The ICPSR Summer Program in Quantitative Methods of Social Research: An Overview

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Workshop in Methods
Indiana University
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Background

The ICPSR Summer Program in Quantitative Methods of Social Research:

Is widely recognized as preeminent training facility for methodologies and technologies of social science research

Serves a multidisciplinary and international constituency

Provides a range of classes that integrate statistical methods with practical concerns and substantive theory
A Unique and Diverse Social Environment:

- Emphasizes a combination of rigor and informality
- Strong synergy between instructors and participants
- Facilitates the ongoing exchange of ideas
- Encourages interpersonal interactions and networking
The ICPSR Summer Program was founded in 1963
Directors of the ICPSR Summer Program

Warren E. Miller (1963 - 1966)
Donald E. Stokes (1967 - 1969)
Lutz Erbring (1972 - 1978)
Henry Heitowit (1981 - 2007)
William G. Jacoby (2008 - 2012)
History

Most Recent Transfer of Power, October 2007
Size of the Program

Strong Pattern of Growth Over the Years

Enrollments in the ICPSR Summer Program, by year.
The ICPSR Summer Program is Very Large

Some Figures from the 2012 Summer Program:

1027 participants
   From 312 institutions
   From 25 nations
   From 26 academic disciplines

91 instructors
   From 50 institutions
   From 12 academic disciplines

43 Teaching Assistants

Support staff of about 25 people
Participants from Many Disciplines

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Political Science</td>
<td>24%</td>
</tr>
<tr>
<td>Sociology</td>
<td>10%</td>
</tr>
<tr>
<td>Public Health</td>
<td>7%</td>
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<tr>
<td>Business Administration</td>
<td>6%</td>
</tr>
<tr>
<td>Education</td>
<td>6%</td>
</tr>
<tr>
<td>Psychology</td>
<td>6%</td>
</tr>
<tr>
<td>Economics</td>
<td>5%</td>
</tr>
<tr>
<td>Library/Information Science</td>
<td>5%</td>
</tr>
<tr>
<td>Social Work</td>
<td>5%</td>
</tr>
<tr>
<td>Nursing</td>
<td>3%</td>
</tr>
<tr>
<td>Public Policy/Law</td>
<td>3%</td>
</tr>
<tr>
<td>Statistics</td>
<td>3%</td>
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</tbody>
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Several additional disciplines and fields send smaller numbers of participants, including Anthropology, Communication, Demography, Geography, Gerontology, History, Journalism, Medicine, Natural Resources, and Urban Planning.
General Structure of the Summer Program

**Traditional Core: Two Four-Week Sessions**

Held in Ann Arbor, MI, on the University of Michigan campus

First session runs from fourth week of June through third week of July and second session runs fourth week of July through third week of August

Participants can attend one session or both sessions

Several types of classes during four-week sessions
- Statistical workshops
- Lectures
- Substantive workshops
- Hubert M. Blalock Lecture Series
General Structure of the Summer Program

Four-week Participants can take as many courses as they want during the session(s) in which they are registered.

Typical Enrollment:
- Two workshops in a single session
- One or two lecture classes
- Many participants focus on one workshop and audit the other workshop(s)
- Blalock sessions

Many Participants Take Classes from 9:00 a.m. through 9:30 p.m.
General Structure of the Summer Program

Short Workshops

Two to five days in length

Held throughout summer, from late May through late August

Statistical and substantive topics

Various locations:

Ann Arbor, MI
Amherst, MA
Berkeley, CA
Bloomington, IN
Boulder, CO (New in 2012)
Chapel Hill, NC
Montreal, Quebec, Canada (New in 2013)

Participants register for short workshops on a course by course basis
Types of Participants

Four-Week Participants

Most are graduate students
A few mid-career faculty

Short Courses

Half or more are faculty
Advanced graduate students
Research staff
Registration Patterns

Registrations by Course Type, by Year

Four-week registrations
Short course registrations

Year
Percent registered in each category


Four-week registrations
Short course registrations
Registration Patterns

Registrations by Course Type, by Year

Four-week registrations
Statistical short course registrations
Substantive short course registrations

Year
Percent registered in each category
10
20
30
40
50
60

Example Classes

Four-week Statistical Workshops

Introduction to Statistics and Data Analysis (I and II)
Regression Analysis (I, II, and III)
Categorical Data Analysis
Multivariate Statistical Methods
Maximum Likelihood Estimation (Introduction and Advanced)
Bayesian Statistical Models (Introduction and Advanced)
Time Series Analysis (Introduction and Advanced)
Network Analysis (Introduction and Advanced)
Example Classes

Four-week Lectures

- Mathematics for Social Scientists (I, II, and III)
- Matrix Algebra
- Introduction to Computing
- Introduction to the R Statistical Computing Environment
- Introduction to the LaTeX text processing system
Example Classes

The Hubert M. Blalock Lecture Series

“Mini-Courses” on Advanced Methodological Topics

Data Mining
Missing Data
Statistical Graphics

Professional Socialization Roundtables and Lectures

Writing Grant Proposals
Academic Publishing: Journals and Books
Teaching Statistics: Advice for New Instructors

Diversity-themed presentations

Latinos and the Changing of America
Black Conservatism and Black Republicans
Research on Latino Political Participation
Example Classes

Statistical Short Courses

- Network Analysis (I and II)
- Hierarchical Linear Models (I and II)
- Structural Equation Models and Latent Variables
- Mixed Methods
- Time Series Analysis
- Panel Data Analysis Using Stata
- Item Response Theory
- Multilevel Models Using SAS and SPSS
- Latent Growth Curve Models
Example Classes

Substantive Workshops

Four-week classes

Quantitative Analysis of Crime and Criminal Justice
Methodological Issues in Quantitative Research on Race and Ethnicity
Longitudinal Analysis of Historical Demographic Data

Short workshops

Health Disparities Research and Minority Populations
The National Black Election/Political Studies
Military Nurses Summer Summit
Applied Data Science
Providing Social Science Data Services
Recent Themes and Innovations

Statistical topics currently of great interest in the social science research community

- Multilevel models
- Network analysis
- Causal inference
- Spatial statistical methods
- Latent growth curve models
- Bayesian statistics
- Analysis of textual data
Recent Themes and Innovations

Short workshops on statistical computing

Programming Estimation Commands in Stata and Mata
The R Statistical Computing Environment: The Basics and Beyond

Sequences of courses on a single topic

Introductory and advanced classes

Sequences occur in both four-week sessions and short workshops

Allow participants to develop broad expertise in a statistical methodology in a relatively short period of time
Recent Themes and Innovations

**Workshops on data science**

Providing Social Science Data Services: Strategies for Design and Operation

Applied Data Science: Managing Research Data for Re-Use

Assessing and Mitigating Disclosure Risk: Essentials for Social Scientists

**Workshops of special interest to diverse audiences**

Methodological Issues in Quantitative Research on Race and Ethnicity

Health Disparities Research and Minority Populations

The National Black Election/Political Studies
Summer Program Facilities and Infrastructure

Summer Headquarters: Helen Newberry House
Summer Program Facilities and Infrastructure

Helen Newberry House:

About 35 offices for faculty and teaching assistants
Seven staff offices
Three computer labs (About 80 computers total)
Library
Commons areas (workspace for participants)

Classrooms in Various Buildings Across UM Campus
Each Short Course:

- Classroom for lecture presentations
- Computer lab for hands-on work
- Usually use the same room for both parts of the short course
- Small commons area for coffee and snacks
- Sometimes, office facilities for instructors
Summer Program Facilities and Infrastructure

Try to Create an Ideal Teaching Environment for Instructors

- Type of classroom they prefer
- Whatever software they request
- All required and recommended readings available in library
- Any equipment or supplies they need

Happy Instructors Produce Happy Participants!
Fee Structure from the 2013 ICPSR Summer Program

The following fees are for participants from ICPSR member institutions.

Fees for Program Scholar status in the four-week sessions

- One four-week session: $2,500
- Both four-week sessions: $4,000

Fees for statistical short courses

- Five-day workshop: $1,500
- Three-day workshop: $1,300

Fees for substantive short courses vary, and are sometimes covered by the course sponsor.
Discounts Available for 2013 Summer Program Fees

Fees for participants from member institutions are one-half those for participants from non-member institutions.

Early payment discount for four-week registrations

Before May 1, 2013, the member-institution fee for one four-week session was $2,300.

Before May 1, 2013, the member-institution fee for both four-week sessions was $3,500.

15% discount for returning Summer Program participants

15% discount for registrations in two or more related statistical short courses.
Scholarships for Participating in the ICPSR Summer Program

ICPSR offers several scholarships aimed at young scholars (usually graduate students) in specific fields. The selection process for the respective scholarships is highly competitive. Candidates must submit applications, including cover letter, vita, and letters of recommendation. For most scholarships, preference is given to relatively advanced graduate students who are focusing on methodology and statistical analysis.

Scholarships are only available for four-week sessions.
Scholarships from ICPSR

Warren E. Miller Scholarship

Clifford C. Clogg Scholarship

Jerome M. Clubb Scholarship

Scholarship for Education Research

Scholarship for Developmental, Child, and Family Psychology

Scholarship for Public Administration, Public Policy, and Public Affairs
Scholarships Offered by Other Organizations

Scholarship for EITM Certification
Offered by the program on Empirical Implications of Theoretical Models (EITM)
Supports ICPSR Summer Program participation to develop expertise in formal models or advanced statistical methods

Janet M. Box-Steffensmeier Scholarship
Offered by the Society for Political Methodology
Supports ICPSR Summer Program participation by women

John A. Garcia Scholarship
Offered by the Society for Political Methodology
Supports ICPSR Summer Program participation by scholars from previously under-represented groups
The ICPSR Summer Program Offers a Comprehensive Curriculum in Social Science Research Methodology

Supportive Learning Environment

- Close interaction between participants and instructors
- Hands-on experience using statistical techniques

Unique Social Environment

- Extensive professional networking
- Many opportunities to make new friends

Summer Program Participants Work Hard, But Also Have a Lot of Fun . . .
SUMMER CAMP FOR SOCIAL SCIENTISTS!

http://www.icpsr.umich.edu/sumprog/