

Master of Science - Bioinformatics

Degree Requirements Worksheet

30 Credits

BRIDGE COURSES

Completed	Course	Title	Prerequisites
	BNFO 135	Programming for Bioinformatics II	
	BNFO 136	Programming for Bioinformatics II	BNFO 135
		Biology Course	
	Math 111	Calculus I	
	Math 112	Calculus II	Math 111

5 CORE COURSES

Completed	Course	Title	Prerequisites
	BNFO 601	Foundations of Bioinformatics I (FALL)	
	BNFO 602	Foundations of Bioinformatics II (SPRING)	
	BNFO 615	Data Analysis in Bioinformatics (FALL)	
	BNFO 644	Data Mining & Management in Bioinformatics (SPRING)	
	Math 663	Introduction to Biostatistics	

5 ELECTIVE COURSES

Completed	Course	Title	Prerequisites
	BNFO 620	Genomic Data Analysis	BNFO 601 AND BNFO 615
	BNFO 700 B	Master's Project	
	BNFO 701 B	Master's Thesis	
	CS 602	Java Programming (DL)	
	CS 610	Data Structures & Algorithms (DL)	2nd semester
	CS 631	Database Management System Design (DL)	
	CS 632	Advanced Database System Design (DL)	CS 631 AND GR 3/GR 4 status
	CS 634	Data Mining (DL)	
	CS 635	Computer Programming Languages	
	CS 639	Electronic Medical Records	
	CS 643	Cloud Computing	CS 633 OR CS 656
	CS 659	Image Processing & Analysis (DL)	
	CS 670	Artificial Intelligence	CS 610 AND CS 631
	CS 673	Software Design and Production Methodology (DL)	CS 631
	CS 680	Linux Kernel Programming	
	CS 683	Software Project Management	
	CS 684	Software Testing and Quality Assurance	
	CS 731	Applications of Database Systems	CS 631
	CS 759	Advanced Image Processing and Analysis	CS 659
	CS 782	Pattern Recognition & Applications	CS 610
	IS 634	Information Retrieval	IS 631 OR CS 631
	ECE 609	Artificial Neural Networks	ECE 601 AND ECE 673
	ECE 640	Digital Signal Processing	ECE 601
	ECE 673	Random Signal Analysis I	
	Math 630	Linear Algebra & Applications	
	Math 635	Analytical Computational Neuroscience	
	Math 636	Systems Computational Neuroscience	Math 635
	Math 637	Foundations of Mathematical Biology	
	Math 661	Applied Statistics	
	Math 662	Probability Distributions	
	Math 665	Statistical Inference	Math 662
	Math 691	Stochastic Processes with Applications	Math 662
	Chem 673	Biochemistry	
	Chem 702	Special Topics in Chemistry II	

Students are permitted one outside elective with advisor approval.

(DL) = Offered as a Distance Learning course