Pharmacoepidemiology
Master of Clinical Biomedical Science Program

Dates: Monday, October 22 – Friday, October 26, 2007
Time: 9:00 AM – 5:00 PM

Instructor:

> Patrick G. Arbogast, PhD
> Associate Professor of Biostatistics
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Course Objectives:

1. Understand pharmacoepidemiologic concepts.

2. Understand bias, confounding, and solutions in pharmacoepidemiologic studies.

3. Understand and apply statistical methods popular in pharmacoepidemiologic studies.

Textbooks:

> Required: None (electronic copies of published papers available)

> *Recommended:*
> Brian L. Strom (Editor). *Pharmacoepidemiology*. Wiley, 2005. ISBN: 0470866810

> Brian L. Strom (Editor), Stephen E. Kimmel (Editor). *Textbook of Pharmacoepidemiology*. Wiley 2007. ISBN: 0470029242

Software:

> SPSS version 15 (or latest)

Website:

> http://biostat.mc.vanderbilt.edu/twiki/bin/view/Main/MCBSPharmacoepi

Grading:

> 5 homework assignments.
> No exams.

Daily Course Organization:

9:00 – 9:40	Lecture
9:40 – 9:50	Team review
9:50 – 10:00	Class review
10:00 – 10:10	Break
10:10 – 10:50	Lecture
10:50 – 11:00	Team review
11:00 – 11:10	Class review
11:10 – 11:20	Break
11:20 – 12:00	Lecture
12:00 – 12:10	Team review
12:10 – 12:20	Class review
12:20 – 2:00	Lunch
2:00 – 4:00	Homework session/computer lab
4:00 – 5:00	Presentation of homework

Class Schedule:

Monday 2007Oct22 Morning	What is pharmacoepidemiology? `2007Oct22_introduction.pdf`
Afternoon	Computer lab: Right heart catheterization (RHC) study `computer_lab_2007oct22.pdf`
Tuesday 2007Oct23 Morning	Bias and confounding in pharmacoepidemiology New-user designs `2007Oct23_bias_confounding_new_users.pdf` Time-dependent exposures `2007Oct23_time_dep_exposure.pdf`
Afternoon	Computer lab: Immortal time bias in Academy Award study `computer_lab_2007oct23.pdf`
Wednesday 2007Oct24 Morning	Propensity scores `2007Oct24_propensity_scores.pdf`
Afternoon	Computer lab: Propensity scores for hypothetical dataset `computer_lab_2007oct24.pdf`
Thursday 2007Oct25 Morning	Using health care utilization databases `2007Oct25_health_care_databases.pdf` Disease risk scores `2007Oct25_risk_score.pdf`
Afternoon	Computer lab: Disease risk scores in RHC study `computer_lab_2007oct25.pdf`
Friday 2007Oct26 Morning	Health policy research: interupted time series `2007Oct26_interrupted_time_series.pdf`
Afternoon	Computer lab: Analyze fluoroquinolone study data `computer_lab_2007oct26.pdf`