# Soil Science (PhD)

## Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REQUIRED COURSES</td>
<td></td>
</tr>
<tr>
<td>SSC 801</td>
<td>Seminar 1</td>
<td>3</td>
</tr>
<tr>
<td>SSC 893</td>
<td>Doctoral Supervised Research 2</td>
<td>2</td>
</tr>
<tr>
<td>or SSC 895</td>
<td>Doctoral Dissertation Research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CORE COURSES</td>
<td>34</td>
</tr>
<tr>
<td>SSC 511</td>
<td>Soil Physics</td>
<td></td>
</tr>
<tr>
<td>SSC 521</td>
<td>Soil Chemistry</td>
<td></td>
</tr>
<tr>
<td>SSC 532</td>
<td>Soil Microbiology</td>
<td></td>
</tr>
<tr>
<td>SSC 541</td>
<td>Soil Fertility</td>
<td></td>
</tr>
<tr>
<td>SSC 551</td>
<td>Soil Morphology, Genesis and Classification</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ELECTIVE COURSES</td>
<td>tbd</td>
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<tr>
<td></td>
<td>“Elective Course” will be determined in conjunction with the academic committee</td>
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<tr>
<td></td>
<td>TOTAL HOURS</td>
<td>72</td>
</tr>
</tbody>
</table>

1. Students must take at least one credit of SSC 801 Seminar.
2. Students are required to take a minimum of two credits of SSC 893 Doctoral Supervised Research or SSC 895 Doctoral Dissertation Research.

## Additional Requirements

All Doctoral students must demonstrate competence in the five soil science sub-disciplines listed below:

- Soil Chemistry
- Soil Fertility and Plant Nutrition
- Soil Genesis and Classification
- Soil Microbiology and Biochemistry
- Soil Physics

The required competencies can be achieved by any combination of the following:

1. relevant course work from previous undergraduate and/or graduate degree programs;
2. prior professional experience in the major sub-discipline(s); and
3. graduate courses included in the student’s Plan of Work (POW) for their current degree program.

- Completion of at least 72 semester credit hours beyond the bachelor’s degree
  - If the student has an MS degree from another institution, a maximum of 18 hours of relevant graduate credit from that degree may be applied toward this minimum, upon the recommendation of the student’s Graduate Advisory Committee, and the minimum required will be 54 semester credit hours
  - If a student completes an MS degree at NC State and continues for a doctoral degree without a break in time, up to 36 relevant credit hours taken while in master’s status may be used to meet minimum requirements for the doctoral degree. If there is a break in time between completing the master’s (at NC State) and beginning the doctorate (at NC State), the allowance is limited to 18 hours. Either allowance may include those 400-level courses taken as an approved part of the MS degree.
- Completion of preliminary written and oral examinations must be completed within six calendar years from the date of admission
- Successful completion of an original research program
- Success completion of the final oral examination
- Completion of a non-credit exit seminar

## Faculty

### Full Professors

- Aziz Amoozegar
- Stephen W. Broome
- David A. Crouse
- Owen W. Duckworth
- Alan J. Franzlubbers
- John L. Havlin
- Joshua L. Heitman
- Dean L. Hesterberg
- Richard A. McLaughlin
- Michael D. Mullen
- Deanna L. Osmond
- Wei Shi
- Michael J. Vepraskas

### Associate Professors

- Alexandria K. Graves
- Jeffrey G. White

### Assistant Professors

- Kevin Garcia
- Terrence G. Gardner
- Luciano C. Gatiboni
- Amy M. Johnson
- Stephanie B. Kulesza
- Matthew C. Ricker
- Alex L. Woodley

### Emeritus Faculty

- Stanley W. Buol
- Keith Cassel
Maurice Cook
Fred Cox
Carl Crozier
George Cummings
J. Wendell Gilliam
Daniel Israel
Joseph Kleiss
David Lindbo
Gordon Miner
George C. Naderman Jr.
Wayne Robarge
Thomas J. Smyth
Richard Volk
Michael Wagger
Arthur Wollum

Practice/Research/Teaching Professors
Robert E. Austin