This course provides a multi-disciplinary look at problems (and some of the possible solutions) affecting food production, storage, and utilization. Presentations and discussions cover sometimes conflicting views on population control, use of technology, as well as the ethical and cultural values of the people in various countries of the world. Emphasis is placed on the need for governments, international assistance agencies, international research and extension centers, as well as the private business sector to assist in solving these complex problems. Students can enroll in either Agro 4103 or ApEc 4103. Previous background in any of the disciplines is not required, but students should expect upper division and/or graduate level assignments.

This course meets Lib Ed requirement of Global Perspectives and CFANS Interdisciplinary course requirement.

Class time: A mixture of lecture-discussion and small group activity.

Workload: 3-hours/week lecture-discussion, 6-hours/week reading, writing, studying: an average of about 40 pages of reading/week per week with a maximum of about 55 pages, in-class quizzes, 3 short homework assignments, and a final project presentation and paper.

Grade: 30% of the grade is based on in-class quizzes, 30% on homework assignments, 15% on the project presentation, 25% on the final project paper.

Cases: As assigned and available on course website
Course Website: [https://ay14.moodle.umn.edu](https://ay14.moodle.umn.edu) & login in the upper right corner of that site. Then you should see the classes you have registered for and which also have Moodle sites.

Supplemental reading:

Teaching Faculty

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Department</th>
<th>Office</th>
<th>Phone</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agro 4103</td>
<td>Paul M. Porter, Professor, Agronomy &amp; Plant Genetics</td>
<td>305 Hayes Hall; 612-625-6719; <a href="mailto:pporter@umn.edu">pporter@umn.edu</a></td>
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<tr>
<td>ApEc 4103</td>
<td>Kent D. Olson, Professor, Applied Economics</td>
<td>316g Ruttan Hall; 612-625-7723; <a href="mailto:kolson@umn.edu">kolson@umn.edu</a></td>
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September 2 – Topic: Introduction to course and faculty & Resources for a Hungry World (Paul)
• Discuss SGT chapters 1 (Intro; Paul) & 2 (Demand side; Kent)
• Reading assignment for Sept. 9: Chapters 1-4

September 9 – Topic: Production and consumption
• Discuss SGT chapter 3 (Supply side; Paul)
• Discuss SGT chapter 4 (Aligning consumption and production; Kent
• Assignment #1, due Sept. 30
• Reading assignment for Sept. 16: Chapter 5 and “Agricultural Production, Productivity and R&D over the Past Half Century: An Emerging New World Order” and "Agricultural Innovation-The United States in a Changing Global Reality" (links on the class web site)

September 16 – Topic: Role of Science and Technology in Addressing World Hunger (Phil Pardey)
• Discuss SGT chapter 5 (Ag & environment; Paul)
• Reading assignment for Sept. 23: Chapter 6

September 23 – Topic: What’s Agronomics got to do with It? (Paul)
• Discuss SGT chapter 6 (Globalization & agriculture; Kent)
• Discuss final project and paper (tentative title and descriptive paragraph are due Sept. 29)
• Reading assignment for Sept. 30: Chapters 7 and 8
• Due by noon, Monday, Sept. 29: tentative final project title and descriptive paragraph (for approval)
  - Email to pporter@umn.edu

September 30 – Topic: Agriculture, Economic Development and Food Security
• Discuss SGT chapter 7 (Ag & economic development; Kent)
• Discuss SGT chapter 8 (Food security; Paul)
• Due: Assignment #1
• Assignment #2, due: Oct. 21
• Reading assignment for Oct. 7: Chapters 9 and 10

October 7 – Topic: Animals and World Food (Michael White)
• Discuss SGT chapters 9 (Interregional differences, Kent) and 10 (Affluent nations, Paul)
• Reading assignment for Oct. 14: Chapter 15 – note we’re jumping to chapter 15 for next week

October 14 – Topic: Sub-Saharan Africa (Paul)
• Discuss SGT chapter 15 (Sub-Saharan Africa, Paul)
• Reading assignment for Oct. 21: Chapter 11

October 21 – Topic: Biotechnology Basics (Nevin Young)
• Discuss SGT chapter 11 (Asia, Kent)
• Due: Assignment #2
• Assignment #3, due: Nov. 11
• Reading assignment for Oct. 28: Chapters 12

October 28 – Topic: Climate Change and Global Food Production (Mark Seeley)
• Discuss SGT chapter 12 (Latin America & Caribbean, Paul)
• Reading assignment for Nov. 4: Chapter 13
November 4 – Topic: Hunger in Minnesota (speaker from Hunger-Free Minnesota)
• Discuss SGT chapter 13 (Middle East & North Africa, Kent)
• Reading assignment for Nov. 11: Chapter 14

November 11 – Topic: Success Stories (Kent)
• Discuss SGT chapter 14 (Eastern Europe & Former Soviet Union, Paul)
• Due: Assignment #3

November 18 – Topic: Case Study: Somalia & Food Aid (Paul)
• Due: Final title and summary of term project

November 25 – Presentations on Term Projects

December 2 – Presentations on Term Projects
• Reading assignment for Dec. 9: Chapter 16

December 9 – Topic: Discussion of all topics in World Food Problems course (Kent & Paul)
• Discuss SGT chapter 16 (Global Food Economy in 21st Century, Kent & Paul)
• Due: Final Paper (before 4:30 pm)

Guest Lecturers
Phillip Pardey  Professor, Dept. of Applied Economics
248 Ruttan; 612-625-2766; ppardey@umn.edu

Mark Seeley  Professor, Dept. of Soil, Water, and Climate
S335 Soils; 612-625-4724; mseeley@umn.edu

Michael White  Professor and Head, Dept. of Animal Science
305 Haecker Hall; 612-624-1205; mwhite@umn.edu

Nevin Young  Professor, Dept. of Plant Pathology
320 Cargill; 612-625-2225; neviny@umn.edu

Grading System

In-class quizzes (30%): Students will be assigned questions to answer briefly in writing during class based on the readings and discussions for that day. There will be 11 of these in-class quizzes worth 3 points each. The low score will be tossed out to leave 10 in the final grade.

Homework assignments (30%): Students will be assigned three homework assignments to answer after the class presentations and discussions; these will be worth 10 points each.

Final Project: Description and Summary (5%), Oral Presentation (15%) and Paper (20%): Each student is expected to develop and submit an original paper utilizing information obtained from lectures, readings and discussions. The paper topic must be related to this course and approved in advance by a course instructor. To obtain this approval, your tentative title and a descriptive paragraph are due by noon on September 29. This is worth 2% of your final grade. The final title and a summary (up to 100 words) is due in class on November 18. This summary is worth 3% of your final grade.

Each student will give an oral project presentation to the class before the written paper is due. Oral presentations will be given on the two class periods before and after the Thanksgiving break. Signup sheets available to choose which day you give your presentation. Due to the size of the class, presentations will be limited in time to 3 minutes with 2 minutes for questions. The presentations will be timed and cut off if the maximum time is exceeded. If you are using PowerPoint slides, start with ONE content slide per minute so strive to keep your talk to 3 slides (plus an ending slide if you have references). PowerPoint slides need to be loaded in the computer BEFORE class; emailing them to the identified instructor is best.
Criteria to be used in assessing your oral presentation are listed below.

(7 pts) **Content:** Coverage of topic, appropriate level of detail, stayed within time limits

(6 pts) **Delivery:** Audio ok, visuals ok, eye contact, fields questions well

(2 pts) **Preparedness:** PowerPoint file delivered on time or was otherwise ready

**This total of 15 possible points will constitute 15% of the final grade.**

Your paper must be typewritten (word-processed) using standard margins, double spacing, and a font size of 12. Instructors will grade it on the quality of writing (be sure you proof it several times before submission), and the degree to which it shows critical thinking, originality, and integration of information and ideas encountered in the course. It must be 10-12 pages in length (not including references).

**Your final paper is due on December 9th in class.**

Criteria to be used in assessing your paper are listed below.

(5 pts) **Organization:** the outline and flow of the paper

(5 pts) **Abstract:** concise summary of paper

(15 pts) **Introduction:** Frame of reference clearly stated; what is the problem or opportunity?

(100 pts) **Detailed Content:** Well developed and supported solutions and/or actions with references and detailed examples

(40 pts) **Conclusion:** Implications, Inferences and Critical Analysis

(15 pts) **Bibliography:** Citations according to instructor's examples.

(20 pts) **Precision:** Grammar, spelling, style, and clarity

**This total of 200 possible points will constitute 20% of the final grade.**

Letter grades for the course will be assigned as indicated in the following table.

<table>
<thead>
<tr>
<th>Average Score Range</th>
<th>Letter Grade</th>
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<tbody>
<tr>
<td>95-100</td>
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<td>90-94</td>
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<td>83-85</td>
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<tr>
<td>80-82</td>
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<td>76-79</td>
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<tr>
<td>70-72</td>
<td>C-</td>
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<tr>
<td>66-69</td>
<td>D+</td>
</tr>
</tbody>
</table>

**Note:** **Scholastic misconduct** is broadly defined as "any act that violates the right of another student in academic work or that involves misrepresentation of your own work. Scholastic dishonesty includes, (but is not necessarily limited to): cheating on assignments or examinations; plagiarizing, which means misrepresenting as your own work any part of work done by another; submitting the same paper, or substantially similar papers, to meet the requirements of more than one course without the approval and consent of all instructors concerned; depriving another student of necessary course materials; or interfering with another student's work."