FOOD SCIENCE 7550 – Advanced Concepts in Sensory Science

Prerequisite or concurrent: Measurement of Food Perception and Liking (FDSCTE 5500) and advanced statistics course.

SEMESTER: Spring 2016 (7 week course)
TIME: 4:10-6:00 PM Monday & Wednesday
CREDITS: 2 credit hours

LOCATION: 114 Parker Food Science Building

INSTRUCTOR: Christopher T. Simons
OFFICE: 315 Parker Food Science Building
PHONE: 688-1489
EMAIL: simons.103@osu.edu
OFFICE HOURS: By Appointment

TEXTBOOKS: None. Course materials will be comprised of articles and primary research obtained from the published scientific literature.

Course Description: This course explores advanced concepts in Sensory Science including flavor perception, food intake and sophisticated methodological and data analysis procedures. The structure of this course will involve open discussion of important concepts obtained from seminal readings. It is imperative that student’s come to class having already read the weekly material and be prepared to discuss the concepts in detail. Articles will be provided in advance through Carmen. Students are expected to post questions and discussion topics related to the readings in Carmen prior to the beginning of class. Students should post a minimum of 2-3 discussion points per article. In general, designated lectures will not be given. On occasion, a lecture may be presented at the beginning of class to help clarify topics related to the week’s readings. There will be two assignments in which students will provide a written critique of an assigned article. In addition, a review paper on an agreed upon topic will be due at the end of the course.

Goals of this course: Upon completion of this course, students should

1) be familiar with advanced concepts in sensory neuroscience, human psychophysics, food reward, factors contributing to food intake and sensory evaluation techniques and analyses.
2) have knowledge and appreciation of seminal works related to food perception, reward, and intake.
3) be able to critically evaluate scientific literature
4) write a comprehensive and coherent review on a topic related to sensory science.
**Prerequisite (or concurrent):** FDSCTE 5500 Measurement of Food Perception and Liking. Due to the advanced nature of the methodological and data analysis procedures reviewed in this course, a 5000 level or above statistics course is required. Advanced Concepts in Sensory Science is a graduate level course open to all graduate students majoring in Food Science and related fields with the permission of the instructor.

**Requirements:**
- **Attendance:** Class attendance is mandatory. Acceptable reasons for missing class are sickness, family emergencies, or job interviews. If it is necessary for you to miss a class, you must contact the instructor in advance. You will be responsible to submit a critique of one of the readings for that week (note: this critique will not count towards one of the two that are due as part of the course homework. See below.). *Late discussion questions are not accepted and will result in a zero participation score for that day (see below).*
- **Participation in class discussions:** Subject mastery critically depends on the active debate and discussion of underpinning concepts. Your committed participation in discussions related to the topics is required to maximize your understanding and acquisition of new knowledge. Useful proficient discussions can only take place if participants are well prepared. Please read the articles well in advance of the scheduled class time. As you are reading, write down questions and seek other materials to help inform and clarify salient points. Read and prepare your response to the discussion questions before coming to class. In general, there are no right or wrong answers to the discussion questions. I am interested in your opinions, interpretations and critiques. Articles and discussion questions will be provided in advance through Carmen. Class participation will be monitored and graded.
- **Homework:** There will be two assignments in which students will provide a written critique of an assigned article. This critique will be due at the beginning of class on the designated day and should be no more than 4 pages of double space text. *Late critiques are not accepted and will result in a zero for that assignment.* A handout depicting the expectations and requirements of the critique will be distributed in class. In addition, a review paper on an agreed upon topic will be due at the assigned time and day of the Final Exam. Expectations and requirements for the review paper will be handed out in class.
- **Exams:** There will be NO midterm or final exams.

**Grading**

Point Breakdown:
- Attendance and participation: **20%**
- Critique of two papers: **40%** (20% for each)
- Final paper: **40%** *(Due at the time of the Final Exam)*

The following scores are guaranteed.

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<tr>
<th>Score</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90%</td>
<td>No less than a A-</td>
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<tr>
<td>80%</td>
<td>No less than a B-</td>
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No less than a C-  
No less than a D-  

**Academic Misconduct**

Academic integrity is the pursuit of scholarly activity free from fraud and deception and is an educational objective of this institution. Academic dishonesty includes, but is not limited to, cheating, plagiarism, fabrication of information or citations, facilitating acts of academic dishonesty by others, unauthorized prior possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. For more information, see the following websites http://studentaffairs.osu.edu/info_for_students/csc.asp & http://www.acs.ohio-state.edu/offices/oaa/procedures/1.0.html. Suspected academic misconduct will be referred automatically to the Committee on Academic Misconduct as required by Faculty Rules.

**Disability**

Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact the Office for Disability Services at 614-292-3307 in room 150 Pomerene Hall to coordinate reasonable accommodations for students with documented disabilities.

**Lecture Schedule**

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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1</td>
<td>1/13</td>
<td><strong>Perception: Chemosensation Physiology</strong></td>
<td>Packet 1</td>
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<tr>
<td></td>
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<td>Readings:</td>
<td></td>
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<tr>
<td>2</td>
<td>1/20</td>
<td><strong>Perception: Chemosensation Perception</strong></td>
<td>Packet 2</td>
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<td>Readings:</td>
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<td></td>
<td></td>
<td>Simons CT, Dessirier JM, Carstens MI, O'Mahony M, Carstens</td>
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<tr>
<td>Packet</td>
<td>Date</td>
<td>Section</td>
<td>Readings</td>
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**Advanced Sensory Methods & Analyses: Signal Detection Theory and R-Index**

Readings:


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**Advanced Sensory Methods & Analyses: Preference Mapping and Product Optimization**

