

Name: _____

Applied Track Masters Degree Plan
(39 credit hours)

Catalog Years: 2020-2025

ID Number: _____

Each student will develop a degree plan with their Academic Advisor. All degree plans require final, written approval from an Academic Advisor, if applicable. Before meeting with your Advisor, consult the Office of Academic Affairs (SBMIAcademics@uth.tmc.edu) to ensure your degree plan is accurate. Confirm course availability for the 'Expected Term Completed' column by reviewing our [Two-Year Course Schedule](#).

Applied Track students must select one elective course from the Research Track concentrations listed on page 2.

A signed degree plan must be filed each academic year during the Fall and Spring terms, listing the required and elective courses for your program.

Required Courses	Semester/Year	SCH	Grade
BMI 5300 Introduction to Biomedical Informatics*		3	
BMI 5301 The U.S. Healthcare System*		3	
BMI 5305 Legal and Ethical Aspects of Health Informatics*		3	
BMI 5313 Foundations of Electronic Health Records and Clinical Information Systems*		3	
BMI 5315 Quality and Outcome Improvement in Healthcare* or BMI 5390 Methods in Pharmacy Informatics*		3	
BMI 5317 Applied Data Management*		3	
BMI 5328 System Analysis and Project Management*		3	
BMI 5329 Workflow Process Modeling*		3	
BMI 5371 Business and Technical Communication*		3	
BMI 6316 Change Management in Health Informatics*		3	
BMI 6340 Health Information Visualization and Visual Analytics*		3	
BMI 6000 Practicum in Biomedical Informatics*		3	
Number of Required Credits		36	
<i>*Required Courses - any exceptions must be pre-approved by the Associate Dean for Academic Affairs prior to course registration.</i>			
Elective	Semester/ Year	Cr	Grade
		3	
Number of MSBMI Elective Credits		3	

Grades should be listed as A, B, P, I (for incomplete), or IP (for In-Progress).

Total SCH Completed	39
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Approved by:

Student Signature

Date

Primary Advisor (Print Name)

Signature

Date

Applied Track Elective Options

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
PHW 2780 Applied Genetic Methods in Public Health

Health Data Science and Artificial Intelligence

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 Biomedical Ontologies and Knowledge Representation
BMI 6318 Big Data in Biomedical Informatics
BMI 6323 Machine Learning in Biomedical Informatics
BMI 6325 Assessment, Implementation, and Evaluation of AI in Healthcare
BMI 6331 Medical Imaging and Signal Pattern Recognition
BMI 6334 Deep Learning in Biomedical Informatics
BMI 6335 Technical Foundations of Generative AI
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 5305 Legal and Ethical Aspects of Health Informatics
BMI 5313 Foundations of Electronic Health Records and Clinical Information Systems
BMI 5315 Quality and Outcome Improvement in Healthcare
BMI 5317 Applied Data Management
BMI 5328 Systems Analysis and Project Management
BMI 5329 Workflow Process Modeling
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 5371 Business and Technical Communication
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 Value in the Health Data Eco-system
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 Digital Technologies and Analytics for Personalized Health
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