

Course Description:

This course explores the fundamentals of experimental foods from a scientific perspective. Topics include the research process; sensory and objective evaluation of foods; physical aspects of food preparation; components of foods including water, carbohydrates, lipids, and proteins; food safety and preservation; and food additives. The course involves assigned textbook readings, the completion of virtual food science experiments and lab assignments, participation in discussions on pertinent food science topics, and a research project. The objective of the project is to modify a food product [formula/recipe] to improve its nutritional value while maintaining or improving its consumer acceptability. Students will have to justify the selection of the product and its modification, complete the product modification, compare the modified product to the original, develop and conduct a sensory evaluation of the modification, develop label and cost information and discuss the results obtained. PowerPoint presentations of the finished project will be shared with class members.

Credits: Three (3)

Course Format and Modes of Instruction:

This course is a web-based class consisting of readings from the textbook, discussion activities posted on the discussion board, links to informational cites on the internet, lecture handouts, written assignments, and practice quizzes.

Prerequisites: None

Course Goals:

The goals of this course are to understand the scientific method, experimental design, and the research process; conduct sensory and objective evaluations on foods; develop a working knowledge of the macronutrients (carbohydrates, lipids and proteins) and their functional properties in foods; perform virtual experiments on evaluating the interactions of food components and/or preparation methods; understand and develop a foundation of knowledge on the principles of food preparation, preservation and food safety; conduct a research project on a food product modification, prepare a presentation on its results and share the project with the class.

Course Requirements:

Requirements	Weight
Labs	25%
Exams	30%
Final Examination	15%
Project	15%
Quizzes	10%
Participation/Group Discussion	5%
Total	100%