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| <p style="text-align: center;"><b>Course General Information (2014-15)</b><br/><b>BIOLOGY 324.3 – PLANTS AND HUMAN AFFAIRS – TERM 2</b></p> |
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**INSTRUCTOR:** J. Hugo Cota-Sánchez, Ph.D.  
**Office:** Room 141, Biology Building. *Tel.* 966-4405  
**Office hours:** TR 9:30 am -11:00 am, Biol. 141  
**E-mail:** [hugo.cota@usask.ca](mailto:hugo.cota@usask.ca)  
**Lectures:** MWF 9:30-10:20 am, Room 125 Biology  
**Laboratory:** Lab & Tutorial - Thursday 1:30 – 4:20 pm, Room 218 Biology.

**TEACHING ASSISTANT:** TBD

### Course structure

- This is a 3-credit course open to any student of the U of S interested in human-plant interactions, not just biologists but also anthropologists, environmentalists, historians and people interested in the biological basis of human society.
- This course has no prerequisites. Class meets three times a week, 1hr/meeting. In addition, a laboratory/tutorial session is scheduled weekly.
- This course is designed for anyone who is interested in knowing the origin of current crop plants, and broadening their understanding on how plants have evolved throughout domestication processes according to numerous human needs, including enjoyment to daily human life. Though botanical terminology is desirable (and will be learned throughout the semester) technical terms are kept to a minimum but a botanical dictionary is highly recommended.

### Course objectives

- To analyze the importance of plants and their role in the local and global community.
- To learn the principles about the origin and domestication of plants, and the major centers of origin and diversification of agriculture in the world.
- To introduce the students to the major plant families, plant parts, and plant products used as food by human cultures around the world and have close encounters with food, textiles, medicines, perfumes, and oils derived from numerous plant species.
- To learn what plant parts/products have been industrialized, and the importance of genetic engineering in the plant production and crop improvement.

The lectures and lab sessions include demonstrations with live plants or plant products or derivatives.  
**STUDENTS WITH FOOD ALLERGIES and/or reactions to plants or plant products are advised NOT to register for this course.**

### Recommended textbooks

Levetin, E. & K. McMahon. 2012. *Plants and Society*. 6<sup>th</sup> Ed. MacGraw-Hill Publishers, New York. ISBN: 978-0-07-722125-6.

Simpson B.B. & M.M. Ogorzaly. 2014. *Economic Botany: Plants in our World*. 4<sup>th</sup>. Ed. MacGraw-Hill Publishers, New York. ISBN: 0-07-290938-2. [Syllabus' reading assignments based on this book.](#)

Prance, G. & M. Nesbitt. 2005. *The Cultural History of Plants*. Routledge, New York. ISBN: 0-415-92746-3.

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| Date       | Lecture Topic                                     | Suggested Reading / Lab Topic             |
|------------|---|---|
| Jan. 5     | Introduction and Course Overview                  |   |
| Jan. 7     | Plants and People and Classification              | Chapter 1, pp 1-5                         |
| Jan. 9     | How to be a Plant                                 | Chapter 1, pp 5-21                        |
| Jan. 12    | Food and Population                               | Chapter 21, pp 472-487                    |
| Jan. 13    | Laboratory Session 1                              | Classification and Plant Morphology       |
| Jan. 14    | Major Cereals I – Wheat origin                    | Chapter 6, pp. 114-126                    |
| Jan. 16    | Major Cereals II – Maize origin                   | Chapter 7, pp 134-146                     |
| Jan. 19    | Major Cereals III – Rice                          | Chapter 6, pp 121-123                     |
| Jan. 20    | Tutorial Session 2 – Major Cereals I - TUTORIALS! | Tutorials & Wheat/Corn Evolution          |
| Jan. 21    | Minor Cereals I                                   | Chapter 6, pp 127-32                      |
| Jan. 23    | Minor Cereals II                                  | Chapter 6, pp 127-32                      |
| Jan. 26    | Pseudocereals                                     | Chapter 6, pp. 133; Ch. 7, pp 146         |
| Jan. 27    | Tutorial Session 3 – Major Cereals II –           | Rice, Minor Cereals & Pseudocereals       |
| Jan. 28    | Edible Plant Parts                                | Chapter 9, pp 172-190                     |
| Jan. 30    | Starchy Plants I                                  | Chapter 10, pp 18192-209                  |
| Feb. 2     | Starchy Plants II: Banana                         | Chapter 5, pp 98-100                      |
| Feb. 3     | Tutorial Session 4                                | Tutorials & Starchy Plants & Parts        |
| Feb. 4     | Midterm 1 through Feb. 2 <sup>nd</sup>            |   |
| Feb. 6     | Sugar Plants I: Sugar Cane and Slave Trade        | Chapter 10, pp 210-215                    |
| Feb. 9     | Sugar Plants II: Sugar Beet and Sugar Maple       | Chapter 10, pp 210-215                    |
| Feb. 10    | Tutorial Session 5                                | Tutorials                                 |
| Feb. 11    | Legumes – Types and biological importance         | Chapter 8, pp 150-170                     |
| Feb. 13    | Pulse/Legume Crops I                              | Chapter 8, pp 150-170                     |
| Feb. 16-20 | No Class – Reading Week                           |   |
| Feb. 23    | Review & Catching up                              |   |
| Feb. 24    | Tutorial Session 6                                | Tutorials & Sugar Plants                  |
| Feb. 25    | Flower and Fruit Parts I - The Dance              | Chapter 4, pp 51-76                       |
| Feb. 27    | Flower and Fruit Parts II                         | Chapter 4, pp 51-76                       |
| March 2    | Fruits and Vegetables I                           | Chapter 4                                 |
| March 3    | Tutorial Session 7                                | Tutorials & Legumes / Pulse Crops         |
| March 4    | Fruits and Vegetables II                          | Chapter 5                                 |
| March 6    | Fruits and vegetables - examples                  | Chapter 9                                 |
| March 9    | Midterm 2 through March 6                         |   |
| March 10   | Tutorial Session 8                                | Tutorials & Temperate and Tropical Fruits |
| March 11   | Spices I – Historical Uses and Spice Trade        | Chapter 13, 261-289                       |
| March 13   | Spices II – Survey of Spices                      | Chapter 13, 261-289                       |
| March 16   | Plant Fibers I                                    | Chapter 18, pp 397-416                    |
| March 17   | Laboratory Session 9                              | Tutorials & Spices & Herbs                |
| March 18   | Plant Fibers II – Agave Plant and Tequila         | Chapter 18, pp . 397-416                  |
| March 20   | Origin of Agriculture - Overview                  | Chapter 2, pp 22-35                       |
| March 23   | Domestication and Selection                       | Chapter 3, pp 36-50                       |
| March 24   | Tutorial Session 10                               | Field Trip                                |
| March 25   | Major Centres of Agriculture in the World         | Reading: Mol. Evol. of Crop Plants        |
| March 27   | Medicinal Plants I – Historical Use and Chemistry | Chapter 14, pp 290-317                    |
| March 30   | Medicinal Plants II                               |   |
| March 31   | Tutorial Session 11                               | Tutorials & Fibers                        |
| April 1    | Stimulant Beverages I                             | Chapter 16, pp 347-390                    |
| April 3    | Good Friday – NO CLASS                            |   |
| April 6    | Stimulant Beverages II                            | Chapter 16, pp 347-390                    |
| April 7    | Tutorial Session 12                               | Tutorials & Multicultural Lab             |
| April 8    | Last Day of Classes                               |   |

## REQUIRED EXAMINATION, COURSE WORK, AND GRADING SYSTEM

| INPUT   | % OF GRADE | IMPORTANT DATES             |
|---|------------|-----------------------------|
| Theory Mid-term I                                   | 20%        | February 4                  |
| Midterm II  | 20%        | March 9                     |
| Laboratory Tutorial (presentation)                  | 15%        | Starting Jan. 20            |
| Lecture & Lab attendance, participation & exercises | 10%        | Every lecture & lab session |
| Comprehensive Theory Final Exam                     | 35%        | April ???                   |

Students who DO NOT complete one or more assignments will receive an "INC" (incomplete) grade

### **Mid-term and final exams:**

There will be two mid-term exams. The mid-term and final exams will test material covered in lecture and any of the assigned readings. The exams will include a combination of fill-in-the-blank, short answer questions and essay questions. Material covered from the start of the course up to the date of the exam is eligible to be included on an exam.

### **Missed exams / Make-up policy:**

You must take examinations during their scheduled periods. Make-up tests will be allowed only if there are extenuating circumstances, in which case the test will be given orally. If there is a medical problem that causes a student to miss an exam, the student must contact the instructor within 3 days of the exam to provide documentation of the illness and make arrangements for a make-up exam. Failure to do so will result in a zero grade for the exam.

### **Late assignments:**

Assignments, tutorials in this case, presented late will be penalized/deducted 10 points (out of a total 100 points). If there is a medical reason for the delay, the student must contact the instructor within 3 days of the assignment due date to provide documentation of illness and make arrangements for a new due date for the assignment. Students who are struggling with unexpected, major life issues that conflict with an assignment due date are advised to contact the instructor BEFORE the assignment is due to discuss the possibility of arranging a new due date.

The **Laboratory sessions** are very important because that is where you will learn a great deal of information about uses and cultural issues of plants. They will consist of demonstration and study of plant material related to the class, reports prepared by class members, and discussion of lecture material, and reading assignments. Most labs are fun, cultural and illustrative. We often prepare and taste food made from the plants or families discussed. We may have international feasts depending on the class cultural enrollment. I strongly recommend you to attend the labs and cover all the material provided. Please share with us your heritage/cultural experiences.

**Note that attendance to lectures, participation and completion of lab and class assignments is worth 10% of your final grade.** In other words, the more you attend classes and the more you participate in lecture AND lab, the higher your percentage will be.

Remember that this is an *integrative course* and that lecture and laboratory sessions make up the entire content of this course. Hence, the exams will include material from both components.

## **ACADEMIC HONESTY**

Honesty and integrity are expected in class participation, examinations, assignments, patient care and other academic work. The Guidelines for Academic Conduct from University of Saskatchewan Council (found at: [http://www.usask.ca/honesty/aca\\_honesty.shtml](http://www.usask.ca/honesty/aca_honesty.shtml)) give the following description of honest behaviour at the university:

- Perform your own work unless specifically instructed otherwise.
- Use your own work to complete assignments and exams.
- **Cite the source when quoting or paraphrasing someone else's work.**
- Follow examination rules.
- Be truthful on all university forms.
- Discuss with your professor if you are using the same material for assignments in two different courses.
- **Discuss with your professor if you have any questions about whether sources require citation.**
- Use the same standard of honesty with fellow students, lab instructors, teaching assistants, sessional instructors and administrative staff as you do with faculty.

***Beware of plagiarism!!!!*** Academic honesty is a must in our institution and plagiarism will be strictly penalized.

For more information on academic honesty visit the above website and the ***Guidelines for Academic Conduct*** found at: [http://www.usask.ca/university\\_council/reports/archives/guide\\_conduct.shtml](http://www.usask.ca/university_council/reports/archives/guide_conduct.shtml)