




R. Elaine Turner, Associate Dean

MEMORANDUM

TO: Daniel Wubah, Chair
University Curriculum Committee

FROM: R. Elaine Turner, Associate Dean
College of Agricultural and Life Sciences 

DATE: 11 September 2007

SUBJECT: Proposed Changes to the Soil and Water Science major and minor

At the May 30 CALS Curriculum Committee, changes to the major and minor offered in Soil and Water Science were approved. These revisions involve:

- Expanding the list of approved electives for the major
- Expanding the list of approved electives for the minor

The modifications are shown in the attached documents.

cc: CALS Curriculum Committee Chair
James Fant

Soil and Water Science

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Suggested semester-by-semester plan

Semester 1	Credits
BSC 2010 and 2010L Integrated Principles of Biology 1 (3) and Laboratory (1) (GE-B)	4
CHM 2045 and 2045L General Chemistry 1 (3) and Laboratory (1) (GE-P)	4
Composition (GE-C, WR)	3
Electives	4
Total	15
Semester 2	Credits
CHM 2046 and 2046L General Chemistry 2 (3) and Laboratory (1) (GE-P)	4
MCB 2000 and 2000L Microbiology (3) and Laboratory (1)	4
Humanities (GE-H)	3
Social and Behavioral Sciences (GE-S)	3
Elective	2
Total	16
Semester 3	Credits
MAC 2311 Analytic Geometry and Calculus 1 (GE-M)	4
Humanities (GE-H) or Social and Behavioral Sciences (GE-S)	3
ECO 2023 Principles of Microeconomics (3) (GE-S) or AEB 3103 Principles of Food and Resource Economics (4) (GE-S)	3-4
AEE 3033C Research and Business Writing in Agricultural and Life Sciences	3
Elective	2
Total	15-16
Semester 4	Credits
Humanities (GE-H)	3
PHY 2004 and 2004L Applied Physics 1 (3) and Laboratory (1) (GE-P)	4
SOS 3022 and 3022L Introduction to Soils in the Environment (3) and Laboratory (1) (GE-P)	4
Elective	3
Total	14
Semester 5	Credits
CHM 3120 and 3120L Introduction to Analytical Chemistry (3) and Laboratory (1)	4
SOS 4451 Soil and Water Chemistry	3
SOS 4231C Soil, Water and Land Use	3
Approved electives (see list)	5
Total	15
Semester 6	Credits
SOS 4715C Environmental Pedology	4

AEE 3030C Effective Oral Communication (or equivalent)	3
Approved electives (see list)	6
Total	13
Summer	Credits
SOS 4905 Individual Work OR Ref	1-3
SOS 4941 Full-time Practical Work Experience in Soil and Water Science	1-3
Approved electives (see list)	
Total	3
Semester 7	Credits
SOS 4602C Soil Physics (GE-P)	3
SOS 4303C Soil Microbial Ecology	3
Approved electives (see list)	10
Total	16
Semester 8	Credits
SOS 4244 Wetlands	3
Approved electives (see list)	10-11
Total	13-14

Approved Electives: must include at least two of these courses

ALS 3133 Agricultural and Environmental Quality	3
SQS 2007 The World of Water	3
SQS 2008 Humans, Soils, and Environmental Impact	3
SOS 3023L Soil Judging	2
SOS 4116 Environmental Nutrient Management	3
SOS 4223 Environmental Biochemistry	3
SOS 4233 Soil and Water Conservation	3
SOS 4245 Water Resource Sustainability	3
SOS 4307 Ecology of Waterborne Pathogens	3
SOS 4720C GIS in Soil and Water Science	3
SOS 4905 Individual Work	
SOS 4909 Honors Project	
SOS 4932 Special Topics in Soil and Water Science	

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Electives are chosen with the student's adviser. There are four specific areas of specialization: soil, water and land use, environmental soil and water management, physical sciences and biological sciences. The student is encouraged to take electives from a range of course groupings that include biology, building construction, chemistry, earth science, environmental science, hydrology, mathematics, physics, policy, production systems, programming and statistics.

Areas of specialization in the soil and water science major are not restricted to the four areas above; other specializations can be developed.

Minors

Soil and Water Science

Hours: 15 credits, all completed with grades of C or better

This minor must include SOS 3022, Introduction to Soils, in the Environment and the lab SOS 3022L.

Additional SOS-designated courses in the minor must be approved in writing at least two semesters before graduation by the academic adviser and the undergraduate coordinator in soil and water science. Electives include:

ALS 3133	Agricultural and Environmental Quality	3
SOS 2007	The World of Water	3
SOS 2008	Humans, Soils, and Environmental Impact	3
SOS 3023L	Soil Judging	2
SOS 4116	Environmental Nutrient Management	3
SOS 4223	Environmental Biogeochemistry	3
SOS 4233	Soil and Water Conservation	3
SOS 4244	Wetlands	3
SOS 4245	Water Resource Sustainability	3
SOS 4303C	Soil Microbial Ecology	3
SOS 4307	Ecology of Waterborne Pathogens	3
SOS 4451	Soil and Water Chemistry	3
SOS 4905	Individual Work	1-3
SOS 4932	Special Topics in Soil and Water Science	1-3

Fifteen credit hours are needed in soils courses for you to be certified as a soil scientist and/or work for the federal government as a soil scientist. Some courses offered in Soil and Water Sciences will not be accepted for certification or to work for the federal government. Please see the Undergraduate Coordinator for more information.