

Dalhousie University, Faculty of Agriculture
AGRI5710 Graduate Module
“Processing, Food Structure and Functionality”
Summer 2015
Schedule: July-August 2015 (4 weeks)

Instructor:

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Module Description:

The food that we harvest from the farm is very different from the finished food product that we purchase for consumption, and much is still unknown about the molecular changes that occur in food during processing. This graduate module will involve a mini lab-based project and literature review, weekly meetings and discussions, and formal presentation and final paper focused on the impact of thermal, ultrasonic, microwave, high pressure, enzymatic or microbial processing, or simulated physiological processing on the native structure and functionality of a food component.

Requirements:

Students must be currently working on a particular food component (e.g. proteins, polysaccharides, lipids, etc.) in their graduate thesis or other related projects.

Capacity: Five (5) graduate students; email the Instructor by Friday July 24, 2015 if interested in taking the module.

Module Content:

Meetings will involve an introductory lecture to discuss the background (currently available literature) and identify specific problems to address in the module, and subsequent weekly meetings and lab work. Students are required to choose a food component and processing method related to their graduate thesis (or other related) projects for the module. The final topic must be discussed with the instructor during the first day of class. The student will review the literature on the selected topic (2 pages), design a mini-project with the instructor, conduct relevant short experiments (the instructor will provide space and materials) and deliver a 20-minute presentation on the topic. The presentations will be evaluated by the instructor. Students are required to write a short report to summarize their study findings. The paper should be written following the format of a top peer-reviewed journal chosen by the student, and must be less than 15 pages in length (excluding cover page, references, figures, tables), double line spaced with 12-pt Times New Roman font and 1-inch page margins.

Evaluation:

Contribution to discussion (20%), Lab work (30%), Paper (30%), Presentation (20%)

Materials:

Materials for module discussions will be derived from peer-reviewed scientific journals.