



In Partial Fulfillment of the Requirements for the Degree of  
**Doctor of Philosophy**  
**Edgar Cardenas**

Will defend his prospectus

**Humanistic Science: Using ArtScience Approaches to Enhance  
Problem Solving for Sustainability.**

Sustainability's complex scientific and societal challenges have been best addressed through interdisciplinary collaboration. These collaborations, however, typically occur between natural, technical, and quantitative social scientists; the humanities, and especially the arts, are often underrepresented in these efforts. Yet when properly facilitated, artist-scientist teams can work at the interstices of these domains and generate creative products and ideas that would not have otherwise been available to them. This research will investigate art-science integration at both the individual and collaborative level. It will combine aesthetic and normative analysis of sustainability thought, especially the work of Aldo Leopold; the realm of art practice; and an empirical inquiry into the social factors that foster or hinder creativity in art-science teams.

The purpose of this research is to understand how the arts and sciences can move beyond formative dialogue and into a reflexive and productive working relationship that allows scientists and artists to collaborate in a truly integrative and effective manner, addressing both the human experience of place and the scientific knowledge necessary for a better understanding of sustainability challenges. In effect, it is an effort to study and incorporate the epistemic spaces of both the arts and sciences in order to provide a more holistic picture of sustainability inquiry, with the goal of improving our ability to envision and solve emerging problems at the nexus of science and society.

Monday, January 7, 2013  
4:30 p.m.  
Wrigley Hall, Room 401

Faculty, students, and the general public are invited.

Supervisory Committee:  
Ben Minter (Co-Chair)  
Mark Klett (Co-Chair)  
Dan Childers  
Ed Hackett