Horticulture 374: Tropical Horticulture

Course Syllabus – Fall 2015

Description:

Horticulture is the art and science of the cultivation of plants. This course meets weekly through the Fall for 50 minutes and will highlight the interactions between plants and society. We will reflect on the origins of the tropical crops, the roles of plants in our daily lives, and the effects that of our daily choices have on the environment, human health, water access, conflicts, poverty, and development. We will survey some of the social, scientific and environmental problems associated with food production, marketing and use.

You may apply in addition to the two-week Tropical Horticulture study abroad program during winter break to contextualize the learning acquired in the course with experiential learning in a tropical country.

Course Learning Goals:

1) To gain an understanding of the unique challenges to food security and sustainability in tropical ecosystems.
2) To explore some of the history and policies that influence our approaches to growing crops and conserving ecosystems today.
3) To develop a critical perspective and creative thinking on how we do agriculture and strive to conserve habitats and species in various locations and contexts.
4) To gain an understanding of the biology of tropical plants; focusing on their physiology, genetics and response to environment.
5) To learn specific content about modes of crop production and how to approach conservation, particularly in the challenging context of the developing tropics.
6) To cultivate interdisciplinary skills, intercultural knowledge and global competencies through the understanding of the ecological and socio-economical impact of tropical crops on local and global human communities.
7) To contrast knowledge of temperate ecology and crop production with the ecology and crop production challenges in four tropical environments: lowland-wet, lowland-dry, highland-wet and highland-dry.
8) To help students practice developing and presenting ideas orally and in writing.
9) To introduce students to key literature pertaining to tropical horticulture and foster respectful discussions around those papers, using scientific criteria.

Instructors:
Jim Nienhuis (nienhuis@wisc.edu)
Office: room 390 in Plant Sciences Phone: 262-6975

Claudia Irene Calderón (cicalderon@wisc.edu)
Office: room 492 in Plant Sciences Phone: 416-9335
Class format: Class will meet on Mondays, from 2:25-3:15 PM, in room 351 Moore Hall.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sep. 14</td>
<td>Introductions and overview of the course</td>
</tr>
<tr>
<td>2</td>
<td>Sep. 21</td>
<td>Overview of the field trip to Costa Rica</td>
</tr>
<tr>
<td>3</td>
<td>Sep. 28</td>
<td>Tropical Vegetables - Jim Nienhuis</td>
</tr>
<tr>
<td>4</td>
<td>Oct. 05</td>
<td>Tropical Fruits - Amaya Atucha</td>
</tr>
<tr>
<td>5</td>
<td>Oct. 12</td>
<td>Presentation by travel nurse</td>
</tr>
<tr>
<td>6</td>
<td>Oct. 19</td>
<td>Student group presentations</td>
</tr>
<tr>
<td>7</td>
<td>Oct. 26</td>
<td>Student group presentations</td>
</tr>
<tr>
<td>8</td>
<td>Nov. 02</td>
<td>Student group presentations</td>
</tr>
<tr>
<td>9</td>
<td>Nov. 09</td>
<td>Student group presentations</td>
</tr>
<tr>
<td>10</td>
<td>Nov. 16</td>
<td>Student group presentations</td>
</tr>
<tr>
<td>11</td>
<td>Nov. 23</td>
<td>Student group presentations</td>
</tr>
<tr>
<td>12</td>
<td>Nov. 30</td>
<td>Student group presentations</td>
</tr>
<tr>
<td>13</td>
<td>Dec. 07</td>
<td>Student group presentations</td>
</tr>
<tr>
<td>14</td>
<td>Dec. 14</td>
<td>Student group presentations</td>
</tr>
<tr>
<td>15</td>
<td>TBD</td>
<td>Final organization and preparation for field trip</td>
</tr>
</tbody>
</table>

Oral Presentations:
The central theme for your presentation will be an important problem or challenge relating to the production, marketing, and/or distribution of a tropical crop. A few examples of tropical crops include palmito, avocado, coffee, banana, pineapple, cassava, cocoa, tomatoes, cashews, cinnamon, orchids, mahogany. This list is far from complete, and you are encouraged to think broadly about a particular crop of interest to you. Basically, any vegetable, fruit, flower, tree, shrub, vine, herb or nut that grows in the tropics is fair game. In your presentations you must discuss the origin, domestication, biology, economics, ecology of your crop. In addition you must also discuss the sustainability of the crop, the social context of its production, and environmental issues associated with its cropping systems.

You must also write a one page summary (single space, 12pt Times New Roman font) of your presentation that will be turned in the Friday prior to the day of your presentation.

Paper:
Select a tropical crop that constitutes an important part of your diet. Write a five page paper where you describe where you can buy this product and mention its nutritional or health qualities. You will also include in the paper a brief investigation of where the product comes from, where it was originally domesticated, different types of processing of the product, and a recipe that includes that plant as an important ingredients. The paper will include an abstract, introduction, discussion, recipe and references.
Due dates for paper (submissions are due on Mondays at 2:25 PM on Learn@UW)

Sep 21: Submit title of your paper.
Oct 05: Submit an annotated bibliography in APA format listing 5 sources relevant to the topic. For each reference, provide 1-2 sentences articulating the relevance of the paper to the topic you chose.
Oct. 12: Submit abstract
Oct. 19: Submit introduction
Nov. 02: Submit complete first draft (print 2 copies to give to 2 peer-reviewers)
Nov. 16: Submit peer review of two other papers
Nov. 23th: Submit second draft
Dec. 07: Submit final paper

Written commentaries:
A weekly article will be posted in Learn@UW about current topics related to Tropical Horticulture. You will submit to the dropbox of Learn@UW a 250 to 500 word commentary about each article that you read. We are looking for descriptions of what you think or how you feel about what you have read, not summaries of the articles.

Grading:
- Group presentations: 25%
- One page summary of oral presentation: 5%
- Weekly commentaries: 10%
- Title/topic statement: 5%
- Annotated bibliography: 5%
- Abstract: 5%
- Introduction: 5%
- First draft: 5%
- Peer editing: 10%
- Second draft: 10%
- Final paper: 15%

Grade scale:
- A 100-95%
- AB 94-89%
- B 88-83%
- BC 82-77%
- C 76-71%
- D 65-70%
- F <65%

Respect
All are welcome here regardless of your age, race, gender, background, political affiliation, or sexual orientation. This course is based on respect and any disrespect will not be tolerated. We are all, including the instructors, both learners and teachers in this class. Your ideas will be received with the utmost respect even when in conflict with other’s opinions. We want to you feel comfortable in sharing your thoughts, comments, and questions. If you ever feel you are not being respected by anyone that is a part of this class, please contact either of the instructors.

*Late assignments will be penalized by 10% for each day it is late. Assignments turned in more than five days late will not be accepted.
*Any student who has a disability and is in need of classroom accommodations should contact the McBurney Disability Resource Center and the instructor at the beginning of the semester.