



## **Epidemiologic Methods**

This area provides training in the development and application of new methods in epidemiologic research. Students learn to use and justify classical epidemiologic methods in study design, data analysis, and interpretation of results. Students also receive training in biostatistical areas most relevant to epidemiologic research. Recent innovations in epidemiologic methodology are introduced through advanced courses and tutorials. Doctoral students conduct research with faculty members in the development of new methodologies and in novel applications of existing methodologies. Those enrolling in this area of interest ordinarily have completed four semesters of college calculus and one semester of linear algebra. Students engaged in this area will have an opportunity for collaboration with researchers working on causal inference in epidemiology and allied sciences. Another option for collaboration is with a cross-departmental group of epidemiologists and biostatisticians working on methods to adjust for bias due to exposure measurement error in nutritional, environmental and occupational health research.

### **Recommended Coursework**

**BIO222** Basics of Statistical Inference

**BIO223** Applied Survival Analysis and Discrete Data Analysis

**BIO226** Applied Longitudinal Analysis

**BIO248** Advanced Statistical Computing

Masters-level students are encouraged to take the core methods courses that are required for doctoral students.

\* Courses with an asterisk are offered every other year

Epidemiologic Methods   Suggested Schedule		
Fall Semester Courses		
BIO 222	Basics of Statistical Inference	P Williams Fall
EPI 207	Advanced Epidemiologic Methods	Hernan Fall I
EPI 247	Epidemiologic Methods Development	Mittleman Fall II
Spring Semester Courses		
BIO 223	Applied Survival Analysis and Discrete Data Analysis	Wei Spring
BIO 226	Applied Longitudinal Analysis	Hughes Spring
BIO 248	Advanced Statistical Computing	Catalano Spring
EPI 289	Causal Inference in Epidemiology	Hernan Spring I

- \* Courses with an asterisk are offered every other year
- Courses in blue are mandatory for doctoral students only