STAPPA/ALAPCO/EPA
Joint Training Committee Meeting
March 2005

Presented by: Laurel Berman

Environmental and Occupational Health Sciences Division

University of Illinois at Chicago

Activities

- APTI Area Training Center Since 1990
- 3 - 6 APTI Short-Courses per Year
- Course development: air quality data analysis and receptor modeling
- Academic Training (masters and doctoral)
- Operation of Distance Learning Network

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Key Faculty

- **Peter Scheff, Ph.D.**
- **William Franek, Ph.D., P.E.**
- **Lorraine Conroy, Sc.D.**
- **An Li, Ph.D.**
- **Serap Erdal, Ph.D.**
- **Salvatore Cali, M.S., C.I.H.**
- **Many others:**

    www.uic.edu/sph/eohs

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Short Courses Taught by UIC ATC

- Laboratory Courses
- APTI423   Air Pollution Dispersion Models-Applications
- APTI424   Source-Receptor Modeling
- APTI435   Atmospheric Sampling
- APTI450   Source Sampling for Particulate Pollutants
- APTI464   Analytical Methods for Air Quality Standards
- APTI474   Continuous Emissions Monitoring

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Short Courses Taught by UIC ATC

- ## Classroom courses
  - APTI400   Introduction to Air Toxics
  - APTI413   Control of Particulate Emissions
  - APTI415   Control of Gaseous Emissions
  - APTI427   Combustion Evaluation
  - APTI444   Air Pollution Field Enforcement
  - APTI452   Principles and Practices of Air Pollution Control
  - APTI470   Quality Assurance for Ambient Air Measurements
  - APTI482   Sources and Control of Volatile Organic Air Pollutants
  - APTI482   Sources, Regulation and Control of VOC (revised)
  - APTI501   Hazardous Waste Combustion

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Short Courses Taught by UIC ATC

- Courses Developed by UIC
- APTI424 Source Receptor Modeling Workshop
- APTI424T Introduction to Receptor Modeling
- APTI Data Analysis Workshop
- APTI Data Analysis Workshop
- APTI Data Analysis for Air Toxics Workshop
- Workshop: Uses and Abuses of Environmental Modeling
- Data Analysis Training Modules (www.uic.edu/sph/eohs).

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Region 5 Needs Assessment

- High Priority (October, 2000)
  - APTI415 Control of Gaseous Emissions
  - APTI450 Source Sampling for Particulate Pollutants
  - APTI482 Sources and Control of VOCs
  - APTI445 Baseline Source Inspection Techniques
  - APTI413 Control of Particulate Emissions
  - APTI446 Inspection Procedures and Safety
  - APTI444 Air Pollution Field Enforcement
  - APTI474 Continuous Emissions Monitoring
  - APTI427 Combustion Evaluation
  - APTI345 Emission Capture and Gas Handling System Inspection

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2004 Activities: 7 Courses +

- Meeting the Needs Assessment
- Meeting the Needs of State Agencies
  - APTI413 Control of Particulate Emissions (February Lansing, MI and March Madison, WI)
  - APTI415 Control of Gaseous Emissions (March Lansing, MI and April Madison, WI)
  - APTI427 Combustion Evaluation (May, Indianapolis)
  - APTI450 Source Sampling for Particulate Pollutants (September, Chicago)
  - APTI474 Continuous Emissions Monitoring (October Springfield, IL)
  - Operation of DLN site (all year)
- Other
  - APTI413, 415 and 427 were in collaboration with LADCO
  - Air Pollution Data Analysis web-based courses, development begun

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Activities Proposed for 2005

- Three to six short courses to be determined based on regional needs, including at least one laboratory course
- Operation of Distance Learning Network
- Update of APTI424T Source-Receptor Models (new/updated course development)
- Continue to work with regional consortia on the development and delivery of courses and specialty workshops
- Web-based courses: data analysis

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Academic Courses at UIC in Air Resources Management

- Environmental and Occupational Health Sciences:
  - Air Quality Management, Occupational and Environmental Epidemiology, Risk Assessment in Environmental and Occupational Health, Industrial Toxicology
- www.uic.edu/sph/eohs

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Key Training Facilities

- Air Monitoring Station: meteorology; CO, SO_2, H_2S, NOx, O_3; TSP, PM_{10}, cascade impactors, dichotomous, FRM $PM_{2.5}$, CNC, and nephelometer.

- Air Quality Laboratory: Orsat, Anderson viable samplers, microgram-balance, portable CO and NO_2, microscopes, flow calibration, annular denuders, method 5 sampling trains, and stack/source simulator.

- Industrial Hygiene and Environmental Measurement Laboratories: AA; GC and GC/MS; portable instruments and personnel samplers (Data RAM, cyclones, and impactors), Hg vapor, PID, FID and IR detectors, and noise levels.

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For Information

- Peter A. Scheff, Laurel Berman,

   Salvatore Cali

  - University of Illinois at Chicago
  - Environmental and Occupational Health Sciences
  - School of Public Health
  - Pscheff@uic.edu
  - Lberma2@uic.edu
  - Scali@uic.edu

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Presentation of New Courses

- Distance Based Learning:

  - web-based courses

- Coordinator: Salvatore Cali

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On-Line Training: Environmental Statistics

Purpose: Present Environmental Statistics training to ambient air pollution monitoring professionals

On-Line Training: Environmental Statistics

- Learning objectives for series
  - Review
  - Basis and review of EPA Criteria Pollutant evaluation statistics and rules
  - Sampling design and various means to evaluate and present Air Toxics Monitoring data
  - In-depth statistical analysis techniques

On-line program Phase 1 (July-November 2004)

- 3 webcasts done at UIC through CADE
- Titles:
  - Module 1: Interpreting your monitoring data (73 slides)
  - Module 2: Sampling and Analytical Limitations & Sample Detection Limits (84 slides + Excel file)
  - Module 3: Quality Assurance/Quality Control (102 slides plus 3 Excel files and some pdf files)
- Completion time

Location and Presentation

- EOHS Web Page
- No registration required
- No completion requirements
- No certificate of completion

Location and Presentation

- EOHS APTI page
- Options
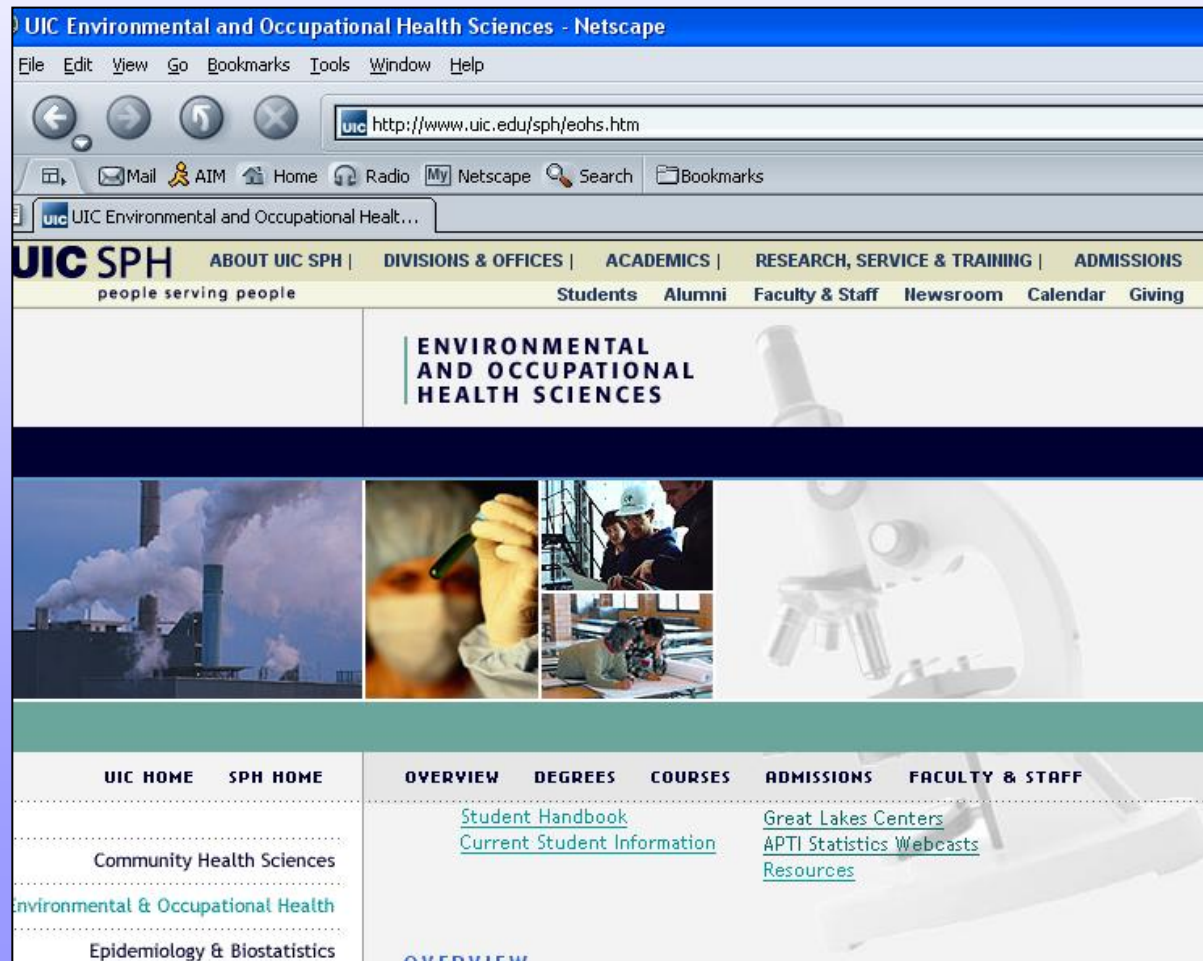
INTRODUCTION TO ENVIRONMENTAL STATISTICS

This series of online lectures was developed for USEPA by Dr. Peter Scheff, Salvatore Cali and Justin Ford, University of Illinois at Chicago School of Public Health, Environmental and Occupational Health Sciences Division. No registration is required to access the archived lectures. If you wish, you can review the necessary technical requirements.

The EOHS Division also offers classroom-based academic and short courses focused on air quality and air pollution topics. Information about these courses can be found at the Air Pollution Training Institute page.

If you have questions or feedback about these presentations, please contact Salvatore Cali at scali@uic.edu.

Module 1: Interpreting Your Monitoring Data

- Video + Slides
- Video with Captions + Slides (requires Internet Explorer)
- Transcript [will open new window]
- Slides (.pdf)

Module 2: Sampling and Analytical Limitations & Sample Detection Limits

- Video + Slides
- Video with Captions + Slides (requires Internet Explorer)
- Transcript
- Slides (.pdf)
- Data File: Detection Limit Examples (.xls)

Module 3: Quality Assurance Quality Control

Location and Presentation
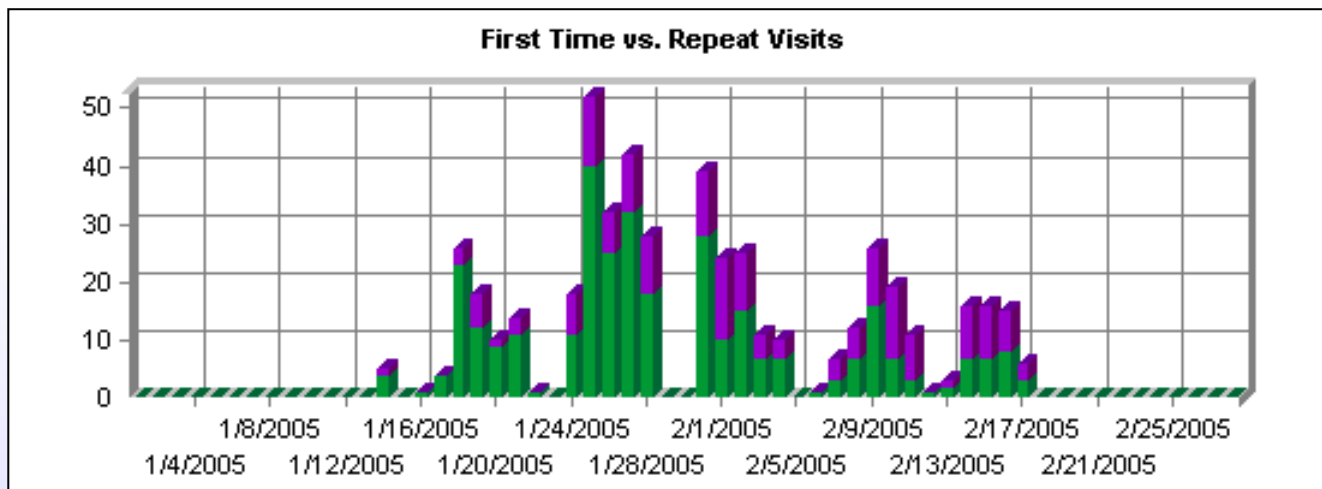
- Module page
- Options

Course evaluations

Modules viewed:	1) I learned new concepts from this course.	2) The concepts I learned will be useful to me in my job.	3) The presentation materials were well-organized and professional.	4) I understood the objectives of the course.	5) The course met the objectives.	6) I will access more of the courses in this series in the future.	7) I understand some of the technical limitations of web-based courses, and I think this presentation was well-done.
1	4	5	5	5	5	5	5
2	2	5	5	5	5	4	5
1	4	5	4	4	4	5	4
2,3	4	4	4	4	4	4	4
1	4	4	5	4	4	4	5
1,2	4	4	5	5	5	5	5
1	5	5	5	4	5	5	5
1,2,3	5	5	5	5	5	5	5
1	4	5	4	4	4	4	5
Averages	**4.0**	**4.7**	**4.7**	**4.4**	**4.6**	**4.6**	**4.8**

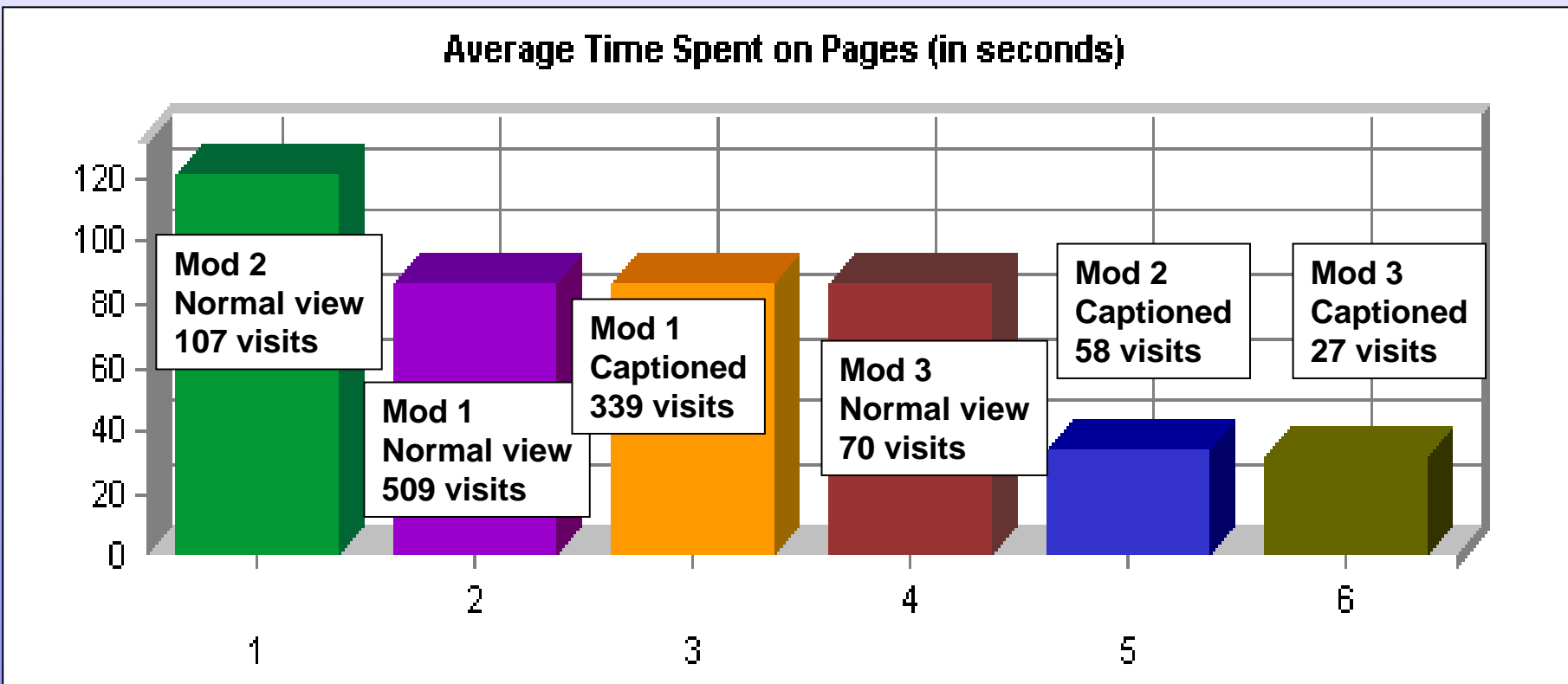# Course evaluations

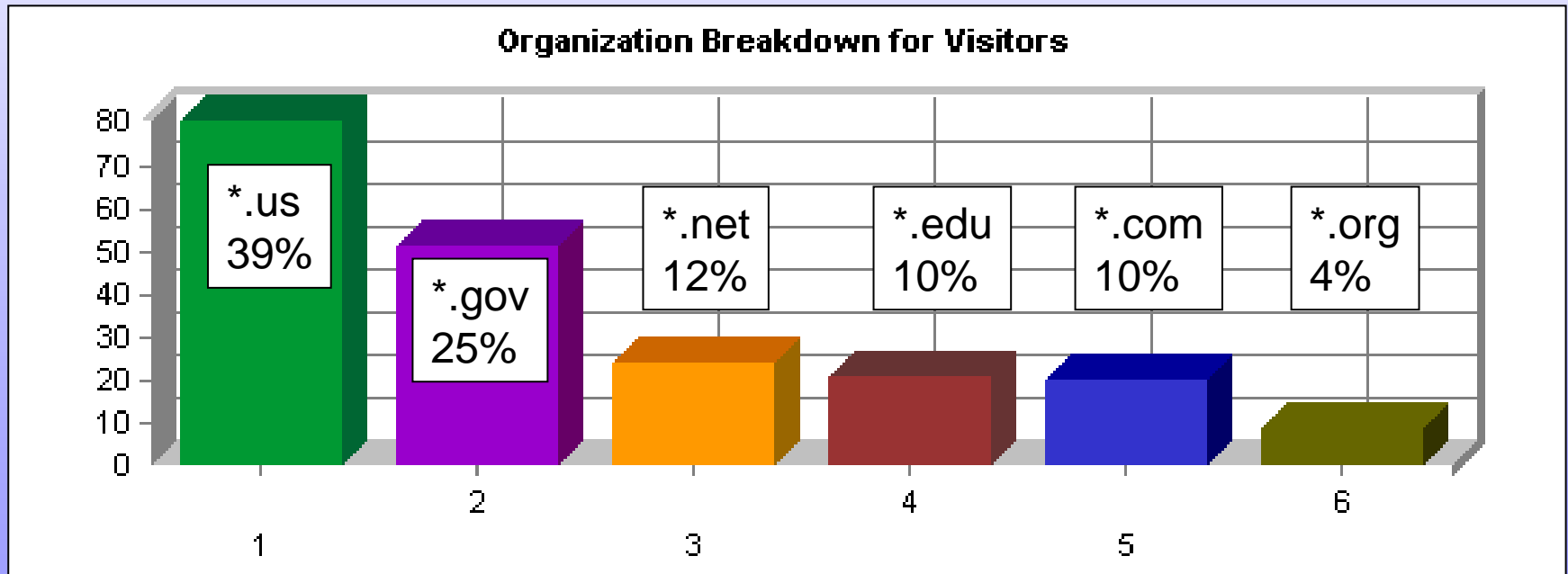| 8) What was the most useful part of this course?	9) What changes would you make to improve this course?
	Make the presentation available in "ppt" format. Some slides of charts and graphs can only be viewed if printed in full size.
Plenty of examples to illustrate key concepts. Well-organized. Ona good level for those who have had some exposure to these concepts, but are not statisticians.	On module 2, the slides did not quite follow the video about halfway through to the end. Other slide/video presentations I have seen allow you to advance the slides manually. This may be a useful feature for fututre presentations.
I particularly enjoed seeing many of the activities and ideas that I utilize on a daily basis put to use.	None
The explanation and examples given for calculating the ozone and PM2.5 3 -yr averages. The examples were very useful.	None
Everything is useful.	None
Able to stop and replay certain concepts and information at your leisure.	None
Real-life examples.	

Viewers & Behavior

First Time vs. Repeat Visits

Average Time Spent on Pages (in seconds)

Mod 2
Normal view
107 visits

Mod 1
Normal view
509 visits

Mod 1
Captioned
339 visits

Mod 3
Normal view
70 visits

Mod 2
Captioned
58 visits

Mod 3
Captioned
27 visits

Organizations

Organization Breakdown for Visitors

- *.us 39%
- *.gov 25%
- *.net 12%
- *.edu 10%
- *.com 10%
- *.org 4%

On-line program Phase 2 (January-December 2005)

- 6 modules
- First 2 with Webex
- Follow-up after evaluation

Summary

- Webcasts are successful and cost-effective means to distribute lessons
- Registration and certificates would add another layer, but with no small difficulty
- Statistics material may lend itself to the computer presentation format
- As with live training, examples work best