
Atmospheric Policy Trajectory (APT) Program Laboratory for Atmospheric Research

Objectives:

- to give each participating student a strong foundation in atmospheric science along with complementary training in environmental public policy. The program will create graduates with the necessary science skills and policy insights to become leaders in industry and government and to undertake the public policy challenges associated with future air quality and climate change.
- To enhance the graduate program within LAR as a way to increase the visibility and success of the LAR research & education program nationally and internationally

APT Background

Sept, 2007: WSU Graduate School approaches LAR with an offer to support an enhanced graduate program (\$500K over 4 to 5 years)
(similar offers made to only two other groups on campus)

Oct, 2007: LAR drafts Atmospheric Policy Trajectory program as a framework for an enhanced graduate program

Spring, 2008: LAR works with WSU policy faculty (Budd, Ford, & Lovrich) to develop preliminary design of APT

APT provided foundation for successful NSF-IGERT pre-proposal to extend policy training to other environmental students—full proposal is in preparation.

Summer, 2008: Advisory Board identified and meeting held to continue APT design and development

Fall, 2008: first students enrolled in Systems Modeling course, and recruiting materials being developed. Policy course under development for spring

APT Participants

- **WSU Policy Faculty**

- **William Budd**, Division of Governmental Studies & Services and Department of Political Science and Criminal Justice, environmental policy and planning, sustainability assessment;
- **Andrew Ford**, School of Earth and Environmental Sciences, system dynamics modeling of energy and environmental systems as a tool to inform policy issues;
- **Nick Lovrich** Dept of Political Science , Director of the Division of Governmental Studies & Services,, and faculty representative to the Legislature, public administration, public policy analysis;

- **LAR Faculty**

- **APT Advisory Board**

- Robert Elleman, EPA Region 10, Air Quality Program, staff scientist
- Genevieve Fisher, AMS Policy Fellow
- Denny Hunter, VP Weyerhaeuser Company
- Jay Olaguer, Project manager, Houston Advanced Research Center
- Doug Pottratz, Environmental Manager, Avista Corp.
- Sarah Rees, policy and planning, WA Dept of Ecology

- **WSU Administration**

- Howard Grimes, Dean of the Graduate School & VP for Research
- Patricia Sturko, Associate Dean of the Graduate School

APT Components

- Designed for more senior PhD students who have completed most of the PhD science/engineering course requirements
- Policy seminar series
 - Invited speakers to give seminar and to conduct half-day student workshop on selected policy topics
 - Seminars coordinated with dept and CEREO seminars to maximize WSU impact
 - Approximately two per semester—costs covered by APT program (or shared with CEREO)
- Systems modeling course ESRP 550, fall semester 3 credit graduate course, instructor Andy Ford
 - The objective is to develop understanding and proficiency in the use of computer simulation models with a focus on models that help us understand the dynamic behavior of environmental systems and their management. We will also learn about systems concepts such as information feedback and homeostasis. Systems concepts are useful in a wide variety of fields -- hydrology, ecology, anthropology, economics, engineering, business, planning, physiology, sociology, etc.

APT Components (cont)

- New Policy fundamentals course (spring semester)
 - Co-taught with Budd, Lovrich, and LAR faculty
 - Emphasis on policy and regulatory processes
 - 3 credit course
- Graduate student travel
 - Funding for travel to professional society meetings
 - AGU, AMS, ACS for science
 - Selected meetings for policy
 - One to two trips per student
- Student internships
 - Policy-oriented postings in agencies and corporations
 - Internships selected through collaborative process with host organizations and each student—ideally focused on area related to PhD research topic
 - Emphasis on environmental policy
 - Results documented as part of a chapter in the dissertation
 - Funded via APT for one semester (4.5 months)

LAR will be looking for internship opportunities beginning next summer and beyond

Recruiting and Marketing

Web site and web form for information requests

Shelley Pressley, part time grad recruiter for WSU environmental programs

Contacts for internship opportunities

Electronic brochures and mailing lists

EOS program announcement

Ties to CEREO: WSU Center for Environmental Research, Education & Outreach

New faculty led umbrella organization to facilitate environmental activities within the WSU system

George Mount is director of CEREO; Brian Lamb is on the executive committee

CEREO seminar series can cosponsor APT policy seminars

Current LAR/WSU Proposals

NSPIRE NSF-IGERT: Nitrogen Systems—Policy Integrated Research & Education
proposal due Oct 20
\$3M over 5 years
support for PhD environmental engineering and science students
focus on N cycling
APT type policy training

Multi-Media Assessment of Chemicals in the Environment

NSF Center Pre-proposal due Oct 14

\$3M/yr for five years

collaborative with WSU, Houston Advanced Research Center, Rutgers University, Dutch Environmental Institute, Max Planck Institute

focus on fundamental science related to multi-media—air, water, soil--transport and fate
of industrial chemicals—POPs, endocrine disrupters, others

Allergens, Asthma, and Climate Change

EPA STAR proposal

due October 4

collaborative with Caltech, USC, NCAR

laboratory and field studies of pollen release, bursting, ambient levels

regional model development of pollen—WRF/CMAQ climate runs as a foundation

Proposals continued

Climate change, air quality, and regulatory needs

EPA STAR proposal due Oct 21

focus on linking climate change/air quality research with policy and regulatory needs