

NUTR*3390
Applied Nutritional and Nutraceutical Sciences I
Fall 2015

Instructor: Dr. W.J. Bettger (wbettger@uoguelph.ca)
Teaching Assistants: Megan Racey (mracey@uoguelph.ca)
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Class Schedule:	Lecture	Mon / Wed / Fri 10:30-11:20	MacKinnon 323
	Lab 1	Tues. 2:30 - 5:20	FS 146
	Lab 2	Wed. 1:30 - 4:20	FS 146

Calendar Description: This course will introduce and develop key concepts of the applied aspects of the Nutritional and Nutraceutical Sciences. Enrichment of foods with health protectant chemicals, reduction of undesirable chemicals in foods, establishing biomarkers and risk indicators of disease, testing of bioavailability/efficacy to support basic health claims, health assessment and nutrigenomic analysis as adjuvants in the effective use of functional foods and nutraceuticals, and regulatory and consumer issues will be addressed.

Course Description: The course is designed to explore, and provide experiential learning opportunities in, the two major areas of Nutritional and Nutraceutical Sciences - product formulation/development and product testing of safety, efficacy and effectiveness. The course also focuses on the analytical techniques which support these areas.

Course Outline/Schedule:

Monday Lectures/Discussions/Demonstrations: Week 1 to Week 12 - Special Topics in FFN Product Design and Development

Wednesday and Friday Lectures/Discussions/Demonstrations: Week 1 to Week 12 – Special Topics in Product Testing for Safety, Efficacy and Effectiveness

Lab Schedule:

Week 1 - 4	Skills and Attributes of Career Development / Consultations for the Major Projects
Week 5 - 6	Human Nutrition/Natural Health Product Studies
Week 7 - 8	Sensory Analysis
Week 9 - 10	Regulatory Affairs
Week 11 - 12	Health Assessment and Diagnostics

Course Evaluation:

Students will be evaluated in the course based on their performance on three major projects and a final exam. Project #1 is the development of a functional food or cosmeceutical product along with an appropriate delivery system (for details see handout #1). Project #2 is a Power Point-based 15 minute oral presentation on the testing of a functional food, nutraceutical or cosmeceutical product for safety, efficacy or effectiveness (for details see handout #2). Project #3 is an opinion/editorial article written about a current issue in nutritional and nutraceutical sciences (see handout #3 for details). The final exam in the course, which will be in the form of short answer/short essay, will be over lecture and lab material and will be a take home examination (see handout #4 for details). The weighting of the marks will be Project #1, 40%, Project #2, 20%, Project #3, 20% and the Final Exam, 20%.