

Application to: TEFD Grants for Professional Development in Teaching (PMYR)
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1. Goals of the Project

The primary goal is to create a **cross-disciplinary learning experience** for students in two different departments: Environmental Conservation (ECo) and Landscape Architecture and Regional Planning (LARP). These departments each train students in the practice of managing land, but from different disciplinary perspectives. In professional practice, conservation scientists and landscape architects and planners frequently work on the same problems, particularly in urban settings. Several professional societies (e.g. International Association of Landscape Ecology) draw their membership from across these disciplines. Student training, however, remains largely silo-ed. By creating a case study that can be implemented simultaneously in two courses, one in ECo and one in LARP, I aim to take the first steps toward developing a model for training students on how to work collaboratively across disciplinary boundaries to address a common problem.

Learning outcomes for the student participants will include:

- Experience with collaboration and working in teams of people with different viewpoints
- Increased appreciation for the multi-faceted nature of environmental problems
- Increased appreciation for the value of their own expertise as well as that of others
- Practice in evaluating multiple aspects of sustainability

Ultimately, I hope for this project to provide a model for additional cross-departmental training, perhaps via the School of Earth and Sustainability.

2. Project Design and Implementation

Cross-departmental training is challenging due to differences in teaching culture and course timing. In addition, the creation of a new course would be impractical given established teaching loads and packed student curriculum requirements. Thus, I propose to **embed this project within existing course frameworks** with minimal additional meeting time. My upper level Wildlife Habitat Management (NRC 564) course is already structured around team-based learning using case studies in partnership with local clients (e.g. Town of Amherst land manager). Similarly, LARP runs studio courses that are also team-based case studies of local planning or design projects. I have been a guest speaker/critic for studio courses taught by Robert Ryan and other LARP faculty. Robert has also been a guest critic for projects in my courses. The funding from this grant would provide us with the support to **develop a joint case study, using a common body of supporting material** that will be simultaneously implemented in NRC 564 and a LANDARCH or Regional Planning studio course. I have discussed the project with Robert Ryan, and he is willing to be a partner in it.

We will identify a **case study involving the management and redesign of a green space** in the Amherst-Northampton-Springfield area. Students will work jointly to achieve goals established by the clients, but these goals will encompass both ecological outcomes and human outcomes in the green space. Students in NRC 564 will be charged with bringing to bear their ecological expertise, while students in the LARP studio course will bring to bear their design expertise. The curriculum plan will be developed in Summer 2019, but the arc of the project will likely include these components:

- Site assessment

- Refinement of goals
- Identification of alternative designs/management actions
- Evaluation of alternatives
- Presentation of the preferred alternatives, with reference to their feasibility

We will aim to have at least 3 joint meetings of the entire classes - one to refine the goals, one to develop the alternatives designs/management actions, and then a presentation of the final plans developed by the interdisciplinary student teams. Interdisciplinary (ECo + LARP) student teams will be formed at the first joint meeting through a kind of match-making of the teams in each course. Collaboration in the intervals between joint meetings will be facilitated through online tools - e.g. Moodle, Box, Slack. Students will be given time during regular class/studio sessions to work within their discipline so that they come to the joint meetings prepared to work together.

3. Project Timeline

January 2019 - Work with Robert Ryan (LARP) to identify a partner course in LARP

Spring semester - meet with Robert and/or LARP faculty partner to identify some potential case studies

May 2019 - Hire two graduate students (one ECo, one LARP) to assist with case study development

Summer session - Finalize selection of case study. Collect relevant supporting materials. Develop curriculum plan for the implementation of the joint case study

September 2019 - Pre-survey of students in the participating ECo and LARP courses

Fall semester - Coordinated simultaneous implementation of the case study in the two courses, with three joint meetings of the two classes (timing to be determined)

December 2019 - Joint final presentation of student projects in interdisciplinary teams; post-survey of students in the participating courses

4. Evaluation of Impact

I plan to work with TEFD to develop a short pre- and post-survey instrument, probing the students' understanding and appreciation of **cross-disciplinary collaboration** and the **multi-faceted nature of environmental problems**. We will administer the survey at the beginning and end of the semester to test for change in these key learning outcomes. In addition, students in both classes will be required to write short reflection pieces on their experience working on the case study.

5. Detailed Budget.

Costs - I request the maximum budget of \$3000. This will cover graduate student support (7 weeks at 10hr/wk and \$28.59/week + fringe = \$2958), leaving \$42 for miscellaneous expenses, such as copying and gasoline for travel to field sites.

Justification - There are some logistical challenges that remain to be addressed in implementing the project, not least of which is identifying the case study. The funding from this grant would provide the support for two graduate students at 5 hours/week each - one from ECo, one from LARP - to assist in ironing out these details and gathering the supporting materials (e.g. maps, planning documents, and available ecological data).