanding of foundational sciences to manage medical nutrition therapy for a variety of clients/patients. Students will practice evaluating the need for and establishing nutrition support regimens. Students will apply patient-centered principles and navigate relevant tools and resources in dietetics practice.

Pre-requisites: NUTR06104 Clinical Nutrition in Human Systems I, RDSL06104 Clinical Lab I

RDSL 08201 Supervised Experiential Learning I 5 credit hours

Students will apply foundational sciences to food and nutrition knowledge to meet the needs of individuals, groups, and organization. Students will support community and population nutrition programs. Students will provide medical nutrition therapy using the nutrition care process in simulated and real-world settings. Students will develop effective nutrition counseling skills and practice nutrition focused physical exams. Students will employ food systems principles and management skills.

Pre-requisites: All core coursework

RDSL 08202 Supervised Experiential Learning II 5 credit hours

Students will integrate evidenced-informed practice, research principles, and critical thinking into professional practice. Students will provide medical nutrition therapy using the nutrition care process in a variety of healthcare settings. Students will assess patients with a range of acute and chronic conditions, medical and social complexity, and across the lifecycle. Students will refine nutrition counseling and nutrition focused physical exam skills. Students will utilize organization management skills. Students will prepare for the registered dietitian exam.

Pre-requisites: All core coursework and RDSL08201