We meet Monday through Friday from 9:00 am to 5:00 pm in G150B, Perry Building, 330 Packard Street, Ann Arbor. The room will be available for lab use in the evenings.

All readings are required unless marked “Recommended.” The texts for the course will be handed out on the first day of the workshop. Required readings not in the texts will be handed out in course packets. Many required and recommended readings can also be found on the CTools website, LAHDD 2011, at https://ctools.umich.edu/portal. Exercises and instructions about projects will be posted to the website. Participants will work on projects and share their results on the final day of the workshop.

(This syllabus may be revised during the course of the workshop.)

Week 1

Monday (7/18):

*ORIENTATION*

Deane: Describing (and Visualizing) the Distribution of Failure Times; The Survivor and Hazard Functions; Censoring and Truncation


Gutmann: Family Reconstitution: Person Years & Rates


Leonard: Introduction to the Lab and Stata

*OPENING RECEPTION 5:00 PM-7:00 PM*

*Perry Atrium*
Tuesday (7/19):

**Gutmann: The Life Table and Its Analogs**

- Cleves et al. 2010, Chapter 6, Chapter 8.

*Lunchtime Talk: Kees Mandemakers*
*Michigan Union Kuenzel Room *
*Lunch Provided*

Leonard: Compute Person-Years and Rates: Creating life tables using brute force
Exercise: Mortality Life Tables

Wednesday (7/20):

**Gutmann: From Family Reconstitution to Population Registers: Various Kinds of Longitudinal Data**

**Deane: The Life-Table Method and Life Tables from Grouped Data; Testing Group Differences in Survivor Functions**
- Cleves et al. 2010, Chapter 8.

Leonard: Build a Mortality Life Table
Exercise: Mortality Life Tables using Stata

Thursday (7/21):

**Gutmann: Introduction to the Data Used in the Course: German Villages, French Parishes, Sart (a Belgian Commune), and the Utah Historical Database**

**Deane: The Cox Proportional Hazards Model; The Genius of Partial Likelihood; Ties**

Cleves et al. 2010, Chapter 9.

**Leonard: ST functions & Kaplan-Meier curves**

Exercise: Birth Interval Life Tables

**Friday (7/22):**

**Gutmann: Censoring and Informative Censoring**


Deane: Model Building Using stcox: Categorical variables; interactions; centering

Cleves et al. 2010, Chapter 10.

**Leonard: Experiments with Informative Censoring**

Exercise: Simulating the effect of migration on family reconstitution data

*Saturday Afternoon*

**SUMMER PROGRAM PICNIC AT BURNS PARK**

**Week 2**

**Monday (7/25):**

**Lynch: Understanding Malthus**


Recommended: Malthus. *An Essay...* 1st ed., 1798, Chapters 7-19


**Deane: Model Building (cont.): Time-varying variables; Testing linear hypotheses**

Cleves et al. 2010, Chapter 10.
Alter: A Strategy for Building Episode Files; Basics of Microsoft Access
Exercise: Define tables, enter data, simple queries

Tuesday (7/26):
Lynch: Thinking about “Preventive Checks” in Social Context

Deane: Cox Models: Stratified analysis; shared frailty; Complex survey designs
Cleves et al. 2010, Chapters 9 and 10.

Alter: Simple Queries
Exercise: Occupation code dictionary

Wednesday (7/27):
Lynch: Re-thinking Checks on Population: Fertility and Mortality Patterns within Marriage
Deane: Introduction to Diagnostics: Testing the Proportional-Hazards Assumption

*Coffee Break: George Alter*
*ISR Thompson Room 6050*
*Coffee Provided*

Alter: The Relational Model

Exercise: Reconstructing kinship


Thursday (7/28):

Lynch: Household Forms and Family Formation Systems


Deane: Introduction to Diagnostics (cont.): Residuals and Influence Statistics

*Coffee Break: George Alter*
*ISR Thompson Room 6050*
*Coffee Provided*

Alter: Working with Data in MS-Access: Text, Dates

Exercise: Matching people on partial names and approximate dates

Alexander 2007, pp. 121-147, 159-170, also see Appendix A.

Friday (7/29):

Lynch: Families and Households as Systems of Social Support


Deane: Estimating Power, Sample Size, and Effect Size in Cox Regression Models

Cleves et al. 2010, Chapter 16.

Alter: Working with the Intermediate Data Structure


**Week 3**

Monday (8/1):

Hacker: Classic Demographic Transition Theory and Recent Critiques


Smith: Introduction to the Utah Population Database – Description, opportunities, and historical and contemporary research capabilities; Historical demographic application and recap essentials of Cox models; Competing risks and Cox models; Multiple potential exits per subject; Identification problem; Independence assumption; Use of covariates


Alter: Understanding SQL: Working with Nulls

Exercise: Finding children without mothers

Tuesday (8/2):

Hacker: The Mortality and Epidemiological Transitions


Smith: Competing risks and Cox Models; Multiple potential exits per subject; Identification problem; Independence assumption; Use of covariates

- Cleves et al. 2010, Chapter 17

Alter: Moving from Events to Episodes

Exercise: Marital Status over Time

Wednesday (8/3):

Hacker: Fertility Measurement and Natural Fertility


Smith: Multiple Events and Cox Models: Sequential events; Multiple events in a group; Marginal models; What is the right clock?


*Lunchtime Talk: Bertrand Desjardins*

*Lunch Provided*
**Thursday (8/4):**

**Hacker: The Fertility Transition**

**Smith: Alternatives to the Cox Model; Common Models; A controversy in Aging and Historical Demography**
- Cleves et al. 2010, Chapters 12 and 13.

**Friday (8/5):**

**Hacker: Intergenerational Transmission of Fertility and the Second Demographic Transition**
Smith: Parametric Models (Continued): Alternatives to the Cox model; Common models; Plotting fully-adjusted survival curves; Variance adjustments for clustered data; Regression diagnostics including collinearity; A comment on correlated vs. shared frailty

- Cleves et al. 2010, Chapters 9 and 12-14.
- Cleves et al. 2010, Chapters 12 and 13.

Alter: “Time since x” Variables

Exercise: Survival of the preceding child

*Saturday Afternoon *
*SUMMER PROGRAM PICNIC AT BURNS PARK*

**Week 4**

**Monday (8/8):**

**Kurosu: Issues, Debates, and Sources in East Asian Historical Demography**


**Deane: Parametric Models: Stratified analysis; Individual (unshared) and shared (group) frailty**

- Cleves et al. 2010, Chapter 15.


**Alter: Forms and Reports**

Alexander 2007, pp. 311-337.

**Tuesday (8/9):**

**Kurosu: Reproduction and Family Strategies in East Asian Societies**


**Deane: Analysis of Discrete Time Data: The logit model for discrete time; The complementary log-log model for continuous-time processes**


**Alter: Introduction to Visual Basic in Forms**

Exercise: A simple record linkage form

**Wednesday (8/10):**

**Kurosu: Marriage, Household, and Kin Networks in East Asian Societies**


**Deane: Discrete-time Event-history Analysis (Cont.): Data with time-dependent covariates**
*Lunchtime Talk: Samuel Clark*
  * Perry II Room 2300*
  *Lunch Provided*

Alter: Lab

**Thursday (8/11):**

Deane: Preparation for Poster Session
Alter: Lab – Student Projects

**Friday (8/12):**

Student Reports
Poster Session – Perry Atrium