# F&N 205 – Food Science I – Syllabus, Spring 2006

**Instructor:** Charles R. Santerre, Ph.D.  
E-mail: santerre@purdue.edu  
Office: 205 Stone, ph. 49-63443  
Office Hours: Tuesday, 11:30-12:20 p.m. or by appt.

**TA:** Claudine Laing-Kean  
E-mail: claingke@purdue.edu  
Office: G-54 Stone Hall, ph. 494-8412  
Office Hours: Mon. 1:00-2:00 pm & Thurs. 10:30-11:30 am or by appt.

**F&N Support Staff:** Jan Buckles;  
Office: 221 Stone

**Student Project Instructor:**  
Mario Ferruzzi, Ph.D.  
E-mail: mferruzz@purdue.edu  
Office: 3233 Food Science, ph. 49-40625

---


Freeland-Graves/Peckam. 1996. Foundations of Food Preparation, 6th Ed.

---

### Week 1/9 Course Introduction  
**Lecture:** Tuesday 12:30-1:20 p.m.  
Location: Smith 208  
**Lab:** Tuesday 8:30-11:20 a.m. or 1:30-4:20 p.m.  
Location: STON 229

- **Sensory Evaluation**  
  - Text: pp. 3-12; 21-43  
- **Temperature & Specific Heat**  
  - Text: pp. 51-67

**Recitation:** Thursday 12:30-1:20 p.m.  
Location: Smith 208  
**Lab:** Thursday 8:30-10:20 a.m. or 2:30-4:20 p.m.  
Location: STON 229

**Text:** pp. 3-12; 21-43  
**Temperature & Specific Heat**  
**Text:** pp. 51-67

**No Lab**

---

### Week 1/16 Sugars, Sweeteners and Confections  
**Lecture:** Tuesday 12:30-1:20 p.m.  
Location: Smith 208  
**Lab:** Tuesday 8:30-11:20 a.m. or 1:30-4:20 p.m.  
Location: STON 229

- **Sugars, Sweeteners and Confections**  
  - Text: pp. 118-135  
  - Solutions & Frozen Desserts  
    - Text: pp. 107-117  
- **Lab Introduction**  
  - Heat and Measurement  
  - Sensory Evaluation  
    - Lab Manual 1-14  
    - Beverages  
    - Lab Manual 15-20

**Recitation:** Thursday 12:30-1:20 p.m.  
Location: Smith 208  
**Lab:** Thursday 8:30-10:20 a.m. or 2:30-4:20 p.m.  
Location: STON 229

**Text:** pp. 118-135  
**Solutions & Frozen Desserts**  
**Text:** pp. 107-117

**Lab Manual 1-14**  
**Beverages**  
**Lab Manual 15-20**

**Fats and Oils**  
**Text:** pp. 243-279; 269-279

**Water crystallization - frozen desserts**  
**Lab Manual 21-29**

---

### Week 1/23 Fats and Oils (continued)  
**Lecture:** Tuesday 12:30-1:20 p.m.  
Location: Smith 208  
**Lab:** Tuesday 8:30-11:20 a.m. or 1:30-4:20 p.m.  
Location: STON 229

- **Fats and Oils**  
  - Sugar crystallization - sugar cookery  
    - Lab Manual 30-39  
  - Effect of temperature on concentration & supersaturation of sugar solutions  
- **Bioactive Components of Foods**  
  - Dr. Mario Ferruzzi

**Recitation:** Thursday 12:30-1:20 p.m.  
Location: Smith 208  
**Lab:** Thursday 8:30-10:20 a.m. or 2:30-4:20 p.m.  
Location: STON 229

**Bioactive Components of Foods**  
**Dr. Mario Ferruzzi**

**Use of oil as heat transfer medium**  
**Lab Manual 53-59**

**Student Projects Assigned**
<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture: Tuesday 12:30-1:20 p.m. Location: Smith 208</th>
<th>Lab: Tuesday 8:30-11:20 a.m. or 1:30-4:20 p.m. Location: STON 229</th>
<th>Recitation: Thursday 12:30-1:20 p.m. Location: Smith 208</th>
<th>Lab: Thursday 8:30-10:20 a.m. or 2:30-4:20 p.m. Location: STON 229</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/30</td>
<td>Starch</td>
<td>Composition of fats &amp; oils</td>
<td>Milk</td>
<td>Food Processing Plant - Field Trip</td>
</tr>
<tr>
<td></td>
<td>Text: pp. 139-155</td>
<td>Emulsions: salads &amp; salad dressing</td>
<td>Text: pp. 308-324</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cereals</td>
<td>Effects of stabilizers &amp; emulsifiers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/6</td>
<td>EXAM 1</td>
<td>Starches</td>
<td>Introduction to Proteins</td>
<td>Cereals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Milk</td>
<td>Cheese</td>
<td></td>
</tr>
<tr>
<td>2/13</td>
<td>No Lecture</td>
<td>Milk: Effect of acid, rennin, heat, and carrageenan on denaturation and coagulation Dairy</td>
<td>Eggs</td>
<td>Dairy – Whipped toppings</td>
</tr>
<tr>
<td></td>
<td>Student Project Due:</td>
<td></td>
<td></td>
<td>Cheese &amp; cheese cookery</td>
</tr>
<tr>
<td></td>
<td>Topic, including: hypothesis, objectives, variables, and copy of reference article</td>
<td></td>
<td></td>
<td>Lab Manual 72-80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Milk</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab Manual 60-65</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hot chocolate</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lab Manual 68-71</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Text: pp. 368-436</td>
<td></td>
<td></td>
<td>LAB QUIZ I</td>
</tr>
<tr>
<td></td>
<td>Poultry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Text: pp. 415-425</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2/27</td>
<td>No Lecture</td>
<td>Meat identification Primal &amp; retail cuts Lab Manual 97-104</td>
<td>No Recitation</td>
<td>Meat - Dry heat cookery</td>
</tr>
<tr>
<td></td>
<td>Student Project Due:</td>
<td></td>
<td></td>
<td>Lab Manual 105-109</td>
</tr>
<tr>
<td></td>
<td>Market Order &amp; Part I</td>
<td></td>
<td></td>
<td>Fish cookery</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lab Manual 115-119</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/13</td>
<td>Spring Break</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week</td>
<td>Lecture: Tuesday 12:30-1:20 p.m. Location: Smith 208</td>
<td>Lab: Tuesday 8:30-11:20 a.m. or 1:30-4:20 p.m. Location: STON 229</td>
<td>Recitation: Thursday 12:30-1:20 p.m. Location: Smith 208</td>
<td>Lab: Thursday 8:30-10:20 a.m. or 2:30-4:20 p.m. Location: STON 229</td>
</tr>
<tr>
<td>------</td>
<td>---------------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>4/3</td>
<td>No Lecture <strong>Student Project Due: Part II</strong></td>
<td>Canning &amp; freezing Lab Manual 205-206</td>
<td><strong>EXAM II</strong></td>
<td>Food Processing Pilot Plant Tour Food Science Rm. 1135</td>
</tr>
<tr>
<td>5/1-5/7</td>
<td></td>
<td></td>
<td>Comprehensive Final Exam (date, time and location to be determined)</td>
<td></td>
</tr>
</tbody>
</table>