FDSN 301. Exploring Food Science and Technology
Spring 2016
Time TBD

SYLLABUS

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STUDY MATERIALS & RESOURCES

1.) Murano, Peter S. *Understanding Food Science and Technology*. Belmont, CA, Thomson/Wadsworth, 2003. (Text)
2.) Selected articles and books (Provided in class or Blackboard)
3.) Access to a computer (Quizzes, Assignments, Lecture Materials)
4.) Library (Research)
5.) Writing Center (As needed)

COURSE DESCRIPTION

In this course students will explore the wide array of disciplines in which engineering, biological, and physical sciences are used to study and produce food products. An overview of the relationship between food nutrition, chemistry, microbiology, safety, processing, engineering, sensory, and product development will be discussed. The food science and technology industry will be studied to understand food processing, food safety, quality and packaging of specific categories of foods. The course also provides a brief introduction to different career opportunities within the food and technology industry.

COURSE OBJECTIVES

By the end of the course, students will be able to:

1.) Understand food laws and regulations in the United States and be able to differentiate the products regulated.
2.) Evaluate a product label for nutrition, ingredients, and other required information.
3.) Describe the chemical and functional properties of food components.
4.) Explain the purpose for various types of food additives and ingredients.
5.) Know common foodborne microorganisms and illnesses and describe common prevention techniques.
6.) Understand the basic concepts of food processing and their relationship to food commodities, and be able to develop critical thinking skills related to the production of foods.
7.) Articulate their stance, and provide background rationale, on current topics related to the food industry.
8.) Understand the role of sensory evaluation.

COURSE EXPECTATIONS AND REQUIREMENTS

1.) Reading from textbook as noted from course outline.
2.) Attend and participate in class.
3.) Assignments will be used to extend information presented in class and allow application of materials learned in class.
4.) Evaluations will be completed through quizzes, exams, assignments, and class participation.

Assignments must be turned in on the due date as indicated on the syllabus. Assignments may either be turned in via class (during class period) or Blackboard (by midnight). Late assignments will be penalized 10% per day late up to 5 days late. After 5 days late, the assignment will not be accepted.

Quizzes must be taken online (Blackboard). The quiz will be open for a period of 48h, closing at midnight on the date indicated on the syllabus.

Exams will be given in class. Only one makeup exam will be allowed per semester with a compelling reason (serious medical reasons with valid documentation). The makeup exam must be completed upon return to campus.

HONOR CODE

Students are expected to uphold the IIT standard of conduct for students relating to academic dishonesty. Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that a student's submitted work, examinations, quizzes, and assignments must be that student's own work.

ACCOMMODATIONS

Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must obtain a letter of accommodation from the Center for Disability Resources (CDR). The CDR is located in Life Sciences Room 252, telephone 312-567-5744 or disabilities@iit.edu.

GRADING

Late assignments will be penalized 10% per day late up to 5 days late. After 5 days late, the assignment will not be accepted.

Grading scale and point assignment

A = 90-100% B = 80-89% C = 70-79% D = 60-69% F < 60%

Assignment	Points possible
Exam 1	100
Exam 2	100
Exam 3 (Final)	100
Quiz 1	10
Quiz 2	10
Quiz 3	10
Nutrition Assignment	10
Processing Assignment	25
Stance Paper	25
Attendance & participation	10
Total Points Possible	400

TENTATIVE SCHEDULE

Week	Dates	Topics	Reading	Assignment
1	1/11/2016 1/13/2016	Orientation and introduction to food science Components of food	Chapter 1 Chapter 2	
2	1/18/2016 1/20/2016	No class M Nutrition	 Chapter 3	
3	1/25/2016 1/27/2016	Nutrition Chemistry	Chapter 3 Chapter 4 & 5	Homework 1: Nutrition Assignment
4	2/1/2016 2/3/2016	Chemistry Food Additives	Chapter 6 Chapter 7	Quiz 1
5	2/8/2016 2/10/2016	Food Quality Laws and Regulations	 Chapter 7	
6	2/15/2016 2/17/2016	Exam 1 Microbiology	 Chapter 10	Exam 1
7	2/22/2016 2/24/2016	Safety Unit Operations	Chapter 11 & 12	
8	2/29/2016 3/2/2016	Food Processing Food Processing	Chapter 8	Quiz 2
9	3/7/2016 3/9/2016	Animal Products Dairy Products	Chapter 8 Chapter 8	
10	3/14/2016 3/16/2016	Spring Break Spring Break		
11	3/21/2016 3/23/2016	Fruits and Vegetables Fermented Foods	Chapter 8 Chapter 10	Processing Assignment
12	3/28/2016 3/30/2016	Exam 2 Cereal Products	 Chapter 9	Exam 2
13	4/4/2016 4/6/2016	Fats, Sugars, Confectionary Food Engineering	Chapter 9 Chapter 13	
14	4/11/2016 4/13/2016	Biotechnology Food Packaging	Chapter 14 Chapter 13	Quiz 3
15	4/18/2016 4/20/2016	Sensory Product Development	Chapter 15 Chapter 15	Stance Paper
16	4/25/2016 4/27/2016	Worldwide Issues Opportunities	Supplemental text *(provided in class)*	
17	5/2/2016 5/4/2016	Finals		Exam 3