

Course Prefix/Number/Title: **PLSC 110 World Food Crops**

Number of Credits: 3

Course Description: Scientific principles of crop growth, worldwide production, management alternatives, and processing for domestic and international consumption.

Pre-/Co-requisites: None

Course Objectives:

1. Summarize the history of agriculture and more specifically the study of the evolution of agricultural practices, various world food habits, and feeding the world.
 - a. Students will gain an understanding of its history and our current agricultural practices.
 - b. Students gain an understanding of the affects of human civilization, geographical, technological, and societal influence on present day food production.
2. Explain the well-defined system of crop classification, plant anatomy, plant physiology, and growth.
 - a. Students will demonstrate critical learning skills in plant classification.
 - b. Students will present and discuss plant anatomy and physiology.
3. Identify and evaluate food diets and fuel use in various parts of the world.
 - a. Students will identify macronutrients and micronutrients contained in different food sources and explain their importance as a dietary source.
 - b. Students will research energy opportunities from plants.
4. Explain factors affecting plants that are based on contributions from breeding, genetic modification, and agroecosystems.
 - a. Students will discuss ethics on cross breeding and genetically modified plants.
 - b. Students will gain knowledge of benefits and consequences derived from new crop varieties

Instructor: Linda Burbidge, PhD; Jerry Migler, PhD

Office:

Dr. Burbidge: Molberg 20

Dr. Migler: Dean's Office, Thatcher Hall

Office Hours:

Dr. Burbidge: In-person: MW 2:00pm – 3:00pm; Virtually: H 2:00pm – 3:00pm; or by appointment

Dr. Migler: In-person: W 3:00 – 4:00 pm

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Lecture/Lab Schedule: TH 8:00am-9:20am, Molberg 28 and IVN

Textbook(s): Sheaffer, C. C. and Moncada, K. M., 2012 *Introduction to Agronomy: Food, Crops, and Environment 2nd Ed.* Delmar, Cengage Learning, Clifton Park, NY.

Course Requirements:

Students' knowledge and understanding of the reading and supplemental materials will be assessed through exams, critical thinking assignments, and presentations. Grading is based on a standard curve, where students earn a grade based upon the percent of total possible points they obtain. Although, slight modification may occur based on the discretion of the instructors. The course consists of 350 points. There will be a one week grace period to make up any missed exam or assignment. Any missed exam or assignment not submitted in the allotted time will be given a zero.

Requirement	Points
Critical Thinking Assignments 5 @ 30 points each	150
Unit Exams 4 @ 50 points each	200
Total	350

Grading in this course will be a letter grade.

Letter Grade	Points (Percent)
A	313 – 350 (89.5% - 100%)
B	278 – 312 (79.5% - 89.5%)
C	243 – 277 (69.5% - 79.5%)
D	208 – 242 (59.5% - 69.5%)
F	<208 (<59.5%)

Tentative Course Outline:

Week of:	Chapter		Topics
Aug 24 - 28	1		Introductions/History of Agriculture
Aug 31 - Sept 4	2		Agriculture Today
Sept 7 - 11	3		Feeding the World
Sept 14 - 18		Exam #1	Review/Exam
Sept 21 - 25	4		Crop Classification
Sept 28 - Oct 2	7		Plant Anatomy and Morphology
Oct 5 - 9	8		Plant Physiology and Growth
Oct 12 - 16		Exam #2	Review/Exam
Oct 19 - 23	5		Food and Energy from Plants
Oct 26 - Oct 30	6		Chemistry of Food and Plants
Nov 2 - 6		Exam #3	Review/Exam
Nov 9 - 13	9		Improving Plants
Nov 16 - 20	10		Environment
Nov 23 - 27	11		Agroecosystems/Review
Nov 30 - Dec 4	19	Exam #4	Exam/Grasses
Dec 7 - 11	20, 21		Legumes/Other Crops
Dec 14 - 18	Review	Exam #5	Exam #5

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. Expand critical thinking competence
 - a. Understand global and social interdependencies as they relate to agriculture and food crops.
 - b. Describe the important factors in plant health, growth, and nutrient density.
 - c. Discuss benefit and consequences of the evolution of our food system from production to consumption.

Relationship to Campus Focus: This course is part of our Agricultural Management and Technology Program and it addresses the campus theme of Nature, Technology, and Beyond through learning about

natural resources and how best to utilize each resource. The latest technology is discussed and demonstrated.

Classroom Policies: Be polite and respectful of the instructor, other students, and any guests in our class. We will follow any COVID-19 classroom policies currently in force by the University system.

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.