



## Research Track Concentrations for 2016-2018

### Bioinformatics (18 hours)

BMI 5330	Introduction to Bioinformatics	Basic
BMI 5331	Foundations of Pharmacogenomics	Research
BMI 5332	Statistical Analysis of Genomic Data	Research
BMI 5333	Systems Medicine: Principles and Practice	Research
BMI 6331	Medical Imaging and Signal Pattern Recognition	Advanced
BMI 6332	Personalized Medicine	Advanced
BMI 6333	Current Topics in Genomics	Advanced

### Clinical Informatics (18 hours)

BMI 5004	Introduction to Clinical Healthcare	Basic
BMI 5007	Methods in Health Data Science	Basic
BMI 5313	Introduction to Electronic Health Records	Basic
BMI 5314	Technology Assessment in Healthcare	Basic
BMI 5315	Quality and Outcome Improvement in Healthcare	Basic
BMI 5353	Biomedical Informatics Data Analysis	Research
BMI 5354	Cognitive Engineering in Biomedical Informatics	Research
BMI 5360	Clinical Decision Support Systems	Basic
BMI 6300	Advanced Health Information Systems	Advanced
BMI 6303	Introduction to Telehealth	Advanced
BMI 6315	Advanced Electronic Health Records	Advanced
BMI 6316	Change Management in Health Informatics	Advanced
BMI 6328	Health Care Delivery in an EHR Enabled Environment	Advanced
BMI 6330	Biomedical Natural Language Processing	Advanced
BMI 6340	HI Visualization and Visual Analytics	Research

### Cognitive Informatics (18 hours)

BMI 5007	Methods in Health Data Science	Basic
BMI 5302	Cognitive Science in Biomedical Informatics	Basic
BMI 5354	Cognitive Engineering in Biomedical Informatics	Research
BMI 5360	Clinical Decision Support Systems	Basic
BMI 6301	Health Data Display	Advanced
BMI 6305	Social Dynamics and Health Information	Advanced
BMI 6308	Consumer Informatics	Advanced
BMI 6309	Healthcare Interface Design	Advanced
BMI 6311	Advanced Decision Analysis	Advanced
BMI 6322	Distributional Semantics: Methods and Biomedical Applications	Advanced
BMI 6330	Biomedical Natural Language Processing	Advanced
BMI 6340	HI Visualization and Visual Analytics	Research

### Health Data Science (18 hours)

BMI 5007	Methods in Health Data Science	Basic
BMI 5304	Advanced Database Concepts in Biomedical Informatics	Research
BMI 5353	Biomedical Informatics Data Analysis	Research
BMI 6318	Big Data in Biomedical Informatics	Advanced
BMI 6323	Machine Learning in Biomedical Informatics	Advanced
BMI 6340	HI Visualization and Visual Analytics	Research

### Public Health Informatics (18 hours)

BMI 5314	Technology Assessment in Healthcare	Basic
BMI 5315	Quality and Outcome Improvement in Healthcare	Basic
BMI 5353	Biomedical Informatics Data Analysis	Research
BMI 5380	Principles and Foundations of Public Health Informatics	Basic
BMI 5381	Methods in Public Health Informatics	Basic
BMI 5382	Synthesis Project in Public Health Informatics	Advanced
BMI 6303	Introduction to Telehealth	Advanced
BMI 6317	Leadership & Entrepreneurship in Health Informatics	Advanced
BMI 6324	Health Information Technology Policy	Advanced
BMI 6340	HI Visualization and Visual Analytics	Research