Electives

Below is a selection of available electives appropriate for areas of specialization.

This list is not all-inclusive. Students are encouraged to check the websites of classes in these departments and in other listings; and then to work with their mentor to formulate a plan to optimize selections to fit interests.

Bold = highly recommended as an elective

**BIOMEDICAL & HEALTH INFORMATICS**
MEBI 530: Medical Informatics (3)
MEBI 533: Public Health & Informatics (3)
MEBI 534: Biology & Informaticists (3)
MEBI 552: Clinical Decision Support (3)

**BIOSTATISTICS/STATISTICS**
BIOST 516: Statistical Methods in Genetic Epidemiology (3)
BIOST 529: Sample Survey Techniques (3)
**BIOST 536: Categorical Data Analysis (4)**
**BIOST 540: Longitudinal & Multilevel Data Analysis (3)**
BIOST 546: Machine Learning and Big Data (3)
CS&SS 508: Introduction to R for Social Scientists (1)
CS&SS 510: Maximum Likelihood Methods for the Social Sciences (5)
CS&SS 526: Structural Equation Models for the Social Sciences (3)
CS&SS 529: Sample Survey Techniques (3)
CS&SS 536: Analysis of Categorical and Count Data (3)
CS&SS 560: Hierarchical Modeling for the Social Sciences (4)
CS&SS 564: Bayesian Statistics for the Social Sciences (4)
CS&SS 566: Causal Modeling (4)
CS&SS 567: Statistical Analysis of Social Networks (4)
CS&SS 569: Visualizing Data (4)
CS&SS 589: Multivariate Data Analysis for the Social Sciences (3)
STAT 516, 517, 518: Stochastic Modeling of Scientific Data (3,3,3)
STAT 519: Time Series Analysis (3)
STAT 542: Multivariate Analysis (3)

**ECONOMICS, ECONOMETRICS AND COST-EFFECTIVENESS**
IND E 250 – Healthcare Modeling and Decision Making
ECON 400: Advanced Microeconomics (5)
ECON 450: Public Finance: Expenditure Policy (5)
ECON 454: Cost-Benefit Analysis (5)
ECON 500: Microeconomic Analysis I (4)
ECON 518: Contract Theory (3)
ECON 534: Empirical Industrial Organization (3)
ECON 580: Econometrics I: Introduction to Mathematical Statistics (4)
ECON 581: Econometrics II (4)
ECON 591: Microeconomics of Development (3)
ECON 592: Development Policy (3)
ECON 594: Economic Growth (3)
ECON 595: Growth and Inequality (3)
PPM 506: Advanced Microeconomics for Policy Analysis (4)
PPM 512: Data Analysis Practicum (4)
HSERV 587: Health Policy Economics (3)

**EPIDEMIOLOGY**
EPI 510: Epidemiologic Data Analysis (3)
EPI 514: Application of Epidemiologic Methods (5)
**EPI 515: Advanced Epidemiological Methods I (3)**
EPI 516: Advanced Epidemiologic Methods II (4)
EPI 517/PHG 511: Genetic Epidemiology (3)
EPI 520: Epidemiology of Infectious Diseases (3)
EPI 524: Cancer: Epidemiology and Biology (3)
EPI 529: Emerging Infections of International Public Health Importance (3-)
EPI 530: AIDS: A Multidisciplinary Approach (2)
EPI 542: Clinical Epidemiology (2)
EPI 546: Psychiatric Epidemiology (3)
EPI 548: Research Methods for Social & Contextual Determinants of Health (3)
EPI 570: Occupational & Environmental Epidemiology (2)
EPI 573: Methods in Using Biological Measurements (3)
EPI 582: Design and Analytic Strategies to Enhance the Validity of Epidemiologic Studies (2)
EPI 583: Epidemiology Seminar (1, max. 12)
**EPI 588: Preparing, Writing, and Critiquing Scientific Research Proposals (2-3)**
EPI 591: Current Literature in Epidemiology (1, max. 15)

**EVALUATION SCIENCES**
HSERV 527: Survey Research Methods (4)
BIOST 529: Sample Survey Techniques (3)
SOC WL 590: Topics in Advanced Research Methods (3)
EDPSY 588: Survey Research Methodology & Theory (3)
EDPSY 592: Advanced Educational Measurements (3)
EDPSY 595: Item Response Theory Models of Testing (3)
GH 533: Survey Research Methods (4)

**GLOBAL HEALTH**
GH 531: Research & Evaluation Methods in Global Health (3/4)
GH 533: Survey Research Methods (4)
GH 543: Global Health Pharmacy: Medicines, Practice, & Policy (2)

**HEALTH SERVICES**
HSERV 509: Public Health & Informatics (3)
HSERV 512: Health Systems & Policy (3)
HSERV 513: Health Policy Research (3)
HSERV 514: Social Determinants of Population Health & Health Disparities (3)
HSERV 518: Social & Ethical Issues (2-4, max. 4)
HSERV 521: Advanced Qualitative Methods in Anthropology & Public Health (5)
HSERV 522: Health Program Evaluation (1-5, max. 5)
**HSERV 527: Survey Research Methods (4)**
HSERV 528: Critically Appraising & Applying Evidence in Healthcare (3)
HSERV 529: Intro to Systematic Reviews & Meta-Analysis of Evidence (3)
HSERV 551: Public Health Law (2)
HSERV 552: Health Policy Development (3-)
HSERV 575: Cancer Prevention & Control (3)
HSERV 578: Grant Writing (3)
HSERV 589: Community Based Participatory Research & Health (3)

HEALTH MANAGEMENT
HSMGMT 500: Risk & Insurance Seminar (3)
HSMGMT 501: Epidemiology/Critical Evidence Appraisal (2-4, max. 4)

METHODS
BIOST 524: Design of Medical Studies (3)
HSERV 529: Introduction to Systematic Reviews and Meta-analysis of Evidence (3)

PROGRAMMING
BIOSTATS 509: Introduction to R
FISH 552/553: Intro and Advanced R Programming
INFX 501: Concepts in Algorithmic Thinking for Information (1)
INFX 502: Database Concepts for Information Professionals (1)

PUBLIC AFFAIRS; PUBLIC POLICY & MANAGEMENT
PPM 506: Advanced Microeconomics for Policy Analysis (4)

PUBLIC HEALTH GENETICS
PHG 512: Legal, Ethical, And Social Issues in Public Health Genetics (3)
PHG 580: Interactive Seminar (1, max. 30)

QUALITATIVE METHODS
HSERV 590: Qualitative Research Methods in Public Health (3)
HSERV 521: Advanced Qualitative Methods in Anthropology & Public Health (3)
GEOG 426: Qualitative Methods in Geography (4)
EDPSY 586, 587: Qualitative Methods of Educational Research (5)