

**Instructor Name:** See Instructor Information in Modules

**Subject:** AGR **Course Number:** 2314 **Course Title:** Basic Soils

**Course Credit Hours:** 4

### **Course Description**

A general course in soils designed to give the student a basic understanding of all important phases of the subject, including soil genesis, morphology, classification and the physical, chemical and biological aspects of soils as applied to soil fertility and soil management, including fertilization and liming.

**Textbook Name and ISBN#:** Inclusive Access Course Materials (eText provided through course fees assessed upon enrollment). Access the textbook through the Red Shelf link in Canvas.

Edward J. Plaster. 2014. Soil Science & Management (Sixth Edition). Delmar Publishers. ISBN: 978-0-8400-2432-9

### **Student Learning Outcomes**

#### **Module 1 Learning Outcomes**

1. Summarize ecological functions of soil and its role in recycling resources needed for plant growth.
2. Describe the four ways plants use soil.
3. Explain how soil is a three-phase system
4. List and explain some agricultural and engineering uses of soil.
5. Discuss the concept of soil quality.
6. Describe briefly the role of soil in climate change.

#### **Module 2 Learning Outcomes**

1. Define a soil body.
2. List examples of the five soil formation factors.
3. Describe how soils develop.
4. Describe the master horizons of the soil profile

#### **Module 3 Learning Outcomes**

1. Describe the concept of soil texture and its importance.
2. Identify the texture of a sample of soil.
3. Describe soil permeability and related properties.
4. Describe structure and its formation and importance.
5. Explain other physical properties.
6. Discuss soil compaction and tilling.

#### **Module 4 Learning Outcomes**

1. Identify the role of water in plant growth.
2. Define the forces that act on soil water.
3. Classify types of soil water.
4. Discuss how water moves in the soil.
5. Explain how plant roots remove water from the soil.
6. Describe how to measure soil water content.

#### **Module 5 Learning Outcomes**

- 1.Explain the source of our fresh water supplies.
- 2.Explain the need for water conservation.
- 3.Describe ways to make better use of water.
- 4.Discuss water quality.

#### Module 6 Learning Outcomes

- 1.Define drainage and explain its importance
- 2.Explain the difference between wetlands and wet soils.
- 3.Identity methods of artificial drainage.
- 4.Identity methods of irrigation.
- 5.Decide when and how much to irrigate.
- 6.Name water quality problems for irrigation.
- 7.Explain natural soil moisture regimes

#### Module 7 Learning Outcomes

- 1.Define the carbon cycle and explain its importance.
- 2.Briefly describe soil organisms.
- 3.List ways that soil organisms are important.
- 4.Describe how to promote populations of beneficial soil organisms.

#### Module 8 Learning Outcomes

- 1.Explain what organic matter is and how it forms.
- 2.Describe what organic matter does in the soil.
- 3.List several ways to maintain soil organic matter.
- 4.Discuss the problem of nitrogen immobilization.
- 5.Define organic soil, and list its uses and problems.
- 6.Discuss soil organic matter and climate.

#### Module 9 Learning Outcomes

- 1.Name and classify the essential elements
- 2.List four sources of nutrients in the soil.
- 3.Describe soil colloids.
- 4.Define cation exchange capacity and related terms.
- 5.Describe how plants absorb nutrients.
- 6.Explain other soil fertility factors.

#### Module 10 Learning Outcomes

- 1.Describe soil pH and its development.
- 2.Describe how pH affects plant growth.
- 3.Tell how to lime or acidify soils.
- 4.Perform lime calculations.
- 5.Describe saline and sodic soils.
- 6.Describe methods to treat and manage saline and sodic soils.

#### Module 11 Learning Outcomes

- 1.Discuss nitrogen nutrition and the nitrogen cycle.
- 2.Discuss phosphorus nutrition.
- 3.Discuss potassium nutrition.
- 4.Answer questions about the secondary nutrients.
- 5.Answer questions about trace elements.

#### Module 12 Learning Outcomes

- 1.Distinguish forms of fertilizers.
- 2.Describe fertilizer sources for each nutrient.
- 3.Perform important fertilizer calculations
- 4.Describe how to use fertilizers.

5. List two effects fertilizers have on the soil.

### **Instructional Techniques**

Conversational lecture, Chapter quizzes, Three major tests, Final exam

### **Attendance Policy**

It is the intent of the Itawamba Community College Board of Trustees that opportunities for student success and the development of personal responsibility be a high priority for the College. One of the key factors in this endeavor is class attendance. In keeping with this intent, Itawamba Community College's faculty maintain attendance records for all classes offered by the College. It is the student's responsibility to attend class.

#### **Online Class Attendance**

Students are expected to attend all classes and complete all coursework prescribed by the instructor. For online classes, submission of module assignments constitutes attendance. Attendance is counted from the first scheduled class meeting following enrollment. If a student is absent more than 15 percent of the class time (3 absences), he/she will be dropped from the class. It is the student's responsibility to monitor his/her class attendance to avoid being dropped from class.

#### **All Classes - Class Reinstatement**

A student who has been dropped from class because of excessive absences may request reinstatement to the instructor prior to the next scheduled meeting or assignment due date after the student has been notified of the drop. If the instructor denies admission, the student may appeal to the Dean of eLearning Instruction, or Vice President of Instructional Services, within 24 hours following the request to the instructor.

#### **All Classes - Appeals**

Students who are not readmitted to class may appeal the decision to the Vice President of Instructional Services who will convene a committee to hear the appeal if the appeal is not otherwise resolved. The appeal must be made in writing to the appropriate dean or Vice President of Instructional Services within two school days following denial of readmission. The appeal must include documentation that absences resulted from by an emergency or an extenuating circumstance. The decision of the committee may be appealed to the President of the College whose decision will be final.

### **Grading System**

ASSIGNMENT Points each Percentage of final grade

Module quizzes 25 25%

Module lab quizzes 25 15%

Module writing assignments 10 10%

Mid-term 120 25%

Final exam 120 25%

### **Grading Scale**

<b>Grade</b>	<b>Percentage</b>
A	90-100
B	80-89
C	70-79
D	60-69
F	Below 60

### **Course Specific Information**

### **Academic Honesty Policy**

Itawamba Community College is committed to academic honesty and scholarly integrity. Cheating and plagiarism erode the educational and social values of the College and deprive students of knowledge, skills and character traits valued in the community.

Cheating is the act of deception by which a student misleadingly demonstrates that he/she has mastered information or skills on an academic exercise. Cheating includes, but is not necessarily limited to:

- submitting work that is not the student's own, including papers, assignments or exams
- supplying or receiving in any way unauthorized information for the preparation of a test, exam, or assignment
- communicating during a test/exam with the intent of copying from or supplying information to another student
- taking a test/exam with the aid of cheat sheets, notes, or other unauthorized assistance
- improperly using technology including copying or receiving information from others, accessing computer files without authority, and altering records
- assisting any person committing an act of academic dishonesty.

Plagiarism is the representation of previously written, published or creative work as one's own. Examples include, but are not limited to:

- representing any scholarly work of others, such as musical compositions, computer programs, visual arts, as one's own.
- offering as one's own work the words, ideas, or arguments of other persons without appropriate credit
- falsifying bibliographies.

**First Offense:** The student will receive a "0" for the assignment. The student may not drop this grade.

**Second Offense:** The student will receive an "F" for the course.

**Third Offense:** The student will be suspended from the college for two calendar years.

### Gender-Based Misconduct

Itawamba Community College is committed to providing an environment free from gender-based discrimination and misconduct. Itawamba Community College will not tolerate gender-based misconduct of any kind. For more information, please visit <http://www.iccms.edu/Portals/0/docs/publications/studentguide.pdf>.

#### On-Campus Services

The College will provide options for interim and ongoing support to students who have experienced any form of gender-based misconduct. These options include, but are not limited to, changes in residential assignments, classroom or employment, no-contact orders and/or academic support. These services may be accessed through the following offices:

- Director of the Tupelo Campus, Student Support Center, Tupelo/Belden, 662.620.5015
- Director of Housing, David C. Cole Student Services Building, Fulton, 662.862.8232
- Dean of Students/Title IX Coordinator, David C. Cole Student Services Building, Fulton, Tupelo/Fulton/Belden, 662.862.8271

#### Campus Police

- Fulton Campus Police, Student Activities Center, 662.862.8300 or 662.687.2750
- Tupelo Campus Police, Student Services Building, 662.620.5300 or 662.687.2751
- Belden Center Police, Belden Center, 662.407.1570 or 662.687.2752

#### Off-Campus Services

Additional services such as counseling and medical exams may be accessed off-campus. Referrals may be made by the above-listed offices. If a student wishes for his/her identity and details of the incident be kept confidential, off-campus victims' services and medical services providers can maintain confidentiality.

- SAFE (24-hour/confidential) 1.800.527.7233
- North Mississippi Medical Center (Tupelo) 662.377.3000
- Fulton Medical Clinic 662.862.5200

**If there is an emergency or to seek criminal remedy, contact 911 or:**

- Fulton Police Department 662.862.2299

- Itawamba County Sheriff's Office 662.862.5575
- Tupelo Police Department 662.841.6491
- Lee County Sheriff's Office 662.841.9040

For more information on gender-based misconduct, see Board Policy JCA-R.

### **Student Conduct for the Classroom**

Students who register at Itawamba Community College agree to conform to its regulations and policies and are subject to disciplinary action upon violation of these regulations and policies. Any student found to have committed the following misconduct is subject to the disciplinary action as outlined in the *Student Guide*.

Misconduct includes, but is not limited to:

- Obstruction or disruptions of teaching, research, administration, public service functions, the flow of vehicular or pedestrian traffic or other college activities.
- Physical assault, abuse or detention of any person, or conduct which endangers the health or safety of any person.
- Theft of or damage to property of the College or property of a member of the college community or a visitor to the College.
- Abusive or profane language or public displays of affection not in keeping with good taste and high moral standards.
- Violations of established college policies and regulations.
- Violations of residence hall rules and regulations.
- Harassment, intimidation or bribery of any student, faculty or staff. Harassment is considered to be words, behaviors and/or actions which intentionally inflict serious mental or emotional distress on others and/or disrupt the educational environment, including electronic communication. Actions which are abusive or disrespectful in nature that are directed toward college officials.
- Only authorized electronic devices are allowed in the classroom.

For a full listing of the Code of Student Conduct, visit the following link and view pages 13-22 of the *Student Guide*: <http://www.iccms.edu/Portals/0/docs/publications/studentguide.pdf>

#### **On Campus Class Attendance**

Students are expected to attend all classes and complete all coursework prescribed by the instructor. Attendance is counted from the first scheduled class meeting following enrollment. If a student is absent more than 15 percent of the class time, he/she will be dropped from the class. Three tardies will count as an absence. A tardy is recorded if a student enters the classroom after instruction begins or leaves during class time. It is the student's responsibility to monitor his/her class attendance to avoid being dropped from class.

#### **Absences in Special Admission Programs**

Some of the College's educational programs have special attendance requirements because of the nature of the subject matter taught, clinical components and/or state or national accreditation. Where this is the case, these requirements will be communicated to the student in the course syllabus.

#### **On Campus Work Missed Because of College-Sanctioned Activity**

It is the student's responsibility to notify the instructor when attending a college-sanctioned activity and to make arrangements for missed notes, assignments and/or tests. These arrangements should be made prior when possible. If arrangements are not made prior to the activity, the student is responsible for contacting the instructor upon returning to class to determine what missed assignments and/or tests will be completed.

### **Supportive Services**

Itawamba Community College's Office of Supportive Services provides services to individuals who are members of special populations. Under the Carl D. Perkins Vocational and Technical Education Act of 1998, special populations include

- Individuals with disabilities;
- Individuals from economically disadvantaged families, including foster children;
- Individuals preparing for nontraditional training and employment;

- Single parents (teens and adults), including single pregnant females;
- Displaced homemakers; and
- Individuals with barriers to educational achievement, including individuals with limited English proficiency.

The Office of Supportive Services coordinators serve as liaisons between instructors, students and school officials; facilitate student learning and assist students with the transition from school to work.

#### Americans with Disabilities Act

In accordance with section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA), a student with a documented disability may apply to the Office of Supportive and Disability Services for accommodations. Assistance and information on the Fulton Campus may be obtained in the Student Services Building (662.862.8173) or on the Tupelo Campus, Student Support Building (662.620.5314).