PhD Degree Plan (93 credit hours)

Name:

Student ID #:   **Catalog Years 2020-2021 & 2021-2022**

Courses Required Prior to Qualifying Exam	Semester/ Year	SCH	Grade
BMI 5300 Introduction to Biomedical Informatics		3	
BMI 5007 Methods in Health Data Science		3	
BMI 5310 Foundations of Biomedical Information Sciences I		3	
BMI 5311 Foundations of Biomedical Information Sciences II		3	
BMI 5352 Statistical Methods or PHM 1690 Intro to Biostatistics		3	
BMI 6319 Data Analysis for Scientific Research in Biomedical Informatics		3	
BMI 7302 Theories & Frameworks for BMI Research		3	
BMI 7303 Critical Review of BMI Literature Seminar		3	
BMI 7304 Advanced Research Design for BMI		3	
Number of Required Credits		27	

Electives	Semester/ Year	Cr	Grade
Advanced Level Statistics Course (*see advisor for course options*)		3	
		3	
		3	
		3	
		3	
		3	
		3	
Number of Elective Credits		21	

Other Requirements	Semester/ Year	Cr	Grade
BMI 7000 Preceptorship (9 hrs)		9	
BMI 7050 Research in BMI (21 hrs)		21	
BMI 7150 Research Seminar (3 hrs)		3	
BMI 7301 Grant Writing		3	
BMI 9999 Dissertation (9 hrs)		9	
Number of Required Credits		45	
	Total SCH Completed	93	

Approved by:

_____   _____   _____
Primary Advisor (Print Name)   Signature   Date

_____   _____
Student Signature   Date

Research Track Concentrations

Bioinformatics

BMI 5330 Introduction to Bioinformatics
BMI 5331 Foundations of Pharmacogenomics
BMI 5332 Statistical Analysis of Genomic Data
BMI 5333 Systems Medicine: Principles and Practice
BMI 5334 Biomedical Data Privacy
BMI 5351 Research Design and Evaluation in Biomedical Informatics
BMI 6331 Medical Imaging and Signal Pattern Recognition
BMI 6332 Genomics and Precision Medicine
BMI 6333 Current Topics in Genomics
BMI 6334 Deep Learning in Biomedical Informatics
BMI 6340 Health Information Visualization and Visual Analytics

Health Data Science

BMI 5007 Methods in Health Data Science
BMI 5304 Advanced Database Concepts in Biomedical Informatics
BMI 5351 Research Design and Evaluation in Biomedical Informatics
BMI 5353 Biomedical Data Analysis
BMI 6306 Information and Knowledge Representation in Biomedical Informatics
BMI 6318 Big Data in Biomedical Informatics
BMI 6323 Machine Learning in Biomedical Informatics
BMI 6331 Medical Imaging and Signal Pattern Recognition
BMI 6334 Deep Learning in Biomedical Informatics
BMI 6340 Health Information Visualization and Visual Analytics

Clinical Informatics

BMI 5004 Introduction to Clinical Healthcare
BMI 5007 Methods in Health Data Science
BMI 5301 The U.S. Healthcare System
BMI 5313 Foundations of Electronic Health Records and Clinical Information Systems
BMI 5315 Quality and Outcome Improvement in Healthcare
BMI 5328 Systems Analysis and Project Management
BMI 5351 Research Design and Evaluation in Biomedical Informatics
BMI 5353 Biomedical Data Analysis
BMI 5354 Cognitive Engineering in Biomedical Informatics
BMI 5360 Clinical Decision Support Systems
BMI 5390 Methods in Pharmacy Informatics
BMI 5391 Synthesis Project in Pharmacy Informatics
BMI 6300 Advanced Health Information Technology
BMI 6303 Introduction to Telehealth
BMI 6315 Advanced Electronic Health Records
BMI 6316 Change Management in Health Informatics
BMI 6324 Health Information Technology Policy
BMI 6328 Health Care Delivery in an EHR Enabled Environment
BMI 6330 Biomedical Natural Language Processing
BMI 6340 Health Information Visualization and Visual Analytics

Human Factors Engineering

BMI 5007 Methods in Health Data Science
BMI 5302 Introduction to Human Factors in Healthcare
BMI 5303 Methods in Human Factors Engineering
BMI 5351 Research Design and Evaluation in Biomedical Informatics
BMI 5354 Cognitive Engineering in Biomedical Informatics
BMI 5360 Clinical Decision Support Systems
BMI 6301 Health Data Display
BMI 6305 Social Dynamics and Health Information
BMI 6308 Connected and Personal Health Technologies
BMI 6309 Healthcare Interface Design
BMI 6322 Distributional Semantics: Methods and Biomedical Applications
BMI 6330 Biomedical Natural Language Processing
BMI 6340 Health Information Visualization and Visual Analytics

Public Health Informatics

BMI 5301 The U.S. Healthcare System
BMI 5315 Quality and Outcome Improvement in Healthcare
BMI 5328 Systems Analysis and Project Management
BMI 5351 Research Design and Evaluation in Biomedical Informatics
BMI 5353 Biomedical Data Analysis
BMI 5380 Principles and Foundations of Public Health Informatics
BMI 5381 Methods in Public Health Informatics
BMI 5382 Synthesis Project in Public Health Informatics
BMI 6303 Introduction to Telehealth
BMI 6324 Health Information Technology Policy
BMI 6340 Health Information Visualization and Visual Analytics