

NR 5884 Landscape Systems & Strategies

Offered: Fall, Spring, and odd-numbered Summer (12-week) Semesters

INSTRUCTOR: Daniel Marcucci, Ph.D., marcucci@vt.edu

REQUIRED TEXT:

Sustainable Landscape Planning: The Reconnection Agenda (2012) by Paul Selman ISBN: 978-1-849-71263-7

A Sand County Almanac, and Sketches Here and There (1949) by Aldo Leopold

COURSE DESCRIPTION:

Landscapes are frames on the physical world where coupled human and natural phenomena create systems ranging from highly altered, such as urban centers or agricultural regions, to predominately natural, such as wild or resource lands. This course examines the cumulative effects on individual landscapes of global trends such as increasing population, expanding cities, improving living standards, accelerating climate change, shifting agriculture, and moving coastlines combined with local pressures. A 21st century perspective is deployed to analyze how these keystone processes will create new challenges for ecosystem services, productivity, sustainability, resilience, and adaptability on landscapes. Integrates the demands of conservation, development, and governance for both the intermediate- and long-term into a single proposition.

Learning Outcomes:

Having successfully completed this course, students will be able to:

- Evaluate the function and services of specific landscapes
- Describe landscape creation and processes of change of specific landscapes
- Integrate 21st century urban centers with their ecoregional landscapes
- Appraise the impacts of landscape on culture and culture on landscapes
- Envision strategies for sustaining and sustainable landscapes

EVALUATION

- Activities and discussions – 60%
- Individual projects – 40%

SUBJECT MATTER:

The Reconnection Agenda

- The Landscape Concept: connections and disconnections
- Functions, Services, and Values of Landscapes
- Landscape Change and Resilience
- Physical Connections in the Landscape
- Social Connections in the Landscape
- The Reconnection Agenda for Future Landscapes

Landscapes as Coupled Natural and Human Systems

- Biodiversity Planning/San Diego County
- Cities in the Wilderness – Endangered Species & Protected Areas
- Discovering the Paraná Delta
- Sustaining the Paraná Delta
- Landscape Services on the Marcellus Play
- Marcellus Landscape Impacts
- Isla de Vieques: Landscape Development, Island Biogeography, and Las Bombas
- Vieques Futures

Case Studies

- Personal Landscape
- Willamette Basin, Oregon
- San Diego County, California
- Paraná River Delta, Argentina
- Marcellus Play, Mid-Appalachians
- Isla de Vieques, Puerto Rico