

## SOIL 210 INTRODUCTION TO SOIL SCIENCE

### COURSE SYLLABUS

Class Number # Merged Online Courses 16478

Fall 2020

(24 August—18 Dec 2020)

#### **INSTRUCTOR:**

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LRSC North Campus

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**COURSE DESCRIPTION:** Introduction to basic principles of soil science and the study of soil properties such as physical, chemical, and biological and how each relates to the crop production resources and the environment.

**CREDIT HOURS:** 3 Credits (includes laboratory)

**CLASS HOURS:** Lecture and Laboratory online

**PREREQUISITES:** None.

**REQUIRED TEXTBOOK:** Plaster, Edward J. 2014. Soil Science and Management. 6<sup>th</sup> Edition. Delmar, Cengage Learning.

**MATERIALS OF INSTRUCTION:** Textbook and website

**LOCATION:** LRSC online campus

**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.

#### **General Education Objectives**

I.3 Apply Knowledge to the Real World

I.6 Values and Ethics

II.3 Problem Solving Skills

III.2 Understand World Events

V.2 Environment

V.4 Scientific Method/Inquiry

VII.1 Value of Lifelong Learning

VII.2 Adapt to the future

#### **TRADE AND TECHNICAL DIVISION MISSION STATEMENT:**

*(Lake Region State College Catalog 2017-2019, p. 40):* 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 soil science. Emphasis is placed on managing soil in a sustainable manner to maximize production and profitability of crops while maintaining and improving soil quality for future generations.

**STUDENT OUTCOMES/COMPETENCIES:**

Upon completion of this course, students will be able to:

- Explain the functions of soil
- Understand soil components, soil forming factors, and basic taxonomy of soils.
- Understand physical properties of soil related to structure, texture, porosity, and water holding capacity of soils
- Understand basic chemical properties of soil
- Understand biological properties of soil, and types and functions of soil organisms and their effects on soil quality
- Understand land use management and soil conservation in modern crop production
- Describe the effects of erosion, water management, and crop residue on the sustainability of soils for crop production.

**MAJOR UNITS OF INSTRUCTION:**

- Chapter 1. The Importance of Soil
- Chapter 2. Soil Origin and Development
- Chapter 3. Soil Classification and Survey
- Chapter 4. Physical Properties of Soil
- Chapter 5. Life in the Soil
- Chapter 6. Organic Matter
- Chapter 7. Soil Water
- Chapter 8. Water Conservation
- Chapter 9. Drainage and Irrigation
- Chapter 16. Tillage and Cropping Systems
- Chapter 18. Soil Conservation
- Chapter 19. Urban Soil
- Chapter 20. Government Agencies and Programs

<b>Assessment Tools</b>			<b>Grading Scale:</b>
Exam I	50 pts		A =90-100%
Exam II	50 pts		B =80-90%
Exam III	50 pts		C =70-80%
Final Exam	50 pts		D =60-70%
Quizzes	100 pts		F =0-60%
Labs	200 pts		
Assignments	150 pts		
<b>Total Points</b>	650 pts		

**ATTENDANCE:** Regular attendance and participation are important parts of this course. Participation in class discussions is required.

**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](http://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.

**1<sup>st</sup> 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

**2<sup>nd</sup> Offense: Dismissed from the class with a failing grade**

Please go to the following site for resource information on Plagiarism:

[http://www.academicplagiarism.com/?page\\_id=109](http://www.academicplagiarism.com/?page_id=109)

Use the following sites to check your papers for plagiarism:

<http://www.plagtracker.com>

<http://www.dustball.com/cs/plagiarism.checker/>

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 38-39. Scholastic dishonesty is addressed in the Lake Region State College catalog on page 39.**

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

**Note: This is a merged online course, therefore some of the laboratory assignments will be assigned to each individual group. I will email laboratory assignments for each group separately with instructions to complete.**

### Tentative Class Schedule

Dates	Chapters	Assignments
<b>August 24-26</b>	Review of Basic Science	Watch Lecture & Complete Quiz by midnight on <b>Aug 26<sup>th</sup>, 2020</b>
<b>August 27-31</b>	Chapter 1 The Importance of Soil: Life in Soil Series:	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 1 related assignments by midnight on <b>Aug 31<sup>st</sup>, 2020</b>
<b>September 1-4</b>	Chapter 2 Soil Origin and Development <b>Lab 1</b>	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 2 related assignments by midnight on <b>Sept 8<sup>th</sup>, 2020</b>
<b>September 8-11</b>	Chapter 3 Soil Classification & Survey	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 3 related assignments by midnight on <b>Sept 14<sup>th</sup>, 2020</b>
<b>September 14-18</b>	<b>Exam will cover Chapters 1-3 Lab 2</b>	<b>Exam 1</b> Complete Exam 1 by Midnight on the last day of <b>Sept 21st, 2020</b>
<b>September 21-30</b>	Chapter 4 Physical Properties of Soil	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 4 related assignments by midnight on <b>Sept 30<sup>th</sup>, 2020</b>
<b>October 1-4</b>	Chapter 5 Life in the Soil <b>Lab 3</b>	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 5 related assignments by midnight on <b>Oct 5<sup>th</sup>, 2020</b>
<b>October 5-9</b>	Chapter 6 Organic Matter	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 6 related assignments by midnight on <b>Oct 12<sup>th</sup>, 2020</b>
<b>October 12-16</b>	<b>Exam will cover Chapters 4-6 Lab 4</b>	<b>Exam 2</b> Complete Exam 2 by Midnight on the last day of <b>Oct 19<sup>st</sup>, 2020</b>
<b>October 19-23</b>	Chapter 7 Soil Water	Watch Lecture & Complete Quiz Complete & Submit all the Chapter 7 related assignments by midnight on <b>Oct 24<sup>th</sup>, 2020</b>
<b>October 26-30</b>	Chapter 8 Water Conservation <b>Lab 5</b>	Watch Lecture & Complete Quiz Complete Quiz Complete & Submit all the Chapter 8 related assignments by midnight on <b>Oct 30<sup>th</sup>, 2020</b>

<b>November 2-6</b>	Chapter 9 Drainage & Irrigation	Watch Lecture & Complete Quiz Complete Quiz Complete & Submit all the Chapter 8 related assignments by midnight on <b>Nov 9<sup>th</sup>, 2020</b>
<b>November 9-13</b>	<b>Exam will cover Chapters 7-9 Lab 6</b>	<b>Exam 3</b> Complete Exam 2 by Midnight on the last day of <b>Nov 16<sup>th</sup>, 2020</b>
<b>November 16-20</b>	Chapter 16 Tillage & Cropping Systems	Watch Lecture Complete Quiz
<b>November 23-30</b>	Chapter 16 Tillage & Cropping Systems Cont. <b>Lab 7</b>	Complete & Submit all the Chapter 16 related assignments by midnight on <b>Nov 30<sup>th</sup>, 2020</b>
<b>December 1-4</b>	Chapter 18 Soil Conservation <b>Lab 8</b>	Watch Lecture Complete Quiz Complete & Submit all the Chapter 18 related assignments by midnight on <b>Dec 6<sup>th</sup>, 2019</b>
<b>December 7-11</b>	Course Review	Complete & Submit all the course related assignments by midnight on <b>Dec 14<sup>th</sup>, 2020</b>
<b>December 14-18</b>	<b>Final Exam is Comprehensive Exam will cover Chapters 1-18</b>	<b>Final Exam</b> Complete the Final Exam by Midnight on the last day of <b>Dec 18<sup>th</sup>, 2020</b>

**Schedule and assignments are subject to change. Unannounced quizzes may be given.**

**Note: This is a merged online course, therefore some of the laboratory assignments will be assigned to each individual group. I will email laboratory assignments for each group separately with instructions to complete and deadlines.**