Class Schedule - Spring 2019

Crop Sciences

CPSC 499  **Advanced Special Topics**  credit: 1 TO 4 hours.
Advanced experimental course on a special topic in crop sciences. 1 to 4 undergraduate hours. 1 to 4 graduate hours. Approved for Letter and S/U grading. May be repeated if topics vary.

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<tr>
<th>CRN</th>
<th>Type</th>
<th>Section</th>
<th>Time</th>
<th>Days</th>
<th>Location</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>15767</td>
<td>Lecture-Discussion</td>
<td>AJM</td>
<td>01:00 PM - 02:50 PM</td>
<td>F</td>
<td>W223 - Turner Hall</td>
<td>Margenot, A</td>
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Credit Hours: 2 hours
Environmental Enzymology
Not intended for students with Freshman or Sophomore class standing.
Transformation of nutrient elements (C, N, P, S) in terrestrial systems is catalyzed by extracellular enzymes. The extracellular nature of these enzymes raises implications for nutrient fluxes from pedon to global scales, while simultaneously challenging their study. This seminar will examine advances in how extracellular enzymes in environmental samples are measured and conceptualized to enhance our understanding of biogeochemical processes that govern the fluxes and fate of nutrient elements. We will examine and synthesize the rapidly evolving scientific literature on extracellular enzymes in environmental samples. Emphasis will be given to (i) novel methods of environmental enzyme assays, (ii) hypotheses on fundamental controls of extracellular enzymes and (iii) interdisciplinary work drawing on approaches and perspectives from traditional biochemistry. This includes methodological challenges unique to environmental samples such as soils and sediments, distinguishing among multiple enzyme sources in complex environmental samples, characterizing enzyme kinetics, and linking enzyme activity with biochemical and microbiological processes. This class is restricted to graduate students and advanced-level undergraduates (juniors/seniors).