

Course Prefix/Number/Title: PLSC210 Horticulture Science

Number of Credits: 4

Course Description: This course teaches the principles and theories of Horticulture Science through both academic knowledge and practice of skills. The overall objective is to allow the student to gain an understanding of the practical application of Horticulture Science and how this applies to current commercial and non-commercial horticultural systems and practices.

The main areas covered in this course include:

Plant Taxonomy, Plant Growth and Functions, Propagation Methods, Pruning Techniques, Greenhouse Management, Integrated Pest Management (IPM), Container and Landscape Planting, Lawn and Turfgrass Management, Fruit and Vegetable Growing, Business Operations, Technology Advancements and Leadership Development.

Pre-/Co-requisites: None

Course Objectives:

Gain a solid understanding of Horticulture Science.

Understand the processes of laboratory techniques through demonstration and practice.

Learn how to apply the knowledge gained to today's horticulture industry.

Increase knowledge and awareness of the importance of correct analysis, investigation and application of horticulture science/

Instructor: Peter Keane MCIHort

Office: Online (Blackboard Ultra)

Office Hours: By Appointment

Phone:

Email: peter.keane@dakotacollege.edu

Lecture/Lab Schedule: Wednesday 1200-1250

Textbook(s):

Introductory Horticulture 9th Edition

Allied Principles of Horticulture Science 3rd Edition

Course Requirements: Online courses require the following to build and engage a classroom community of learners:

- ✓ Log in to the course a minimum of three times per week to check for new announcements and course information.
- ✓ Read the assigned texts and papers. It is essential to success in this course.

- ✓ Complete and submit coursework on time.
- ✓ Pace yourself, and make sure that all assignments are completed by the end of the semester.
- ✓ Be an active participant in discussion boards.
- ✓ Communicate with the instructor.

Participation/Discussion Boards: Students are expected to participate in discussion board on topics related to the class throughout the semester. The purpose will be to discuss and learn from each other. It is important that students be respectful of each other's opinions. The requirements for each discussion will be outlined when the discussion begins. In order to be effective, we all must participate and respond to each other in a timely manner. Discussions will be available for one to two weeks and students must complete them during that time frame.

Grading and Evaluation:

Total Point Percentage	Letter Grade
90% and ↑	A
80% - 89.99%	B
70% - 79.99%	C
60% - 69.99%	D
59.99% and ↓	F

Tentative Course Outline:

Syllabus and Weekly Breakdown -

Week 1 - Units 1 & 2 Exploring the Horticulture Field / Plant Taxonomy: How Plants are Named.
Discussion, Videos, LAB, Crop Choice Assignment Overview.

Week 2 - Units 3,4 & 5 Parts of the Plant and Their Functions / Environmental Requirements for Good Plant Growth / Growth Stimulants, Retardants, and Rooting hormones.
Discussion, Videos, LAB, Crop Choice Assignment Part 1.

Week 3 - Unit 6, 7 & 8 Seeds / Softwood and Semihardwood Cuttings and Micropropagation / Hardwood Cuttings.

Discussion, Videos, LAB.

Week 4 - Units 9,10,11 & 12 Separation and Division / Grafting / Budding and Layering.

Discussion, Videos, LAB,

Week 5 - Units 16 & 17 Integrated Pest Management and the Biological Control of Pests and Diseases / The Safe Use of Pesticides/Biopesticides.

Discussion, Videos, LAB.

Week 6 - Units 18,19 & 20 Insecticides / Fungicides, Rodenticides, Molluscicides, and Nematodes / Herbicides.

Discussion, Videos, LAB, Crop Choice Assignment Part 2.

Week 7 - Units 25,26 & 27 Annual Bedding Plants / Perennials, Ornamental Grasses, Vines, Bamboo's and Prairie Gardens / Narrowleaf Evergreens.

Discussion, Videos, LAB.

Week 8 - Units 28,29,30 & 31 Broadleaf Evergreens / Deciduous Trees / Deciduous Shrubs / Ground Covers / Bulbs.

Discussion, Videos, LAB + Mid-Term.

Week 9 - Spring Break

Week 10 - Units 33 & 34 Pruning Techniques / Principles of Landscaping, Maintenance, Xeriscaping, Water Gardens, Irrigation and Green Roofs.

Discussion, Videos, LAB, Crop Choice Assignment Part 3.

Week 11 - Units 35,36 & 37 Establishing the Lawn / Maintaining the Lawn / Renovating the Lawn.

Discussion, Videos, LAB.

Week 12 - Units 23 & 24 The Interior Plantscape: Houseplants and Plantscaping / Shrubs and Trees.

Discussion, Videos, LAB,

Week 13 - Units 38,39,40 & 41 Planning and Preparing the Garden Site / Planting the Vegetable Garden / Caring for the Vegetable Garden / Favorite Garden Vegetables and Herbs.

Discussion, Videos, LAB.

Week 14 - Units 42,43,44,45 & 46 Strawberries / Blueberries / The Bramble Family / Grapes / Nut Crops.

Discussion, Videos, LAB, Crop Choice Assignment Part 4.

Week 15 - Units 52,53 & 54 Beginning a Horticultural Enterprise / Financial Operations of a Horticultural Business / Human Relations: Personnel Management and Customer Sales.

Discussion, Videos, LAB.

Week 16 - Units 55,56 & 57 Business Communications / Horticulture in the Age of Technology / Leadership Development in Horticulture.

Discussion, Videos, LAB. + Course Reflection.

Finals Week

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

This course meets the CTE department learning outcome of employing industry-specific skills in preparation for workplace readiness by:

1. Expanding critical thinking competence.
 - a. Students will develop an understanding of how science, plants and people interact.
 - b. Students will demonstrate knowledge of sound laboratory practice.
 - c. Students will apply their understanding of horticulture science and how this can be applied in both commercial and non-commercial applications.

Relationship to Campus Focus: This course supports the campus theme of “Nature, Technology and Beyond” by fostering the skills and knowledge necessary to utilize natural, human and technological resources successfully and confidently.

Classroom Policies: This academic environment is open and harassment free. Always be respectful of other students and the instructor.

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.