



# FOUNDATIONS OF NUTRITION

## COURSE DESCRIPTION

Students evaluate their own food intake, eating behaviors; learn to be informed consumers of food and nutritional information in our modern environment. Provide students with critical human life and nutrition information that will expand their understanding of science and also be personally applicable to their daily and life-long health and wellbeing in the modern environment through applied assessments, exams, and discussions. It will also serve as the foundation course for subsequent course work in the area of nutrition and satisfy a life science general education course requirement.

## STRANDS

Demonstrate knowledge of the common terminology used in the discipline of fundamental scientific principles of nutrition and levels of organization in nature. Understand how to fuel and nourish the body optimally. Compare the six categories of nutrients that function in cellular structure and metabolism that are essential to life: carbohydrates, proteins, lipids, vitamins, minerals, and water.

Understand how to use various dietary tools to plan, manage, and evaluate diets for nutritional adequacy. Communicate the evolution of Paleolithic diets to today's diet in the context of dietary recommendations for American. Utilize tools to determine nutrient values of foods consumed by diverse populations. Plan, evaluate, and manage diets to improve and support life-long health. Integrate the scientific knowledge of nutrition, genetics, chemistry, metabolism, exercise and lifestyle with utilizing several standards/guidelines/guidance systems to plan, evaluate, and manage diets to support life-long health.

Understand how to manage the intake of energy to prevent nutrition-related chronic disease. Identify essential nutrients for humans. How humans obtain and use energy, and how they maintain or disrupt homeostasis through sustained or altered metabolisms affected by their cumulative dietary food choices and lifestyle. Provide specific roles of nutrition in metabolism and homeostasis in the human body. Explain how the human body processes food and utilizes nutrients with additional reference to energy balance and weight control. Associate nutrition, genetics, metabolism, exercise and lifestyle with health promotion and disease prevention. Identify risks factors for developing chronic disease including the interpretation of biochemical, clinical and anthropometrical laboratory measures.



## DAVIS ESSENTIAL SKILLS AND KNOWLEDGE

**Investigate energy balance, physically activity, and weight control to prevent obesity and achieve nutritional adequacy. Identify scientific methods used to discern reliability of nutrition information based on scientific evidence, source and professional credentials. Relate the knowledge across several different scientific disciplines such as physiology, anatomy, biochemistry, biology immunology, and microbiology.**

**Understand the appropriate intake of vitamins and minerals to regulate metabolism and maintain health. Provide examples of shared genetic processes in regards to essential nutrients, function, health, and disease.**

**Recognize scientifically based nutrition information and to understand the food industry, food safety, food processing, and food production. Demonstrate knowledge of human nutrition needs and the role of nutrition in improving individual life and the societal economic impact of good versus bad nutrition. Relate technological advancements in medicine and food production to the advancement of the science of human nutrition. Explain the impact that the food industry has on human food choices and the subsequent relationship to health and disease at the individual, society, and environmental level. Provide examples of past and present nutrient and diet trends in modern society and the positive an/or negative implications for human health and earth's resources. In addition describe the federal agencies and their responsibilities to insure public food safety, sustainable food production; and personal food handling skills to avoid food borne illness from a variety of microorganisms.**

**Apply the principles of proper nutrition to each phase in the life cycle, specifying the particular nutritional choices most important during pre-pregnancy, pregnancy, lactation, infancy, childhood, adolescence, and older adulthood.**