Perspectives on Statistical Practice

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Statistical Pedagogy

36-701

Instructor/Course Leader: Brian Junker

Writing Consultant: Tim Dawson

Guest Lecturers and Panels

Class Meetings: MW 1:30-2:20, BH 231B

Pedagogy: Activities that impart knowledge.

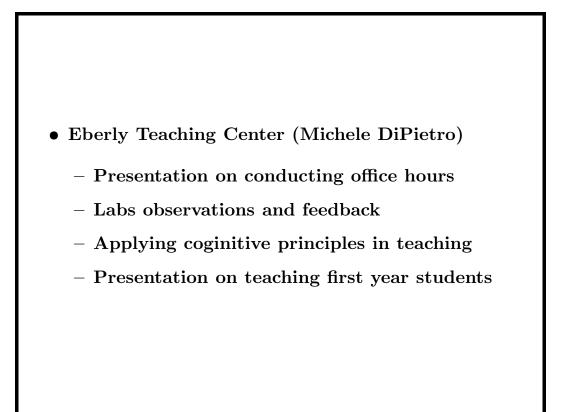
Goals of the course:

- 1. Become effective communicators of statistical ideas/knowledge.
- 2. Develop understanding of the elements of statistical practice.

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I. TEACHING

- We'll Talk about:
 - How do students learn, and what are the the needs and difficulties of the learner?
 - What are the current trends in statistics education?
 - What are the challenges in teaching statistics?
 - How can we help students learn (and retain)?
- Practice in Instruction (Oded Meyer)
 - Supervised practice in TA-related activities (labs, office hours, grading)
 - Mini lectures



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II. CROSS-DISCIPLINARY WORK/CONSULTING

- What are some good and bad practices of statistical consulting (video)
- Panel discussions on cross-disciplinary work (Statistics Faculty)
- Ethics in Statistics Research (Joel Greenhouse)

$Teaching \iff Consulting$

III. WRITING

- We'll supervise the writing of two paper assignments
 - one from **7**11
 - one from 707
- Presentation on technical writing (Tim Dawson, English Department)
- Individual meetings with Tim after first draft is due.

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The "heart" of statistical practice is the process of....



Where:

- ${\cal A}$ Translating a scientific research question into well-posed statistical problems.
- \boldsymbol{B} Solve the problems.
- ${\cal A}^{-1}$ translating the results back into a product that is accessible to the relevant scientific community.
 - Also important when teaching introductory courses (tutor....)

Handouts:

1. Assignment 1 from 36-711

For next week Wednesday (9/8).... Think about the "A" part - translate the research question into 2-3 statistical problems (and write them down).

2. Examples of old 707 papers.

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What's coming.....

- Wed. 9/1 Meet here a little early: presentation in the Library Instruction Center, Hunt Library (Paul Neuhaus)
- Mon. 9/6 Labor Day
- Wed. 9/8 More about the Clinical Depression assignment and ABA^{-1}