Course Syllabus for PA 5790, Fall 2019

Environmental Systems Analysis at the Food, Energy, Water Nexus

Humphrey School of Public Affairs
University of Minnesota
Room: HHH 30, West Bank
Tuesdays: 6pm to 8:45pm

Instructor: Dr. Bonnie Keeler
E-mail/Phone: keel0041@umn.edu, 612-625-8905
Office Hours: Room 158 HHH Time: TBD

Teaching Assistant: Maggie Rogers
Email: roge0431@umn.edu

Course objectives and learning goals:
- Develop skills in systems thinking in order to better understand, diagnose, and effectively communicate complex environmental challenges.
- Cultivate an awareness of the diverse viewpoints, incentive structures, and perspectives of key stakeholders affected by food-water-energy issues.
- Identify social, ecological, and technological dimensions of environmental systems and how they are interlinked over time and space.
- Become a critical consumer of news and information about environmental topics.
- Gain exposure to quantitative and professional skills essential in food, energy, water careers.

Required Text:
This Blessed Earth: A Year in the Life of an American Family Farm, by Ted Genoways

Additional readings and resources will be provided on Canvas.
## Class Schedule:

*Subject to change with notice. Consult Canvas for updated schedule and assignments*

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Skill/Activity</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/3</td>
<td>Overview of the food-energy-water nexus and contemporary policy contexts</td>
<td>Introduction to systems thinking</td>
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<td>Slide design</td>
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<tr>
<td>9/10</td>
<td>The global perspective: Sustainable development, planetary boundaries, and feeding the world without destroying the planet.</td>
<td>Integrated assessment modeling</td>
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<tr>
<td>9/17</td>
<td>Food systems: How we got here and where are we going? Farm Bill 101</td>
<td>Scenario Analysis</td>
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<tr>
<td>9/24</td>
<td>Food systems: Standards, diets, and consumer choice</td>
<td>Life cycle assessment</td>
<td>Blog post on census of ag data due</td>
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<tr>
<td>10/1</td>
<td>Food systems: Interactions with water and energy</td>
<td>Greenhouse gas accounting</td>
<td>Concept Quiz I</td>
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<td>10/8</td>
<td>Water systems: A hydro-social perspective</td>
<td>Social network analysis</td>
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<td>10/15</td>
<td>The water and energy nexus: Renewable energy</td>
<td>Science communication, part I - ABT method</td>
<td>This Blessed Earth reflection due</td>
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<td>10/22</td>
<td>Environmental justice</td>
<td>Measuring equity, best practices in community-engaged scholarship</td>
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<td>10/29</td>
<td>DIY Field Trip: No Class.</td>
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<td>11/5</td>
<td>Pipelines: Energy and water implications</td>
<td>Science communication part II - Assertion - Evidence method</td>
<td>DIY Field Trip memo due</td>
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<td>11/12</td>
<td>Governance of food, energy, and water in Minnesota</td>
<td>Contract design</td>
<td>Concept Quiz II</td>
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<td>11/19</td>
<td>Mining: Energy and water implications</td>
<td>Facilitation and the art of hosting</td>
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<td>11/26</td>
<td>Bright spots in the anthropocene: Searching for success stories</td>
<td>Advocacy in academia</td>
<td>Mississippi River editorial</td>
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<tr>
<td>12/3</td>
<td>Resilience, sustainability, and transformation</td>
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<td>12/10</td>
<td>FEW nexus lesson plan</td>
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<tr>
<td>12/10</td>
<td>Systems thinking part II: Leverage points</td>
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**Evaluation and Assignments:**

I. Reading and discussion prompts, 15%
II. Science explainer presentations, 5% + 5%
III. Blog post on Census of Ag data, 10%
IV. Concept quizzes, 10% + 10%
V. This Blessed Earth book reflection, 10%
VI. DIY Field Trip memo to executive, 10%
VII. Mississippi River editorial, 10%
VIII. FEW nexus lesson plan, 15%

**Canvas**
All of our class readings, resources and assignments are available on the course Canvas site. Find the site at [canvas.umn.edu](http://canvas.umn.edu), or go to “Key Links” on [MyU.umn.edu](http://MyU.umn.edu) and scroll down to Canvas. For help with Canvas, go to [https://z.umn.edu/CanvasHelpandSetup](https://z.umn.edu/CanvasHelpandSetup) or click the “Canvas Help” link on our course Canvas site.

**Set Your Canvas Notification Preferences**
This course depends upon your ability to receive communications from your instructor about the class. It’s important that you set up your Canvas “notification preferences” to choose how and when you’d like to receive messages via text, email, or both. Find easy-to-follow instructions at “How do I set my Canvas notification preferences as a student?: [https://community.canvaslms.com/docs/DOC-10624-4212710344](https://community.canvaslms.com/docs/DOC-10624-4212710344).

I **strongly recommend** that you opt to receive notification of Announcements, Conversation Messages, and Added to Conversation so that you don’t risk missing important class communication.

**Access to readings and materials after semester**
Students may lose access to Canvas sites and course reserves at the end of the semester. If you’d like to download class material (depending on copyright) or your own work for personal use, please do so during the semester.

**Name and Pronoun Usage**
I will happily honor your request at any point to address you by your correct name, gender pronoun, or any other manner you would like to be referred. If you like, I will also instruct class members to do the same. Please advise me of how you would like to be referred to in class.
Use of Personal Electronic Devices in the Classroom

Using personal electronic devices in the classroom setting can hinder instruction and learning, not only for the student using the device but also for other students in the class. My preference is for students to take notes in a notebook, instead of on a laptop to minimize the temptation to browse the internet during class. It is quite apparent when students are using their laptop, phone, or tablet to view non-course content as surrounding classmates can’t help but register their interest. Do not create distractions that negatively affect the learning experience of your peers.

Missing class and coursework extensions

Students will not be penalized for absence during the semester due to unavoidable or legitimate circumstances. Such circumstances include verified illness, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, and religious observances.

There are situations that may arise where you need to request an extension for a class assignment. If this occurs, email me with your request in advance of the due date and include a proposed timeline for completion of the assignment. I do my best to grant extensions to all reasonable requests.

Mental Health and Stress Management Services

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. There are advisors in the Humphrey Student Services office who are trained and experienced counselors. They are available at short notice to address any concerns you have and provide further resources within the University - Humphrey Student Services, HHH 280, (612) 624-8162. You can learn more about the broad range of confidential mental health services available on campus at: http://www.mentalhealth.umn.edu.

Disability Accommodations:

The University of Minnesota views disability as an important aspect of diversity, and is committed to providing equitable access to learning opportunities for all students. The Disability Resource Center (DRC) is the campus office that collaborates with students who have disabilities to provide and/or arrange reasonable accommodations. If you have, or think you have, a disability in any area such as, mental health, attention, learning, chronic health, sensory, or physical, please contact the DRC office on your campus (UM Twin Cities - 612.626.1333) to arrange a confidential discussion regarding equitable access and reasonable accommodations.

Students with short-term disabilities, such as a broken arm, can often work with instructors to minimize classroom barriers. In situations where additional assistance is needed, students should contact the DRC as noted above. If you are registered with the DRC and have a
disability accommodation letter dated for this semester or this year, please contact me early in
the semester to review how the accommodations will be applied in the course.

University and School policies
For links to University of Minnesota and Humphrey School policies, please click the “U of M
Policies” link on our course Canvas site, or see https://z.umn.edu/PolicyStatements. Policies
include information on student conduct, scholastic dishonesty, sexual harassment, equal
opportunity, disability accommodations, and more.