# Soil Science (PhD)

## Degree Requirements

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
<th>Counts towards</th>
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</thead>
<tbody>
<tr>
<td>SSC 801</td>
<td>Seminar</td>
<td>3</td>
<td></td>
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<tr>
<td>SSC 893</td>
<td>Doctoral Supervised Research</td>
<td>2</td>
<td>Required Courses</td>
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<tr>
<td>or SSC 895</td>
<td>Doctoral Dissertation Research</td>
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### Core Courses

<table>
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<tr>
<th>Code</th>
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<tbody>
<tr>
<td>SSC 511</td>
<td>Soil Physics</td>
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<tr>
<td>SSC 521</td>
<td>Soil Chemistry</td>
</tr>
<tr>
<td>SSC 532</td>
<td>Soil Microbiology</td>
</tr>
<tr>
<td>SSC 541</td>
<td>Soil Fertility</td>
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<tr>
<td>SSC 551</td>
<td>Soil Morphology, Genesis and Classification</td>
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### Elective Courses

<table>
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<tr>
<th>Code</th>
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<td></td>
<td>&quot;Elective Course&quot; will be determined in conjunction with the academic committee</td>
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Total Hours: 72

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

- 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

- **Aziz Amoozegar**
  - **Area of Research:** Environmental Soil Physics
- **Stephen W. Broome**
  - **Area of Research:** Environmental Soil Science
- **David A. Crouse**
  - **Area of Research:** Soil Science Education
- **Owen W. Duckworth**
  - **Area of Research:** Soil Biogeochemistry
- **Alan J. Franzluebbers**
  - **Area of Research:** Soil Ecology and Management
- **John L. Havlin**
  - **Area of Research:** Soil Fertility
- **Joshua L. Heitman**
  - **Area of Research:** Soil Physics & Hydrology
- **Richard A. McLaughlin**
  - **Area of Research:** Urban Soil & Water Management
- **Michael D. Mullen**
  - **Area of Research:** Soil Biology & Soil Science Education
- **Deanna L. Osmond**
  - **Area of Research:** Soil Fertility & Watershed Management
- **Wei Shi**
  - **Area of Research:** Soil Microbiology & Ecology
- **Michael J. Vepraskas**
  - **Area of Research:** Wetland Soils & Pedology

## Associate Professors

- **Alexandria K. Graves**
  - **Area of Research:** Soil Microbiology

- **Kevin Garcia**
  - **Area of Research:** Plant-Microbe Interactions & Nutrient Transport

- **Terrence G. Gardner**
Soil Science (PhD)

**Area of Research:** Soil & Environmental Microbial Ecology
Luciano C. Gatiboni

**Area of Research:** Soil Fertility & Nutrient Management
Amy M. Johnson

**Area of Research:** Soil Science
Stephanie B. Kulesza

**Area of Research:** Nutrient Management and Animal Waste
Hui Li

Matthew C. Ricker

**Area of Research:** Pedology
Alex L. Woodley

**Area of Research:** Sustainable Agricultural Systems

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**Practice/Research/Teaching Professors**

Robert E. Austin

**Area of Research:** Geospatial Information and Analytics in Soils, Agriculture and Environmental Science

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