



# PIPELINES INTO BIOSTATISTICS

## 2019 Summer Program

#HarvardSPB

Sunday, June 09 - Friday, July 19

### WEEK 1

Sunday, June 9

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

Monday, June 10

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 Christina Howe

12:00 - 1:00pm

Welcome Lunch with Department Chair [lunch provided]: 2-426

John Quackenbush, PhD

Henry Pickering Walcott Professor of Computational Biology and Bioinformatics  
Chair, Department of Biostatistics

1:00 - 2:00pm

Research Project Introductions: 2-426

PROJECT 1: Applied Statistics Project with R

Faculty: Rafael Irizarry, PhD

Graduate Student Mentor: Isabella Grabski

PROJECT 2: Causal Inference for Microbiome Species

Effect on Complex Diseases and Traits

Faculty: Liming Liang, PhD

Graduate Student Mentor: Luli Zou

PROJECT 3: Classification and Regression Trees  
and other Data Mining Methods: Application to  
Neurodevelopmental Outcomes Following Infant  
Cardiac Surgery

Faculty: David Wypij, PhD

Graduate Student Mentor: Lara Maleyeff

PROJECT 4:

Faculty: Kimberlee Gauvreau, PhD

Graduate Student Mentor: Patrick Emedom-Nnamdi

2:00 - 4:00pm

GRE Assessment and IRB Training: 2-426

4:00 - 5:00pm

HSPH-wide Summer Program Scavenger Hunt: Kresge Atrium

Tuesday, June 11

10:00 - 11:30am

Professional Development Workshop Series: FXB - G13

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

12:30 - 1:00pm

Research Project Assignments with Priti: 2-426

1:30 - 3:30pm

Public Health Overview with HSPH Summer Program Students, Part One: FXB G-13

3:30 - 5:30pm

Introduction to Biostatistics: 2-426

Instructor: Kamrine Poels, 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.



## Wednesday, June 12

- 9:30 - 11:30am Introduction to Biostatistics: 2-426
- 12:00 - 1:00pm Afternoon Seminar: 2-426  
Xihong Lin, PhD  
Professor of Biostatistics  
Former Department Chair of Biostatistics, Director of PQG
- 2:00 - 4:00pm Public Health Overview with HSPH Summer Program Students, Part One: FXB G-13
- 6:00 - 8:30pm Welcome Dinner with HSPH Summer Program Students at King's Bowling: 50 Dalton Street, Boston, MA

## Thursday, June 13

- 9:30 - 11:30am Programming Workshop: 2-426  
Instructor: Shayna Stein, 4th Year PhD Student in Department of Biostatistics
- 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/work on your summer research project.

## Friday, June 14

- 8:30 - 10:00am HSPH Summer Program Breakfast [breakfast provided]: Epi Library-Kresge 907
- 1:30 - 3:30pm Programming Workshop: 2-426
- 4:00 - 6:00pm Research Group Meetings

## Saturday, June 15

- 3:30 - 6:00pm Program Outing: Boston Duck Tour  
Location: Prudential Duck Stop, 53 Huntington Ave, Boston, MA 02116

## WEEK 2

## Monday, June 17

- 9:30 - 12:00pm Introduction to Biostatistics: 2-426
- 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 - 4:00pm GRE Prep: 2-426  
Instructor: Beth Welch
- 4:00 - 6:00pm Research Group Meetings



## Tuesday, June 18

- 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 Ula Widocki, SM Student, at 1:30pm in Harvard Square in front of Pressed Juice (1380 Mass Ave)
- 4:00 - 6:00pm Research Project

## Wednesday, June 19

- 9:30 - 12:00pm Introduction to Biostatistics: 2-426
- 12:30 - 1:30pm Lunch with Biostatistics Faculty [lunch provided]: 2-426
- 2:00 - 3:30pm GRE Prep: 2-426
- 5:00-7:00pm HILS Summer Gathering Event  
HILS Summer Gathering food and networking fest (i.e. indoor BBQ) at the Queens Head Pub  
Location: Harvard Queens Head Pub (the basement of Memorial Hall), 45 Quincy Street, Cambridge

## Thursday, June 20

- 9:30 - 12:00pm Introduction to Biostatistics: 2-426
- 1:00 - 2:00pm Department of Biostatistics, Admissions: 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 - 7:30pm Summer Programs Dinner [dinner provided]  
Harvard Medical School Courtyard Café, Warren Alpert Building, 200 Longwood Avenue, Boston, MA 02115

## Friday, June 21

- 8:30 - 10:00am HSPH Summer Program Breakfast: Epi Library-Kresge 907
- 10:00 - 12:00pm Professional Development Workshop Series: FXB G-13  
Admissions Overview: What Do We Look For In Prospective Students?  
Kerri Noonan, Associate Director of Admissions
- 12:30 - 2:00pm Afternoon Seminar: 2-426  
Heather Mattie, PhD  
Executive Director of Master's Program in Health Data Science, Instructor of Data Science, Department of Biostatistics
- 2:30 - 4:00pm GRE Prep: 2-426
- 4:00 - 5:00pm Biostatistics Professional Development Writing Workshop: 2-426  
Amanda King, Program Coordinator, Department of Biostatistics



## WEEK 3

### Monday, June 24

9:30 - 12:00pm	Introduction to Biostatistics: 2-426
1:00 - 2:15pm	Afternoon Seminar: 2-426 Curtis Huttenhower, PhD Professor of Computational Biology and Bioinformatics, Departments of Biostatistics & Immunology and Infectious Diseases
2:30 - 3:30pm	Research Project
3:30 - 5:00pm	GRE Prep: 2-426
5:00 - 6:30pm	Evening Conversation [dinner provided]: Kresge 502 Eric Rubin, PhD Irene Heinz Given Professor of Immunology and Infectious Diseases Chair, Department of Immunology and Infectious Diseases

### Tuesday, June 25

9:30 - 12:00pm	Introduction to Biostatistics: 2-426
1:00 - 2:00pm	Brand Building and Networking through Social Media: A Conversation with a Current PhD Student Jemar Bather
2:00 - 3:30pm	Research Project
3:30 - 5:30pm	Programming Workshop: 2-426

### Wednesday, June 26

9:30 - 11:30am	Introduction to Biostatistics: 2-426
12:30 - 2:00pm	GRE Prep: 2-426
2:00 - 5:00pm	Museum of Fine Arts [free with Harvard ID]: 465 Huntington Avenue, Boston, MA
5:30 - 7:00pm	Evening Conversation [dinner provided]: Kresge 502 Frank Hu, PhD Fredrick J. Stare Professor of Nutrition and Epidemiology Chair, Department of Nutrition; Departments of Nutrition & Epidemiology

### Thursday, June 27

9:30 - 12:00pm	Introduction to Biostatistics: 2-426
12:30 - 2:00pm	Afternoon Seminar: 2-426 Drs. Radhika Khetani, Meeta Mistry, Mary Piper Bioinformatics Core, Department of Biostatistics
2:00 - 6:00pm	Research Project



## Friday, June 28

8:30 - 10:00am	HSPH Summer Program Breakfast: Epi Library-Kresge 907
10:00 - 12:00pm	Professional Development Workshop Series: FXB G-13 Tips and Tricks for Creating Poster Presentations for Your Research Beth Beighlie, Harvard Medical School, IT Client Services Representative/Research Imaging Solutions
1:00 - 5:00pm	Research Project

## WEEK 4

### Monday, July 1

9:30 - 12:00pm	Introduction to Biostatistics: 2-426
12:30 - 2:00pm	Afternoon Seminar: 2-426
2:00 - 4:00pm	Programming Workshop: 2-426
4:00 - 5:30pm	Research Project
5:30 - 7:00pm	Evening Conversation [dinner provided]: FXB G-13 Meredith Rosenthal, PhD C. Boyden Gray Professor of Health Economics and Policy Department of Health Policy and Management

### Tuesday, July 2

9:30 - 12:00pm	Introduction to Biostatistics: 2-426
12:30 - 2:00pm	GRE Prep: 2-426
2:00 - 3:30pm	Research Project
3:30 - 5:30pm	Programming Workshop: 2-426

### Wednesday, July 3

9:30 - 11:30am	Introduction to Epidemiology: 2-426 Instructors: David Cote, PhD Student in Department of Epidemiology and Louisa Smith, 4th year PhD Student in Department of Epidemiology 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 - 2:30pm	Programming Workshop: 2-426
2:30 - 5:00pm	Research Project

### Thursday, July 4 and Friday, July 5

**SCHOOL CLOSED FOR HOLIDAY**



## WEEK 5

### Monday, July 8

9:30 - 11:30am	Introduction to Epidemiology: 2-426
12:00 - 1:30pm	Afternoon Seminar: 2-426
1:30 - 4:30pm	Research Project
4:30 - 5:30pm	GRE Prep: 2-426

### Tuesday, July 9

9:30 - 11:30am	Introduction to Epidemiology: 2-426
12:00 - 1:30pm	Afternoon Seminar: 2-426 Briana Stephenson, PhD Assistant Professor in Department of Biostatistics
2:00 - 3:30pm	Career Development Workshop: 2-426 Erin Lake, Sc.D Director of Student Development
3:30 - 5:00pm	GRE Prep: 2-426
5:00 - 6:30pm	Evening Conversation [dinner provided]: FXB G-12 Francine Laden, Sc.D. Professor of Environmental Epidemiology Departments of Environmental Health and Epidemiology

### Wednesday, July 10

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 and Professor of Statistical Computing
2:00 - 3:30pm	Research Project
3:30 - 5:00pm	Programming Workshop: 2-426

### Thursday, July 11

9:30 - 11:30am	Introduction to Epidemiology: 2-426
12:30 - 1:45pm	Afternoon Seminar: 2-426 Brent Coull, PhD Professor of Biostatistics Associate Chair of the Department of Biostatistics Departments of Biostatistics & Environmental Health
2:30 - 7:00pm	Public Health in Action with HSPH Summer Students - Boda Borg: 90 Pleasant Street, Malden, MA



## Friday, July 12

9:30 - 11:30am	Introduction to Epidemiology: 2-426
12:30 - 2:00pm	Professional Development Workshop Series: FXB-G13 Ra'Shaun Nalls, MPA Associate Director of Community Engagement, Office of Diversity and Inclusion
2:00 - 4:00pm	Programming Workshop: 2-426
4:00 - 6:00pm	Research Project

## WEEK 6

### Monday, July 15

9:30 - 11:30am	Introduction to Epidemiology: 2-426
12:30 - 2:00pm	Afternoon Seminar: 2-426 Jukka-Pekka Onnela, PhD Associate Professor of Biostatistics Department of Biostatistics
2:00 - 3:00pm	Research Project
3:00 - 4:00pm	GRE Prep: 2-426
4:00 - 5:00 pm	Professional Development Workshop Series: FXB-G12 Betty Johnson, DSL Assistant Dean for Faculty and Staff Diversity, Development and Leadership
5:30 - 7:00pm	Evening Conversation [dinner provided]: Kresge 502 John Quackenbush, PhD Henry Pickering Walcott Professor of Computational Biology and Bioinformatics Chair, Department of Biostatistics

### Tuesday, July 16

9:30 - 11:30am	Introduction to Epidemiology: 2-426
11:30 - 12:30pm	GRE Prep - Bring Your Questions: 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
5:30 - 7:00pm	Evening Conversation [dinner provided]: Kresge 502 Albert Hofman, MD, PhD Stephen B. Kay Family Professor of Public Health and Clinical Epidemiology Chair of the Department of Epidemiology

## Wednesday, July 17

- 9:30 - 12:00pm Prepare and Practice presentation: 2-426
- 12:30 - 2:00pm 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 and Epidemiology
- 2:00 - 5:00pm Practice Sessions: 2-426  
Get feedback on your presentation

## Thursday, July 18

- 8:30 - 4:00pm Pipelines Into Biostatistics Annual Symposium: Kresge G3  
Wear your business attire!

## Friday, July 19

- 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