

## Term Information

Effective Term Spring 2017  
[Previous Value](#) Summer 2012

## Course Change Information

### What change is being proposed? (If more than one, what changes are being proposed?)

Change the course title to reflect updates in the course curriculum. Add an online course offering.

### What is the rationale for the proposed change(s)?

See full rationale in attached document.

### What are the programmatic implications of the proposed change(s)?

#### (e.g. program requirements to be added or removed, changes to be made in available resources, effect on other programs that use the course)?

We are adding the online course as a way to increase enrollment in autumn semester and summer term. The course will continue to be offered as a traditional in-person offering for spring semesters. With media and online tools in the new Canvas course management system, there will be ample ways to foster interaction between students in the online class. The proposed course title better reflects the curriculum, which has evolved over the years with changes in agricultural practices and plant health management.

Is approval of the request contingent upon the approval of other course or curricular program request? No

Is this a request to withdraw the course? No

## General Information

Course Bulletin Listing/Subject Area	Plant Pathology
Fiscal Unit/Academic Org	Plant Pathology - D1178
College/Academic Group	Food, Agric & Environ Science
Level/Career	Undergraduate
Course Number/Catalog	4597
Course Title	Contemporary Issues: Pesticides, Genetic Engineering, and the Environment
<a href="#">Previous Value</a>	<a href="#">Societal Issues: Pesticides, Alternatives, and the Environment</a>
Transcript Abbreviation	PP Contemp Issues
<a href="#">Previous Value</a>	<a href="#">PInt Soc Issues</a>
Course Description	Contemporary, cultural, and social issues related to pesticide use, genetic engineering and sustainable plant management. Au, Sp Sems.
Semester Credit Hours/Units	Fixed: 3

## Offering Information

Length Of Course	14 Week, 12 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	Yes
Is any section of the course offered	100% at a distance
<a href="#">Previous Value</a>	<a href="#">No</a>
Grading Basis	Letter Grade
Repeatable	No
Course Components	Lecture

Grade Roster Component	Lecture
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus

## Prerequisites and Exclusions

Prerequisites/Corequisites	Prereq: Jr or Sr standing.
Exclusions	Not open to students with credit for 597.

## Cross-Listings

Cross-Listings

## Subject/CIP Code

Subject/CIP Code	26.0305
Subsidy Level	Baccalaureate Course
Intended Rank	Junior, Senior

## Requirement/Elective Designation

General Education course:  
Cross-Disciplinary Seminar (597 successors and new)  
The course is an elective (for this or other units) or is a service course for other units

## Course Details

### Course goals or learning objectives/outcomes

- Understand the benefits and limitations of different disciplinary perspectives.
- Understand the benefits of synthesizing multiple disciplinary perspectives.
- Synthesize and apply knowledge from diverse disciplines to a topic of interest.
- *Learn about issues facing agriculture and society today, including diseases/pests, pesticides/toxins, biotechnology and the environment*
- *Learn relevant historical and scientific concepts to help students assess these issues*
- *Consider various perspectives- economic, political, scientific, and ethical -and how these perspectives impact agriculture, society, and the environment*
- *Develop critical thinking and communication skills that will carry over into students' professional and personal lives*
- *Learn to synthesize information, formulate independent and creative thinking*

### *Previous Value*

### Content Topic List

- Agriculture- historical perspectives, current issues and public perception, with emphasis on U.S. and Ohio
- Pests and Diseases- major classes, significance to agriculture and environment, invasive species
- Pesticides- historical and current perspectives
- Biotechnology- scientific, economic, political, and ethical perspectives (emphasis on plant/crop applications)

**COURSE CHANGE REQUEST**  
4597 - Status: PENDING

Last Updated: Neal,Steven Michael  
04/27/2016

**Attachments**

- Letter Rationale Assessment.docx: Rationale  
*(GEC Course Assessment Plan. Owner: Williams,Sarah Dee)*
- PLNTPTH 4597 Online Syllabus SU 2017.docx: Syllabus - online  
*(Syllabus. Owner: Williams,Sarah Dee)*
- SP2017 PLNTPTH 4597 In Person Course Syllabus.docx: Syllabus - on campus  
*(Syllabus. Owner: Williams,Sarah Dee)*

**Comments**

- Please make corrections to the syllabi. *(by Neal,Steven Michael on 04/27/2016 04:36 PM)*

**Workflow Information**

Status	User(s)	Date/Time	Step
Submitted	Williams,Sarah Dee	04/22/2016 01:44 PM	Submitted for Approval
Revision Requested	Neal,Steven Michael	04/25/2016 09:30 AM	Unit Approval
Submitted	Williams,Sarah Dee	04/26/2016 08:57 AM	Submitted for Approval
Revision Requested	Neal,Steven Michael	04/26/2016 10:55 AM	Unit Approval
Submitted	Williams,Sarah Dee	04/27/2016 02:28 PM	Submitted for Approval
Approved	Mitchell,Thomas Kenneth	04/27/2016 02:36 PM	Unit Approval
Revision Requested	Neal,Steven Michael	04/27/2016 04:36 PM	College Approval
Submitted	Williams,Sarah Dee	04/27/2016 05:06 PM	Submitted for Approval
Approved	Neal,Steven Michael	04/27/2016 06:06 PM	Unit Approval
Approved	Neal,Steven Michael	04/27/2016 06:06 PM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler Hogle,Danielle Nicole	04/27/2016 06:06 PM	ASCCAO Approval

April 17, 2016

Dr. Steve Neal  
Assistant Dean for Academic Affairs  
College of Food, Agricultural, and Environmental Sciences

Dear Dr. Neal,

Enclosed is a course change request to change the course title and add an online course offering for PLNTPH 4597. This is a General Education - Cross Disciplinary seminar course. This course also fulfills the "Contemporary Issues" requirement for the B.S. in Agriculture in the College of Food, Agricultural, and Environmental Sciences.

The current course title is Societal Issues: Pesticides, Alternatives and the Environment. The proposed course title is: Contemporary Issues: Pesticides, Genetic Engineering and the Environment. The course title better reflects the curriculum and the course description, "Contemporary, cultural, and social issues related to pesticide use, genetic engineering and sustainable plant management." The only course prerequisite is Junior or Senior standing. The class is suited to all majors; interaction between students with different viewpoints fosters greater understanding about class topics.

We are adding the online course as a way to increase enrollment in autumn semester and summer term. The course will continue to be offered as a traditional in-person offering for spring semesters. With media and online tools in the new Canvas course management system, there will be ample ways to foster interaction between students in the online class. Students today are generally quite comfortable with online modes of communication.

Course topics are centered on plant health issues such as invasive species, pesticides and genetic engineering. These are topics which have broad impacts on agriculture, society and the environment - with diverse perspectives. These are also topics that attract media attention, yet there is much misinformation on the internet. It is important that students learn to acquire the basic background needed to begin to assess these issues, formulate their own views, and learn how to support and communicate a position.

**GE Rationale**

The table below includes summaries of how each learning outcome will be met with a general description of class activities and materials.

<p><b>ELO 1</b> <b>Students understand the benefits and limitations of different disciplinary perspectives</b></p>	<ul style="list-style-type: none"> <li>- Documentaries provide an example of how different cultural and disciplinary perspectives are necessary to understand and address problems (examples: invasive species, water contamination, genetic engineering, organic food).</li> <li>- Different types of literature are discussed: media, special interest groups, academic research (peer-review, authorship). Students are guided through the steps of reading and understanding an academic paper (typically a scientific paper associated with genetic engineering, organic agriculture or another class topic).</li> </ul>
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<p><b>ELO 2</b></p> <p><b>Students understand the benefits of synthesizing multiple disciplinary perspectives</b></p>	<ul style="list-style-type: none"><li>- The assigned book, <i>Our Daily Bread: The Essential Norman Borlaug</i>, provides several examples of the challenges faced by Norman Borlaug to improve wheat varieties in Mexico, India and the U.S., and the multi-disciplinary approaches that Borlaug had to use to successfully meet these challenges. Students write reflective essays for each of the three parts of the book on topics such as "overcoming adversity," "attitude," and "opportunity."</li><li>- Presentations by plant pathology and agricultural researchers (videos) are used to demonstrate and understand how a position is presented and supported (Example, TED Talk - "How to feed 10 billion dinner guests" by Nina Federoff; examples in genetic engineering).</li><li>- Online discussion activities are used to learn how to evaluate sources, identify common logical fallacies, and evaluate correlation and causing, using examples provided by students.</li><li>- Class readings: Historical perspectives on plant disease impacts throughout history (ergot poisoning, Irish potato famine); pesticide use for public health (non-pesticide and pesticide use for mosquito borne diseases, history of DDT) and agricultural pests (insects, weeds e.g.) are discussed and compared to changes in integrated pest management strategies used today. Class discussions also center on public perceptions of agriculture.</li></ul>
<p><b>ELO 3</b></p> <p><b>Students synthesize and apply knowledge from diverse disciplines to a topic of interest</b></p>	<ul style="list-style-type: none"><li>- Students learn differences in communication styles/methods, tips for writing blog posts, and challenges in communicating with the general public. Students write 2-3 blog posts about a topic of their choice on the <a href="http://u.osu.edu/blight">u.osu.edu/blight</a> class blog.</li><li>- Students will be asked to respond to weekly discussion questions on class topics, emphasizing the need to examine issues from multiple perspectives.</li><li>- Students prepare and record a short video on a class topic of their choice, to learn how to incorporate information from different disciplines and to develop technical skills in this mode of communication.</li></ul> <p>A writing assignment in which students are expected to integrate multiple perspectives to support a position on a class-related topic of their choice.</p>

Thank you for consideration of this request.

Sincerely,

Monica Lewandowski  
Assistant professor clinical professional practice  
Plant Pathology

Enclosed:  
Course syllabus  
Course assessment plan and appendix

## Course Assessment Plan

<b>Cross-Disciplinary Seminar</b> <b>GE Expected Learning Outcomes</b>	<b>Methods of Assessment</b>	<b>Level of student achievement expected for the GE ELO</b>	<b>What is the process that will be used to review the data and potentially change the course to improve student learning of GE ELOs?</b>
<b>ELO 1</b> <b>Students understand the benefits and limitations of different disciplinary perspectives</b>	Direct <b>Embedded test question on required reading</b> Appendix A	75% of the class achieves a minimum of 70% possible points	At the end of the course, the instructor will analyze the survey responses and the students' performance on the assessment measures.  The analysis will be used to guide modifications to improve the course, including changes in: <ul style="list-style-type: none"> <li>• course content and delivery of content,</li> <li>• learning activities and assignments,</li> <li>• assessment methods and rubrics,</li> <li>• and other aspects of the course.</li> </ul> The course assessment will be discussed with the department's Academic Affairs committee.
	Direct <b>Embedded test question</b> Appendix B	75% of the class achieves a minimum of 70% possible points	
	Indirect measure <b>Student survey</b> Appendix C	End of semester = mean score of 3.8	
<b>ELO 2</b> <b>Students understand the benefits of synthesizing multiple disciplinary perspectives</b>	Direct <b>Online group discussion assignment</b> Appendix D	75% of the class achieves a minimum of 70% possible points	
	Direct <b>Online group discussion assignment</b> Appendix E	75% of the class achieves a minimum of 70% possible points	
	Indirect <b>End of semester student survey</b> Appendix F	End of semester = mean score of 3.8	
<b>ELO 3</b> <b>Students synthesize and apply knowledge from diverse disciplines to a topic of interest</b>	Direct <b>Evaluation of literature for writing assignment</b> Appendix G	75% of the class achieves a minimum of 70% possible points	
	Direct <b>Writing assignment</b> Appendix H	75% of the class achieves a minimum of 70% possible points	

## Appendix A

### Example embedded test question and rubric

**ELO 1: Students understand the benefits and limitations of different disciplinary perspectives.**

#### **Our Daily Bread, class textbook**

Norman Borlaug was able to develop new wheat varieties and implement many changes in agriculture in Mexico, Pakistan and the U.S., but he faced many challenges along the way. Discuss three different types of challenges that Borlaug faced in his work and how Borlaug addressed these challenges (starting from his work in Mexico). Include examples from the book for each challenge. The challenges should encompass three distinct and different disciplines, areas or aspects (think – what was required beyond the science?). What were key factors in Borlaug’s ability to address each of the challenges? (24 points)

Excellent 21-24 pts	Three major challenges were described, with thorough discussion of how these challenges were addressed. Examples from the book were used to illustrate/describe each of the challenges. The challenges encompassed different disciplines, or areas. You adequately discussed the importance of these challenges and how Borlaug addressed them.
Good 16-20 pts	2-3 major challenges and how these challenges were addressed were described, but are missing detail or examples from the book to support your response. The challenges encompassed different disciplines, or areas. Your discussion on the importance of these challenges, and how Borlaug addressed them, were not fully or thoroughly discussed.
Fair 10-15 pts	1-2 challenges and how these challenges were addressed were listed, but not adequately described, lacked detail or examples. The challenges did not encompass different disciplines, or areas, or was not thoroughly discussed. Some information was incorrect or lacking.
Poor 0-9 pts	The response lacked examples or detail and did not describe. There was no or a weak discussion of the challenges and how the challenges were addressed. Most information was incorrect or lacking.

Level of expected achievement: 75% of students will achieve a score of 70% or greater

## Appendix B

### Example embedded test question and rubric

**ELO 1: Students understand the benefits and limitations of different disciplinary perspectives.**

#### **Invasive Species**

In class, we discussed several examples of the different issues or problems that can arise with the establishment of an invasive species. Select an example of an invasive species issue covered in class material or class videos. Discuss examples of the different types of issues or problems that can arise with the establishment of an invasive species, specifically a. discuss the different problems or effects that can arise from the introduction of an invasive species; b. discuss at least one management measure that was employed, including why this measure was employed, and evaluate the effectiveness of this measure. (12 pts)

Excellent 10-12 pts	An invasive species was described, and different types of problems or issues were clearly explained.  A management measure was correctly described. You thoroughly evaluated the effectiveness of the management measure, described the factors into employing the decision, and any benefits/limitations of the measure.
Good 7-9 pts	An invasive species was described, but the different problems or issues were not adequately explained or some information was lacking or incorrect.  A management measure was described. Some information was lacking or incorrect in your discussion of the effectiveness of the management measure, the factors into employing the decision, and/or benefits/limitations of the measure.
Fair 4-6 pts	An invasive species was described, but the different problems or issues were not adequately explained or information was lacking or incorrect.  A management measure was not thoroughly or correctly described. Key information was lacking or incorrect in your discussion of the effectiveness of the management measure, the factors into employing the decision, and/or benefits/limitations of the measure.
Poor 0-3 pts	An invasive species was not described or incorrectly described. Information on the management measures was missing or incorrect.

Level of expected achievement: Criteria: 75% of students will achieve a score of 70% or greater



## Appendix C

**Student survey**, given at the beginning of the semester, and at the end of the semester.

**ELO 1: Students understand the benefits and limitations of different disciplinary perspectives.** This is an anonymous self-evaluation of your understanding of different disciplinary perspectives about major class topics. Survey responses will be evaluated at the end of the course to identify areas that may need improvement in the course.

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1. I investigate topics that are important to me before making an opinion or judgement.

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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2. I understand the challenges in addressing invasive species in different situations (e.g. agricultural, natural ecosystems)

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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3. I understand the risks versus the benefits of pesticide usage in society

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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4. I understand different viewpoints about the benefits and concerns about genetically modified foods

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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Level of successful achievement for end of semester = mean score of 3.8 for each question.

## Appendix D

### Online Group Discussion Assignment and Rubric - Labeling of Genetically Modified Foods -

#### ELO 2: Students understand the benefits of synthesizing multiple disciplinary perspectives.

Discuss the issue of labeling of genetically modified foods with classmates who may have different viewpoints and devise a campaign strategy a. "For" labeling and b. "Against" labeling.

Groups of 2-3 students comprised of different majors. Student will utilize the group discussion board in Canvas to share ideas as they develop their response.

Prior to this discussion activity, view class materials (lecture video and online materials) about the topic. Read the following fact sheets and investigate articles and other media pieces on the topic by doing an internet search.

Labeling of Genetically Modified Foods. Colorado State University Extension fact sheet. P. Byrne, D. Pendell, and G. Graff. <http://extension.colostate.edu/docs/pubs/foodnut/09371.pdf>

The Impact on Human Health of Genetically Modified Organisms (GMOs) in Foods. OSU Extension fact sheet. R. Ralston and B. Kidd,

When arguing or supporting a position, it's critical to understand the "opposite" side from which you stand. Be open-minded and see the issue from the other viewpoint – admittedly, this can be hard. This is a valuable skill, whether you're asking for a job, a raise or supporting an issue about which you are passionate. In the future, some of you may find yourself in a job where you'll need to garner support and/or defend a position.

This assignment requires you to interact with students who may be able to provide various views and perspectives on this issue. Your group should designate a one-hour time period to log onto Carmen Connect to work this project. You can use the audio or the chat option to discuss ideas. Consider various perspectives and views, and incorporate input from all group members.

For each position, devise a campaign strategy or message (e.g. a media campaign, television commercial etc. – what do you think would be most effective?) You can list bullet points in crafting your response. Provide supporting information (cite sources). A rubric is provided as a guide. If you were to devise a "marketing" campaign around the issue of labeling of genetically modified foods, what do you think would be effective messages a) "for" labeling, and b) against labeling? How would you garner public support for your campaign? What messages do you think would resonate for each position? Would you target any specific audiences?

**Rubric.** For each campaign, "For" (12 pts) and "Against" (12 pts) = 24 points total.

Excellent 21-24 pts	The campaign message and strategy for "For" and "Against" are clear. Target audiences are defined for each campaign. You have clearly indicated, based on supporting information, why you think the message/strategy will resonate with the respective audiences. You clearly described how you will deliver the messages. Your strategies are aimed at the interests of your target audiences. There is thought and creativity in your campaigns.  Research, supporting information and critical thinking were used to develop your strategies for effective campaigns. Your sources of information were cited.
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<p>Good 16-20 pts</p>	<p>The campaign message and strategy for “For” and/or “Against” are described but need to be explained more thoroughly. Target audiences were described for each campaign but need more focus. It is not clear why you have determined that the message/strategy will resonate with the respective audiences. Research and supporting information were used, but it was not clear that you critically analyzed your sources to guide your strategies. Detail and thought were lacking in how you will deliver the messages, and your strategies are aimed at the interests of your target audiences.</p>
<p>Fair 10-15 pts</p>	<p>The campaign message and strategy for “For” and/or “Against” are described but were only briefly described. Target audiences are poorly defined for each campaign. You did not provide strong reasoning why you think the message/strategy will resonate with the respective audiences. Inadequate research and supporting information were used to develop your strategies for effective campaigns. Detail and thought were lacking in how you will deliver the messages, and your strategies are aimed at the interests of your target audience</p>
<p>Poor 0-9 pts</p>	<p>Information is missing in the response. The campaign message and strategy for “For” and/or “Against” are described but were only briefly explained. Target audiences are poorly or not defined for each campaign. It is not clear how you think the message/strategy will resonate with the respective audiences. Inadequate research and supporting information were used to develop your strategies for effective campaigns, or sources were not indicated. You clearly described how you will deliver the messages, and your strategies are aimed at the interests of your target audiences.</p>
<p>Other</p>	<p>-3 points for each day late.</p>

Level of expected achievement: 75% of the class achieves a minimum of 70% possible points

## Appendix E

### Online group discussion assignment and rubric: Pesticides

#### ELO 2: Students understand the benefits of synthesizing multiple disciplinary perspectives.

Discuss why new or unconventional ideas presented in a video might impact decisions (research, regulation, public thinking, usage and applications, etc.) about toxins and pollutants.

#### Video: Strange Days on Planet Earth: Troubled Waters

View the video, Strange Days on Planet Earth: Troubled Waters. The video featured people who have challenged conventional thinking and/or traditional methods.

Work in groups of 2-3 students comprised of different majors. Student will utilize the group discussion board in Canvas to share ideas as they develop their responses. Include contributions from all group members.

For the examples below, jot down how these studies challenge conventional thinking or pave the way for novel practices. Discuss the following questions about each of the video segments below:

**Part a.** What new, unconventional or controversial idea(s) was proposed in each segment? Describe why these ideas were considered unconventional or controversial.

**Part b. Discussion points:** discuss why the new ideas proposed in each of the segments impact future decisions (research, regulation, public thinking, usage and applications, etc.) about toxins and pollutants. Provide at least two discussion points for each video segment:

- Chemical Cocktails (whales in the St. Lawrence)
- Farm Chemicals and Frogs
- Mercury and plants that can metabolize pollutants
- Pollutants, Tagging and the Open Ocean
- Chemicals and Human Reproduction (water)
- Crown-of-Thorns, Wetlands and Nitrogen

Excellent 26-30 pts	New, unconventional, or controversial ideas were correctly described for each of the video segments (part a). At least two valid discussion points were raised for each video segment regarding why these ideas might impact decisions about toxins and pollutants (part b).
Good 21-25 pts	New, unconventional, or controversial ideas were correctly described for only 4-5 of the video segments (part a). Discussion points for the video segments contained inaccuracies or incorrect information (part b).
Fair 15-20 pts	New, unconventional, or controversial ideas were correctly described for only some of the video segments (part a). Discussion points for the video segments contained inaccuracies or incorrect information (part b).
Poor 0-14 pts	New, unconventional, or controversial ideas were incorrectly described or lacking for most of the video segments (part a). Discussion points for the video segments contained inaccuracies or incorrect information (part b).
	- 2 points for each day late

Level of expected achievement:: 75% of the class will achieve 70% or more of the possible points

## Appendix F

### End of semester student survey

#### ELO 2: Students understand the benefits of synthesizing multiple disciplinary perspectives.

This is an anonymous self-evaluation of how you believe the course improved your understanding of the benefits of synthesizing multiple disciplinary perspectives for selected class topics. Survey responses will be evaluated at the end of the course to guide future course changes.

1. Did PLNTPTH 4597 help you learn how to analyze information more critically?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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2. Did PLNTPTH 4597 help you understand the importance of understanding multiple disciplinary perspectives about a topic?

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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3. Did PLNTPTH 4597 help you understand the benefits and limitations of understanding multiple disciplinary perspectives about . . .

a. Management of invasive species

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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b. Making policy decisions on pesticides

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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c. Making policy decisions on genetic engineering

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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d. Forming personal views and making decisions on genetically modified food

1	2	3	4	5
Strongly disagree	Disagree	Neither agree or disagree	Agree	Strongly agree

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Level of successful achievement for end of semester = mean score of 3.8 for each question.

## Appendix G

**Assignment, Evaluation of literature on writing assignment topic (student's choice) and rubric.**

**ELO 3: Students synthesize and apply knowledge from diverse disciplines to a topic of interest.** Provide a preliminary outline of your writing assignment. Evaluate literature and sources for writing assignment (minimum of 5 preliminary sources).

	Excellent	Good	Fair	Poor
<b>Preliminary Outline</b>  <b>10 pts possible</b>	<p>The outline includes a well-defined thesis statement, 2-4 main points with 2-4 subpoints under each main point, and a bullet point for your concluding paragraph. Main points/subpoints are appropriate for the scope of the assignment</p> <p style="text-align: center;">/ 9-10 pts</p>	<p>The outline includes a thesis statement but needs to be defined more clearly. The outline has 2-4 main points with 2-4 subpoints under each main point, and a bullet point for your concluding paragraph, but some main points/subpoints need to be more focused to the thesis statement or added or removed.</p> <p style="text-align: center;">/ 7-8 pts</p>	<p>The outline includes a thesis statement but is vague. The outline is lacking 2-4 main points with 2-4 subpoints under each main point, and/or a bullet point for your concluding paragraph. Some main points/ subpoints need to be more focused. or added or removed.</p> <p style="text-align: center;">/ 4-6 points</p>	<p>The thesis statement is lacking or vague. The outline is lacking 2-4 main points with 2-4 subpoints under each main point, and/or a bullet point for your concluding paragraph. Some main points/ subpoints need to be more focused, or added or removed.</p> <p style="text-align: center;">/ 0-3 pts</p>
<b>Literature review/ Evaluation of sources</b>  <b>40 points possible</b>	<p>Literature review includes the minimum of 5 sources that represent a variety of sources appropriate to the topic. Sources include substantial and information in the form of expert opinion, statistics, or research studies. If applicable, commentaries, blogs, social media posts and similar types of sources are included. Information is relevant and supports the position.</p> <p>Information is correctly cited or attributed to the source (name-year).</p> <p>Sources are critically evaluated. Bias or other flaws in logic are noted.</p> <p style="text-align: center;">/ 35-40 pts</p>	<p>Literature review has less than the minimum 5 sources appropriate to the topic. The sources do not include sufficient information to support your thesis statement. Information is cited or attributed to the source (name-year), with a few (3-4) errors.</p> <p>The range of sources applicable to the topic needs to be expanded upon.</p> <p>The evaluation of sources needs to be more in-depth, with more critical analysis of the sources.</p> <p style="text-align: center;">/ 28-34 pts</p>	<p>Literature review includes a narrow selection of sources appropriate to the topic. Sources do not include a sufficient range of information, or do not adequately cover the topic in-depth. Information is poorly or incorrectly cited or attributed to the source (name-year),</p> <p>The range of sources applicable to the topic is weak and needs to be expanded upon.</p> <p>The evaluation of sources is superficial and needs a more critical analysis.</p> <p style="text-align: center;">/ 21-27 pts</p>	<p>Literature review is incomplete. Sources do not adequately cover the topic. Citations are lacking or incorrectly cited. The range of sources applicable to the topic needs to be expanded upon.</p> <p>The evaluation of sources is superficial and lacks critical analysis.</p> <p style="text-align: center;">/ pts</p>
<b>Other</b>	- 3 points off for each day late.			
			<b>TOTAL POINTS</b>	<b>/30 points possible</b>

Level of expected achievement:

75% of the class achieves a minimum of 70% possible points in in the Literature review/Evaluation of Sources



## Appendix H

### Writing assignment and rubric.

#### **ELO 3: Students synthesize and apply knowledge from diverse disciplines to a topic of interest.**

For the writing assignment, synthesize different perspectives or views on a topic (at least two perspectives) to support a position on a topic of your choice. It doesn't necessarily need to be an opinion or a controversial subject – it can be informational in nature – but make sure you support a strong thesis statement and incorporate at least two different disciplines (e.g. biology and economic impact, or environmental impact and public opinion). You should research different types of sources and literature for this paper. Length: 1200-1500 words, double spaced, 11 or 12 point font (about the length of a one-page position paper, editorial or white paper).

#### **Rubric**

	<b>Excellent</b>	<b>Good</b>	<b>Fair</b>	<b>Poor</b>
<b>Topic/ Thesis statement</b>	The topic is clearly described in the introductory paragraph. Thesis statement is a focal point of the paper and strongly and thoroughly supported throughout the paper. 9-10 pts.	The topic is introduced and adequately described in the introductory paragraph. Thesis statement is a focal point of the paper and partially supported throughout the paper. 6-8 pts.	The topic is poorly introduced, or vague adequately in the introductory paragraph. The thesis statement is weakly supported throughout the paper and/or vague. 4-5 pts.	The topic is not used or adequately described. The thesis statement is weakly supported throughout the paper. 0-3 pts.
<b>Introduction</b>	Introduction is compelling and grabs reader's attention; background information makes the importance of the topic clear. Pts: 10-8	Information in the introduction does not strongly describe the topic, the importance of the topic is vague. Pts: 7-5	Introduction does not provide relevant background information to describe the topic. Pts.4-0	

	<b>Excellent - Very Good</b>	<b>Good - Fair</b>	<b>Weak-Poor</b>			
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	<p>The topic is introduced and clearly described in the introductory paragraph.</p> <p>Thesis statement is a focal point of the paper and strongly and thoroughly supported throughout the paper.</p> <p>Pts: 10-8</p>	<p>The topic is introduced and adequately described in the introductory paragraph.</p> <p>Thesis statement is a focal point of the paper and partially supported throughout the paper.</p> <p>Pts: 7-5</p>			
<b>Introduction</b>	<p>Introduction is compelling and grabs reader's attention; background information makes the importance of the topic clear.</p> <p>Pts: 10-8</p>	<p>Information in the introduction does not strongly describe the topic, the importance of the topic is vague.</p> <p>Pts: 7-5</p>	<p>Introduction does not provide relevant background information to describe the topic.</p> <p>Pts.4-0</p>		
<b>Opinion, Position or Thesis</b>	<p>Opinion/position/thesis is clearly stated and supported with strong reasons throughout the paper. Reasons show strong analysis and conclusions based on the information.</p> <p>Pts: 10-8</p>	<p>Opinion/position/thesis is described but supporting reason or arguments are weak or incomplete. Analysis and conclusions are poorly linked to the reasons or arguments.</p> <p>Pts: 7-5</p>	<p>Opinion/position/thesis of the paper is poorly described and reasons or arguments are weak or incomplete</p> <p>Pts. 4-0</p>		
<b>Use of credible sources; depth and variety of evidence and evaluation of your sources</b>	<p>Position is supported in depth with a variety of sources. Substantial valid and accurate information in the form of expert opinion, statistics, research studies, etc. has been used throughout the paper. Information is relevant and supports the position. Information is correctly cited or attributed to the source (name-year). Sources are thoroughly evaluated and represent the range of literature applicable to the topic.</p> <p>A final summary is provided for each of your sources, with your evaluation of the source.</p> <p>Pts: 20-15</p>	<p>Some of the information is not be relevant and/or does not support the thesis. A mix of general and specific information is used.</p> <p>Source(s) of information is not always clear and/or correctly cited in the text.</p> <p>Pts: 14-10</p>	<p>Position needs to be supported with more valid and accurate information. Some of the information may not be relevant and/or does not support the thesis. Sources of information are not correctly cited in the text.</p> <p>Pts. 9-0</p>		

<p><b>Multiple perspectives</b></p> <p><b>If applicable to your topic: Alternative views</b></p>	<p>Student addresses and demonstrates a thorough understanding of multiple, relevant perspectives of the topic: e.g., scientific, political, social, economic, ethical. Two or more relevant perspectives are addressed in the paper.</p> <p><b>If applicable:</b> Student directly addresses (refutes if appropriate) alternative or opposing views of the topic (e.g. pros/cons, benefits/disadvantages, challenges, etc.)</p>	<p>Student demonstrates a superficial understanding of multiple perspectives of the topic.</p> <p><b>If applicable:</b> Student makes a weak reference to an opposing cause and does not thoroughly acknowledge or address alternative views or information.</p>	<p>Student does not adequately address the perspectives or views of more than one discipline.</p> <p><b>If applicable:</b> Student does not acknowledge or address the key opposition or arguments relevant to the topic.</p> <p>Pts. 9-0</p>			
<p><b>Organization, Flow and Transitions</b></p>	<p>Ideas are well organized and there is good flow in the paper. The writing is compelling and hooks reader. Transitional words and phrases are used to connect ideas and maintain coherence between paragraphs.</p> <p>Pts: 15-11</p>	<p>Most ideas are well organized. Some transitional words and phrases are used.</p> <p>Pts: 7-5</p>	<p>Ideas are loosely connected and do not support the position of the paper. Information is hard to follow.</p> <p>Pts. 6-0</p>			
<p><b>Structure, Organization and mechanics</b></p>	<p>Paper is free or nearly free of writing and grammatical errors.</p> <p>Pts: 15-11</p>	<p>There are several (5 +) writing/grammatical errors. Sentence structure needs to be strengthened/corrected.</p> <p>Pts: 7-5</p>	<p>There are numerous mechanical errors which make comprehension difficult.</p> <p>Pts. 6-0</p>			
<p><b>Late points</b></p>	<p>- 5 points off each day late</p>					
			<p><b>TOTAL POINTS / 100 points possible</b></p>			

Level of expected achievement:

75% of the class achieves a minimum of 75% on the total writing assignment (100 points possible)





# **SYLLABUS: PLNTPTH/4597 CONTEMPORARY ISSUES: PESTICIDES, GENETIC ENGINEERING AND THE ENVIRONMENT**

**SUMMER 2017**

## **Course overview**

### **Instructor**

Instructor: Monica M. Lewandowski, Assistant Professor Clinical Professional Practice

Email address: lewandowski.52@osu.edu

Phone number: 614-247-6876

Office hours: Monday 3:00 - 5:00 p.m. or by appointment

3 credit hours

Instruction Mode: Distance Learning

Class Components: Lecture Required

General Education Cross-Disciplinary Seminar

PLNTPTH 4597 also fulfills the Contemporary Issues requirement for the CFAES - BS Agriculture.

### **Course description**

Examine contemporary, cultural, and social issues related to pesticide use, genetic engineering and sustainable plant management. Learn how to investigate scientific issues and integrate information from different disciplines to formulate viewpoints and support a position.

### **Course learning outcomes**

Course Goal: Students demonstrate an understanding of a topic of interest through scholarly activities that draw upon multiple disciplines and through their interactions with students from different majors.

Learning Outcomes: By the end of this course, students should successfully be able to:

- Understand the benefits and limitations of different disciplinary perspectives.

- Understand the benefits of synthesizing multiple disciplinary perspectives.
- Synthesize and apply knowledge from diverse disciplines to a topic of interest.

You are expected to integrate class lectures, discussion activities, readings, assignments and class activities to achieve the full learning experience.

## Course materials

### Required

Our Daily Bread: The Essential Norman Borlaug by Noel Vietmeyer, Bracing Books (print). The book is available in print from the university bookstore, or as an e-book download on Amazon.com (versions are available for Kindle, PC, Mac, tablets and smartphones).

### Required supplemental materials

Additional readings are drawn from a variety of sources and will be posted on the Carmen course site.

## Other fees or requirements

- Students will be required to attend one on-campus seminar or event pertaining to a class topic. Several options will be available on different days/times to accommodate student schedules. A list of approved seminars and events will be provided during the semester. If you have conflicts with the seminars and events on the list, please contact the instructor.
- Students will be required to participate in 2-4 online discussions per week on the Carmen discussion board. Some of the discussion questions will require individual student responses, and other assignments will be require working in pre-assigned groups of 2-4 other students. For the group assignments, students can choose to work together online at a specified meeting time or work asynchronously.

## Course technology

For help with your password, university e-mail, Carmen, or any other technology issues, questions, or requests, contact the OSU IT Service Desk. Standard support hours are available at <https://ocio.osu.edu/help/hours>, and support for urgent issues is available 24x7.

- **Self-Service and Chat support:** <http://ocio.osu.edu/selfservice>
- **Phone:** 614-688-HELP (4357)
- **Email:** [8help@osu.edu](mailto:8help@osu.edu)
- **TDD:** 614-688-8743

### Baseline technical skills necessary for online courses

- Basic computer and web-browsing skills
- Navigating Carmen

### Technology skills necessary for this specific course

- CarmenConnect text, audio, and video chat
- Collaborating in CarmenWiki
- Recording a slide presentation with audio narration
- Recording, editing, and uploading video

### Necessary equipment

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed
- Microphone: built-in laptop or tablet mic or external microphone

### Necessary software

- Microsoft Word, Microsoft Powerpoint, Adobe Acrobat reader.

## Grading and faculty response

### Grades

Assignment or category	Points
Online discussion postings and assignments (including group assignments)	200
Written homework assignments	200
Quizzes	40
Midterm, Final (100 points each)	200
Writing assignment and literature review (150 points)	150
Total	790

*See course schedule, below, for due dates*

## Participation and Group Assignments

Selected assignments will be done in small discussion groups. Assignments may involve readings and videos.

The small group discussions in class are an opportunity to brainstorm ideas, consider other viewpoints, and formulate your own thinking. Listening to people from different perspectives is critical to understanding any topic.

## Late assignments

A points penalty for late assignments will range from 2-5 points, depending on the assignment, and will be specified on each assignment. Quizzes, the midterm and the final must be submitted by the specified time. Late submissions are only accepted in cases of emergency (illness or injury, death in family) and with proper documentation.

## Grading scale

93–100: A  
90–92.9: A-  
87–89.9: B+  
83–86.9: B  
80–82.9: B-  
77–79.9: C+  
73–76.9: C  
70–72.9: C-  
67–69.9: D+  
60–66.9: D  
Below 60: E

## Faculty feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-HELP** at any time if you have a technical problem.)

### Grading and feedback

For large weekly assignments, you can generally expect feedback within **10 days**.

### E-mail

I will reply to e-mails within **48 hours on school days**.

## Discussion board

I will check and reply to messages in the discussion boards every **24 hours on school days**.

# Attendance, participation, and discussions

## Student participation requirements

Because this is a distance-education course, your attendance is based on your online activity and participation. The following is a summary of everyone's expected participation:

Students are required to complete the weekly assignments, including reading and viewing videos, and be prepared to post a discussion post, respond to a question and or record a video response to a discussion topic (4 per week). Take the 2 scheduled online essay exams (open note, open book). Take 4 online quizzes (10 points each). Create a 5-minute video on a class topic (student's choice of topic) to post and share with the class. There is the opportunity to explore a topic of the student's choice by conducting a review of literature and media on the topic, and writing a paper that synthesizes different perspectives or views on a topic (at least two perspectives) to support a **position**.

- **Logging in: AT LEAST ONCE PER WEEK**

Be sure you are logging in to the course in Carmen each week, including weeks with holidays or weeks with minimal online course activity. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.

- **Office hours and live sessions: OPTIONAL OR FLEXIBLE**

All live, scheduled events for the course, including my office hours, are optional. For live presentations, I will provide a recording that you can watch later. If you are required to discuss an assignment with me, please contact me at the beginning of the week if you need a time outside my scheduled office hours.

- **Participating in discussion forums: 2-4 TIMES PER WEEK**

As participation, each week you can expect to post 2-4 times as part of our substantive class discussion on the week's topics.

## Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. Informality (including an occasional emoticon) is fine for non-academic topics.



- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.
- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. (For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.)
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.

## Other course policies

### Academic integrity policy

#### Policies for this online course

- **Quizzes and exams:** You must complete the midterm and final exams yourself, without any external help or communication. Quizzes are included as self-checks without points attached.
- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. In formal assignments, you should follow Council of Biological Editors style to cite the ideas and words of your research sources. You are encouraged to ask a trusted person to proofread your assignments before you turn them in--but no one else should revise or rewrite your work.
- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. If you want to build on past research or revisit a topic you've explored in previous courses, please discuss the situation with me.
- **Falsifying research or results:** All research you will conduct in this course is intended to be a learning experience; you should never feel tempted to make your results or your library research look more successful than it was.
- **Collaboration and informal peer-review:** The course includes many opportunities for formal collaboration with your classmates. While study groups and peer-review of major written projects is encouraged, remember that comparing answers on a quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.
- **Group projects:** This course includes group projects, which can be stressful for students when it comes to dividing work, taking credit, and receiving grades and feedback. I have attempted to make the guidelines for group work as clear as possible for each activity and assignment, but please let me know if you have any questions.

## Ohio State's academic integrity policy

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University's *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. Instructors shall report all instances of alleged academic misconduct to the committee (Faculty Rule 3335-5-487). For additional information, see the Code of Student Conduct <http://studentlife.osu.edu/csc/>.

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the University, or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the University's *Code of Student Conduct* is never considered an "excuse" for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

**If I suspect that a student has committed academic misconduct in this course, I am obligated by University Rules to report my suspicions to the Committee on Academic Misconduct.** If COAM determines that you have violated the University's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the University.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- The Committee on Academic Misconduct web pages ([COAM Home](#))
- *Ten Suggestions for Preserving Academic Integrity* ([Ten Suggestions](#))
- *Eight Cardinal Rules of Academic Integrity* ([www.northwestern.edu/uacc/8cards.htm](http://www.northwestern.edu/uacc/8cards.htm))

## Accessibility accommodations for students with disabilities

### Trigger Warning

Some contents of this course may involve media that may be triggering to some students due to descriptions of and/or scenes depicting acts of violence, acts of war, or sexual violence and its aftermath. If needed, please take care of yourself while watching/reading this material (leaving classroom to take a water/bathroom break, debriefing with a friend, contacting a Sexual Violence Support Coordinator at 614-292-1111, or Counseling and Consultation Services at 614-292-5766, and contacting the instructor if needed). Expectations are that we all will be respectful of our classmates while consuming this media and that we will create a safe space for each other. Failure to show respect to each other may result in dismissal from the class.

### Statement on Title IX

Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories (e.g., race). If you or someone you know has been sexually harassed or assaulted, you may find the appropriate resources at <http://titleix.osu.edu> or by contacting the Ohio State Title IX Coordinator, Kellie Brennan, at [titleix@osu.edu](mailto:titleix@osu.edu)

## Accessibility accommodations for students with disabilities

### Requesting accommodations

Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated and should inform the instructor as soon as possible of their needs. The Office for Disability Services is located in 150 Pomerene Hall, 1760 Neil Avenue; telephone 292-3307, TDD 292-0901; <http://www.ods.ohio-state.edu/>."

If you would like to request academic accommodations based on the impact of a disability qualified under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, contact your instructor privately as soon as possible to discuss your specific needs. Discussions are confidential.

In addition to contacting the instructor, please contact the Student Life Disability Services at [614-292-3307](tel:614-292-3307) or [ods@osu.edu](mailto:ods@osu.edu) to register for services and/or to coordinate any accommodations you might need in your courses at The Ohio State University.

Go to <http://ods.osu.edu> for more information.

### Accessibility of course technology

This online course requires use of Carmen (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- [Carmen \(Desire2Learn\) accessibility](#)

- Streaming audio and video
- Synchronous course tools

## Course schedule (tentative)

Week	Topics	Readings, activities, assignments, deadlines	Quizzes and Midterms
1	<p>Introduction to the class</p> <p>Agriculture overview; food security challenges.</p> <p>Introduction to the class blog (<a href="http://u.osu.edu/blight">u.osu.edu/blight</a>); Why blogs are important today; what makes a good blog post (for your blog post assignments)</p> <p>How to ask good questions in online and in-person discussions</p>	<p>Class survey</p> <p>View instructor's video (future of agriculture) and respond to discussion questions about video</p> <p>Readings on Carmen: - Keeping Discussion Going</p>	
2	<p>Critical thinking. How to evaluate sources; errors in logic/logical fallacies</p>	<p>View instructor's video and complete reading assignment: Article: How to read a scientific paper Assignment: review of an academic paper (Seralini et al. reading posted on Carmen)</p> <p>Instructor video: peer review and authorship for academic papers</p> <p>Assignment: Find a news article, blog or video on a class topic and evaluate the source and content for errors in logic, bias, "sensationalism"</p>	
3	<p>How Do Pests and Diseases Impact Our Lives?</p> <p>Introduction to terms and concepts: Integrated Pest Management and plant disease management strategies; Major classes of pests and diseases</p>	<p>View instructor videos, respond to discussion board questions</p> <p>Assignment: Read <i>Famine on the Wind/Purple Cockspurs and LSD</i> (posted on Carmen) and complete the associated homework questions</p> <p>Assignment, Blog post 1: Research a plant disease in the news and write a blog post for <a href="http://u.osu.edu/blight">u.osu.edu/blight</a> (300-</p>	

		400) words	
4	How Do Pests and Diseases Impact Our Lives? continued  Introduction to Biotechnology and Genetic Engineering of Crop Plants (we will continue to explore this topic further later in the semester)	View instructor videos; complete group discussion board assignment: biotechnology	
5	<b>Invasive Species</b>  What Are Invasive Species, and how do they become invasive?	Assignment: Our Daily Bread: The Essential Norman Borlaug Part 1. Essay on Part 1 due.  View video, <i>Strange Days on Planet Earth: Invaders</i> and group discussion assignment	Online Quiz 1: Pests and Diseases, terms and concepts. Quiz opens on [day/time" and closes on [day/time].  10 pts.
6	<b>Invasive Species continued</b> Examples (emerald ash borer, sudden oak death)  <b>Invasive Species and our Borders</b>  Regulatory agencies; Select Agents  Citrus Canker Eradication Program in Florida	View readings and materials on Carmen. Assignment: respond to discussion board questions  Blog post 2: student's choice of topic (related to a class topic)	
7	International Agriculture: plant pathology research  Midterm 1	View video about plant pathology research in Tanzania.  Reading assignment, Dirt Poor (N. Gilbert), Nature 2012. Respond to posted questions.	Midterm 1 on Carmen: Essay questions (open book and open note). Midterm opens on [day/time] and closes on [day/time]. Midterm 1 covers Weeks 1-6.
8	Pesticides, Toxins and Health?  Overview of terminology, concepts	Online activity, National Pesticide Information Center. Video response to questions.  Reading assignment and online discussion assignment: "The Urgency of Malaria" and "Resistance" from Our Children's Toxic Legacy	
9	Pesticides today; public perception of pesticides, Rachel Carson and Silent	View video online: Strange Days on Planet Earth: Troubled Waters Group discussion assignment: new,	

	Spring. Pesticide regulations (banning of cosmetic pesticides in Ontario, communities).	conventional or controversial information	
10	Organic agriculture Overview of the process, applications; exploring the issues; videos	View video, In Organic We Trust. Respond to discussion board question.  Our Daily Bread: The Essential Norman Borlaug. Essay, Part 2 due	Online Quiz 2: Pesticides and Toxins: terms and concepts. Quiz opens on [day/time" and closes on [day/time].  10 pts.
11	Biotechnology Genetic engineering: laboratory processes	Video (first 90 minutes) - Harvest of Fear - a NOVA/Frontline special; online discussion  Supplemental Reading: Tomorrow's Table - Organic Farming, Genetics, and the Future of Food, Ch. 4 - The Tools of Genetic Engineering and online discussion  Discussion Board questions	
12	Issues (e.g., gene escape); controversies, media coverage	Video (second 90 minutes)- Harvest of Fear - a NOVA/Frontline special  Online group assignment: Biotechnology Benefits/Advantages vs. Concerns/Issues	
13	Biotechnology Discussion, controversial issues (labeling of genetically modified food)	Online group discussion assignment, Labeling of Genetically Modified Food	Online Quiz 3: Biotechnology: terms and concepts. Quiz opens on [day/time" and closes on [day/time].  10 pts.
14	Our Daily Bread: The Essential Norman Borlaug  The Future of Food: discussion	Our Daily Bread: The Essential Norman Borlaug  Essay, Part 3 due	Online Quiz 4:  Our Daily Bread: The Essential Norman Borlaug. Quiz opens on [day/time" and closes on [day/time].  10 pts.

## Assessments

See <http://odee.osu.edu/online-assessment/> for considerations (e.g., authenticity, academic integrity).

<b>Learning outcome</b>	Understand the benefits and limitations of different disciplinary perspectives.
	<b>See assessment document</b>
<b>Learning outcome</b>	Understand the benefits of synthesizing multiple disciplinary perspectives.
How to assess (describe in a few sentences)	
<b>Learning outcome</b>	Synthesize and apply knowledge from diverse disciplines to a topic of interest.
How to assess (describe in a few sentences)	

# SYLLABUS: PLNTPTH 4597

## CONTEMPORARY ISSUES: PESTICIDES, GENETIC ENGINEERING AND THE ENVIRONMENT SPRING 2017

Wed-Fri 2:20 - 3:40 pm | Room

### Instructor

Instructor: Monica M. Lewandowski, Ph.D.

Office: 246A Kottman Hall

E-mail: lewandowski.52@osu.edu

Office tel: (614) 247-6876

Office hours I can usually be found in/around my office during business hours and have an open door policy (e-mail or call so make sure I will be there). After class is also a good time.

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### Course overview

#### Course description

Contemporary, cultural, and social issues related to pesticide use, genetic engineering and sustainable plant management.

Au, Sp Sems. Prereq: Jr or Sr standing. Not open to students with credit for 597. GE cross-disciplinary seminar course.

You are expected to integrate class lectures, discussion activities, readings, assignments and class activities to achieve the full learning experience.

#### GEC Categories

PLNTPTH 4597 is a *General Education Cross-Disciplinary Seminar*

This course also fulfills the *Contemporary Issues* requirement for the CFAES - BS Agriculture.

The class will emphasize . . .

- How to investigate topics and issues on your own



- How to integrate information from different viewpoints and disciplines
- How to formulate your own ideas and thinking

By drawing upon multiple disciplines, this course intends to provide a capstone experience to help you attain and enrich your experiences of the increasingly global nature of the contemporary world.

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## **Cross-Disciplinary Seminar: Goals and Learning Outcomes**

(<https://ascas.osu.edu/curriculum/ge-goals-and-learning-outcomes#Cross-Disciplinary%20Seminar>)

### **Goals:**

Students demonstrate an understanding of a topic of interest through scholarly activities that draw upon multiple disciplines and through their interactions with students from different majors.

### **Expected Learning Outcomes:**

Students understand the benefits and limitations of different disciplinary perspectives.

Students understand the benefits of synthesizing multiple disciplinary perspectives.

Students synthesize and apply knowledge from diverse disciplines to a topic of interest.

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In this class, we will:

- Learn about issues facing agriculture and the environment, including diseases/pests, pesticides/toxins and biotechnology.
- Learn relevant historical and scientific background information to help you assess these issues.
- Demonstrate an understanding of the relationships between information derived from different disciplines by interacting with students from different majors.
- Consider various perspectives – economic, political, scientific, cultural, ethical and more – and how they impact agriculture, society and the environment.
- Consider public reaction and the challenge of communicating complex topics to diverse audiences.
- Develop critical thinking and communication skills that will carry over into your professional and personal lives.
- Synthesize information, formulate your own thinking and think creatively.

## Course Materials and Readings

Readings are drawn from a variety of sources. Reading assignments will be posted on the course website (Carmen) or distributed in class.

The book for the class is *Our Daily Bread: The Essential Norman Borlaug* by Noel Vietmeyer (Bracing Books); available as an e-book download on Amazon.com (you can download a Kindle reader for Kindle, PC, Mac, tablets and smartphones).

## Spread the News

Everyone is encouraged to share articles and stories that you find by posting on the OSU blog, [u.osu.edu/blight](http://u.osu.edu/blight), our Carmen course site (e-mail the link to me) and/or our class Twitter site (@plntpth4597). This is a great way to gain exposure to new and various sources.

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## Grading and faculty response

### Participation and Activity/Discussion Assignments

Participation is key for this class. Attendance is very important, because you'll be asked to respond to in-class activities and discussions for graded assignments. "Participation" involves more than speaking in class. Participation means that you are mentally engaged – listening, observing and thinking. Open your mind to different viewpoints, listen to and learn from differences of opinion.

Many activities this semester will involve small discussion groups. Assignments may involve outside class reading/questions, as well in-class discussions.

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The small group discussions in class are an opportunity to brainstorm ideas, consider other viewpoints, and formulate your own thinking. Listening to people from different perspectives is critical to understanding any topic.

The discussions are also an opportunity to develop conversational skills - learn to ask good questions and contribute to discussions in a meaningful, respectful way. (this is also a valuable skill in the workplace)

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## Grades

The class will include lectures, group discussions, short oral or video presentations, class activities, blog posts, quizzes and outside class assignments. There is a written assignment (position paper). There is a midterm and a final.

## Grading and feedback

For weekly assignments, you can generally expect feedback within 7 days. Larger assignments exams, and papers should be completed in 7-10 days. I use the Carmen Gradebook to record grades; please keep track of your gradebook to verify that your grades are recorded correctly.

In-class assignments (paper) are generally returned in class. Feedback on assignments that have been submitted to the Carmen Dropbox is provided on files that are uploaded to your Dropbox folders. Regularly check your Dropbox folder for your graded assignments.

### E-mail

I try to reply to e-mails in a timely manner, especially if you have questions on assignments, and within 24 hours on school days. If I do not respond, please try again and I will respond as soon as possible. (Sometimes e-mails get past me or even end up in my junk folder)

Assignment Category	Points Distribution
In class activities/assignments	200
Homework assignments	200
Quizzes	40
Midterm, Final (100 points each)	200
Writing assignment and literature review	150
<b>Total</b>	<b>790 pts</b>

## Grading Scale

(note this differs slightly from the standard OSU grading scale)

A	95-100%	A-	90-94.9
B+	87-89.9	B	83-86.9
B-	80-82.9	C+	77-79.9
C	73-76.9	C-	70-72.9
D+	67-69.9	D	60-66.9
E	59.9 and below		

## Missed Classes and Make-up Policy

Class attendance is expected and participation is a key part of this class. Please let me know (e-mail, telephone or in person) if you need to miss a class.

Nearly every class is associated with in-class points, so if you have questions regarding any materials that you missed, I am glad to help.

E-mail: lewandowski.52@osu.edu

Tel. (614) 247-6876

If you miss an in-class discussion activity/assignment, one excused make-up is allowed for full credit, subsequent excused make-ups are allowed for partial credit.

To summarize, if you miss an in-class activity, one make-up activity is allowed for full credit. Subsequent make-ups are allowed for partial credit as follows:

- 12 pts maximum for a 15-point in-class assignment
- 8 pts maximum for a 10-point in-class assignment
- 6 pts. maximum for an 8-point in-class assignment
- 3 pts maximum for a 5-point in-class assignment

Generally, an absence or two will not drop your final grade if you have an otherwise good record of attendance and good grades on classwork. Therefore it is important to have a line of communication and contact me if you miss a class.

One 3-pt extra credit opportunity will be announced during the semester to help students that may have missed an assignment. The extra credit opportunity is available to the entire class.

Missed exams or quizzes can be made up in extreme circumstances, but proper documentation must be provided and arrangements must be made *in advance*.

## Disability Services

If you need an accommodation based on a disability you can contact me to discuss your needs.

The Office for Disability Services ([www.ods.ohio-state.edu/](http://www.ods.ohio-state.edu/)) is available to assist students with disabilities with services and programs. The office is located in Room 150 Pomerene Hall, at the northeast corner of 12th Ave. and Neil Ave., next to Mirror Lake. Tel. (614) 292-3307.

## Academic Misconduct

Academic misconduct is prohibited by the university. Any student who engages in academic misconduct is subject to disciplinary action. Academic misconduct is defined in the Code of Student Conduct (<http://studentaffairs.osu.edu/csc/>) as any activity that tends to compromise the academic integrity of the university, or subvert the educational process.

Examples of academic misconduct include, but are not limited to, knowingly providing or receiving information during examinations or submitting plagiarized work for an academic requirement

Plagiarism is the representation of another's work or ideas as one's own; it includes the unacknowledged word-for-word use and/or paraphrasing of another person's work, and/or the inappropriate unacknowledged use of another person's ideas

Alleged cases of academic misconduct will be forwarded to the University's Committee on Academic Misconduct ([oaa.osu.edu/coam/home.html](http://oaa.osu.edu/coam/home.html)). A more comprehensive discussion on academic misconduct can be found in the Code of Student Conduct.

*Do not "copy and paste" work or writing from the internet or another source into your own paper - (unless it's a quote and the quote is correctly marked with quotation marks) - this is plagiarism.*

## Class Schedule (subject to change)

2017	Topics / Class Activities	Associated Assignments, Points
Week 1	<p><b>Class Overview and Introductions</b></p> <ul style="list-style-type: none"> <li>Class and syllabus overview; things to think about as we explore issues in this class</li> </ul> <p><b>Introduction to <i>Our Daily Bread: The Essential Norman Borlaug</i></b> (class book)</p> <p><b>Setting the foundation for class topics</b></p> <ul style="list-style-type: none"> <li>Video: <i>Coral Reef Adventure</i> This video illustrates some themes that are relevant to several class topics - think about possible themes that and enjoy the "scenery"</li> </ul>	
Week 2	<p>- Discuss - Coral Reef Adventure themes</p> <p><b>Setting the foundation for class topics cont.</b></p> <p><b>Agriculture overview; food security challenges</b> Videos and discussion "How to feed 10 billion dinner guests" Nina Federoff Outline main points</p> <p>Handout: How to read a scientific paper Peer review and authorship for academic papers</p> <p>Time permitting Why blogs are important today; what makes a good blog post (for your blog post assignments)</p>	<p>Complete a short "Beginning of Semester Survey" (on Carmen) ..... 5 pts</p> <p>- Reading assignment: Long term toxicity paper, Seralini et al. (2012) and scientific paper worksheet (bring to class on Fri. Jan. 22 for in class discussion</p>
Week 2	<p>Learning to examine and investigate topics <b>Handout: How to read a scientific paper</b></p> <p>- <b>Common Fallacies</b> - Start discussion</p> <p><b>Intro to writing a blog post for <a href="http://u.osu.edu/blight">u.osu.edu/blight</a></b> Info on Blog Post Assignment #1 (plant disease and impact on food security or the environment)</p> <p><b>Time Permitting</b> - Presentation/Paper Ideas</p> <p><b>Discussion and Conversation</b> - Learning from your classmates; expectations, class assignments, tips</p> <p>"Keeping Discussion Going" – how to think critically, ask good questions, and contribute to discussions and conversations</p>	<p>Need: 1 or more people in your group will need internet access on a laptop, tablet or phone</p> <p>In class, small group discussion activity, fallacies ..... 10 pts</p> <p>Homework: Evaluation of a media piece using critical thinking skills ..... 10 pts</p>

2017	Topics / Class Activities	Associated Assignments, Points
	<p>. . . Common Fallacies continued</p> <p><b>Critical Thinking</b></p> <ul style="list-style-type: none"> <li>Thinking critically; research strategies; assessing sources of information</li> </ul> <p>How to read a scientific paper (</p>	<p>Assignment (work on this outside of class; we will also work on this together in class)</p> <p>Long term toxicity paper, Seralini et al. (2012)                      ..... 25 pts</p>
Week 3	<p><b>Critical Thinking continued</b></p> <p><b>Search/Research Strategies</b></p> <p><b>How Do Pests and Diseases Impact Our Lives?</b></p> <ul style="list-style-type: none"> <li>Major classes of pests and diseases, significance, case studies - know the difference and significance of different pathogen types (bacteria, virus, fungus, oomycete, nematode etc.); understand plant management strategies</li> <li>Major fungal epidemics in the world today</li> </ul> <p>Reading assignment: Famine on the Wind/Purple Cockspurs and LSD (pdf on Carmen)</p>	<p>Discussion activity in class ..... 10 pts</p>
Week 3	<p><b>Pests and Diseases continued</b></p> <p>Major classes of pests and diseases continued</p> <p>Plant diseases and cropping practices</p>	<p>In-class discussion activity ..... 10 pts</p> <p>Think about your presentation and paper topics</p>
Week 4	<p><b>Pests and Diseases continued</b></p> <p>Major classes of pests and diseases continued</p>	<p>Quiz: Pests and Diseases ..... 10 pts</p> <p>Blog Post #1 for u.osu.edu/blight: select a plant disease and impact on food security (due in Carmen Dropbox)                      ..... 25 pts</p>
Week 4	<p><b>Introduction to Biotechnology and Genetic Engineering of Crop Plants</b></p> <p>(we will continue to explore this topic further later in the semester)</p>	<p>In class discussion activity – biotechnology ..... 10 pts</p> <p>Daily Bread Essay #1 DUE                      ..... 25 pts</p>

2017	Topics / Class Activities	Associated Assignments, Points
Week 5	<p><b>Examine the Famine: Plant Disease Threats on Global Food Security</b></p> <p><b>Norman Borlaug – Part 1; The Home Side</b></p> <p><b>View video, Rust Never Sleeps</b></p>	<p>In class assignment ..... 10 pts</p>
Week 5	<p><b>Invasive Species</b></p> <p>What Are Invasive Species, and how do they become invasive?</p> <p>What Can Be Done? What Should be Done?</p> <p><b>Video, <i>Strange Days on Planet Earth: Invaders</i></b></p> <p><b>Info on preparing your presentation</b></p>	<p>Homework assignment, Famine in the Wind due in Carmen Dropbox ..... 30 pts</p> <p>In class assignment about invasive species ..... 10 pts</p>
Week 6	<p><b>Invasive Species continued</b></p> <p>Management, examples</p> <p>Finish viewing video (if needed)</p>	<p>In class discussion, <i>Invaders</i> video ..... 10 pts</p>
Week 6	<p><b>Guest presenter, Invasive species</b></p> <p><b>White nose syndrome in bats – A Bat Killing Fungus</b></p>	<p>In class discussion, white nose syndrome in bats ..... 15 pts</p>
Week 7	<p><b>Invasive Species and our Borders</b></p> <p>Select Agents</p> <p>Citrus Canker in Florida (a true story)</p>	<p>In class discussion about Our Daily Bread, Part 1 ..... 10 pts</p>
Week 7	<p>Guest presenter, International Agriculture</p> <p>*****</p> <p>End of material for Midterm 1.</p>	<p>In-class discussion activity ..... 15 pts</p>
Week 8	<p><b>MIDTERM 1</b></p> <p>Agriculture; In class videos (themes); Pests and Diseases/Pathogens; Invasive Species; Critical Thinking; Plant diseases and impact on food security (Examine the Famine); Evaluating media pieces; Biotechnology and Genetic Engineering introduction; Famine on the Wind, international agriculture (Mgonja presentation) and all material and topics covered through Week 7</p>	<p>Midterm 1 ..... 100 pts</p>



2017	Topics / Class Activities	Associated Assignments, Points
Week 8	<p><b>What Should I Know About Pesticides, Toxins and Health?</b></p> <ul style="list-style-type: none"> <li>- Overview of major toxins, terminology</li> <li>- Reading assignment, "The Urgency of Malaria" and "Resistance" from Our Children's Toxic Legacy</li> <li>- posted on Carmen</li> </ul>	<p>Need: 1 or more people in your group will need internet access on a laptop, tablet or phone</p> <p>In class discussion National Pesticide Information Center Questions..... 10 pts</p>
Week 9	<p><b>Pesticides</b></p> <p>Discussion, continued</p> <p>Video, Strange Days on Planet Earth: Troubled Waters</p>	<p>Video discussion, in class ..... 10 pts</p>
Week 9	<p>Quiz and discussion, "The Urgency of Malaria" and "Resistance" from Our Children's Toxic Legacy</p>	<p>Our Daily Bread Essay #2 due (Carmen Dropbox) ..... 25 pts</p> <p>Quiz, "The Urgency of Malaria" and "Resistance" from Our Children's Toxic Legacy ..... 30 pts</p>
<b>SPRING BREAK</b>		
Week 10	<p><b>Pesticide topics continued</b></p> <p><b>Organic agriculture</b></p> <p>Overview of the process, applications; exploring the issues; videos</p>	<p>Discussion on selected video clips, organic food..... 10 pts</p>
Week 10	<p><b>Biotechnology</b></p> <p>Genetic engineering: lab basics</p> <p>Video (first part) - Harvest of Fear - a NOVA/Frontline special</p> <p>Supplemental Reading: Tomorrow's Table - Organic Farming, Genetics, and the Future of Food, Ch. 4 - The Tools of Genetic Engineering (on Carmen)</p>	<p>Position Paper Outline and Citation Evaluation (including a two-page review of an academic paper you will use in your position paper Due in Carmen Dropbox ..... 50 pts</p>
Week 11	<p><b>Biotechnology / Issues</b></p> <p>Video continued - Harvest of Fear - a NOVA/Frontline special</p> <p>Issues (e.g., gene escape); controversies, media coverage; Benefits/Advantages vs. Concerns/Issues</p>	<p>In class discussion ..... 10 pts</p>

2017	Topics / Class Activities	Associated Assignments, Points
Week 11	Biotechnology Issues continued Issues (e.g., gene escape); controversies, media coverage; Benefits/Advantages vs. Concerns/Issues	In class discussion activity, Genetic Engineering, Benefits/Advantages vs. Concerns/Issues ..... 10 pts
Week 12	"You Are the Teacher" Presentations – class topic of your choice (it can be the same topic, or a subtopic of your position paper) - we will have class sign-ups so that half the class will present on April 6, and the other half of the class will present on April 8	Oral or video presentation ..... 50 pts  Evaluation of your classmate's presentations..... 10 pts
Week 12	" You Are the Teacher" Presentations continued	Evaluation of your classmate's presentations..... 10 pts  Blog Post #2 for u.osu.edu/blight: topic of your choice ..... 25 pts
Week 13	Continued Biotechnology Discussion, controversial issues (labeling)	In class discussion ..... 10 pts
Week 13	Our Daily Bread - wrap up discussion and video	Essay Post, Our Daily Bread, Part 3, due in Carmen Dropbox ..... 25 pts
[Week 13]	"Investigate a Topic" Position Paper is Due in Carmen Dropbox	Position paper ..... 100 pts
Week 14	Outdoor activity in Chadwick Learning Gardens (ag campus) Diagnosing Plant Problems	In class activity ..... 10 pts
Week 14	The Future of Agriculture; wrap-up and midterm review.	Complete the "End of Semester Survey" (on Carmen) ..... 5 pts
Final (Midterm 2)		..... 100 pts