

Recommendations to the University Concerning the Ole Miss Green Initiative



ENGR 597: Global Warming – Causes, Impacts, and Solutions

“Rising Above the Gathering Storms”

- To Educate Students on the Causes, Impacts, and Solutions Concerning Global Warming Issues
- Raise Awareness about the Global Warming Issues
- Consolidate a Research Base on Mitigating the Climate Change at the University of Mississippi

1/16	Overview of the Causes and Impacts of Global Warming	Wei-Yin Chen
1/23	Overview of the Causes and Impacts of Global Warming - continued	Wei-Yin Chen
1/28	Energy Economics and Environmental Policy	Neil Manson
1/30	Atmospheric Physics and Chemistry	Nathan Hammer
2/4	Biomass Conversion	Clint Williford
2/6	Ecological and Health Impact, I	David Reed
2/11	Ecological and Health Impact, II	Gochfeld, Willett
2/13	Energy Conservation	Jeff Roux
2/18	Climate Change – Evidences and Contrarian Viewpoints	Charles Wax
2/20	Overview of the Solution of Global Warming	Wei-Yin Chen
2/25	Chemistry and Physics of CO ₂	Walter Cleland
2/27	Mobile and Area Sources of CO ₂ and Abatement Strategies	Waheed Uddin
3/3	Nuclear Energy	Elizabeth Ervin
3/5	Carbon Sequestration – in Brine, Ocean, Rocks and Coal Bed	Robert Holt
3/17	Combustion on the Horizon – Oxy-Fuel Combustion	Shi, Chen
3/19	Combustion on the Horizon – Chemical Looping	Wan, Chen
3/24	Integrated Gasification Combined Cycle (IGCC), Ultra-Supercritical Steam Generation, and Integrated O ₂ Transport Membrane	Gathitu, Chen
3/26	Photocatalytic Reduction of CO ₂ and Water Splitting, I	Nathan Hammer
3/31	Photocatalytic Reduction of CO ₂ and Water Splitting, II	Steve Davis
4/2	Effects of Climate Change on Costal Flood	Yan Ding
4/14	Fuel Efficiency in Transportation Systems	John Seiner

4/16	Nuclear Energy	Damon Webster
4/16	Implementation of Solar Panels on Commercial Properties and the Cost-Based Incentives	Crystal Warren
4/16	Atmospheric Carbon Dioxide Capture Technologies	Joey Parkerson
4/21	Solar Energy	Michael McClure
4/21	Home Energy Efficiency	Eddie Smith
4/21	Ice Cores	Archer Davis
4/23	Hydroelectric Energy	Josh Sage
4/23	Green Roofs	Leanna Smith
4/28	US vs. Global Policy Changes	Brett Vescovo
4/28	Green Community	Grady Cutrer
4/28	Algae-Based Biofuels	Sarah Mixon
4/30	Micro Remediation	Alison Kinnaman
4/30	Biomass	Eric Williams

Recommendations on Policy

We urge the University to work with engineers and scientists to establish exploratory projects on the reduction of greenhouse gas emissions and development of alternative energy sources. Teamwork will create the quickest, most efficient methods for solving the impending issues concerning climate change.

We urge the Governor of the State of Mississippi to consider joining the Governors' Declaration on Climate Change. The declaration should be founded on three principles:

- A federal-state partnership is the only way we can get the job done.
- State-based climate action plans and programs have paved the way for cost effective reductions of greenhouse gases and they deserve continued support.
- Rewarding and encouraging meaningful and mandatory federal and state climate action is the key to success.

- We encourage the faculty to incorporate discussion of climate change into the following curriculums: environmental policy, law, politics, physical sciences, technology, engineering, international studies, social science, and home and consumer sciences.
- The city of Oxford should be influenced to increase renewable energy programs and to educate the local elementary and high schools about renewable energy.

- Faculty are encouraged to be involved in global warming research.
- Policies should be established to reward faculty for investigating improvements and preventions regarding climate change.
- We propose the formation of an annual regional Climate Change Forum that involves both poster presentations and panel discussions.

The University administration should examine the feasibility of

- establishing an Ole Miss Farm that provides part of the food supply for University employees and students.
- constructing community composts

Paper use and waste can be significantly reduced by:

- encouraging electronic submission of homework
- encouraging the printing of the *Daily Mississippian* on recycled paper
- monitoring and reducing the number of spoils of the *Daily Mississippian*
- discouraging the use of the “blue book” for exams

The role of the recycling program should be notably expanded by providing recycling bins outside of:

- Sporting Events
- Dormitories
- At Every *Daily Mississippian* and ASB Readership Program Pickup Location

- The University should work with UM Athletics to ensure that fields are not needlessly illuminated at night when teams are not practicing or maintenance workers are not busy.
- Goals need to be set for reductions in overall campus power usage.

The University should consider keeping the money saved by using any renewable methods in a special account for developing and researching additional novel green technologies at Ole Miss.

Recommendations on Facilities

We urge the University to work with the City of Oxford to expedite the establishment of a public transportation system

Consider the Implementation of the following:

- Green Roofs
- Solar Panels
- Wind Turbines
- Geothermal Heat Pumps
- Motion-censored Lighting or Lighting Switches
- Natural Lighting
- LED Lights
- High Efficiency Heating Ventilation and Air Conditioning (HVAC) Systems

The University is committed to being one of the best public universities. It is therefore important to have the physical facilities of the University reflect its Green Initiative which will help sensitize and educate the general population about the various energy options.

Discussion