

Spring 2-1-2018

GEO 595.01: ST: Food-Energy-Water Field

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UM BRIDGES Field Lab

Course Syllabus

Spring 2018 – 2 credits

ST: Food-Energy-Water Nexus Field Lab

GEO 595-02 (CRN# 38840); NRSM 595-02 (CRN# 38620)

Monday 3:30-4:50pm

CHCB 333

Instructor Info

Alisa A. Wade, Ph.D.

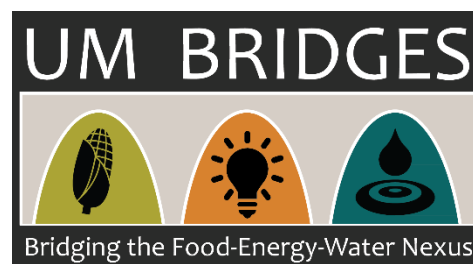
Research and Affiliate Faculty

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Office Hours by appointment



Course Description

This course is offered through the UM BRIDGES training program, which trains future leaders from diverse backgrounds to advance societally-relevant science toward more sustainable food-energy-water systems (umt.edu/bridges). This field-based course connects theory and practice by examining food-energy-water case studies, conducting interdisciplinary synthesis, and communicating with diverse stakeholders. This course meets throughout the semester (see schedule) to research and discuss local case studies and culminates in an end-of-semester field trip that enables trainees to examine food-energy-water issues on-the-ground and to meet with and learn from farmers and ranchers, energy and water managers, policy-makers, and tribal members. The Field Lab also integrates lessons from communications workshops (described below), which are required of all field lab students, and will conclude with students completing a synthesis podcast, video vignette, or other digital-platform project. For this semester, the case studies and field trip will focus on the Columbia River basin. **The field trip will be held between Saturday, May 12 and Friday, May 18 (exact dates forthcoming) and is MANDATORY.**

Learning Objectives and Outcomes

1. Conduct in-classroom exploration and analysis of nexus case study topics in preparation for field trip so as to understand both broad and detailed nexus issues and appreciate specific viewpoints of multiple stakeholders
2. Synthesize and report on nexus issues related to field case studies, integrating across food-energy-water systems, disciplinary, and stakeholder silos
3. Apply digital communications strategies from workshops to people and places from the field trip via pre-reporting and ultimately production of digital-platform based science communication during field trip

Course Assessment

Course grading is on a traditional (A-F) scale. Your performance in the course will be assessed based on your attendance and participation, your leadership of a class session (described below), and your final communications project (described below).

Participation (30% of Final Grade)

Participation grades will be based on attendance and engaged participation. Students will also be graded on their peer-review of their colleague's work products. Students are responsible for contributing to the content of the course through participation and discussion. Students are expected to carefully and thoroughly read ALL assigned readings prior to class and come to class and the field experience prepared to discuss, examine, analyze, and critique each case-study/issue addressed. "Engaged participation" does not refer to the number of comments you make or your level of expertise, but rather describes the sort of thoughtful, meaningful, prepared questions and comments that further your own intellectual development and that of the group. A willingness to work on the material at hand and consider its application to the field is critical. Civility and respect for different views and ideas are also expected, during on-campus sessions and in field site meetings with nexus decision-makers. I will take attendance and note your participation each day in class as part of this grade. **All students MUST attend the field trip to receive credit for this class.**

Class Session Leader (40% of Final Grade)

Students will be divided into teams of 2 or 3 students based on interests. Each team will select a case-study/issue related to the nexus within the Columbia River Basin. The instructor will provide a list of ideas, but teams may come up with their own case-study/issue idea. The instructor reserves the right to suggest alternate topics to ensure we cover multiple issues that cover a range of topics. These will be graded by the instructor, a J-school graduate student assistant, and your field lab peers. Each team will:

1. Identify the top 2-5 resources summarizing the case-study/issue and post those resources to Moodle AT LEAST one full week prior to their topic session (see schedule for specific due dates). Resources chosen should demonstrate multiple viewpoints on the issue. These resources should include at least one paper from the peer-reviewed literature, but other resources can include web-sites, gray-literature, opinion pieces, pamphlets, etc. – whatever provides the most relevant synthesis of various viewpoints. Even short pod-casts or videos are acceptable.
2. Come prepared and lead the conversation/analysis/discussion of the case-study during their assigned session. Leading the session does not mean presenting for the full class-time, but effectively engaging all class participants in lively intellectual discourse around the topic. Novel methods for engagement are encouraged, although general discussion, as long as it is on topic and framed as a scientific or systems-based inquiry is fine. We want to avoid just rehashing what you've read. We want to think critically beyond the readings.
3. One week after the session led by the team, the team will prepare a no-more-than a four-page pre-reporting summary or "fact sheet" for their case-study/issue. This summary shall include and be roughly ordered as follows:
 - A descriptive title (and the names of your team members somewhere on it);
 - One piece of (copyright legal) artwork that illustrates the case-study/issue;
 - "Three Things You Need to Know" about the case-study/issue;
 - Summary: a pithy summary of the issue(s) with appropriate references and attention to summarizing multiple viewpoints on the topic; be sure to highlight the FEW nexus;
 - Key players/stakeholders and specific names of individuals associated with those stakeholders with a brief summary of their world view about the case-study/issue;
 - Five sample, relevant interview questions that could be asked of stakeholders to inform the conversation around the FEW nexus;
 - Any descriptive graphics you feel necessary to communicate the issue simply (optional, but encouraged).

Possible topics (all framed as issues within the CRB) include (these are just ideas, tweak to your team's interests by adding, combining, or applying a unique framing, e.g., economics, ethics, modeling, etc.):

- Nuclear power and water use and quality (particularly, Columbia Generating Station)
- Nuclear waste storage (particularly, Hanford Site)
- The Columbia Basin Fish Accords: a new era in ethical and interdisciplinary solutions?
- The Yakima Integrated Basin Plan: economics and ethics
- The Columbia River Treaty: past and present
- Tribal sovereignty and national FEW needs
- Dams, hatcheries, and salmon
- The proposed Chelan pumped hydro storage facility: opportunities and challenges
- Climate friendly farming within the CRB
- Agricultural waste to fuels
- Groundwater vs. surface water for agriculture: impacts and implications

Communication Project (30% of Final Grade)

Students will be divided into reporting teams of 3(ish) and assigned one day during the field trip on which to report. The reporting team's mission: within that single day, film video, capture images, and record audio that tells a story about the science and issues behind the FEW nexus discussed during that day. Edit and compile that information into an engaging, societally-relevant reporting piece – using some digital platform or platforms – that are then completed and uploaded to a digital platform by 12:00 midnight. Digital platforms can include podcasts, video vignettes, a Twitter or Instagram storm, or a website page (or others?). Each report, however, must include: 1) written text; 2) audio; and 3) video and/or a series of still photography. Projects can consist of a single “offering” (e.g., a video on YouTube that is introduced and presented via a FB post) or multiple pieces (a suite of Instagram posts throughout the day, that, when taken together, tell a cogent story). These will be graded by the instructor, a J-school graduate student assistant, and your field lab peers. We will discuss these more later.

Course Logistics and Schedule

This seminar meets on Mondays from 3:30-5 pm (generally) per the schedule listed below. There is no required textbook, although readings will be posted on Moodle and you are expected to have read those prior to the class for which they are assigned.

January 22 – MEET AT 4:00: Quick overview of course and begin team discussion

January 29 – Overview of communication opportunities on the field trip; establish teams

February 5 – Know before you go: how to pre-report and prepare to maximize research and science story-telling effectiveness

- TEAM 1 Readings posted to Moodle

February 12 – **Student led discussion; Team 1**

February 19 – NO MEETING (President's Day)

- TEAM 1 Summary Posted to Moodle (by Tuesday is ok given holiday)

February 26 – NO MEETING (Data Mining Workshop at 4:30)

- Peer-review of TEAM 1 due

March 5 – NO MEETING (Data Mining Workshop at 4:30)

- TEAM 2 Readings posted to Moodle

March 12 – **Student led discussion; Team 2**

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March 19 – NO MEETING

- TEAM 2 Summary Posted to Moodle

March 26 – NO MEETING (Spring Break)

April 2 – NO MEETING

- TEAM 3 Readings posted to Moodle
- Peer-review of TEAM 2 due

April 9 – **Student led discussion; Team3**

- TEAM 4 Readings posted to Moodle

April 16 – **Student led discussion; Team 4**

- TEAM 3 Summary Posted to Moodle
- TEAM 5 Readings posted to Moodle

April 23 – **Student led discussion; Team 5**

- TEAM 4 Summary Posted to Moodle
- Peer-review of TEAM 3 due

April 30 – MEET AT 4:00: Wrap/up and field trip logistics and planning

- TEAM 5 Summary Posted to Moodle
- Peer-review of TEAM 4 due

May 7 – NO MEETING

- Peer-review of TEAM 5 due

Respect, Inclusiveness and Diversity of Thoughts, Ideas and People

All students are entitled to and deserve respect, courtesy and tolerance, regardless of their race, ethnicity, background, religious affiliation, gender, sexual preference, disability or any other perceived difference. Likewise, faculty, staff, guest speakers and fellow students deserve the same treatment from other students. I will make every effort to promote and create a safe space for diverse thoughts, regardless of the form of communication. I ask that you do the same.

Given the broad range of speakers and topics presented in this seminar, showing respect for others is paramount and is taken very seriously. We will strive towards an engaging, respectful and open forum in which numerous opinions related to the course material can be discussed and explored.

Equal Access

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors and [Disability Services for Students](#) (DSS). If you have a disability that adversely affects your academic performance, and you have not already registered with Disability Services, please contact Disability Services in Lommasson Center 154 or by calling 406.243.2243. I will work with you and Disability Services to provide an appropriate modification.

Student Conduct

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the [Student Conduct Code](#).

Course Withdrawal Deadlines

Important Dates Restricting Opportunities to Drop a Course are listed at <https://www.umt.edu/registrar/calendar.php>. In general, you may drop any course up to the 15th instructional day and receive a refund. Beginning the 16th instructional day, a class drop form, with the instructor's signature is required. You will also need to pay a \$10 fee, will not receive a refund, and you will receive a "W" on your transcript. On the 46th day of instruction and thereafter, students may only drop a class under very limited and unusual circumstances. Not doing well in the class, deciding you are concerned about how the class grade might affect your GPA, deciding you did not want to take the class after all, and similar reasons are not among those limited and unusual circumstances. If you want to drop the class for these sorts of reasons, make sure you do so by the end of the 45th instructional day of the semester. On the 46th day of instruction and thereafter, requests to drop must be signed by the instructor, advisor, and Associate Dean (in that order) so if you pursue this request, leave sufficient time to schedule meetings with each of these individuals (generally this will take at least 3-5 working days). A \$10 fee applies if approved. Instructor must indicate whether the individual is Passing or Failing the class at the time of request.