Longitudinal Analysis
of Historical Demographic Data

July 22 – August 16, 2013

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.

For most days there will be both required and recommended readings — readings not marked ‘Recommended’ are required. 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 2013, at http://ctools.umich.edu. 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: 7/22 – 7/26

Monday

ORIENTATION

Smith: The Survivor and Hazard Functions; the Utah Population Data Base


Gutmann: Family Reconstitution; Person-Years and Rates


Leonard: Introduction to the Lab and Stata

OPENING RECEPTION 5–7PM, PERRY ATRIUM
Tuesday

Gutmann: The Life Table and Its Analogs


Leonard: Compute Person-Years and Rates: Creating Life Tables Using Brute Force


LAB EXERCISE #1: Mortality Life Tables Using Excel

Wednesday

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


Smith: The Life-Table Method and Life Tables from Grouped Data; Testing Group Differences in Survivor Functions


LUNCHTIME GUEST LECTURE: MICHIGAN LEAGUE, VANDENBERG ROOM — Lisa Dillon, University of Montreal

Leonard: Build a Mortality Life Table

LAB EXERCISE #2: Mortality Life Tables Using Stata
Thursday

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


**Smith: The Cox Proportional Hazards Model**


**Leonard: ST functions and Kaplan-Meier Curves**

**LAB EXERCISE #3: Birth Interval Life Tables**

Friday

**Gutmann: Censoring and Informative Censoring**


**Smith: Cox Models with Categorical Variables, Interactions/Centering**


**OPTIONAL DETROIT BUS TOUR, 2-10PM ($15)**

**OPTIONAL WEEKEND LAB EXERCISE #4: Simulating the Effect of Migration on Family Reconstitution Data**
Saturday

SUMMER PROGRAM PICNIC AT BURNS PARK

Week 2: 7/29 – 8/2

Monday

Lynch: Understanding Malthus

- Recommended:

Deane: Model Building (cont.) — Interactions, Time-varying Variables, Testing Linear Hypotheses


Alter: A Strategy for Building Episode Files; Basics of Microsoft Access


LAB EXERCISE #5: Define Tables, Enter Data, Simple Queries

Tuesday

Lynch: Thinking about “Preventive Checks” in Social Context

- Recommended:
Deane: Modeling Group Effects in Cox Models: Stratified Analysis, Shared Frailty, Complex Survey Designes


Alter: Simple Queries


LAB EXERCISE #6: Occupation Code Dictionary

Wednesday

Lynch: Re-thinking Checks on Population: Fertility and Mortality Patterns within Marriage


- Recommended:

Deane: Cox Regression with Fixed Effects


LUNCHTIME GUEST LECTURE: MICHIGAN UNION, ANDERSON (D) ROOM — David Weir, University of Michigan

Alter: The Relational Model


LAB EXERCISE #7: Reconstructing Kinship
Thursday

**Lynch: Household Forms and Family Formation Systems**


- **Recommended:**

**Deane: Introduction to Diagnostics — Testing the Proportional-Hazards Assumption**


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


**LAB EXERCISE #8: Matching People on Partial Names and Approximate Dates**

Friday

**Lynch: Families and Households as Systems of Social Support**


- **Recommended:**


Deane: Diagnostics (cont.) — Residuals and Influence Statistics


Alter: Working with the Intermediate Data Structure


**Week 3: 8/5 – 8/9**

Monday

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


- Recommended:
  - Cameron Campbell. CMGPD-LN User Guide
    http://www.icpsr.umich.edu/cgi-bin/file?comp=none&study=27063&ds=0&file_id=1098564

Deane: Power, Sample Size, and Effect Size in Cox Regression Models; Ties and Likelihood Calculations

Alter: Understanding SQL — Working with Nulls


**LAB EXERCISE #9: Finding Children Without Mothers**

**Tuesday**

Kurosu: Health and Mortality in East Asian Societies


**Recommended:**

Deane: Competing Risks and Cox Models — Multiple Potential Exits Per Subject


Alter: Moving from Events to Episodes

**LAB EXERCISE #10: Marital Status Over Time**

**Wednesday**

Kurosu: Reproduction and Family Strategies in East Asian Societies


• **Recommended:**

Deane: Multiple Events and Cox Models — Sequential Events


LUNCHTIME GUEST LECTURE: MICHIGAN LEAGUE, VANDENBERG ROOM – Lionel Kesztenbaum, INED

Alter: Aggregation


LAB EXERCISE #11: Count Older Siblings By Sex

Thursday

Kurosu: Marriage, Divorce and Remarriage in East Asian Societies


• **Recommended:**

Deane: It’s About Time — What is the Right Clock? Unequal Intervals of Time

Alter: Coordinating Episodes Within Households

LAB EXERCISE #12: Household Composition Over Time

Friday

Kurosu: Geographic and Social Mobility in East Asian Societies

– Recommended:

Deane: Analysis of Discrete Time Data — Logit and Complementary Log-Log Models for Discrete Time and Continuous-Time Processes; Time-Dependent Covariates


Alter: “Time Since x” Variables

LAB EXERCISE #13: Survival of the Preceding Child

Saturday

SUMMER PROGRAM PICNIC AT BURNS PARK
Week 4: 8/12 – 8/16

Monday

Hacker: Classic Demographic Transition Theory and Recent Critiques


- **Recommended:**

Deane: Parametric Models — Other Alternatives to the Cox Model


Alter: Forms and Reports


Tuesday

Hacker: The Mortality and Epidemiological Transitions


- **Recommended:**
Deane: Postestimation in Parametric Models — Regression Diagnostics


Alter: Introduction to Visual Basic in Forms

LAB EXERCISE #14: A Simple Record Linkage Form

Wednesday

Hacker: Fertility Measurement and Natural Fertility


- Recommended:

Deane: Parametric Models — Stratified Analysis; Individual (Unshared) and Shared (Group) Frailty


Alter: Lab – Student Projects

Thursday

Deane: Lab – Student Projects

Alter: Lab – Student Projects

Friday

STUDENT REPORTS, G150B
POSTER SESSION, PERRY ATRIUM