Doctor of Philosophy Curriculum

University of Cincinnati College of Medicine

2019-2020 Academic Year

BIOMEDICAL INFORMATICS

Cincinnati Children's | University of CINCINNATI.

Designation	Course		Semester Offered	Credit Hours
Core Courses	BMIN 7003	Biomedical Informatics Seminar	Fall	1
	BMIN/CS 7053	Introduction to Medical Informatics	Fall	3
	BMIN/CS 7099	Introduction to Bioinformatics	Spring	3
	GNTD 8001C/ CS 7097C	Introduction to Functional Genomics	Fall	3
	BMIN 8089	Dissertation Research	Fall & Spring	1-15
	BMIN/CS 7074	Data Science for Biomedical Research	Spring	3
	GNTD 7003	Ethics in Research	Spring	1
General Medical Sciences	***Select Two Courses:***			
	BE 7066	Principles of Clinical Trials	Fall	3
	BE 7068C	Decision and Cost-Effectiveness Analysis	Spring	3
	BE 7076	Introduction to Epidemiology	Fall	2
	GNTD 7001	Principles of Molecular and Cellular Biology	Fall	4
Data Management	***Select One Course:***			
	CS 6051	Database Theory	Fall & Spring	3
	BE/PH 8093	Introduction to Database Management Systems	Spring	3
Elective Courses	***Select Four Courses:***			
	BANA 7015	Advanced Health Care Data Analytics, Business Intelligence and Reporting	Spring	3
	BE 7022	Introduction to Biostatistics	Fall	3
	BE 7024	Computational Statistics	Spring	3
	BE 7070	Quantitative & Qualitative Data Collection Methods for Health Services	Spring	2
	BE 7071	Quality Improvement and Patient Safety	Fall	1
	BE 7074	Community-Based Participatory Research	Spring	1-3
	BE 7080	Analysis of Internet Health Data	Spring	3
	BE 8068	Genetics of Complex Disease	Spring	2
	BME 6012	Biomedical Signal and Image Processing	Fall	3
	BME 7061	Biostatistics in Research	Spring	3
	BME 8064	Advanced Statistical Methods in Biomedical Research	Spring	3

	CS 6033	Artificial Intelligence	Fall	3
	CS 6034	Natural Language Processing	Spring	3
	CS 6037	Machine Learning	Fall	3
	CS 6052	Intelligent Data Analysis	Fall & Spring	3
	CS 6065	Introduction to Cloud Computing	Fall & Spring	3
	CS 6067	User Interface I	Fall	3
	CS 6068	Parallel Computing	Fall	3
	CS 6072	Network Science	Fall	3
	CS 6073	Deep Learning	Spring	3
	CS 7081	Advanced Algorithms I	Fall & Spring	3
	CS 8021	Pattern Recognition	Spring	3
	DB 9088	Regulation of Gene Expression	Spring	2
	EECE 6042	Digital Image Processing	Spring	3
	EECE 8075	Data Warehousing and Mining	Spring	3
	MCP 6031C	Computational Systems Biology	Spring	3
	MG 8011	Advanced Fundamentals in Human Genetics	Fall	2-3
	STAT 6043	Applied Bayesian Analysis	Spring	3
	STAT 8022	Advanced Bayesian Analysis	Fall	3