Environmental Fate and Impact of Pollutants in Soil and Water
Environment and Natural Resources 5273
Course Syllabus, Spring Semester 2017
164 Howlett Hall, TuTh 9:35AM - 10:55AM

INSTRUCTOR: Nicholas T. Basta
Professor of Soil and Environmental Chemistry
410C Kottman Hall, 292-6282, basta.4@osu.edu

INSTRUCTOR ASSISTANT: Kaitlyn Benson, 454 Kottman Hall, benson.438@osu.edu

COURSE DESCRIPTION: 3 semester hr. An overview of contaminant sources, transport through soil and water, and of environmental fate and impact of contaminants to human and ecosystem receptors. Topics include assessment and remediation of soil and water contaminants.

PREREQUISITES: graduate standing or two semesters of chemistry

COURSE OBJECTIVES: After completion of this course:
You should have an understanding of:
1. sources of major environmental pollutants,
2. the relationship between environmental processes and contaminant transport and exposure,
3. pollutant transport through human and ecosystem pathways
4. approaches used to prevent or remediate environmental contamination

TEXTBOOKS:
Recommended but not required


CLASS NOTES: Class notes will be posted as pdf files on-line

EXAMINATIONS AND GRADING

<table>
<thead>
<tr>
<th>exams, problem sets, attendance</th>
<th>% OF GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 exams @ 25 each</td>
<td>50</td>
</tr>
<tr>
<td>Final Examination</td>
<td>25</td>
</tr>
<tr>
<td>3 problem sets</td>
<td>15</td>
</tr>
<tr>
<td>7 topical briefs</td>
<td>10</td>
</tr>
</tbody>
</table>

Grading A 90-100; B 80-89; C 70-79; D 60-69; F < 60. Plus/minus grading applied to overlap ranges.
DISABILITY STATEMENT

Students with disabilities who need accommodations should see Dr. Basta during office or contact him by telephone (614-292-6282) or e-mail (basta.4@osu.edu) to make arrangements. Special needs must be discussed and arrangements made well in advance (preferably before the first week of class) of when arrangements to accommodate specific needs are required. Special accommodations may be arranged through the OSU Office of Disability Service, 150 Pomerene Hall, 1760 Neil Ave., Telephone 614-292-3307, www.ods.ohio-state.edu.

TOPICS COVERED:
extent and types of pollution; environmental impact and risk; contaminant transport; surface water quality; chemistry; nutrient pollution and waste management; organic chemical pollution; emerging pollutants (pharmaceutical and personal care products, etc.), trace element pollution; radionuclide pollution, shale fracking pollution, soil /groundwater remediation, beneficial reuse of industrial, agricultural, and municipal byproducts.