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UNLV solar and renewable energy minor

Thomas C. Piechota

University of Nevada, Las Vegas, thomas.piechota@unlv.edu

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UNLV Solar and Renewable Energy Minor

Thomas Piechota, Director of Sustainability and Multidisciplinary Research

David Hassenzahl, Chair, Department of Environmental Studies

David James, Associate Vice Provost for Academic Programs
- Supported by NV Energy donation
- Fall 2009 – first class of students
- Academic program in Department of Environmental Studies, College of Urban Affairs.
- Administered through Division of Research and Graduate Studies and Office of Vice Provost for Academic Affairs
Background

- Two Major Components
  - Curriculum
  - Co-Curricular Activities

- Available to students in all disciplines
  - Track 1: Policy (21 Credits)
  - Track 2: Engineering/Science (21-23 Credits)
1. Develop familiarity with terminology and types of solar energy utilization (3 credits)
   (EGG 150/450 - Introduction to Solar Energy Utilization I)

2. Acquire background knowledge of global environmental problems (3 credits)
   (ENV 101 - Introduction to Environmental Science)

3. Develop competence in some aspect of sustainable building design (3 credits)
   (Sustainable Building Design Course will be developed)
Curriculum
Track 1: Policy

- Core Outcomes (9 credits) plus

- Develop competence in environmental history, economics, policy and science (12 credits of electives)
  
  - Geology
  - Environmental Studies
  - Law
  - History
  - Political Science
  - Economics?
Track 2: Engineering/Science

- Core Outcomes (9 credits) plus

- Develop competence in design of solar thermal and photovoltaic systems (3 credits)
  - EE 4XX Photovoltaic Devices and Systems, or
  - ME 414 Sizing Solar Energy Systems

- Develop technical depth in the scientific fundamentals or engineering design principles of renewable energy (6-8 credits depending on whether courses have labs)
  - Chemistry
  - Electrical Engineering
  - Mechanical Engineering
  - Physics
Co-Curricular Activities

- Internships
  - NV Energy
  - Other appropriate entities and private sector
- Scholarships
- Undergraduate Research Assistantships
- Student Activities (projects, field trips, supplies)
Other Activities

- Upgrade to teaching labs and demonstration facilities
- Support for Part Time Instructors
- Conferences and Guest Speakers
- Graduate student support to help with Minor
http://environment.unlv.edu/solar