Texas A&M University
Departmental Request for a Change in Course
Undergraduate • Graduate • Professional
Submit original form and attachments

1. Request submitted by (Department or Program Name):

   Department of Soil and Crop Sciences

2. Course prefix, number and complete title of course:

   SCSC 618

3. Change requested

   Cross-listed courses require the signature of both department heads.
   a. Prerequisite(s): From: ____________________________ To: ____________________________
   b. Withdrawal (reason): ____________________________
   c. Cross-list with: N/A
   d. Change in course title and description. Enter complete current course title and current course description in item 5; enter proposed course title and proposed course description in item 6. Complete item 7 for change in title.
   e. Change in course number, contact hours (lab & lecture), and semester credit hours. Complete item 7. Attach a course syllabus.

4. For informational purposes only, please indicate course number if this course will be stacked: N/A

5. Complete current course title and current catalog course description:
   Advanced Soil Analysis: Fundamental procedures for analysis of soils and sediments including chemical, spectrophotometric, electrometric, chromatographic and sample handling: methods important to the soils researcher and analyst.

6. Complete proposed course title and proposed catalog course description (not to exceed 50 words):
   Analysis of Environmental Systems: Classical and contemporary methods for analyzing chemical components of environmental systems, soil, water, plants and gases; environmental chemistry coupled with experiential.

7. a. As currently in course inventory:

   Prefix | Course # | Title (excluding punctuation)
   ------ | -------- | ----------------------------------------
   SCSC 618 ADV SOIL ANALYSIS

   Lect. | Lab | SCH | CIP and Fund Code | Admin. Unit | FICE Code | Level
   ----- | --- | ---- | ---------------- | ----------- | --------- | ----
   0  2  0 3  0 3  0 1  1  2  0 1  0 0  5  0 0  0 0  0 3  6 3  2  6

   b. Change to:

   Prefix | Course # | Title (excluding punctuation)
   ------ | -------- | ----------------------------------------
   SCSC 618 ANALYSIS ENVIRONMENT SYSTEMS

   Lect. | Lab | SCH | CIP and Fund Code | Admin. Unit | Acad. Year | FICE Code | Level
   ----- | --- | ---- | ---------------- | ----------- | --------- | --------- | ----
   0  1  0 2  0 2  0 1  1  2  0 2  0 0  5  0 0  0 1  3  1  4  0  3  6 3  2  6

   Level 6

   Approval recommended by:
   Wayne Smith

   Chair, College Review Committee
   Date

   Department Head or Program Chair (Type Name & Sign)
   Date

   Department Head or Program Chair (Type Name & Sign)
   Date

   (if cross-listed course)

   Submitted to Coordinating Board by:

   Associate Director, Curricular Services
   Date

   Questions regarding this form should be directed to Sandra Williams at 845-8201 or sandra-williams@tamu.edu.
   Curricular Services – 02/11
Course Description and Prerequisites

Course will introduce classical and contemporary methods for analyzing chemical components of environmental systems including soil, water, plants and gases. Theory of environmental chemistry is coupled with experiential learning in the field and laboratory.

Prerequisites:
Graduate Classification

Goals of Course:
- To acquaint students with the basic principles of standard methods for the analysis of elements and compounds in surface water, soil extracts, soil solution, gaseous matrices and vegetation using analytical instruments.
- To introduce QA/QC (Quality Assessment/Quality Control)

Learning Objectives:
- Gain first-hand experience in some of the analytical techniques used in water, soil, plant and water analysis.
- Gain experience of dealing with various analytical hardware and software.
- Learn the importance of QA/QC, Standard curves, NIST traceable standards, check standards and sample replicates.
- Learn how to choose the best analytical method to test hypotheses.

Course Structure:
The course will consist of 1 lecture and 2 labs a week. There will be three modules to the course and each module will be led by Dr. Aitkenhead-Peterson, Dr. Senseman or Dr. Murray. There will be laboratory write-ups and/or homework assignments and/or project reports for continual assessment and a final exam. The final exam will be a take home exam comprising questions posed and graded by Dr. Aitkenhead-Peterson or Dr. Senseman.

Instructors and Modules

Module 1 (Monday 26th August and Wednesday 28th August 2013 then Monday 23rd September to
Wednesday 23rd October 2013) 10 labs + 5 lectures + 3 Field Trips

Dr. Jacqueline A. Aitkenhead-Peterson
621 Heep Center
Email: jpeterson@ag.tamu.edu
Phone: 5-3682

Grading: 40% of course
- Laboratory Report (Introduction, Materials and Methods, Statistical Analysis, Results and Discussion) - 30%
- Final Exam (Take Home) – 10%

Module 2 (Monday 2nd September to Wednesday 18th September 2013) 6 labs + 3 lectures
Dr. Seth Murray
Agronomy Field Lab
Email: sethmurray@tamu.edu
Phone: 5-3469

Grading 20% of course
- R Homework – 10%
- NIRS Homework – 10%

Module 3 (Monday 28th October to Wednesday 20th November 2013: 7 Labs + 4 lectures
Professor Scott Senseman
6th Floor Lab, Heep Center
Email: s-senseman@tamu.edu
Phone: 5-5375

Grading 40% of course
- Written Abstract 20%
- Final Exam (Take Home) 20%

Field Trips:
1. Soil and Water Sample Collections
2. OI Laboratories, Research Park or GERG Labs
3. State Chemists Facility

Text:
On some occasions, certain papers will be selected for discussion in class. Papers, protocols, standard methods, lecture notes and presentations will be available on E-Learning which will be available to you
when you register for the class.

Grading:

Module 1: 40%
Module 2: 20%
Module 3: 40%

Grades:
90 – 100 = A
80 – 89 = B
70 – 79 = C
60 – 69 = D
< 60 = F

Field trips/laboratories:

<table>
<thead>
<tr>
<th>Mod</th>
<th>Prof</th>
<th>Day</th>
<th>Date</th>
<th>Room</th>
<th>Lecture</th>
<th>Laboratory</th>
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<td>1</td>
<td>Peterson</td>
<td>Mon</td>
<td>8/26/2013</td>
<td>Heep 124 Labs</td>
<td>Introduction to Course Experimental Design &amp; setting up hypotheses</td>
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<td>Weds</td>
<td>8/28/2013</td>
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<td>Field Sampling</td>
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<td>Murray</td>
<td>Mon</td>
<td>9/2/2013</td>
<td>Heep 124 Agro Lab</td>
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<td>Introduction to R software. Basic commands in R</td>
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<td>Heep 124 Agro Lab</td>
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<td>Heep 124 Heep 621</td>
<td>Sub-sampling and Soil Extracts</td>
<td>Soil extractions pH and EC</td>
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<td>Analysis of NH₄-N and NO₃-N</td>
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<td>Take Friday Classes</td>
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MAKE-UP POLICY: Completion of assignments and participation in all activities of the class are the responsibility of the student. Therefore, it is the responsibility of the student to present a valid reason, such as a signed medical excuse from a doctor, to be given consideration in the assessment of timeliness and submission of assignments. Assignments not returned will be given a grade of zero. Consideration in the assessment of timeliness and submission of assignments is subject to University Rules for Excused Absences.

Americans with Disabilities Act (ADA) Policy Statement
The following ADA Policy Statement (part of the Policy on Individual Disabling Conditions) was submitted to the University Curriculum Committee by the Department of Student Life. The policy statement was forwarded to the Faculty Senate for information. The Americans with Disabilities Act (ADA) is a federal antidiscrimination statue that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Department of Student Life, Services for Students with Disabilities in Cain Hall, Room B118, call 845-1637 or visit: http://disability.tamu.edu.

Aggie Honor Code
“An Aggie does not lie, cheat, or steal or tolerate those who do.”

Upon accepting admission to Texas A&M University, a student immediately assumes a commitment to uphold the Honor Code, to accept responsibility for learning and to follow the philosophy and rules of the Honor System. Students will be required to state their commitment on examinations, research papers, and other academic work. Ignorance of the rules does not exclude any member of the Texas A&M University community from the requirements or the processes of the Honor System. For additional information please visit: http://www.tamu.edu/aggiehonor/.

Excused Absences

7.1 The student is responsible for providing satisfactory evidence to the instructor to substantiate the reason for absence. Among the reasons absences are considered excused by the university are the following:

7.1.6 Injury or illness that is too severe or contagious for the student to attend class.

7.1.6.1 Injury or illness of three or more days. For injury or illness that requires a student to be absent from classes for three or more university business days (to include classes on Saturday), the student should obtain a medical confirmation note from his or her medical provider. The Student Health Center or an off-campus medical professional can provide a medical confirmation note only if medical professionals are involved in the medical care of the student. The medical confirmation note must contain the date and time of the illness and medical professional’s confirmation of needed absence.

7.1.6.2 Injury or illness less than three days. Faculty members may require confirmation of student injury or illness that is serious enough for a student to be absent from class for a period less than three university business days (to include classes on Saturday). At the discretion of the faculty member and/or academic department standard, as outlined in the course syllabus, illness confirmation may be obtained by one or both of the following methods:
a. Texas A&M University Explanatory Statement for Absence from Class form available at http://attendance.tamu.edu
b. Confirmation of visit to a health care professional affirming date and time of visit.
7.1.6.3 An absence for a non acute medical service does not constitute an excused absence.
To view all Student Rules, please go to: http://student-rules.tamu.edu/
To view Rule 7 of the Student Rules please go to: http://student-rules.tamu.edu/rule7.htm

On all course work, assignments, and examinations at Texas A&M University, the following Honor Pledge shall be preprinted and signed by the student:

“On my honor, as an Aggie, I have neither given nor received unauthorized aid on this academic work.”