

## **Dakota College at Bottineau Course Syllabus**

### **Course Prefix/Number/Title:**

PLSC 268; Plant Propagation  
Spring Semester 2014: 2 Credits

### **Course Description:**

Plant propagation teaches the principles and practices of sexual and asexual reproduction of plants. Propagation methods covered are seed, cuttings, layering, division, grafting, budding and micro-propagation.

### **Course Objectives:**

The objective of this course is to acquaint the student with the basic principles and methods of plant propagation techniques practiced in the horticulture industry today and in the past. Upon completion of this class, you will have a workable knowledge of seed germination and handling; production from cuttings; grafting and budding; layering and other natural modifications; division; propagation by specialized stems and roots and methods of micro-propagation.

### **Instructor:**

Diann Beckman

### **Office:**

Molbert 20

### **Office Hours:**

MWF 10:00-11:00 other hours by appointment

### **Phone:**

701-228-5442

### **Email:**

[diann.beckman@dakota college.edu](mailto:diann.beckman@dakota college.edu)

### **Lecture/Lab Schedule:**

Lecture; M 3:00 – 4:00

Lab; W 3:00 – 5:00

### **Textbook(s):**

American Horticultural Society – Plant Propagation

### **Reference Textbooks;**

Plant Propagation Principles and Practices

Hudson T. Hartmann, Dale E. Kester, Fred T. Davies Jr.

Plant Propagation A to Z

Geoff Bryant

Secrets of Plant Propagation

Lewis Hill

**Course Requirements:**

Student Final Lab Project;

Each student will be required to select a horticultural crop/plant and review the history of its propagation. You will need to prepare a demonstration speech telling and showing how to propagate the plant. In the last lab period you will present your findings to the class. (You will need to get started on this immediately as it takes time to successfully propagate many crops.) 100 points

Tests There will be three lecture tests worth 100 points each

Grading formula; 100-90% = A, 80-90% = B, 70-80% = C, 60-70% = D, below 60% = Failing

**Tentative Course Outline:****Week one**

General overview of propagation

Pages 1-7

**Week Two**

Reading; Introduction to propagation (pages 8-48)

Lab; Sexual propagation

**Week Three**

Reading; Garden Trees (pages 49-74)

Lab; Asexual propagation – Herbaceous stem and leaf cuttings

**Week Four**

Reading; Shrubs and Climbing plants – (pages 92-118)

Lab; Asexual propagation – Layering and its natural modifications

**Week Five**

Lecture test Review

Lab; Lecture test (Pages 1-118)

**Week Six**

Lecture; Perennials (pages 146-186)

**Week Seven, Eight and Nine**

Annuals and Biennials (pages 146-230)

Lab: Sowing seed of annuals and Biennials

**Week Ten Spring Break****Week Eleven**

Review for test

Test on Perennials, annuals and biennials

**Week Twelve**

Cactus and Succulents pages 230-242

Lab: Propagation of cactus and succulents

**Week Thirteen**

Lecture: Grafting techniques

**Lab Project: Students will be assigned a type of grafting to research and prepare a presentation on and present it to class in weeks 14 and 15.**

**Week Fourteen**

Bulbous plants and vegetables

**Week Fifteen**

Presentation of Grafting Projects

**Week Sixteen**

Presentation of final Lab Projects

**Week Seventeen**

Final Test /Comprehensive Exam

**Relationship to Campus Theme:**

Plant propagation has been evolving since ancient times. Some ancient techniques are still used today, but many plants are now propagated by using micro-propagation techniques so that exact replicas (clones) can be produced in mass quantities. Sometimes propagation is still best left to Mother Nature. There is no other industry that is more affected by nature and technology than the Horticulture/Agriculture industries. When we work with both, it is only our imaginations that can depict what is beyond.

**Classroom Policies:**

Students are expected to come to class with the assignments read, be on time and have cell phones off. Lap tops are welcome as we occasionally will use them to look up information.

**Academic Integrity:**

Students are expected to do their own work, any plagiarism or cheating will result in an automatic F for the project.

**Disabilities and Special Needs:**

Please inform me within the first week of class of any assistance that may be required because of a disability or special need.