

COLLEGE OF HUMANITIES AND SOCIAL SCIENCES
FCS 567: CONSUMER AND FOOD TECHNOLOGY
CREDIT HOURS: 3
SECOND SUMMER SESSION: JULY 8, 2008

Class Meets: Day/Time: Mon, Tues, Wed, and Thurs, 9-11.50 am
Academic Building II: Room 201

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Required Textbook: Johnson-Green, P. Introduction to Food Biotechnology. Boca Raton, CRC Press, 2003.
Understanding Biotechnology: and Integrated and Cyber-based Approach. Pearson, Prentice Hall, 2004.

Course description:

This course is intended to include an analysis of food production and marketing techniques. Consideration of physical and chemical factors influencing the quality of food will be studied with implications and guidelines for the consumer.

Course objectives:

Upon completion of this course the student should have the ability to:

1. Relate the environment, ecology, and energy to mankind's ability to feed itself
2. Evaluate issues focused on the food industry in regard to nutrition, standards, and safety
3. List the issues related to regulatory aspects of food biotechnology
4. Promote an understanding of chemical and physical properties and principles as they apply to food processing and evaluation
5. Describe the use of biotechnology in food safety applications
6. Research a topic of special significance and relate it to consumer needs for food information; and
7. Communicate effectively and discuss the concerns associated with biotechnology-derived foods to target audience
8. Participate actively in classroom discussions on food technology and consumer perspectives
9. Apply critical thinking skills in a short write-learn assignment

Student Syllabus Guidelines: You may find online a more detailed description of the following policies. These guidelines will also provide you with a link to the specific university policy or procedure: <http://www.shsu.edu/syllabus/>

Attendance Policy:

Students are expected to attend class sessions. Only University-recognized excuses will be accepted. Roll will be taken each class.

Academic Dishonesty: Students are expected to maintain honesty and integrity in the academic experiences both in and out of the classroom. *See Student Syllabus Guidelines.*

Classroom Rules of Conduct: Students are expected to assist in maintaining a classroom environment that is conducive to learning. Students are to treat faculty and students with respect. Students are to turn off all cell phones while in the classroom. Under no circumstances are cell phones or any electronic devices to be used or seen during times of examination. Failure to do so will result in **one-grade-point reduction of overall class grade.**

Students may tape record lectures provided they do not disturb other students in the process.

Student Absences on Religious Holy Days: Students are allowed to miss class and other required activities, including examinations, for the observance of a religious holy day, including travel for that purpose. Students remain responsible for all work. *See Student Syllabus Guidelines.*

Students with Disabilities Policy: It is the policy of Sam Houston State University that individuals otherwise qualified shall not be excluded, solely by reason of their disability, from participation in any academic program of the university. Further, they shall not be denied the benefits of these programs nor shall they be subjected to discrimination. Students with disabilities that might affect their academic performance should visit with the Office of Services for Students with Disabilities located in the Counseling Center. *See Student Syllabus Guidelines.*

Visitors in the Classroom: Only registered students may attend class. Exceptions can be made on a case-by-case basis by the professor. In all cases, visitors must not present a disruption to the class by their attendance. Students wishing to audit a class must apply to do so through the Registrar's Office.

Grading Policy:

Two (1 hour) classroom examinations	200 points = 50% of the overall grade
Class participation	100 points = 10% of the overall grade
One research and class debate	200 points = 15% of the overall grade
One final examination	200 points = 25% of the overall grade

Tests will consist of short and long answers, True/False, and multiple-choice type questions.

Grades will be assigned using the following scale:

A	=	90 -100 %	B	=	80 - 89.95 %
C	=	70 - 79.95 %	D	=	60 – 69.95 5
F	=	Below 60 %			

COURSE FORMAT:

This course will be taught through the use of lecture, class discussion, demonstrations/ field experience, literature review and guest speaker (s) when applicable. Each student will prepare assigned chapters from the text and provide a 10-20 minute discussion to the class highlighting the technology, its application and impact on human health and nutrition.

COURSE OUTLINE:

UNIT I

Introduction/Overview

- Consumer: perception of food quality
- Consumer's attitude: convenience foods and innovation and technology
- Definitions of terms
- The Goals and Scope of Food Technology
- Forms of food processing and technology
- Benefits

UNIT II

- Functional foods
- Forms of food biotechnology
 - – Irradiation
 - – GMO/Genetic Engineering
 - – Other: Nanotechnology in food industry
- Regulations related to food Biotechnology

Exam 1

July 17, 2008

Debate Session

July 24, 2008

UNIT III

- Specific Applications
 - Plant Biotechnology
 - Animals and Microbes
 - Human health and diagnostics
 - Forensic
 - Other

Exam II

July 31, 2008

UNIT IV

- Environmental concerns
- Social Issues/ Concerns of Consumers
- Regulations related to food biotechnology
- Perceptions and fear food Biotechnology

- Food safety and other concerns
- Possible Answers

Final Exam and paper due:

August 7, 2008

Purpose of the writing Assignment:

1. To facilitate learning using the active learning approach
2. Foster critical thinking using a short write-to-learn assignment for formative assessment.

Writing Assignment:

- Select one type of food technology that is relatively new and explain in layman terms to a consumer how this technology is applied in food production and why knowledge of this technology might assist the consumer with concerns.
- Classroom debate: Through lecture, reading and class discussion, the student will focus on a controversial issue of food, technology, nutrition, or FCS.

Procedure:

Short write-to-learn assignment:

1. Student will be given a critical thinking task of selecting a new food technology; he/she will conduct peer-reviewed literature research and use lecture notes then translate this information into a 3-5 page nutrition-related education paper. The target audience will be the average consumer of the food products that are produced this chosen method or technology. The paper will provide accurate details of the technology concept in lay terms as well as inform the consumer about this type of technology and its implication to the consumer after production.

An In-class Debate:

2. Toward the end of the class, the instructor will set up two teams of cross-questions debate. The instructor will facilitate the debate by keeping time and allowing time for rebuttal. Adequate time will be allowed for preparation of the case in the affirmative or negative position.
3. This assignment will end with each student writing a one page summary report detailing the position debated in an essay format.

Evaluation:

1. The instructor will assign a grade for the short write-to-learn assignment using a rubric.
2. On the actual debate, a check plus, check minus, and zero system will be assigned by the instructor, however, a peer evaluation on performance within teams will be completed by each student using a likert scale (1 = poor, 5 = excellent).
3. The written report of the debate will be subject to formal grading using a rubric.

4. To measure the impact on learning using these techniques, a pre- and post assessment, rating the student's knowledge will be conducted.

SUGGESTED JOURNALS TO REVIEW:

American Association of Family and Consumer Sciences Research Journal

Journal of Business Education

Journal of Chemical Education

Journal of The American Dietetic Association

American Journal of Public Health

Canadian Home Economics Journal

Communication Research—An International Quarterly

Evaluation Review

Evaluation and Program Planning: An International Journal

Journal of Food Science

Journal of Nutrition

Food Processing

Food Technology

Prepared Foods