PLSC 225 Principles of Crop Production

COURSE SYLLABUS
Class Number # Merged Online Courses: **16038**
Fall 2020
(25 August—21 Dec, 2020)

INSTRUCTOR:
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Office Hours: Tues, Thurs 2:00 PM- 3:00 PM, or by appointment

CATALOG DESCRIPTION: Introduction to basic principles of plant science and field crop production with emphasis on relationships of crops to their climate and production considerations as a means of managing resources and the environment.

CREDIT HOURS: 3 Credits (includes laboratory)

CLASS HOURS: Online/Blackboard/Microsoft Teams. Laboratory incorporated into lecture

PREREQUISITES: None

REQUIRED TEXTBOOK: Scheaffer, C, and K Moncada. 2012. Introduction to Agronomy: Food, Crops, and Environment. 2nd Edition. Delmar, Cengage Learning.

MATERIALS OF INSTRUCTION: Textbook, website, handouts and Cooperative Extension documents.

LOCATION: Blackboard/Online

NOTE: It is the responsibility of the student to read, understand and apply the information available in the Lake Region State College 2017- 2019 catalog and this syllabus.

LRSC PHILOSOPHY OF GENERAL EDUCATION *(Lake Region State College Catalog 2017-2019, pp. 4-5)***:**

I. An educated person must have a critical appreciation of society and of self. This includes some understanding and experience in thinking about moral and ethical problems which enable an educated person to make discriminating moral choices – *personal/interpersonal skills.*

3. To apply knowledge gained in the educational process and use that knowledge in everyday living – *apply knowledge to the real world*

II. An educated person must be able to think, speak, and write effectively – *communication/thinking skills.*

3. To use information objectively for solving problems and arriving at alternative solutions – *problem-solving skills*

5. To nurture creative thinking and intellectual curiosity through opportunities and incentives and to encourage attempts at different, divergent solutions to open-ended questions, problems, and situations – *creativity/intellectual curiosity*

V. An educated person must have an informed acquaintance with and an appreciation for science and mathematics and their contributions to society – *mathematics/ sciences applications.*

2. To understand and appreciate the natural physical environment of the planet Earth, thus promoting an ethic of stewardship and ecology – *environment*

4. To foster an attitude of intellectual inquiry and methodology which will expand one's view of the universe and the place of humanity within it – *scientific method/inquiry*

VII. An educated person must have a continued commitment to life-long learning – *life-long learning experiences/skills.*

1. To develop a pattern of intellectual curiosity and inquiry which promotes life-long learning – *value of life-long learning*

CAREER AND TECH EDUCATION DIVISION MISSION STATEMENT *(Lake Region State College Catalog 2017-2019, p. 41)*:

The Trade and Technical Division offers various specialized programs. The division frequently assesses industry trends and standards and alters curricula to ensure the quality of its programs. It is the mission of the Trade and Technical Division to provide students with current knowledge and training necessary for immediate entry into various specialties within the job market.

COURSE OBJECTIVES

This course introduces basic principles of plant science and field crop production with emphasis on relationships of crops to their climate and production considerations as a means of managing resources and the environment. Student will gain knowledge of the factors necessary for the profitable production of North Dakota crops. Throughout the semester students will travel to various agricultural fields/shows and agricultural extension research centers around North Dakota.

STUDENT OUTCOMES/Competencies:

Upon completion of this class student will be able to:

A. Classify crops into botanical classifications.

B. Identify, understand, and integrate processes related to pollination, germinating seeds, plant nutrients, and factors affecting photosynthesis, respiration, and transpiration.

C. Identify, understand, and integrate the key agronomic production practices (cultivar selection, seeding date, seeding rate, seeding depth, and fertility, pest (IPM), and harvest management.

D. Identify, understand, and integrate the key factors (climate, soils, transportation, processing, markets) affecting crop distribution and performance in North Dakota, the northern Great Plains, the United States, and other countries.

E. Describe the key agronomic production practices, life cycles (growth staging), and water requirements for cereal grains, corn, soybean, canola, dry bean, and sunflower and be capable of applying these to other similar crops.

F. List and describe factors important in stand establishment (crop emergence type, seed germination and vigor, seeding depth, soil moisture, seeding date)

G. List and describe factors in the replanting decision process.

H. Discuss crop growth and development and gain a basic understanding of growth factors (genetic potential, nutrients, light, water, temperature, and growing season duration) associated with crop performance, and identify critical crop developmental stages for limitations in growth factors.

I. Compare and contrast value-added production systems and how they enhance sustainability.
J. Describe the effects of new technologies on sustainable agriculture.
K. Describe the importance and components of sustainable agriculture and how they relate to a profitable crop production system.

MAJOR UNITS OF INSTRUCTION FROM THE TEXTBOOK:

1	Chapter 4	Classifying and Naming Crops
2	Chapter 7	Plant Anatomy and Morphology
3	Chapter 8	Plant Physiology and Growth
4	Chapter 9	Improving Plants
5	Chapter 10	Environment
6	Chapter 11	Agroecosystems
7	Chapter 12	Soils
8	Chapter 13	Cropping Systems
9	Chapter 14	Tillage and Crop Establishment
10	Chapter 15	Weeds
11	Chapter 16	Plant Disease and Insects
12	Chapter 17	Harvesting
13	Chapter 19	Crop Profiles: Grasses
14	Chapter 20	Crop Profiles: Legumes
15	Chapter 21	Crop Profiles: Other Crops
16	Chapter 18	Organic Amendments in Agriculture

ASSESSMENT TOOLS:

Exam I	150 pts	12%
Exam II	150 pts	12%
Exam III	150 pts	12%
Final Exam IV	200 pts	16%
Online Labs	400 pts	15%
Online Quizzes	150 pts	15%
Reflective Papers	100 pts	8%
Crop Profile Reports	100 pts	10%
Course Total	**1400 pts**	**Total: 100%**

GRADING SCALE:

90-100% = A
80-<90% = B
70-<80% = C
60-<69% = D
0-<60% = F

ATTENDANCE:

Class attendance contributes significantly to academic success. Students who attend class regularly earn higher grades and have higher passing rates in courses. In addition to exams, a significant portion of your grade will be determined by lab assignments and quizzes that will be completed in class. Exams may only be made up in cases of excused absence due to illness, hospitalization, or family emergency. **If you become ill or an emergency situation comes up, please notify us as soon as possible.** If you miss an extended period due to illness, you will need a doctor's excuse. Labs may not be made up due to any absence.

ACADEMIC HONESTY:

Plagiarism takes the words and/or ideas of another and uses them as your own without giving appropriate credit to the original source. Any clear violations of these standards and others such as cheating, or violating copyright laws, are handled promptly, firmly, privately, and fairly by the instructor. Other examples of scholastic dishonesty and the grievance process can be found in the LRSC Student Catalogue. Students who either intentionally or unintentionally practice plagiarism will receive a grade of zero for that assignment. Additionally, instructors have the ability to have students submit assignments through TurnItIn via Pearson Learning Studio or the website www.turnitin.com the website will provide plagiarism check of similar content, citations and sources, provide feedback on grammar, spelling and word usage and critiques on writing from Pearson professional tutors.

1st Offense: Since it is impossible to evaluate a plagiarized paper, no credit can be given. At the discretion of the instructor, a student may also be:

Assigned a reduced grade for the course
Allowed to rewrite and submit the assignment for credit

2nd Offense: Dismissed from the class with a failing grade

Please go to the following site for resource information on Plagiarism:
http://www.academicplagiarism.com
Use the following sites to check your papers for plagiarism:
http://www.plagtracker.com

If you are caught copying another person's assignment, quiz, or test or knowingly allow a classmate to copy your work, you will be given an automatic grade of 0 on that assignment. **Students are expected to adhere to the Student Code of Conduct as listed in the Lake Region State College 2017-2019 catalog pages 38-40. Scholastic dishonesty is addressed in the Lake Region State College catalog on page 38.**

ACCOMODATIONS:

If you need special accommodations because of a disability, we will gladly work to meet your needs. Please let us know if you need any special accommodations of the curriculum, instruction, or assessments of this course to enable you to participate fully. We will keep any information you share with us confidential**.**

CELL PHONES, TEXTING, AND COMPUTERS

Please silence your cell phones and put them away during class. Phones are very disrupting for you, your instructors, and your classmates. Computers should be stowed away during class unless we tell you that you need them for an assignment. If you abuse these policies, you may be asked to leave.

Tentative Course Schedule
PLSC 225 Fall, 2020

Dates	Content	Quiz & Projects
August 24-26	Syllabus, Introduction Lecture: Chapters 1,2 & 3 Classifying and Naming Crops	Watch Lecture & Complete Quizzes 1,2,3 by midnight on **Aug 26th, 2020** **Individual reading of the chapters 1-3**
August 27-31	Lecture: Chapter 4,5,6, Plant Anatomy and Morphology	Watch Lecture & Complete Quizzes 4,5,6 Complete & Submit all the Chapter 1-5 related assignments by midnight on **Aug 31st, 2020**
September 1-4	Lecture: Chapter 7,8 Plant Physiology and Growth Online Lab 1 Plant Growth & Staging	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 7-8 related assignments by midnight on **Sept 8th, 2020**
September 8-11	Lecture: Chapter 9 Improving Plants Online Lab 2 Plant Variety Selection	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 9 related assignments by midnight on **Sept 14th, 2020**
September 14-18	Lecture: Chapter 10 & 11 Environment & Agroecosystems **Exam 1**	Complete Exam 1 by Midnight on the last day of **Sept 21st , 2020**
September 21-30	Lecture: Chapter 12 Plant & Soil Relationships	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 10 & 11 related assignments by midnight on **Sept 30th, 2020**
October 1-4	Lecture: Chapter 12 Soils Online Lab 3 Nutritional Needs of Plants	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 12 related assignments by midnight on **Oct 5th, 2020**
October 5-9	Lecture: Chapter 13 Cropping Systems Online Lab 4 Plant Diseases	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 13 related assignments by midnight on **Oct 12th, 2020**
October 12-16	Lecture: Chapter 14 Tillage and Crop Establishment **Exam 2**	Complete Exam 2 by Midnight on the last day of **Oct 19st , 2020**
October 19-23	Lecture: Chapter 15: Weeds Online Lab 5 Corn Diseases	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 14&15 related assignments by midnight on **Oct 24th, 2020**
October 26-30	Lecture: Chapter 16 Plant Disease and Insects Online Lab 6 Soybean Diseases	Watch Lecture & Complete Quiz Complete Quiz Complete & Submit all the Chapter 16 related assignments by midnight on **Oct 30th, 2020**
November 2-6	Lecture: Chapter 19 Crop Profiles:	Watch Lecture & Complete Quiz Complete Quiz Complete & Submit all the Chapter 19 related assignments by midnight on **Nov 9th, 2020**

November 9-13	Lecture: Chapter 19 Crop Profiles: **Exam 3**	Complete Exam 2 by Midnight on the last day of **Nov 16th, 2020**
November 16-20	Lecture: Chapter 19 Crop Profiles: Grasses Online Lab 7 Alfalfa Diseases	Watch Lecture Complete Quiz
November 23-30	Lecture: Chapter 20 Crop Profiles: Grasses	Complete & Submit all the Chapter 20 related assignments by midnight on **Nov 30th, 2020**
December 1-4	Lecture: Chapter 17 & 18 Organic Agriculture & Harvesting Online Lab 8 Wheat Diseases	Watch Lecture Complete Quiz Complete & Submit all the Chapter 17 &18 related assignments by midnight on **Dec 6th, 2020**
December 7-11	**Finals week**	
December 14-18	**Final Exam 4**	

Schedule and assignments are subject to change. Laboratory exercises and assignments will be incorporated into the lecture periods.