COURSE OUTLINE

FDSC 4413/4410l
Sensory Evaluation of Food

Fall 2007

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Catalog Description: FDSC4413 Sensory Evaluation of Food (FA, Odd years) Principles and procedures for sensory evaluation of food. Appropriate uses of specific tests are discussed, along with physiological, psychological, and environmental factors affecting sensory verdicts. Lecture 2 hours, laboratory 2 hours per week. Corequisite: FDSC 4410L. Prerequisite: PSYC 2013 or STAT 2013 or ISYS 2013 or AGST 4023 or STAT 2023.

Text Book: Meilgaard, Civille, and Carr. 2007. Sensory Evaluation Techniques, 4th Edition CRC Press, Boca Raton, FL

References:
1. Lawless, H.T. and Heymann, H. 1998. Sensory Evaluation of Food: Principles and Practices, Chapman & Hall, NY
2. Gacula, M.C. 1997. Descriptive Sensory Analysis in Practice. Food & Nutrition Press, Inc. CT
3. Resurreccion, A.V.A. 1998. Consumer Sensory Testing for Product Development, Chapman & Hall, NY

Course Objectives: This course is designed for seniors and graduate students from food science, animal science, poultry science and biological engineering to learn principles, methods and application of sensory evaluation techniques to testing the quality of food products. Upon completion of the course, students are expected to be able to formulate test objectives, recommend an appropriate test methodology for addressing the test objectives, statistically analyze test results, draw conclusions and make recommendations.

Class Procedures: Two 50-min lectures (MF, 2:30-3:20) and a 2-hour laboratory exercise (W 2:30-4:20) per week.

Assignments: Students will be assigned readings in the text, homework problems and laboratory exercises reports. All written assignments may be submitted either on paper or electronically. Students are encouraged to consult their peers. However, the assignments submitted should consist of their own work.

Evaluation Method: All assignments, projects and exams will be expected to be of professional quality. Laboratory reports are due one week after the lab exercise at the beginning of the lab period. No late assignments will be accepted without prior approval from the instructor. Late homework or laboratory reports will be penalized by deducting 20% of the points per late day. The grade for this course will be determined as follows:

Category	**Weight**
Exams (3)	45%
Final Exam	25%
Homework, Lab reports	30% undergraduates, 20% graduate students
Current topic paper	10% graduate students

Composite Score	**Grade**
93-100	= A
90-92	= A-
87-89	= B+
83-86	= B
80-82	= B-
77-79	= C+
73-76	= C
70-72	= C-
67-69	= D+
63-66	=D
60-62	= D-
< 60	= F

Graduate Students: Graduate students taking this course for graduate credit will be required to complete an individual report on a current sensory science topic summarizing the current stage of knowledge. Graduate student will also be assigned additional homework and exam questions requiring a higher level of understanding of sensory evaluation.

Attendance: Attendance at the lectures and laboratory exercises is mandatory. Absences should be justified and you should contact the instructor prior the class period you will miss. An excessive number of absences will result points deduction on your final grade.

Students w/ Disability: If you need an accommodation due to a disability, please make arrangements to discuss this with the instructor during the first week of class.

Lecture Topics:

A. Lectures

Lecture 0: Introduction to sensory evaluation
Lecture 1: History of sensory analysis and defining a sensory problem
Lecture 2: Perception of sensory modalities
Lecture 3: Discriminative testing

Exam I (1 hr)

Lecture 4: Overall difference testing
Lecture 5: Attribute difference testing
Lecture 6: Threshold determination
Lecture 7: Developing a sensory evaluation program

Exam II (1 hr)

Lecture 8: Descriptive analysis
Lecture 9: Consumer testing: Quantitative and Qualitative methods

EXAM III (1hr)

Lecture 10: Sensory evaluation in quality control
Lecture 11: Relating instrumental to sensory data
Lecture 12: Statistical analysis of data
Lecture 13: Statistical Designs

FINAL EXAM

B: Laboratories

Lab 1: Application of paired comparison for evaluation of milk samples
Lab 2: Triangle Tests
Lab 3: Use of sequential testing in selecting judges
Lab 4: Order of combining tea and milk
Lab 5: Determination of odor thresholds by force-choice ascending concentration series

Lab 6: Inversions in ranking
Lab 7: Magnitude Estimation
Lab 8: Descriptive analysis of cola beverages 1
Lab 9: Descriptive analysis of cola beverages 2
Lab 10: Consumer testing ballot design
Lab 11: Consumer testing: Test and Analysis