



PIPELINES INTO BIOSTATISTICS

2018 Summer Program

#HarvardSPB

Sunday, June 10 - Friday, July 20

WEEK 1

Sunday, June 10

Settle into your dorm rooms and explore the city. Perhaps go to dinner near Fenway Park as a group!

Monday, June 11

9:30 - 12:00pm

Orientation [light breakfast provided]: 2-426

9:30 Introductions, Code of Conduct Form, Stipends, Harvard IDs
10:45 IT Help: Novell Log In, Connecting to the Internet, Downloading R
11:30 HSPH Mini Tour with Jaffer Zaidi

12:00 - 1:00pm

Welcome Lunch with Department Chair: 2-426

Xihong Lin, PhD
Henry Pickering Walcott Professor of Biostatistics
Chair, Department of Biostatistics

1:00 - 2:00pm

Research Project Introductions: 2-426

PROJECT 1: Chest X-ray Classification Using Convolutional Neural Networks

Faculty: Heather Mattie
Graduate Student Mentor: Daniel Briggs

PROJECT 2: Statistics for Safer Deliveries
Faculty: Marcello Pagano and Bethany Hedt-Gauthier
Graduate Student Mentor: Isabel Fulcher

PROJECT 3

Faculty: Kimberlee Gauvreau
Graduate Student Mentor: Jaffer Zaidi

PROJECT 4

Faculty: John Quackenbush
Postdoc Mentor: Camila Lopes-Ramos

PROJECT 5: Data Science With R

Faculty: Rafael Irizarry
Graduate Student Mentor: Rolando Acosta
and Postdoc Mingxiang Teng

2:00 - 5:00pm

GRE Assessment: Kresge 907 & Kresge 201

5:00 - 6:00pm

HSPH-wide Summer Program Scavenger Hunt: Kresge Atrium

Tuesday, June 12

9:00 - 10:30am

Professional Development Workshop Series: FXB G-12

Monik Jimenez, Sc.D, Instructor in Medicine, HMS, BWH

11:00 - 1:00pm

Introduction to Biostatistics: 2-426

Instructor: Tom Madsen, 4th Year PhD Student 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.

1:15 - 1:45pm

Research Project Assignments with Megan: 2-426

2:00 - 4:00pm

Public Health Overview, Part One: FXB G-13

5:30 - 6:00pm

Kaplan GRE Orientation and Dinner, Ground Floor Kresge



Wednesday, June 13

- 9:30 - 11:30am** **Programming Workshop:** 2-426
Instructor: Tom Madsen, 4th Year PhD Student in Department of Biostatistics
- 12:00 - 1:30pm** **Afternoon Seminar** [bring your own lunch!]: 2-426
Martin Aryee, PhD
Assistant Professor in the Department of Biostatistics, HSPH and Department of Pathology at MGH & HMS
- 2:00 - 4:00pm** **Public Health Overview, Part Two:** FXB G-13
- 5:30 - 7:00pm** **Welcome Dinner with HSPH Programs**

Thursday, June 14

- 9:30 - 11:30am** **Introduction to Biostatistics:** 2-426
12:30 - 2:00pm **Lunch with Graduate Students** [lunch provided]: 2-426
- 2:00 - 6:00pm** **Research Group Meetings**
Use this time (and other free times) to meet with your faculty mentor and postdoc/graduate student mentor to discuss your summer research project.
- 6:00 - 7:30pm** **Evening Conversation** [dinner provided]: FXB G-12
Zachary Nagel, PhD
Assistant Professor of Radiation Biology
Department of Environmental Health

Friday, June 15

- 8:30 - 10:00am** **HSPH Summer Program Breakfast:** Epi Library
10:00 - 12:00pm **Professional Development Workshop Series:** FXB G-12
Betty Johnson, DSL, Assistant Dean for Faculty and Staff Diversity, Development and Leadership
- 1:30 - 3:30pm** **Programming Workshop:** 2-426
4:00 - 5:30pm **GRE Prep:** 2-426

Saturday, June 16

- 1:30 - 4:00pm** **Program Outing: Boston Duck Tour**
Location: Prudential Duck Stop, 53 Huntington Ave, Boston, MA 02116

WEEK 2

Monday, June 18

- 9:30 - 12:00pm** **Introduction to Biostatistics:** 2-426
Heather Mattie, PhD
Executive Director, Master's Program in Health Data Science & Instructor of Data Science
- 12:30 - 2:00pm** **Welcome Lunch with Director of Summer Program in Biostatistics & Computational Biology**
[lunch provided]: 2-426
Marcello Pagano, PhD
Director of Summer Program in Biostatistics & Computational Biology and Professor of Statistical Computing
- 2:30 - 3:30pm** **Biostatistics Professional Development Writing Workshop:** 2-426
Amanda King, Program Coordinator, Department of Biostatistics
- 5:30 - 7:00pm** **Evening Conversation** [dinner provided]: FXB G-12
Xihong Lin, PhD
Henry Pickering Walcott Professor of Biostatistics
Chair, Department of Biostatistics



Tuesday, June 19

- 9:30 - 12:00pm** **Introduction to Biostatistics:** 2-426
- 1:30 - 3:00pm** **Program Outing: Harvard Yard Tour in Cambridge**
Suggestion: Have lunch in Harvard Square before the tour!
Meet Josh Barback, PhD Student, at 1:30pm in Harvard Square in front of Pressed Juice (1380 Mass Ave)
- 4:00 - 6:00pm** **Research Project**

Wednesday, June 20

- 9:30 - 12:00pm** **Introduction to Biostatistics:** 2-426
- 12:30 - 1:30pm** **Lunch with Faculty** [lunch provided]: 2-426
- 2:00 - 3:30pm** **GRE Prep:** 2-426
Beth Welch, MS Student in Department of Biostatistics
- 5:00 - 6:30pm** **Evening Conversation** [dinner provided]: FXB G-12
Nancy Kreiger, PhD
Professor of Social Epidemiology, Department of Social and Behavioral Sciences
- 7:00pm** **Free Movie Outside at the Museum of Fine Arts:** Black Panther
Enjoy fun and film at the MFA with HSPH Summer Programs!

Thursday, June 21

- 9:30 - 12:00pm** **Introduction to Biostatistics:** 2-426
- 12:30 - 1:30pm** **Department of Biostatistics, Admissions** [bring your own lunch!]: 2-426
Paige Williams, PhD
Director of Graduate Studies, Senior Lecturer on Biostatistics, Departments of Biostatistics & Epidemiology
- 2:00 - 4:00pm** **Programming Workshop:** 2-426
- 5:30 - 7:00pm** **Evening Conversation** [dinner provided]: FXB G-12
Francesca Dominici, PhD
Professor of Biostatistics, Department of Biostatistics

Friday, June 22

- 8:30 - 10:00am** **HSPH Summer Program Breakfast:** Epi Library
- 10:00 - 12:00pm** **Professional Development Workshop Series:** FXB G-12
Admissions Overview: What Do We Look For In Prospective Students?
Kerri Noonan, Associate Director of Admissions
- 1:00 - 2:00pm** **Afternoon Seminar** [bring your own lunch!]: 2-426
Jukka-Pekka Onnela, PhD
Assistant Professor, Department of Biostatistics, Director of Master's Program in Health Data Science
- 2:00 - 4:00pm** **Research Project**
- 4:00 - 5:30pm** **GRE Prep:** 2-426
Beth Welch, MS Student in Department of Biostatistics



WEEK 3

Monday, June 25

- 9:30 - 12:00pm** **Introduction to Biostatistics:** 2-426
- 12:30 - 2:00pm** **Afternoon Seminar** [bring your own lunch!]: 2-426
Bethany Hedt-Gauthier, PhD
Assistant Professor of Global Health and Social Medicine, HMS
Assistant Professor in the Department of Biostatistics, HSPH
- 3:30 - 5:00pm** **GRE Prep:** 2-426
- 5:30 - 7:00pm** **Evening Conversation** [dinner provided]: FXB G-12
Ichiro Kawachi, MB.ChB., PhD
John L. Loeb and Frances Lehman Loeb Professor of Social Epidemiology
Chair, Department of Social and Behavioral Sciences

Tuesday, June 26

- 9:30 - 12:00pm** **Introduction to Biostatistics:** 2-426
- 1:00 - 2:00pm** **Afternoon Seminar** [bring your own lunch!]: 2-426
Julie Buring, ScD
Professor in the Dept of Epidemiology, HSPH, HMS, & BWH Division of Preventive Medicine
- 2:00 - 3:30pm** **Research Project**
- 3:30 - 5:30pm** **Programming Workshop:** 2-426

Wednesday, June 27

- 9:30 - 11:30am** **Introduction to Biostatistics:** 2-426
- 11:30 - 4:30pm** **Public Health In Action - Field Trip to the Framingham Heart Study** [lunch provided]

Thursday, June 28

- 9:30 - 12:00pm** **Introduction to Biostatistics:** 2-426
- 12:30 - 2:00pm** **Afternoon Seminar** [bring your own lunch!]: 2-426
Sherri Rose, PhD
Assistant Professor of Biostatistics, Department of Health Care Policy, Harvard Medical School
- 5:30 - 7:00pm** **Evening Conversation** [dinner provided]: FXB G-12
Walter Willett, M.D., Dr. P.H.
Fredrick John Stare Professor of Epidemiology and Nutrition, Departments of Nutrition & Epidemiology

Friday, June 29

- 8:30 - 10:00am** **HSPH Summer Program Breakfast:** Epi Library
- 10:00 - 12:00pm** **Professional Development Workshop Series:** FXB G-12
Tips and Tricks for Creating Poster Presentations for Your Research
Beth Beighlie, Harvard Medical School, IT Client Services Representative/Research Imaging Solutions
- 1:30 - 3:30pm** **Programming Workshop:** 2-426



WEEK 4

Monday, July 2

- 9:30 - 12:00pm** **Introduction to Biostatistics:** 2-426
- 12:30 - 2:00pm** **Afternoon Seminar** [bring your own lunch!]: 2-426
Curtis Huttenhower, PhD
Associate Professor of Computational Biology and Bioinformatics
- 2:00 - 4:00pm** **Programming Workshop:** 2-426
- 4:30 - 6:00pm** **GRE Prep:** 2-426

Tuesday, July 3

- 9:30 - 12:00pm** **Introduction to Biostatistics:** 2-426
- 12:30 - 3:30pm** **Research Project**

Wednesday, July 4

SCHOOL CLOSED FOR HOLIDAY

Thursday, July 5

- 9:30 - 11:30am** **Introduction to Epidemiology:** 2-426
Instructors:
Julie Buring, ScD, Professor in the Dept of Epidemiology, HSPH, HMS, & BWH Division of Preventive Medicine
Pamela Rist, ScD, Instructor in Medicine at HMS and Instructor in Epidemiology at HSPH

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.
- 12:30 - 1:30pm** **Afternoon Seminar** [bring your own lunch!]: 2-426
Heather Mattie, PhD
Executive Director, Master's Program in Health Data Science & Instructor of Data Science
- 1:30 - 3:30pm** **Research Project & Individual (Optional) Meetings with Dr. Williams**
- 3:30 - 5:30pm** **Programming Workshop:** 2-426

Friday, July 6

- 8:30- 10:15am** **Introduction to Epidemiology:** 2-426
- 10:15 - 12:15pm** **Professional Development Workshop Series:** Countway Library, Minot Room 506
Ra'Shaun Nalls, MPA, Associate Director of Community Engagement, Office of Diversity and Inclusion
- 12:30 - 5:00pm** **Public Health In Action - Summer Program Outing:** Lawn On D



WEEK 5

Monday, July 9

- 9:30 - 11:30am** **Introduction to Epidemiology:** 2-426
- 12:00 - 1:30pm** **Biostatistics Professional Development Workshop: Resumes** [bring your own lunch!]: 2-426
Erin Lake, PhD
Director of Student Development and Instructor, Department of Biostatistics
- 1:30 - 4:30pm** **Research Project & Individual (Optional) Meetings with Dr. Williams**
- 4:30 - 5:30pm** **GRE Prep:** 2-426

Tuesday, July 10

- 9:30 - 11:30am** **Introduction to Epidemiology:** 2-426
- 12:30 - 1:30pm** **Joint Afternoon Seminar with StatStart** [lunch provided!]: 2-426
Tamarra James-Todd, PhD
Mark and Catherine Winkler Assistant Professor of Environmental Reproductive and Perinatal Epidemiology
Departments of Environmental Health & Epidemiology
- 2:00 - 5:00pm** **Research Project**
- 5:30 - 7:00pm** **Evening Conversation** [dinner provided]: FXB G-12
Albert Hoffman, MD, PhD
Chair of the Department of Epidemiology
Stephen B. Kay Family Professor of Public Health and Clinical Epidemiology

Wednesday, July 11

- 9:30 - 11:30am** **Introduction to Epidemiology:** 2-426
- 1:00 - 2:30pm** **Programming Workshop:** 2-426
- 3:00 - 4:00pm** **Biostatistics Professional Development Workshop: Writing Follow Up,** 2-426
Amanda King, Program Coordinator, Department of Biostatistics
- 5:30 - 8:00pm** **Industry Night - Beyond Academia Event** [dinner provided]
Lavine Family Dining Pavilion, 3rd Floor, Yawkey Center for Cancer Care, Dana-Farber
Wear your business attire!

Thursday, July 12

- 9:30 - 11:30am** **Introduction to Epidemiology:** 2-426
- 12:30 - 2:00pm** **Joint Afternoon Seminar with StatStart** [lunch provided]: 2-426
Marcello Pagano, PhD
Director of Summer Program in Biostatistics & Computational Biology
- 2:00 - 5:00pm** **Research Project & Individual (Optional) Resume Meetings with Erin Lake**
- 5:00 - 6:15pm** **Evening Conversation** [dinner provided]: FXB G-12
William Mair, PhD
Associate Professor of Genetics and Complex Diseases, Department of Genetics and Complex Diseases



Friday, July 13

- 9:30 - 11:30am **Introduction to Epidemiology:** 2-426
- 12:30 - 2:00pm **GRE Prep:** 2-426
- 2:00 - 5:30pm **Research Project**

WEEK 6

Monday, July 16

- 9:30 - 11:30am **Introduction to Epidemiology:** 2-426
- 12:30 - 2:00pm **Afternoon Seminar** [bring your own lunch!]: 2-426
Rebecca Betensky, PhD
Professor of Biostatistics, HSPH and Director of Harvard Catalyst Biostatistics Program
- 2:00 - 5:00pm **Research Project**

Tuesday, July 17

- 9:30 - 11:30am **Introduction to Epidemiology:** 2-426
- 12:00 - 1:00pm **Joint Afternoon Seminar with StatStart - College Prep Discussion** [lunch provided]: 2-426
- 1:30 - 2:30pm **Biostatistics Professional Development Workshop: Public Speaking,** 2-426
Nicole Levesque, Program Coordinator, Biostatistics Department
- 2:30 - 5:00pm **Afternoon to prepare and practice presentation:** 2-426

Wednesday, July 18

- 9:00 - 11:30am **Practice Sessions:** 2-426
Get feedback on your presentation
- 12:00 - 3:00pm **Afternoon to prepare and practice presentation:** 2-426
- 3:45 - 5:00pm **Meet & Greet with Visiting Faculty Workshop Attendees:** 2-426

Thursday, July 19

- 8:30 - 4:00pm **Pipelines Into Biostatistics Annual Symposium:** DFCI, Yawkey Conference Center 306/307
Wear your business attire!

Friday, July 20

- 10:00 - 12:00pm **FACETS Summer Program Poster Presentations**
Support fellow HSPH Summer Program students and see their presentations
- 12:00 - 2:00pm **Pipelines Into Biostatistics Certificate Ceremony** [lunch provided]: 2-426