Proposal for a Human Issues 305/405 Course

Fishing for Food: Implications of a Contaminated Local Fishery for Food Security, Public Health, Social Justice, and Communication

1. Instructors: Kelly Mella (Communication Studies) and Jim Lorman (Natural Science)

2. Proposed timetable information:

Human Issues 305 (2 credits): Spring 2008
Human Issues 405 (2 credits): Fall 2008
Cross-listed as Environmental Studies (pending approval by ES Steering Team)
Cross-listed as Communication Studies (pending approval by Com Studies Department)

3. Human Issues questions addressed by courses:

Access to healthy food is at the heart of a just and sustainable society. As human population size and per capita resource use have increased, food quantity and quality have increasingly become the focus of concern about our ability as a species to live sustainably on the planet.

There are two somewhat opposing trends with respect to food systems: On one hand, there is increasing industrialization of food systems, globalization of corporations, and implementation of international world trade agreements that impact food; on the other hand, there is a resurgence of small-scale locally-owned food systems aimed at enhancing ecological sustainability, health, and social justice. Our ability to meet the needs of future generations is likely to depend a great deal on how these trends play out.

This course addresses broad questions at the intersection of food security, science, health, environmental justice and culture: How healthy and ecologically sustainable are our food systems and what factors affect this? How do historical and cultural factors influence our food choices, and how are different social sub-groups affected differently by the larger social and environmental context? How can we provide long-term food security in an ecologically-sustainable and socially responsible manner?

Within this broad context, our proposed Human Issues course will explore the specific issue of toxins (especially mercury) in fish in local lakes and streams and the dissemination of information about these toxins to the culturally varied populations that fish here. The local fishery is utilized by diverse groups of anglers, with motivations ranging from primarily subsistence to purely recreational. Those that fish for “trophy” fish such as muskellunge, for example, generally use expensive equipment and transport large boats over relatively long distances. This group, mostly of the dominant white culture, is thought to be relatively well-informed on the issues of toxins in fish. On the other hand, many cultural minority and lower socioeconomic people in the Madison area are subsistence anglers, acquiring a significant portion of their diet from the fish they catch. These later groups have proven hard to reach through traditional information channels (e.g., DNR fish consumption advisories).

How do different ethnic and socioeconomic groups utilize the local fishery? How important is the local fishery as a source of food? To what extent are different groups familiar with the possible toxic risks associated with the fish they eat, and just how significant are these risks? If groups do know about the risks of consuming contaminated fish, what information, tools, etc. would help them follow safe consumption guidelines? What sorts of public outreach and resource management strategies should be developed in order to address these risks

Through engagement in these questions (within the context of the broader questions

posed earlier about food systems, sustainability, and social justice), students will have the opportunity to experience the "deep learning, reflective practice, and community engagement" that "are among the primary goals of [the Human Issues] program." Students will a) study the necessary background (both broad and specific) needed to understand the issues outlined above, b) conduct research on both the scientific and sociocultural aspects of the issues involved, and c) develop recommendations for public outreach and resource management based on their study. Each of these steps will require engagement that is personal as well as communal, reflective as well as intellectual, and integrative as well as disciplinary. The completion of these steps will also require critical judgment based on the clarification of personal and societal values.

4. Student learning outcomes:

Know/understand:

- Historical and present trends in food systems
- Ecological fate and environmental and human health impacts of environmental toxins
- Historical landmarks of environmentalist response to toxic pollution
- Key sociocultural aspects of populations of interest
- Key aspects of sociology of marginalized/disadvantaged groups
- Concepts of environmental ethics and environmental justice
- Key aspects of intercultural, interpersonal and mass communication theory
- Basics of community-based social science research
- Techniques in communication campaign and message develop
- Basics of risk-benefit analysis and the precautionary principle applied to environmental toxins
- Key aspects of effective science communication with diverse audiences

Do:

- Interpret ecological data on fish populations and toxic contamination
- Apply principles of environmental ethics and environmental justice to a specific community-based resource issue
- Develop social science survey instrument to gather information from anglers with diverse cultural and ethnic backgrounds
- Develop intercultural communication skills
- Conduct inter-cultural community-based research
- Develop a community-based information campaign
- Work effectively with community partners and with each other on a cooperative research project
- Plan and complete a group presentation to share their reflections on the seminar with the Edgewood College community and authentic audiences in the wider Madison community

5. How course includes required Human Issues elements:

A. <u>Interdisciplinary inquiry</u> will incorporate science, where students will learn about toxins in the environment and their effects on human health; communication theory (interpersonal, mass and intercultural) and its application in outreach campaigns; sociology and cultural studies, which will help students understand issues of social justice and diversity; health

education, and history; as well as research methodologies in the natural sciences and the social sciences.

B. Values clarification

Students will explore the values of **truth and justice** as they learn about issues of food security and "the tragedy of the commons," or how human societies use, share and distribute among their members natural resources vital to survival. Students will also explore these values as they learn about public health disparities and environmental justice—the idea that disadvantaged segments of society fall prey disproportionately to the harmful effects of environmental degradation because they lack the social capital and political voice to stop, for example, the citing of toxic waste dumps in their neighborhoods. Students will be encouraged through discussion and reflection to explore their own values related to these issues as well.

An important part of this course and its projects will be the development of **partnerships** with community groups and organizations that share our interests in environmental preservation and justice and public health issues, including but not limited to the Friends of Lake Wingra, the Wisconsin Department of Natural Resources, the South Side Farmers' Market, the Madison Environmental Justice Organization, Sustain Dane, and community centers in the diverse communities mentioned above.

Students will expand their sense of **community** by working with and in the ethnically diverse Madison communities that use the local fisheries under study in this course, including the African American, Hmong and Latino communities. Grounding our formative research in these communities is an intentional technique meant to increase not only the validity and practical applicability of our findings for developing outreach campaigns and resource management strategies, but also the depth of the student experience. Our hope is that by expanding their own circles of community in this project, students will explore and further develop **compassion and responsibility** toward those who are less advantaged and a sense of **stewardship** toward the natural world on which we all depend.

C. Engaged learning

The main focus of this course, which requires a great deal of student engagement, will be the development and implementation of a research and program-development project with the following components:

Phase 1 (Spring 2008)

- Toxins Group (science students): Students will compile data on toxins in local waterways (Monona Bay and Wingra Creek), including which toxins are present, in what quantities, and how bad they are for human health.
- Fishing Community Group (communications students): Students will design and conduct formative research interviews with anglers at the identified local sites to determine how many and what kind of fish they catch, how much of what they catch they eat, what if anything they know about toxin levels in the fish, what if anything they know about fish consumption advisories, and what might keep them from following fish consumption advisories (e.g., structural barriers, cultural practices and beliefs, economic concerns, etc.)

Phase 2 (Fall 2008)

Both groups work cooperatively to develop recommendations for informational outreach campaigns for the diverse population groups concerned, as well as proposed research

management plans. Students will also plan and carry out group presentations on their findings, proposals and experiences for authentic community audiences (DNR, Friends of Lake Wingra, Boys and Girls Club, etc.) and for the Edgewood College community.

Phase 3 (optional)
Students who wish to continue in the project through independent study or other means many be able to join Kelly Mella in fully developing, implementing and evaluating their outreach campaign (outside funding and/or community partners would be sought at this stage).

In addition to this main project, students may participate in the following engaged learning activities:

- As a group, go fishing in local waterways and prepare and eat a locally harvested meal.
- Invite to class and/or visit community partners (individuals and groups) involved in issues that cross the boundaries of food security, environmental justice, health and culture, such as the South Side Farmers' Market, the American Indian Science and Engineering Society (AISES) Wild Rice Ecological and Cultural Awareness project, etc.
- Take a field trip to the site of a similar project in Chicago, Minneapolis, Milwaukee, etc.

D. Intellectual growth, ethical maturation, and critical judgment

Students' **intellectual growth** will be encouraged through thoughtful and engaged study of scholarly readings, discussions on the issues of food security, social justice and public health with community partners, and reflection on both. Their **ethical maturation** will be encouraged through critical examination of the ethical concerns related to social justice, environmental justice, health disparities, cultural diversity and environmental stewardship. Through the experiential learning components of the course (the research itself and the resultant program proposal development), students will be able to develop and use their **critical judgment** to connect and integrate relevant academic theory with real-world experience.

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6. Faculty Development:

Kelly Mella:

My interdisciplinary background includes a dozen years working in professional communications in the Madison area with various public-sector and nonprofit organizations, including the WI Department of Natural Resources and the Madison-Dane County Public Health Department. Through these experiences I developed not only my applied communication skills, but also a deep and abiding interest in and commitment to environmental stewardship and public health promotion. I also learned about disparities in the distribution of detrimental effects of environmental degradation (usually hitting hardest the lower socioeconomic groups and ethnic and cultural minorities) along with other health disparities that unfairly affect the already disadvantaged in our society.

These work experiences have been complemented by my scholarly pursuits: I received a Masters in science communication and am currently completing a doctorate in mass communication with an emphasis in health and environmental communication and information and outreach campaigns, particularly as they relate to diverse ethnic and cultural populations (my dissertation research focuses on anti-smoking advertisements targeted toward Native American audiences).

Finally, although I am a new faculty member at Edgewood College, I have taught communication at the post-secondary level for about 6 years. I also pursued and earned a graduate-level certificate in teaching and learning scholarship during my doctoral studies. These experience have helped me develop a pedagogical approach that prioritizes engaged learning, the exploration of values (particularly social justice and community) within the scope of the course, cultural diversity and the representation thereof in my courses, service learning, community involvement and "real world" experience for my students, as well as academic rigor and intellectual challenge.

Jim Lorman:

I have taught natural science, biology, ecology, evolution, and interdisciplinary environmental studies at Edgewood College for the past 25 years. As an educator, I seek to foster innovative pedagogy, particularly as applied to holistic education. I involve my students in community-based science and apply inquiry-based approaches to science and interdisciplinary environmental education and ecological sustainability. I collaborate with students and educators at the K-16 levels to develop projects focused on the long-term research and management of local environments, using watershed and ecosystem health as integrating themes.

Much of this work is part of my leadership in the Friends of Lake Wingra (FOLW), an informal organization whose goal is "to promote a healthy Lake Wingra through an active watershed community." As a co-founder (1998) and continuing board member of FOLW, and also in my roles on the Dane County Lakes and Watershed Commission and various other city, county, and state committees and task forces, I work to apply my expertise in aquatic ecology, restoration ecology, sustainability, and watershed science toward the development of projects and policy aimed at protecting and enhancing water resources.

I also have a long-term interest in effective strategies for the teaching of evolution to non-science majors. I ask students to envision the evolutionary history of life on earth as their own story, and one that may create common understanding of the human role in the natural world. I taught (with Paula Hirschboeck) an interdisciplinary course called "The Universe Story," which explored the implications of the story that modern science tells us about the origin and evolution of the universe, life, and human consciousness.

As a part of a three-year Kellogg National Fellowship grant, I explored relationships between indigenous and environmental issues, partnership models between indigenous and non-indigenous peoples, and implications of indigenous knowledge systems for science and education. I continue to study these issues, particularly in terms of their implications for effective multicultural science education.

7. Notes:

A. Bibliography

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B. Curriculum Notes

Topics will include the following: food security, toxins in the environment; environmental justice, communication theory; outreach campaigns; sociology and cultural studies; social justice and diversity; health education.

C. Instructional Notes

- Pedagogical approaches
  The instructors approach teaching with a focus on student engagement and active learning strategies coupled with some lecture, guest speakers (in class or at off-campus locations), and group discussion to help students integrate experiences and material, along with opportunities for individual reflection.
- Learning experiences/assignments
  For a thorough discussion of learning experiences, see Section 5C. Students will also be assigned readings and will be required to complete an assigned portion of the research project and resultant program development. They will also present their research results and proposed programs to the Edgewood College community and to key community partners. Other assignments may include an individual reflection/research paper incorporating academic literature in the above topic areas.
- Research
  See Section 5C

D. Assessment and Evaluation Notes

- Students will be assessed based primarily on their participation and work on the development and implementation of the research project and the subsequent development of outreach programs/ resource management strategies. They will also be assessed on their end-of-semester presentations, and on final papers (should they be assigned). Participation in class discussion will also be an assessed element.
- The instructors will grade students on the above parameters, with Professor Lorman taking the lead on grading students in the "toxins" group and Professor Mella taking the lead for students in the "fishing community" group. However, the ultimate grade decisions will be joint.

E. Community Partner Notes

Please see Sections 5B and 5C.

F. Administrative Notes

- Two instructors (Jim Lorman and Kelly Mella)
- Consent of Instructor required for registration
- Enrollment capped at 15
- Attendance required; some class sessions devoted to field research
- Instructional hours/Preferred class time: to be determined
- Preferred classroom: Mazzuchelli G14, 103, or 104