PhD in Biostatistics Life Science Courses Advising

In order to fulfill your degree requirements for the **PhD** in Biostatistics at UC San Diego, you are expected to successfully complete at least 8 units of upper level coursework in life sciences. The following table compiles courses that are deemed appropriate*. There ***may*** **be other courses** that are acceptable; **if you would like to enroll in a course that is not listed, please email the Graduate Coordinator sctripp@health.ucsd.edu**

** Please note that there is no guarantee that the courses will be available when you want them or that you will be allowed to enroll in them. If enrollment is restricted in WebReg, you will need to submit an Easy request.*

Helpful Reminders:

- Look up course descriptions, including pre-requisites in the course catalog
- Look up course offerings for a given quarter in the schedule of classes
- For further information about a course, you may contact the course's Department and/or instructor directly
- For enrollment requests, use the Easy request tool for Department and/or instructor authorization

Subject	Number	Name	Unit(s)	Quarter Previously Offered
BIOENGINEERING (BENG)				
BENG	202	Bioinformatics II: Introduction to Bioinformatics Algorithms	4	W
BENG	203	Genomics, Proteomics, and Network Biology	4	S
BENG	211	Systems Biology and Bioengineering I: Biological Components	4	F
BENG	212	Systems Biology and Bioengineering II: Large-Scale Data Analysis	4	W
BENG	213	Systems Biology and Bioengineering III: Building and Simulating Large-Scale In Silico Models	4	S
BENG	230C	Cardiovascular Physiology	4	S
BENG	230D	Respiratory and Renal Physiology	4	F, W, S
BENG	232	Musculoskeletal Health, Injury, and Disease	4	S
BENG	233	Neuromuscular Physiology and Biomechanics	4	S
BENG	234	Intro to Neurophysiology: Molecules to Systems	4	S
BENG	238	Molecular Biology of the Cardiovascular System	4	W
BENG	241A	Tissue Engineering and Regenerative Medicine: Foundations	4	F
BENG	241B	Tissue Engineering and Regenerative Medicine: Cell Microenvironment	4	W
BENG	241C	Tissue Engineering and Regenerative Medicine: Development & Growth	4	*unknown*
BENG	276	Numerical Analysis in Multiscale Biology	4	W
BENG	280A	Principles of Biomedical Imaging	4	F
BENG	280C	Imaging Cardiovascular Disease	4	S
BIOLOGICAL SCIENCES (BGGN)				

BGGN	203	Topics in Ecology, Behavior, and Evolution	3	S
BGGN	204	Topics in Community and Population Ecology	3	F
BGGN	214	Introduction to Q-Biology	4	F
BGGN	220	Graduate Molecular Biology	6	F
BGGN	222	Graduate Cell Biology	4	W
BGGN	223	Graduate Genetics	4	S
BGGN	225	Graduate Immunology	4	W
BGGN	226	Graduate Animal Virology	4	*unknown*
BGGN	232	Innate Immunity	4	S
BGGN	237	Quantitative Methods in Genetics	4	W
BGGN	238A	Integrative Microbiology I	4	W
BGGN	238B	Integrative Microbiology II	4	S
BGGN	245	Advanced Topics in Cancer Research and Therapy	2	F
BGGN	249 A-B-C	Basic Neuroscience	4-4-4	F, W, S
BGGN	264	Structural Biology of Viruses	4	W
BIOMEDICAL SCIENCES (BIOM)				
BIOM	219	Ethics in Scientific Research	1	W, S
BIOM	224	Topics in Cancer Research	2	W, S
BIOM	226	Hormone Action	3	S
BIOM	235	Pharmacogenomics	3	F
BIOM	252	Genetics and Genomics	3	S
BIOM	253	Pathogens and Host Defense	3	W, S
BIOM	268	System-Wide Mass Spectrometry (cross-listed CMM 264)	2	S
CHEMISTRY & BIOCHEMISTRY (CHEM)				
CHEM	264	Structural Biology of Viruses	4	W
CHEM	280	Applied Bioinformatics	4	W
CELLULAR & MOLECULAR MEDICINE (CMM)				
CMM	225	Essentials of Glycobiology	4	S
CMM	264	System-Wide Mass Spectrometry (cross-listed BIOM 268)	2	S
COMPUTER SCIENCE & ENGINEERING (CSE)				
CSE	280A	Algorithms in Computational Biology	4	W
CSE	282	Bioinformatics II: Sequence and Structure Analysis—Methods and Applications	4	W

CSE	283	Bioinformatics III: Functional Genomics	4	S
CSE	284	Personal Genomics for Bioinformaticians	4	S
ELECTRICAL & COMPUTER ENGINEERING (ECE)				
ECE	204	Statistical Learning in Bioinformatics	4	*unknown*
ECE	207A	Principles of Medical Imaging	4	*unknown*
ECE	208	Computational Evolutionary Biology	4	S
ECE	209	Statistical Learning for Biosignal Processing	4	W, S
FAMILY MEDICINE & PUBLIC HEALTH (FMPH) (FPM)				
FMPH	277	Health Policy, Technology, and Public Health	4	W
FMPH	291	Special Topics in Public Health **See last page for full list*	1-4	F, W, S
FMPH	401	Introduction to Epidemiology	4	F
FMPH	402	Introduction to Health Behavior	4	F
FMPH	403	Public Health Research Methods	4	S
FMPH	404	Introduction to Environmental and Occupational Health	4	W
FMPH	405	Introduction to Health Policy	4	W
FMPH	406	Scientific Writing	4	S
FMPH	410	Health Behavior Interventions	4	S
FMPH	411	Program Optimization and Evaluation	4	W
FMPH	412	Health Promotion and Communication	4	W
FMPH	413	Ethics in Public Health Research and Practice	4	F
FMPH	415	Advanced Epidemiologic Methods	4	W
FMPH	417	Cardiovascular Disease Epidemiology	4	F
FMPH	418	Infectious Diseases: Epidemiologic Methods and Emerging Trends	4	S
FMPH	425	Epidemiology of Public Mental Health	4	W
FMPH	426	Public Mental and Behavior Health and Addiction	4	F
FMPH	427	Mental Health Across the Life Course	4	F
FMPH	428	Dissemination and Implementation, Policy, and Health Services in Mental Health	4	W
FMPH	430	Technology and Precision Health	4	F
FMPH	431	Public Health Informatics	4	S
FMPH	440	Introduction to Health Economics	4	W
FMPH	441	The Organization and Financing of the US Health Care System	4	S
FMPH	460	Human-Centered Design and Public Health	4	W

FMPH	462	Non-Communicable Diseases and Global Health	4	TBD
FMPH	491	Special Topics in Public Health ** Anthropology in Public Health*	4	S
FPM	233	Clinical Nutrition	2	W
FPM	270	Cultural Perceptions of Health and Disease	4	F
FPM	278	Scale Development for Behavioral Health Measurement	4	F
FPM	288	Introduction to Qualitative Research Methods	4	F
FPM	291	Dissemination and Implementation Science in Health: An Introduction	4	S
FPM	509	Teaching Methods in Public Health	2	F
MEDICINE (MED)				
MED	224	Molecular and Cellular Basis of Disease	3	F
MED	238	Moleclr Biol/Cardiovasclr Syst	4	W
MED	263	Bioinformatics Applications to Human Disease	3	W
NEUROSCIENCES (NEU)				
NEU	200 A-B-C	Basic Neuroscience	4-4-4	F, W, S
NEU	225	Statistical Methods and Experimental Design	2	n/a
NEU	233	Circadian Rhythms and Health	1	W
NEU	241	Ethics and Survival Skills in Academia	3	W

PHYSICS (PHYS)				
PHYS	259A	Methods in Quantitative Biology	2	F

*FMPH 291 & 491 courses				
FMPH	291	Special Topics in Public Health • *Reproducibility Lab* • *Advanced Methods in Epidemiology and Causal Inference* • *Life Course Epidemiology (Sp22, Sp23)* • *Genetic Epidemiology (Sp23)*	1-4	F, W, S
FMPH	491	*Special Topics in Public Health *(MPH)* • *Anthropology in Public Health* • *Climate Change and Health (Sp 24)* • *Social Determinants of Health (Sp 24)* • *The Internet as Data (Sp 24)*	4	varies