



PIPELINES INTO BIOSTATISTICS

2017 Summer Program

#HarvardSPB

Sunday, June 11 - Friday, July 21

WEEK 1

Sunday, June 11

7:00pm

Welcome Dinner: At the Harvard T.H. Chan School of Public Health
Meet Heather Mattie in the lobby of the MassArt Treehouse at 7pm, then walk to HSPH

Monday, June 12

9:00 - 11:45am

Orientation [light breakfast provided]: 2-426

9:00 Introductions, Code of Conduct Form, Stipends, Harvard IDs
10:30 Novell Log In, Connecting to the Internet, Downloading R
11:15 HSPH Mini Tour with Jaffer Zaidi

11:45 - 12:45pm

Welcome Lunch with Department Chair: 2-426
Xihong Lin, PhD
Henry Pickering Walcott Professor of Biostatistics
Chair, Department of Biostatistics

12:45 - 2:00pm

Research Project Introductions: 2-426
PROJECT 1: Tracking air pollution from power plants
Faculty: Cory Zigler
Postdoc Mentor: Chanmin Kim

PROJECT 4: Estimating and Understanding
Gene Regulatory Networks
Faculty: John Quackenbush
Postdoc Mentor: John Platig

PROJECT 2: Smartphone-base Digital Phenotyping
Faculty: Jukka-Pekka Onnela
Postdoc Mentor: Patrick Staples

PROJECT 5: Controversy in Genomics
Faculty: Rafael Irizarry
Graduate Student Mentor: Sheila Gaynor

PROJECT 3: Machine Learning for
Health Outcomes Prediction
Faculty: Sherri Rose
Graduate Student Mentor: Savannah Bergquist

2:00 - 4:00pm

Public Health Overview, Part One: FXB - G11

4:00 - 5:00pm

HSPH-wide Summer Program Scavenger Hunt: FXB - G11

Tuesday, June 13

9:30 - 11:30am

Introduction to Biostatistics: 2-426

Instructor: Heather Mattie, PhD, Instructor in Department of Biostatistics
Introduction to Biostatistics acquaints the student with the basic concepts and methods of biostatistics, their applications, and their interpretation. The material covered includes data presentation, numerical summary measures, rates and standardization, and life tables. Probability is introduced to quantify uncertainty, especially as it pertains to diagnostic and screening methods. Also covered are sampling distributions so that students may be introduced to confidence intervals and hypothesis testing. Computers are used throughout the course, and the student will gain familiarity with the software package R.

12:30 - 1:00pm

Research Project Assignments with Jai and Megan: 2-426

2:00 - 4:00pm

Public Health Overview, Part Two: FXB - G11



Wednesday, June 14

9:30 - 11:30am **Introduction to Biostatistics:** 2-426
12:00 - 1:30pm **Afternoon Seminar** [lunch provided]: 2-426
 Laura Forsberg White, PhD
 Adjunct Associate Professor of Biostatistics, HSPH and Associate Professor of Biostatistics, BU

1:30 - 5:30pm **Research Group Meetings**
 Use this time to have your first meeting with your faculty research mentor and postdoc or graduate student research mentor to discuss your summer research project.

5:30 - 6:30pm **Kaplan Orientation and Dinner,** Kresge G2
6:30 - 9:00pm **Kaplan GRE Prep Course (#1):** Kresge G1

Thursday, June 15

9:30 - 11:30am **Introduction to Biostatistics:** 2-426
12:30 - 1:30pm **Department of Biostatistics, Admissions** [lunch provided]: 2-426
 Paige Williams, PhD
 Director of Graduate Studies, Senior Lecturer on Biostatistics, Departments of Biostatistics & Epidemiology

2:00 - 5:00pm **Introduction to R:** 2-426
 Shirley Liao, PhD Student in Biostatistics Department

6:00 - 7:30pm **Evening Conversation** [dinner provided]: FXB G12
 Ichiro Kawachi, MB.ChB., PhD
 John L. Loeb and Frances Lehman Loeb Professor of Social Epidemiology
 Chair, Department of Social and Behavioral Sciences

Friday, June 16

10:15 - 12:15pm **Professional Development Workshop Series:** 2-426
 Monik Jimenez, Sc.D, Instructor in Medicine, HMS, BWH

1:00 - 3:00pm **Introduction to Biostatistics:** 2-426
3:15 - 6:15pm **Introduction to R Graphics:** 2-426

Saturday, June 17

10:00 - 12:30pm **Kaplan GRE Prep Course (#2):** Kresge 202A/202B

2:00 - 4:30pm **Program Outing: Boston Duck Tour**
 Location: Prudential Duck Stop, 53 Huntington Ave, Boston, MA 02116
Meet outside of Treehouse at 2pm - We must be at Prudential location at 2:30pm! Tour starts at 3pm.

WEEK 2

Monday, June 19

9:30 - 11:30am **Introduction to Biostatistics:** 2-426

1:00 - 3:00pm **Program Outing: Harvard Tour**
 Meet Sarah Anoke, PhD, at 1pm in Harvard Square in front of Pressed Juice (1380 Mass Ave)

5:30 - 7:00pm **Evening Conversation** [dinner provided]: FXB G12
 Xihong Lin, PhD
 Henry Pickering Walcott Professor of Biostatistics
 Chair, Department of Biostatistics



Tuesday, June 20

9:30 - 11:30am	Introduction to Biostatistics: 2-426
12:00 - 1:30pm	Welcome Lunch with Director of Summer Program in Biostatistics & Computational Biology: 2-426 Marcello Pagano, PhD Professor of Statistical Computing
2:00 - 5:00pm	Programming Workshop: Sarah Anoke, PhD, 2-426 Postdoctoral Fellow, Department of Biostatistics
5:30 - 7:00pm	Evening Conversation [dinner provided]: FXB G12 Dyann Wirth, PhD Richard Pearson Strong Professor of Infectious Diseases Chair, Department of Immunology and Infectious Diseases

Wednesday, June 21

9:30 - 11:30am	Introduction to Biostatistics: 2-426
12:30 - 1:30pm	Lunch with Graduate Students: 2-426
1:30 - 2:30pm	Research Project
2:30 - 5:30pm	Regression Models in R: 2-426
6:30 - 9:00pm	Kaplan GRE Prep Course (#3): Kresge 202A/202B

Thursday, June 22

9:30 - 11:30am	Introduction to Biostatistics: 2-426
12:30 - 2:00pm	Afternoon Seminar [lunch provided]: 2-426 Eric Tchetgen Tchetgen, PhD Professor of Biostatistics and Epidemiologic Methods, Summer Program Alum
2:15 - 3:15pm	Biostatistics Professional Development Writing Workshop: 2-426 Nicole Levesque & Amanda King, Program Coordinators, Department of Biostatistics
3:30 - 5:00pm	Research Project
5:00 - 7:30pm	Evening Conversation [dinner provided]: FXB G12 Nancy Kreiger, PhD Professor of Social Epidemiology, Department of Social and Behavioral Sciences

Friday, June 23

10:15 - 12:15pm	Professional Development Workshop Series: 2-426 Career Development: Translational Research Setting Carol Martin, MPA, Program Manager, Harvard Catalyst
1:00 - 3:00pm	Introduction to Biostatistics: 2-426
3:00 - 5:00pm	Research Project

Saturday, June 24

10:00 - 12:30pm	Kaplan GRE Prep Course (#4): Kresge 202A/202B
12:30 - 4:00pm	STEM Summer Research Environment Conference: Broad Institute Boston-wide event for summer interns - Grad Panel, Career Fair, and BBQ
2:00 - 4:00pm	BBQ on HMS Quad, Hosted by Meredith Rosenthal, PhD Senior Associate Dean for Academic Affairs, Office of the Dean Professor of Health Economics and Policy, Department of Health Policy and Management



WEEK 3

Monday, June 26

9:30 - 11:30am **Introduction to Biostatistics:** 2-426
12:30 - 2:00pm **Faculty Lunch:** 2-426
2:30 - 5:30pm **Research Project**

Tuesday, June 27

9:30 - 11:30am **Introduction to Biostatistics:** 2-426
1:00 - 2:30pm **Research Project**
2:30 - 5:30pm **Basic R Programming for Data Analysis:** 2-426
5:30 - 7:00pm **Evening Conversation** [dinner provided]: FXB G12
Walter Willett, M.D., Dr. P.H.
Fredrick John Stare Professor of Epidemiology and Nutrition, Departments of Nutrition & Epidemiology

Wednesday, June 28

9:30 - 11:30am **Introduction to Biostatistics:** 2-426
11:30 - 4:30pm **Field Trip [lunch provided]: Meet in 2-426**
Framingham Heart Study
6:30 - 9:00pm **Kaplan GRE Prep Course (#5):** Kresge 202A/202B

Thursday, June 29

9:30 - 11:30am **Introduction to Biostatistics:** 2-426
12:30 - 2:00pm **Afternoon Seminar** [lunch provided]: 2-426
Jerald Schindler
VP, Data Science and Statistics at Alnylam Pharmaceuticals and Adjunct Professor of Biostatistics, HSPH
2:30 - 5:00pm **Research Project**
5:30 - 7:00pm **Evening Conversation** [dinner provided]: FXB G12
Albert Hoffman, MD, PhD
Chair of the Department of Epidemiology
Stephen B. Kay Family Professor of Public Health and Clinical Epidemiology

Friday, June 30

10:15 - 12:15pm **Professional Development Workshop Series:** 2-426
Admissions Overview: What Do We Look For In Prospective Students?
Felisa Nobles, Director of Recruitment Programs & Special Assistant to the Associate Dean of Diversity
Kerri Noonan, Associate Director of Admissions
1:00 - 3:00pm **Introduction to Biostatistics:** 2-426
3:15 - 6:15pm **Programming Workshop:** Sarah Anoke, PhD, 2-426

Saturday, July 1

10:00 - 12:30pm **Kaplan GRE Prep Course (#6):** Kresge 202A/202B



WEEK 4

Monday, July 3

9:30 - 11:30am
11:45 - 1:15pm

Introduction to Biostatistics: 2-426
Afternoon Seminar [lunch provided]: 2-426
Julie Buring, ScD
Professor in the Department of Epidemiology, HSPH and BWH Division of Preventive Medicine

Tuesday, July 4

SCHOOL CLOSED FOR HOLIDAY

Wednesday, July 5

9:30 - 11:30am
12:30 - 3:30pm
4:00 - 5:30pm
6:30 - 9:00pm

Introduction to Biostatistics: 2-426
Programming Workshop with Sarah Anoke, PhD, 2-426
Research Project
Kaplan GRE Prep Course (#7): Kresge 202A/202B

Thursday, July 6

9:30 - 11:30am

Introduction to Epidemiology: 2-426
Instructor: Sarah Anoke, PhD
This course is an introduction to the principles and methods of epidemiologic research. The course will meet regularly for 2 hour lectures. Attendance to all lectures is mandatory and you are required to be on time. This course assumes no prior knowledge of epidemiology.

12:00 - 1:30pm

Afternoon Seminar [lunch provided]: 2-426
Martin Aryee, PhD
Assistant Professor in the Department of Biostatistics, HSPH and Department of Pathology at MGH & HMS
Research Project

2:00 - 5:00pm

5:30 - 7:00pm

Evening Conversation [dinner provided]: FXB G12
Marianne Wessling-Resnick, PhD
Professor of Nutritional Biochemistry, Departments of Nutrition, and Genetics & Complex Diseases

Friday, July 7

10:15 - 12:15pm

Professional Development Workshop Series: 2-426
Presentation is Everything: Resumés, Interviews, and How to Secure Your Next Opportunity
Kristina Gravellese, Recruiter, Human Resources Department

1:30 - 3:30pm

Introduction to Epidemiology: 2-426

4:00 - 5:00pm

Afternoon Conversation: 2-426
Betty Johnson, MEd
Assistant Dean for Faculty and Staff Diversity, Development and Leadership

Saturday, July 8

10:00 - 12:30pm

Kaplan GRE Prep Course (#8): Kresge 202A/202B

Sunday, July 9

10:00 - 12:00pm

Kaplan GRE "Real Test Practice" Exam: Kresge 202A/202B



WEEK 5

Monday, July 10

9:30 - 11:30am
12:00 - 1:30pm
2:00 - 5:00pm
5:30 - 7:00pm

Introduction to Epidemiology: 2-426
Afternoon Seminar [lunch provided]: 2-426
Rebecca Betensky, PhD
Professor of Biostatistics, HSPH and Director of Harvard Catalyst Biostatistics Program
Research Project

Evening Conversation [dinner provided]: FXB G12
Meredith Rosenthal, PhD
Senior Associate Dean for Academic Affairs, Office of the Dean
Professor of Health Economics and Policy, Department of Health Policy and Management

Tuesday, July 11

9:30 - 11:30am
12:00 - 1:30pm
2:00 - 5:00pm
5:30 - 7:00pm

Introduction to Epidemiology: 2-426
Afternoon Seminar [lunch provided]: 2-426
Curtis Huttenhower, PhD
Associate Professor of Computational Biology and Bioinformatics
Research Project

Evening Conversation [dinner provided]: FXB G12
Wafaie Fawzi, DrPH
Richard Saltonstall Professor of Population Sciences
Professor of Nutrition, Epidemiology, and Global Health
Chair, Department of Global Health and Population

Wednesday, July 12

9:30 - 11:30am
2:00 - 3:00pm
3:30 - 5:30pm
5:30 - 8:00pm

Introduction to Epidemiology: 2-426
Biostatistics Professional Development Workshop: Writing Follow Up, 2-426
Nicole Levesque & Amanda King, Program Coordinators, Department of Biostatistics
Research Project

Industry Night - Beyond Academia Event [dinner provided]
Lavine Family Dining Pavilion, 3rd Floor, Yawkey Center for Cancer Care, Dana-Farber

Thursday, July 13

9:30 - 11:30am
12:00 - 1:30pm
2:00 - 5:00pm
5:30 - 7:00pm

Introduction to Epidemiology: 2-426
Afternoon Seminar [lunch provided]: 2-426
Marcello Pagano, PhD
Professor of Statistical Computing and Director of Summer Program in Biostatistics & Computational Biology
Research Project

Evening Conversation [dinner provided]: FXB G12
Francine Laden, ScD
Professor of Environmental Epidemiology, Departments of Environmental Health and Epidemiology



Friday, July 14

9:30 - 11:30am
12:30 - 2:30pm
3:00 - 6:00pm

Introduction to Epidemiology: 2-426
Biostatistics BBQ, HMS Quad
Research Project

Sunday, July 16

7:00pm

Program Outing: Boston Red Sox vs. New York Yankees
Meet outside of the Treehouse at 7pm - the game starts at 8:05pm

WEEK 6

Monday, July 17

9:30 - 11:30am
12:00 - 1:30pm

Introduction to Epidemiology: 2-426
Afternoon Seminar [lunch provided]: 2-426
Bethany Hedt-Gauthier, PhD
Assistant Professor of Global Health and Social Medicine, HMS
Assistant Professor in the Department of Biostatistics, HSPH

2:00 - 6:00pm

Research Project

Tuesday, July 18

9:30 - 11:30am
1:30 - 2:30pm
3:00 - 6:00pm

Introduction to Epidemiology: 2-426
Biostatistics Professional Development Workshop: Public Speaking, 2-426
Nicole Levesque, Program Coordinator, Biostatistics Department
Research Project

Wednesday, July 19

9:00 - 11:30am
12:30 - 5:00pm
5:30 - 7:00pm

Practice Sessions: 2-426
Get feedback on your presentation
Afternoon for preparing and practicing
Special Program Dinner: 2-426
Melody Goodman, PhD
Acting Chair, Associate Professor, Department of Biostatistics, College of Public Health at NYU
Summer Program Alumna

Thursday, July 20

8:30 - 4:00pm

Pipelines Into Biostatistics Annual Symposium: Yawkey 306/307
Wear your business attire!

Friday, July 21

11:00 - 12:00pm
12:00 - 1:00pm
1:00 - 3:00pm

Meetings with Program Evaluator Lynne Man, Group 1: Chair's Conference Room, 2-401
Meetings with Program Evaluator Lynne Man, Group 2: Chair's Conference Room, 2-401

Pipelines Into Biostatistics Certificate Ceremony [lunch provided]: 2-426