



**HORT. 181 Specialty Food Crops**

**Credits: 2**

**Course Description:**

Production and physiological principles involved in growing vegetable, herb and fruit crops. Emphasis being placed on plants suitable for market gardening and farmer's markets.

**Course Objectives:**

- To understand general principles of vegetable, herb and fruit production
- To know specific facts about vegetable and fruit production
- Identification of common fruits and vegetables

**Instructor:** Keith Knudson

**Office:** Molberg 26

**Office Hours:** By Appointment

**Phone:** 701-228-5489

**Email:**

[keith.a.knudson@dakotacollege.edu](mailto:keith.a.knudson@dakotacollege.edu)

**Lecture/Lab Schedule:** Online

**Textbook(s):**

- 2019 or 2020 *Midwest Vegetable Production Guide for Commercial Growers* (free PDF download found here: <https://ag.purdue.edu/btny/midwest-vegetable-guide/Pages/default.aspx>)
- 2019 or 2020 *Midwest Fruit Pest Management Guide for Commercial Growers* - Purdue Agriculture (free PDF download found here: <https://ag.purdue.edu/hla/hort/documents/id-465.pdf>)
- *Midwest Home Fruit Product Agriculture* (see blackboard course):
- Territorial Seed Company Vegetable Seed Catalog (Order on-line) [www.territorialseeds.com](http://www.territorialseeds.com)
- Other related reading material will be provided by the instructor throughout the course.

**Lab Material Requirements**

**You may need to purchase these materials before the assignment of the lab. Listed below are the 3 course labs, the weeks they are assigned and the materials you will need to purchase. If there are any issues or are you are unable to perform the lab, you must contact the course instructor to make different arrangements at least 1 week before the lab is due. Since there is no cost for textbook purchase I believe these lab material costs are justified and reasonable.**

**Lab Assignment 1- Soil Testing for pH; Week 3 (There may be extensions to due date depending on soil temps)**

- Soil probe or **gardening trowel (hand shovel)** to gather soil samples
  - If you are located on or near DCB campus you may be able to borrow a soil probe from the DCB Greenhouse. Contact Instructor. Supplies are limited\*
- Plastic bucket for mixing soil samples
- **Roll of PH strips**
  - (These can be found at most hardware stores or purchased on Amazon. Here is a link to a product on amazon that would fulfil your needs.)
  - [https://www.amazon.com/dp/B005FYGXUC/ref=cm\\_sw\\_em\\_r\\_mt\\_dp\\_U\\_KbsHCbVWYCMAR](https://www.amazon.com/dp/B005FYGXUC/ref=cm_sw_em_r_mt_dp_U_KbsHCbVWYCMAR)
- Distilled water or Rainwater

**Lab Assignment 2-Value Added Product Recipe; Week 5**

- Ingredient's for you recipe
- Production unit for recipe (i.e. Stove, hot plate, food dehydrator, etc...)
- Digital picture taking device (phone, camera)

**Lab Assignment 3-Garden Design; Week 8**

**Course Requirements:**

**GRADING:** 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: **The instructor reserves the right to modify this syllabus and course requirements at any time.**

**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**

Week	Topics and Assignments <b>Tentative Course Outline:</b>
1 Introduction	Review: <b>Course syllabus</b> Watch: "Live recording of introduction to the class by instructor" ( <b>A scheduled time will be given to students to watch the introduction live and ask questions directly to the instructor</b> ) Read: <b>NDSU Publication: Growing Great Vegetables in ND</b> Watch: (Videos provided below) <ul style="list-style-type: none"> <li>• <b>How to Design and build a Vegetable Garden</b></li> <li>• <b>How to Grow Warm Season Vegetables</b></li> <li>• <b>How to Grow Cool Season Vegetables</b></li> </ul> Complete: <b>Week 1 Discussion Forum "Introduce Yourself"</b> (due Friday) (40 pts)
2 Keys to Successful Gardening	Read: <b>Midwest Vegetable Production Guide for Commercial Growers P.gs12-49</b> Review: <b>Keys to Successful Gardening PPT</b> Complete: <b>Week 2 Discussion Forum</b> (due Friday) (40 pts) Complete: <b>Week 2 Quiz</b> (Due Sunday) (30 pts)

Week	Topics and Assignments Tentative Course Outline:
3 Vegetable Cultural ID	<p>Read:</p> <ul style="list-style-type: none"> <li>• Skyscraper farms are about to go global – Finance &amp; Commerce</li> <li>• BBC - Future - How vertical farming reinvents agriculture</li> </ul> <p>Review: Vegetable Cultural ID Artichokes-Lettuce PPT</p> <p>Watch: Skyscraper Farms and Abandoned Warehouses video</p> <p>Complete: Week 1 Discussion Forum (due Friday) (40pts)</p> <p>Complete:</p> <ul style="list-style-type: none"> <li>• Lab Assignment 1- Soil Testing for pH (You will need to have purchased pH strips as stated in course syllabus and the Live Instructor course introduction) (100pts)</li> </ul>
4 Vegetable Cultural ID (continued)	<p>Read</p> <ul style="list-style-type: none"> <li>• Organic farming_ why we don't have more organic farms-National Geographic</li> <li>• Why Organic Food Might Be Worth the High Price _ Time</li> <li>• Agricultural Alternatives Organic Vegetable Production-Penn State Extension</li> </ul> <p>Review: Vegetable cultural ID Gourmet Greens – Tomatoes PPT</p> <p>Watch: NDSU Field to Fork - Spring 2018: Weed Management and Soil Fertility for Organic Vegetable</p> <p>Complete: Week 4 Discussion Forum (due Friday) (40pts)</p> <p>Complete: Week 4 Quiz (Due Sunday) (30pts)</p>
5 Herbs Cultural ID	<p>Read: NDUS From Garden to Table: Harvesting Herbs for Healthy Eating</p> <p>Review: Herbs PPT</p> <p>Watch: NDSU Field to Fork -Spring 2017 - "Herbs: From Growing to Packing"</p> <p>Complete: Week 5 Discussion Forum (due Thursday due to campus holiday) (40 pts)</p> <p>Complete: Lab Assignment 2- Value Added Recipe (You will have to purchase food ingredients for your value added recipe as stated in course syllabus and the Live Instructor course introduction) (100pts)</p>
6 Fruits	<p>Read: Midwest Home Fruit Product Agriculture Chapters 1,2, and 3</p> <p>Review:</p> <ul style="list-style-type: none"> <li>• Fruit Production ppt</li> <li>• Cool fruits for cold climates video pdf</li> </ul> <p>Watch: NDSU Field to Fork 2019: Cold Fruits for Cold Climates</p> <p>Complete: Week 6 Discussion Forum (due Friday) (40pts)</p> <p>Complete: Week 6 Quiz (Due Sunday) (30 pts)</p>
7 Value- Added Specialty Crop Products	<p>Read: What is Value-Added Agriculture-PennState Extension</p> <p>Complete: Selling Home-processed, Home-canned and Home Baked Foods Using Specialty Crops- NDSU Mini Course</p> <p>Complete: NDSU Mini Course Assignment (30 pts)</p> <p>Watch: Field to Fork - Spring 2018:' Developing and Selling Food Products That are Safe and Tasty' Video</p> <p>Review: Developing and Selling Food Products That are Safe and Tasty video pdf</p>
8 <b>Final Exam</b>	<p>Complete: Lab Assignment 3- Garden Design (100 pts)</p> <p><b>Final Exam Due!!!! (150 pts)</b></p>

### CTE Competency/Department Learning Outcome(s):

- Employ industry-specific skills in preparation for workplace readiness
- Combine general education and vocational skills curriculum
  - Horticulture LO 3. Demonstrate critical thinking and decision making skills.

**Relationship to Campus Focus:**

Everything we do in the horticulture industry is based on Nature and the use of plants in their proper places. Through technology, we continue to develop new cultivars in order to satisfy our changing consumer base. We must constantly change so we will be able to attract the consumer of the future to our stores rather than the box stores. This course will also investigate into the good, bad and ugly of international commerce and trade issues that affect the horticulture industry.

**Classroom Policies:** N/A

**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.

**Plagiarism:** The strength Dakota College at Bottineau depends on academic and personal integrity. In this course, you must be honest and truthful. Plagiarism is the use of someone else's work, words, or ideas as if they were your own. Here are three reasons not to do it:

- By far the deepest consequence to plagiarizing is the detriment to your intellectual and moral development: you won't learn anything, and your ethics will be corrupted.
- Giving credit where it's due but adding your own reflection will get you higher grades than putting your name on someone else's work. In an academic context, it counts more to show your ideas in conversation than to try to present them as *sui generis*.
- **This means absolutely not cut and pasting directly into your assignment from other sources. I want everything is your own words!**
- Finally, all students are expected to adhere to the highest standards of academic integrity. Students must complete all work themselves. Cheating or plagiarism is a serious offense and is subject to disciplinary action by the instructor and the college administration. Please be sure to review the **Student Handbook. The consequences of plagiarism in this class depend on the level exhibited, but are at a minimum a failing grade on the assignment up to failing the class.**

**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.