Jordan University of Science and Technology
Faculty of Agriculture
Department of Nutrition and Food Technology
Semester 2007

Course Information	
Course Title	Advanced Food Processing
Course Number	NF 762
Instructor	Dr. Taha Rababah
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Office Hours	--------
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Teaching Assistant	

Course Description

This course will introduce new and emerging food processing and preservation topics as well as build on fundamentals. The course is divided among thermal technologies (thermal processing, aseptic processing, ohmic heating, microwave/RF processing and others) and non-thermal technologies (high pressure processing, irradiation, pulsed electric fields, pulsed lights, magnetic fields, ultrasound and others). Laboratory demo sessions will provide students with demonstration of the new food processing principles learned in the class.

Text Book	
Title	None. Supplemental notes and handouts will be distributed in class.

Assessment Policy		
Assessment Type	**Expected Due Date**	**Weight**
First Exam		30%
Lab		10%
Final Exam		50%
Assignments		10%

Teaching & Learning Methods

The format for the class will vary from traditional lectures, group discussion, quest speakers, laboratory demonstrations, and tutorials.

Learning Outcomes: Upon successful completion of this course, students will be able to	
Related Objective(s)	Reference(s)
Students will become familiar with the trends of advanced food processing technology development and will be capable of using research literature on the subjects and analyzing situations in which the advanced food processing technologies may be utilized.	

Useful Resources

- Rick Parker. (2003). Introduction to Food Science.
- Food Chemistry 3rd edition by Fennema, O., 1996. Marcel Dekker, N.Y.
- Food Science. Potter & Hotchkiss. 5th edition.
- Introduction to food Eng. 3rd edition.2001. R Paul singh and Dennis R Heldman

Journals

1- J Food Sci 2- Journal of Food Technology 3- Food Engineering
4- Poultry Sci 5- Meat Sci 6- J Agri & Food Chem

Course Content

Week	Topics	Chapter in Text (handouts)
1	Introduction	
	Advanced Thermal Processing	
	Aseptic Processing	
	Ohmic Heating	
	Microwave Processing	
	Radio Frequency Processing	
	Infrared Heating	
	Extrusion	
	Ultrasound Processing	
	Pulsed Lights Processing	
	Food Irradiation	
	Magnetic Fields Processing	
	Pulsed Electric Fields Processing	
	Ozone Processing	
	Plasma Processing	
	Minimal Processing	
	Hurdle Technology	