Rachel Berndtson, Geographical Sciences

Chesapeake Project Course Redesign

I will apply my Chesapeake Project training to design a new course for the Department of Geographical Sciences: GEOG498S: Sustainability and the City: Washington, DC's Green Landscape. The course will be offered each summer, and will satisfy an upper level GEOG major requirement.

After completing this course, students will be able to:

1. Define sustainability across the triple bottom line, and analyze urban policies and processes that enable and restrain sustainability.
2. Identify how human-environment interaction as alter cultural landscapes.
3. Recognize urban human-environment interactions as part of larger socio-ecological systems.
4. Understand features of urban systems that influence resiliency and adaptive capacity of those systems.
5. Apply class concepts to case studies in Washington, DC to critically evaluate the sustainability of the city's "green" landscape.

Sustainability and the City explores whether and how human-environment interactions within an urban space can be sustainable across the triple bottom line, and how efforts towards urban sustainability alter cultural landscapes. Students will spend the first segment of the course developing an understanding of sustainability, including its application across the triple bottom line and urban landscapes as socio-ecological systems. The second segment of the course explores challenges and advancements in urban sustainability across food, water, energy, and land resources, with case studies on those resources' use in Washington, DC. The class includes student-led discussions on each of these topics for learning assessment. Each class, a team of students will present a summary of the readings, and prompt fellow students for a larger class discussion on the topics. Student-led discussions will focus on one of the learning outcomes 1-4. In the third and final segment of the course, students integrate knowledge to produce a final term paper. The paper and accompanying presentation account for one third of the class points, and assess learning outcomes 1-5, above. The earlier class modules and discussions that focused on individual learning outcomes prepare students to apply all learning outcomes in one final paper.

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For their term paper, students will conduct a sustainability assessment on one urban resource (water, food, energy, or green space) in Washington, DC, and determine how efforts towards the “greening” of that resource impact the surrounding cultural landscape. Students will research the resource’s historical use in the city, and will also assess contemporary sustainability efforts for that resource based on Washington, DC’s sustainability plan. In their assessment, students will critically analyze how the city addresses the resource’s sustainability across the triple bottom line, as well as how sustainable plans for future resource use build resiliency for the city. Students will then determine how the city’s plan for sustainable use of the resource might influence surrounding cultural landscapes, including: infrastructure, ecosystems, neighborhood aesthetics, cultural artifacts, advocacy and awareness, public perceptions, and community normalization. In future renditions of this course, I hope to incorporate a research component through which students visit sites of urban greening, and collect data through observations and interviews with those living in the area to assess impacts to the landscape.