Principles of Forest Soils

Syllabus

Instructor: Kenneth W. Farrish  
Room 108 Forestry Lab Building  
(936) 468-2475  
kfarrish@sfasu.edu  
Office hours: M and W 8:00 - 10:30am  
T and Th 8:00 – 9:00am and 1:30 to 2:30pm

Department: Forestry  
Lecture: 9:30 to 10:20am TR, Live ZOOM format

Laboratory Instructors:  
Brianna Clark  
Room 101 Forestry Laboratory Building  
(936) 468-2272  
clarkbm@jacks.sfasu.edu

Hannah Bays  
Room 107AC Forestry Laboratory Building  
bayshc@jacks.sfasu.edu

William Graves  
Room 109C Forestry Laboratory Building  
graveswj1@jacks.sfasu.edu


Course Description: Three semester hours, two hours lecture and three hours laboratory per week. Physical, chemical and biological properties of forest soils, their role in forest ecosystems, and management concerns. Required field trips. Prerequisite: CHE 133 or CHE 111

Course Objectives: The primary objective of this course is to make the student aware of the importance of soils in natural ecosystems and management of those ecosystems. This required core course will cover aspects of the physical, chemical and biological properties of soils and also the classification of soils. This required course will address the needs of forestry and related majors, and the subject matter supports courses in ecology, hydrology, silviculture, and forest management.

Program Learning Outcomes:  
Program Learning Outcomes
1. Demonstrate understanding and competency of forest ecology and biology;
2. Demonstrate understanding and competency in the measurement of forest resources;
3. Demonstrate understanding and competency in managing forest resources;
4. Demonstrate understanding and competency of forest resource policy, economics, and administration.
5. Demonstrate understanding and competency in oral and written communication skills.

Items #1 - #4 above are required by the Society of American Foresters, the program’s accrediting agency.

<table>
<thead>
<tr>
<th>B.S. Forestry Program Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course</strong></td>
</tr>
<tr>
<td>Forestry Common Core</td>
</tr>
</tbody>
</table>

N/A – Not Applicable
B – Basic
I – Intermediate
A – Advanced
M – Mastery

Definition of Rating Categories:

1. **N/A** – Not Applicable – course does not support the Program Learning Outcome.
2. **B** – Basic – course supports Program Learning Outcome by providing students with fundamental information, definitions, concepts, and lab activities relative to the expected outcomes.
3. **I** – Intermediate – course supports Program Learning Outcome by providing students with topic-specific information, concepts, applications, and lab activities that increase the students’ skills in making tactical implementation decisions relative to the expected outcomes.
4. **A** – Advanced – course supports Program Learning Outcome by providing students with transitional, high level topic-specific information, activities, and opportunities that enable the students to apply their critical thinking and tactical skills to resolved increasingly challenging strategic situations.
5. **M** – Mastery – course supports Program Learning Outcome by providing students with opportunities to independently apply tactical and strategic planning skills to successfully accomplish real-world, non-academic management objectives. Completes students’ preparedness for entry-level professional activity accomplishment.

Student Learning Outcomes: The primary objective of this course is to make the student aware of the nature and functions of soils and the importance of soils in natural resource management. The course will cover important aspects of the physical, chemical and biological properties of soils, as well as soil classification, and how these relate to land management. This required course will address the needs of forestry and related majors, and the subject matter supports courses in hydrology, silviculture, and forest management.

Course Calendar:
<table>
<thead>
<tr>
<th>Lecture Topics</th>
<th>Text Chapters</th>
<th>Dates*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
<td>8/25, 8/27</td>
</tr>
<tr>
<td>Soil Formation and Morphology</td>
<td>2</td>
<td>9/01, 9/03, 9/10</td>
</tr>
<tr>
<td>Soil Physical Properties</td>
<td>4</td>
<td>9/08, 9/10, 9/15, 9/17</td>
</tr>
<tr>
<td><strong>EXAM 1</strong></td>
<td></td>
<td>9/22</td>
</tr>
<tr>
<td>Soil Water</td>
<td>5</td>
<td>9/24, 9/29, 10/01</td>
</tr>
<tr>
<td>Soils and the Hydrologic Cycle</td>
<td>6</td>
<td>10/06, 10/08</td>
</tr>
<tr>
<td>Soil Air</td>
<td>7</td>
<td>10/13</td>
</tr>
<tr>
<td>Soil Temperature</td>
<td>7</td>
<td>10/15</td>
</tr>
<tr>
<td><strong>EXAM 2</strong></td>
<td></td>
<td>10/20</td>
</tr>
<tr>
<td>Soil Colloids</td>
<td>8</td>
<td>10/22, 10/27</td>
</tr>
<tr>
<td>Soil Reaction</td>
<td>9</td>
<td>10/29</td>
</tr>
<tr>
<td>Soil Organisms</td>
<td>11</td>
<td>11/03</td>
</tr>
<tr>
<td>Soil Organic Matter</td>
<td>12</td>
<td>11/05</td>
</tr>
<tr>
<td>Plant Nutrients and Fertility Management</td>
<td>13,14,15,16</td>
<td>11/10, 11/12, 11/17</td>
</tr>
<tr>
<td><strong>Fall Break</strong></td>
<td></td>
<td>11/23-11/27</td>
</tr>
<tr>
<td>Soil Classification</td>
<td>3</td>
<td>12/01, 12/03</td>
</tr>
<tr>
<td><strong>EXAM 4</strong></td>
<td></td>
<td>12/08 (Finals Week)</td>
</tr>
</tbody>
</table>

* Schedule likely to change

**COVID-19 MASK POLICY**

Masks (cloth face coverings) must be worn over the nose and mouth at all times in this class and appropriate physical distancing must be observed. Students not wearing a mask and/or not observing appropriate physical distancing will be asked to leave the class.

All incidents of not wearing a mask and/or not observing appropriate physical distancing will be reported to the Office of Student Rights and Responsibilities. Students who are reported for multiple infractions of not wearing a mask and/or not observing appropriate physical distancing may be subject to disciplinary actions.


Course Policies:

A. Grading System - Four exams together will comprise 80 percent (each 20 percent) of the final grade. The overall laboratory grade will comprise the remaining 20 percent of the final grade. The overall laboratory grade is calculated as the mean of the four laboratory reports, three quizzes, and one assignment. **All students entering the environmental science** and
forestry undergraduate degree programs during or after fall semester of 2008 must make a grade of C or better in each core environmental science (ENV) or forestry (FOR) courses to have the course count toward graduation. This course is a core forestry course.

B. Grading Scale - The following scale is adhered to strictly. Individual overall means are calculated to the first decimal place.

90.0 - 100 = A
80.0 - 89.9 = B
70.0 - 79.9 = C
60.0 - 69.9 = D
< 60.0 = F

C. Late Assignments - Make-up exams will only be given if arrangements are made with the instructor before missing the scheduled exam. A documented excuse will be required. Otherwise, missing exams will be counted as zeroes in the overall grade computation. Late laboratory assignments will not be accepted.

D. Attendance - Attendance in the laboratory section is mandatory. The final laboratory grade will be reduced by one letter grade per absence.

E. Other Policies

Academic Integrity (A-9.1)
Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

Definition of Academic Dishonesty
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit.
Withheld Grades Semester Grades Policy (A-54)
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average.

Students with Disabilities
To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

Responsible Use of Technology
It is expected that all students will only use cell phones, PDAs, laptop computers, MP3 players and other technology outside of class time or when appropriate in class. Answering a cell phone, texting, listening to music or using a laptop computer for matters unrelated to the course may be grounds for dismissal from class or other penalties.

Acceptable Student Behavior
Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy 10.4). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed. Please read the complete policy at: http://www.sfasu.edu/policies/student-code-of-conduct_10.4.pdf