Yale School of Public Health
Ph.D. in Biostatistics
With a Specialization in Implementation and Prevention Science Methods
Curriculum (2020-2021 Matriculation)

The Ph.D. degree requires a total of 16 course units. If a course is waived, a substitute course must be identified, approved by the student's adviser, the Implementation Science Specialization Director, and the DGS.

Course	Title	Units	Term Offered	Term Taken	Notes
PhD Required Courses **(13 course units)**					
BIS 623	Advanced Regression Analysis or S&DS 612, Linear Models	1	Fall	1st year	
EPH 508	Foundations of Epidemiology and Public Health	1	Fall	1st year	
S&DS 610	Statistical Inference	1	Fall	1st or 2nd year	
EPH 600	Research Ethics and Responsibilities	0	Fall	1st year	
BIS 525	Seminar in Biostatistics and Journal Club	0	Fall	1st year	
BIS 691	Theory of Generalized Linear Models	1	Spring	1st or 2nd year	
BIS 628	Longitudinal and Multilevel Data Analysis	1	Spring	1st or 2nd year	
BIS 643	Theory of Survival Analysis	1	Spring	1st or 2nd year	
BIS 526	Seminar in Biostatistics and Journal Club	0	Spring	1st year	
BIS 695	Summer Internship in Implementation Science Methods Research	0	Summer	1st year	
BIS 678	Statistical Practice I	1	Fall	2nd year	
BIS 610	Applied Area Readings for Qualifying Exams	1	Spring	2nd year	
EMD 533	Implementation Science	1	Fall	1st ,2nd or 3rd year	Acceptable to take after 2nd year. Material not part of qualifying exams.
EPH 608	Frontiers of Public Health **	1	Either	1st, 2nd or 3rd year	Acceptable to take after 2nd year. Material not part of qualifying exams.
BIS TBD	Advanced Methods in Implementation & Prevention Science	1	Fall	2nd year	
BIS 537	Statistical Methods for Casual Inference	1	Fall	2nd year	
BIS TBD	Advanced Topics in Causal Inference	1	Spring	2nd year	
PhD Elective Courses **(Choose at least 3 course units from the below)** **^ Strongly recommended for Implementation Science Specialization**					
HPM 611	Policy Modeling^	1	Fall		
SBS 541	Community Health Program Evaluation^	1	Spring		
SBS 575	Developing a Health Promotion and Disease Prevention Intervention^	1	Fall		
SBS 580	Qualitative Research Methods in Public Health^	1	Spring		
BIS 557	Computational Statistics	1	Fall		
BIS 567	Bayesian Statistics	1	Fall		
BIS 646	Nonparametric Statistical Methods and Their Applications	1	Spring		
BIS 536	Measurement Error and Misclassification	1	Fall		
S&DS 541	Probability Theory or Advanced Probability	1	Fall		Strongly recommended
S&DS 565	Applied Data Mining and Machine Learning	1	Either		
S&DS 600	Advanced Probability	1	Fall		
CDE 516	Principles of Epidemiology II	1	Spring		
CDE 534	Applied Analytic Methods in Epidemiology	1	Spring		
EMD 538	Quantitative Methods for Infectious Disease Epidemiology	1	Fall		
HPM 570	Cost-Effectiveness Analysis and Decision Making^	1	Fall		
HPM 583	Microeconomics for Health Policy and Management	1	Spring		
HPM 586	Advanced Health Economics	1	Fall		
SBS 676	Questionnaire Development	1	Spring		

Other Courses Taken (Additional Courses)					

** Students entering the program with an MPH or relevant graduate degree may be exempt from this requirement.

Updated: 4/3/2020

More on electives: Implementation and Prevention Science is an inter-disciplinary field. The more broadly you are trained, the more effective you will be as an independent statistical researcher as well as a collaborator.