

Course Prefix/Number/Title: HORT 151 Intro to Plants and Pests

Number of Credits: 1

Course Description: This course is an introduction to basic soil science, plant anatomy and physiology, diseases, and pests as it pertains to specialty crops. Students will learn basic plant growth, organization, function, adaptations and reproduction along with basic soil composition and how it affects plant growth and health.

Pre-/Co-requisites: None

Course Objectives:

1. Learn basic plant biology pertaining to specialty crops
2. Understand basic plant growth, organization, function, adaptations and reproduction of specialty crops
3. Learn basic soil science pertaining to specialty crops
4. Identify basic soil composition and how it affects plant growth and health
5. Become familiar with basic plant pathology including plant pests pertaining to specialty crops

Instructor: Keith Knudson

Office: Room 26

Office Hours: See Office Schedule on office door

Phone: 701-228-5489

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Lecture/Lab Schedule: Online

Textbook(s): *You can also purchase a digital copy on Amazon*

*Botany for Gardeners* by Brian Capon

Paperback: 268 pages

Publisher: Timber Press; 3rd edition (May 21, 2010)

Language: English

ISBN-10: 160469095X

ISBN-13: 978-1604690958

Product Dimensions: 6 x 0.6 x 9 inches

Course Requirements: Grading is based on a standard college curve, where students earn a grade based upon the percent of total possible points they obtain. Any missed quiz, exam or assignment not made up within the allotted time will be given a zero. The "allotted time" given is at the discretion of the

instructor and will be communicated to the students throughout the course. (Note: It is the responsibility of the student to schedule make-up work with the instructor at a time convenient to both parties.) Final letter grades are assigned based on the following criteria:

**A = 90-100% of the total points**

**B = 80-90% of the total points**

**C = 70-80% of the total points**

**D = 60-70% of the total points**

**F = <60% of the total points**

Tentative Course Outline:

| Week                            | Topics and Assignments                                                                                                                                                                                                                                                                                                  |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1<br>Plant Growth               | Intro: Live recording from the instructor<br>Read: <ul style="list-style-type: none"> <li>• Cells and Seeds (Chapter 1)</li> <li>• Roots and Shoots (Chapter 2)</li> </ul> Review: Cells, Seeds, Roots and Shoots ppt<br><b>Week 1 Discussion Forum due (40 pts)</b>                                                    |
| 2<br>Organization/<br>Functions | Read: <ul style="list-style-type: none"> <li>• Adaptations for protection (Chapter 5)</li> <li>• Adaptions to Fulfill Basic Needs (Chapter 6)</li> </ul> Watch: Evolutionary Ecology of Plant Defenses Webinar<br><b>Week 2 Discussion Forum due (40 pts)</b><br><b>Week 2 Quiz due (20 pts)</b>                        |
| 3<br>Function/Soils             | Read: The Uptake and use of Water, Minerals and Light (Chapter 8)<br>"Soil and Plant Nutrition: A Gardener's Perspective" Dr. Lois Berg Stack, Extension Professor (2011).<br>Review: Intro to Soils and effects on plants Health and Growth PPT<br>Watch Living Soil Video...<br><b>Week 3 Living Soil WS (60 pts)</b> |
| 4<br>Reproduction               | Read: From Flowers to Fruits (Chapter 9)<br>Watch: Reproductive Cycle of Flower Plants / The Amazing Lives of Plants video<br><b>Week 4 Discussion Forum due (40 pts)</b><br><b>Week 4 Quiz due (20 pts)</b>                                                                                                            |
| 5<br>Plant Inheritance          | Read: Strategies of inheritance 10<br>Watch: Plant Breeding- Iowa State University<br><b>Week 5 Plant Breeding Video assignment (30 pts)</b>                                                                                                                                                                            |
| 6<br>Plant Disease and<br>Pests | Read: "Introduction to Plant Diseases" -University of Nebraska Extension 2014<br>Review: <ul style="list-style-type: none"> <li>• Diseases and Plants ppt</li> <li>• Introduction to Plant Disease USDA presentation</li> </ul> <b>Week 6 Discussion Forum due (40 pts)</b>                                             |

| Week                                  | Topics and Assignments                                                                                                                                                                                                                                                                                                                   |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7<br>Plant Disease and<br>Pests Cont. | Review: Pests and Plants; Pest Control Past, Present, and Future PPT<br>Read: <ul style="list-style-type: none"> <li>• Basics of Entomology</li> <li>• Integrated Pest Management</li> </ul> Watch: Four Seasons Gardening Series - Beneficial Insects<br><b>Week 7 Discussion Forum due (40 pts)</b><br><b>Week 7 Quiz due (20 pts)</b> |
| 8<br><b>Final Exam</b>                | Study<br><b>Final Exam Due!!!! (150 pts)</b>                                                                                                                                                                                                                                                                                             |

General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s):

Relationship to Campus Focus:

Classroom Policies: Be respectful of other students, instructors and guests.

Student Email Policy:

Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the Campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

Academic Integrity:

According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

Disabilities or Special Needs:

Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

Title IX:

Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX

Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.