

# University Distance Learning Opportunities Soils & GIS

## What to get

The Soil Science Society of America has Soil Science Competency Areas and Performance Objectives that list what you need to know to prepare for exams. Using the objectives as a checklist would be a good way to assess your strengths and weaknesses in soil science. The link provided here will take you to those objectives.

<https://www.soils.org/certifications/csse/>

## Where to get it

NRCS and the Soil Survey Division provide the **Soil Science Institute I - Fundamentals and Applications (000110)**. This is done through a partnership with selected universities and is conducted by the university and is approximately three weeks in length. A wide range of soil related course material is usually covered, including soil genesis, soil physics, soil chemistry, mineralogy, soil microbiology, and others.

NRCS periodically offers competitive opportunities for graduate study. All employees will receive notice if and when this happens. Normally, areas of study are selected to fill voids in the agency. It will require you to get accepted into a grad program. You may need to be mobile after completion of the studies.

You always have the opportunity to seek advanced degrees on your own. It is suggested that you work with your supervisor, State Soil Scientist, and HR people. Opportunities may occur to help you in this effort. However, this will probably only work if you are located near one of the land grant universities offering the course of study you wish to pursue.

A growing number of universities offer soils and GIS courses, certificates, and advanced degrees via distance learning. These are often online offerings but some may have a lab component that is on campus for several days in a block of time. Check out the links in the following table. These are from our Land Grant University partners in the soil survey program. For GIS courses and certificate or degree programs in particular, you can find other options (Google – GIS distance learning). These were located via internet search. Others may exist that were not found. New offerings may be posted in the interim before this information is next updated.

Courses/certificates/degrees/programs that may interest an employee whom already meets the soil science requirements for a soil scientist in NRCS are in ***bold italics***.

In all cases, the employee should expect to pay all related expenses out of pocket unless they have reached a prior arrangement with NRCS or other means.

## University Distance Learning Links

(Search last done 4/23/2007)

### Post Graduate Level Courses, Degrees or Certificates

Auburn University	<p><a href="http://www.ag.auburn.edu/agrn/distancelearning/">http://www.ag.auburn.edu/agrn/distancelearning/</a></p> <p><b>Master of Agriculture, Master of Science options, or</b></p> <p>Individual courses:</p> <p><b>AGRN 5063/6066 Soil Microbiology Lecture</b></p> <p><b>AGRN 5061/6061 Soil Microbiology Lab</b></p> <p><b>AGRN 5303/6306 Soil Chemistry</b></p> <p><b>AGRN 7086 Experimental Methods</b></p>
Iowa State University	<p><b>Masters of Science in Agronomy</b></p> <p><a href="http://masters.agron.iastate.edu/">http://masters.agron.iastate.edu/</a></p>
North Carolina State University	<p><b>Masters in Soil Science-</b></p> <p><a href="http://distance.ncsu.edu/programs/master-of-soil-science">http://distance.ncsu.edu/programs/master-of-soil-science</a></p> <p>University Certificate in Soil Science</p> <p><a href="http://distance.ncsu.edu/programs/university-certificate-in-soil-science">http://distance.ncsu.edu/programs/university-certificate-in-soil-science</a></p>
Northern Illinois University	<p>Online Courses, including a <b>GIS Certificate Program</b></p> <p><a href="http://www.niu.edu/academics/online/offerings/index.shtml">http://www.niu.edu/academics/online/offerings/index.shtml</a></p>
Penn State University	<p><b>Post-baccalaureate Certificate in Geographic Information Systems-</b></p> <p><a href="http://www.worldcampus.psu.edu/GISCertificate.shtml">http://www.worldcampus.psu.edu/GISCertificate.shtml</a></p> <p><b>On-line Masters in GIS Program</b></p>

	<a href="http://www.worldcampus.psu.edu/MasterinGIS.shtml">http://www.worldcampus.psu.edu/MasterinGIS.shtml</a>
University of California-Davis	<b><i>Field Study of Soils in California Ecosystems (summer field course)-</i></b> <a href="http://lawr.ucdavis.edu/classes/ssc105/index.htm">http://lawr.ucdavis.edu/classes/ssc105/index.htm</a>
University of Florida	Distance Education webpage- <a href="http://www.distance.ufl.edu/">http://www.distance.ufl.edu/</a> <b><i>Masters in Environmental Science-</i></b> <a href="http://www.distancelearning.ufl.edu/program.aspx?p=18">http://www.distancelearning.ufl.edu/program.aspx?p=18</a> <b>Certificate Programs in Soil and Water Science</b> <a href="#">Sustainable Land Resource and Nutrient Management, Soil Ecosystem Services, and Wetland and Water Resource Management.</a>
Virginia Tech	<b><i>Master's of Agricultural and Life Sciences-</i></b> <a href="http://www.online.cals.vt.edu/masters/">http://www.online.cals.vt.edu/masters/</a>
Wilkes University (PA)	<b><i>Summer field courses in soil morphology and hydric soils</i></b> <a href="http://www.water-research.net/course/soilsciencetraining.htm">http://www.water-research.net/course/soilsciencetraining.htm</a>

## University Distance Learning Links

(Search last done 5/12/2011)

### Undergraduate Level Courses

Auburn University	<p><a href="#">Distance Learning course Descriptions</a></p> <p>AGRN 2043 Basic Soil Science</p> <p>AGRN 5083/6086 Soil Resources and Conservation</p>
University of Delaware	<p><a href="#">Distance Education</a></p> <p>PLSC170 Soils and Environmental Quality</p>
Iowa State University	<p>Introduction to Soil Science-Agronomy 154</p> <p><a href="http://www.agron.iastate.edu/academic/distancelearning.aspx">http://www.agron.iastate.edu/academic/distancelearning.aspx</a></p>
North Carolina State University	<p>Course Catalog-</p> <ul style="list-style-type: none"> <li>• Principles of Soil Science</li> <li>• Soil Science</li> <li>• Soil Fertility and Fertilizers</li> <li>• Wetland Soils</li> <li>• Introduction to Soil Science</li> <li>• Soil Physics</li> <li>• Soil Fertility</li> <li>• Soil Morphology, Genesis and Classification</li> <li>• Seminar</li> <li>• Hydric Soils</li> </ul> <p><a href="http://distance.ncsu.edu/courses/fall-courses/SSC.php">http://distance.ncsu.edu/courses/fall-courses/SSC.php</a></p>
Oregon State University	<p>CSS 205. SOILS: SUSTAINABLE ECOSYSTEMS (4)-</p> <p><a href="http://ecampus.oregonstate.edu/soc/ecatalog/ecoursedetail.htm?termcode=all&amp;coursenumber=205&amp;subject=CSS">http://ecampus.oregonstate.edu/soc/ecatalog/ecoursedetail.htm?termcode=all&amp;coursenumber=205&amp;subject=CSS</a></p> <p>CSS 305 Principles of Soil Science</p> <p><a href="http://ecampus.oregonstate.edu/soc/ecatalog/ecoursedet">http://ecampus.oregonstate.edu/soc/ecatalog/ecoursedet</a></p>

	<a href="http://www.worldcampus.psu.edu/course-catalog/">ail.htm?termcode=all&amp;coursenumber=305&amp;subject=CSS</a>
Penn State University	Soils 101 - Introduction to Soils <a href="http://www.worldcampus.psu.edu/course-catalog/">http://www.worldcampus.psu.edu/course-catalog/</a>
Texas Tech University	Certificate – Soil Management <a href="http://www.pssc.ttu.edu/ProgramPages/GCP-SM.php">http://www.pssc.ttu.edu/ProgramPages/GCP-SM.php</a>
University of California- Davis	<b><i>Field Study of Soils in California Ecosystems (summer field course)-</i></b> <a href="http://lawr.ucdavis.edu/classes/ssc105/index.htm">http://lawr.ucdavis.edu/classes/ssc105/index.htm</a>
University of Georgia	Topics in Crop and Soil Sciences: Principles of Soils- <a href="http://www.georgiacenter.uga.edu/idl/courses/view-courses/crop-and-soil-sciences-crss">http://www.georgiacenter.uga.edu/idl/courses/view-courses/crop-and-soil-sciences-crss</a> Not available in 2012?
University of Maryland	<b><i>Field Soil Morphology (summer field course)-</i></b> <a href="http://www.sawgal.umd.edu/mapss/flyer2007-2.pdf">http://www.sawgal.umd.edu/mapss/flyer2007-2.pdf</a>
Virginia Tech	<b><i>Soils for professionals</i></b> <a href="http://www.vto.vt.edu/course.php?cid=287">http://www.vto.vt.edu/course.php?cid=287</a>
Washington State University	201 Soil: A Living System 301 Ecological Soil Management 441 Soil fertility 502 Advanced Topics in Soils 503 Advanced Soil Analysis Soil Fertility Management <a href="http://online.wsu.edu/future_students/courses.aspx">http://online.wsu.edu/future_students/courses.aspx</a>
Wilkes University (PA)	Introduction to Soil Science and Morphology

Introduction to Hydric Soils

<http://www.water->

[research.net/course/soilsciencetraining.htm](http://www.water-research.net/course/soilsciencetraining.htm)