Research Track - Masters Degree Plan

(39 credit hours)

Name:

Student ID #:   **Catalog Year 2018-2020 v7.24.18**

SBMI Required Courses	Semester/Year	SCH	Grade
BMI 5300 Introduction to Biomedical Informatics*		3	
BMI 5310 Foundations I*		3	
BMI 5311 Foundations II*		3	
BMI 5351 Research Design and Evaluation*		3	
BMI 5352 Statistical Methods*		3	
BMI 6313 Scientific Writing*		3	
BMI 6000 Practicum in Biomedical Informatics*		3	
Number of SBMI Required Credits		21	

SBMI Electives	Semester/ Year	SCH	Grade
		3	
		3	
		3	
		3	
		3	
		3	
Number of SBMI Elective Credits		18	
	Total SCH Completed	39	

Approved by:

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Student Signature   Date

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Primary Advisor (Print Name)   Signature   Date

-Degree plans must have an original signature by both the student and advisor to be valid.

Research Track Concentrations for 2018-2020

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 5334	Biomedical Data Privacy	Research
BMI 6331	Medical Imaging and Signal Pattern Recognition	Advanced
BMI 6332	Genomics and Precision Medicine	Advanced
BMI 6333	Current Topics in Genomics	Advanced
BMI 6334	Deep Learning in Biomedical Informatics	Advanced

Clinical Informatics (18 hours)

BMI 5004	Introduction to Clinical Healthcare	Basic
BMI 5007	Methods in Health Data Science	Basic
BMI 5301	The U.S. Healthcare System	Basic
BMI 5313	Foundations of Electronic Health Records and Clinical Information Systems	Basic
BMI 5315	Quality and Outcome Improvement in Healthcare	Basic
BMI 5328	Systems Analysis and Project Management	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 6324	Health Information Technology Policy	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

Human Factors Engineering (18 hours)

BMI 5007	Methods in Health Data Science	Basic
BMI 5302	Introduction to Human Factors in Healthcare	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	Connected and Personal Health Technologies	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 6340	HI Visualization and Visual Analytics	Research
BMI 5353	Biomedical Informatics Data Analysis	Research
BMI 6334	Deep Learning in Biomedical Informatics	Advanced
BMI 5304	Advanced Database Concepts in Biomedical Informatics	Research
BMI 6306	Information and Knowledge Representation in Biomedical Informatics	Advanced
BMI 6318	Big Data in Biomedical Informatics	Advanced
BMI 6323	Machine Learning in Biomedical Informatics	Advanced

Public Health Informatics (18 hours)

BMI 6340	HI Visualization and Visual Analytics	Research
BMI 5353	Biomedical Informatics Data Analysis	Research
BMI 5301	The U.S. Healthcare System	Basic
BMI 5315	Quality and Outcome Improvement in Healthcare	Basic
BMI 5328	Systems Analysis and Project Management	Basic
BMI 6303	Introduction to Telehealth	Advanced
BMI 6324	Health Information Technology Policy	Advanced
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 6317	Leadership & Entrepreneurship in Health Informatics	Advanced