Systems Analysis

Students must complete a total of 90 credits of study with a minimum of 35 credits of coursework [17 credits of coursework in the first year]. Of the 35 credits of coursework, *at least 28 credits* must be earned in graduate level quantitative/computational courses. Graduate level courses approved by the other tracks in the Complex Biosystems PhD will count towards the remaining credits. Other courses will count with permission of the student's supervisory Committee.

The following quantitative courses will count toward the 28 credits of quantitative/computational coursework.

Bioinformatics		Systems Biology		Quant Gen, Genomics, Biotech, Phylogenetics		Stat and Computation	
AGRO896	Bioinfo App in Ag	ASCI896	Genomics and Sys Bio	AGRO/ ASCI 931	Pop Gen	BIOS428/828	Perl Programming
BIOS427/827	Prac Bioinfo Lab			AGRO932	Bio Gen and Plant Breeding	CSCE 811	Data Modeling Syst Dev
BIOS477/877	Bioinfo and Mol Evol	BIOS826	Comp Sys Bio	AGRO919	Plant Genetics	CSCE 876	Intro AI
BIOS429/829	Phylo Biol	CHME 896 Chem Comp		ASCI932	Quant Animal Genetics	CSCE 823 or 923	Devel and Analy of Algorithms
BIOS942	Gen, Genom, and Bioinfo of Prok	CSCE990	Mol and Nano Comm	ASCI933	Quant Animal Genetics II	CSCE 878	Machine Learning
BIOS/ STAT442/842	Comp Bio			ASCI934	App of Biotech in Ansci	CSCE970	Pattern Recog
CSCE 155T	CS 1: Informatics	STAT843	NGS and Sys Bio	ASCI 860	Quan Gen App Matrx Alg	CSCE874	Data Mining
CSCE496/896	Comp Methods in Bioinfo			BIOS818	Advanced Genetics	CSCE973	SVM
CSCE971	Advanced Bioinfo			BIOS824	Fund of Ecol and Evol Physiology	CSCE979	Advanced NN
ECEN850	Bioinfo			BIOS825	Plant Biotech	ECEN915	Adap Signal Processing
MATH439/839	Math Mod in Biol			BIOS829	Phylo Biol	ECEN863	Dig Signal Processing
BIOS/ NRES456/856	Math Mod in Biol			BIOS924	Molecular Phylogen	ECEN848	Decision Analy
MATH496/896	Math Aspects of Bioinfo			BIOS952	Lkhd and Bayesian Ecol	MATH889	Stochastic Processes
STAT896A	Stat Meth in Bioinfo			BIOS958	Genetic Ecology	MATH938	Math Modeling
				BIOS/ VBMS964	Signal Trans	STAT802	Design and Analy of Res Studies
						STAT803	Ecol Stat
						STAT831	Spatial Stat
						STAT841	Stat Meth for Biol Data

						STAT850	Comp Tools
						STAT884	Applied Stochastic Models
						STAT950	Bootstrap Methods and App
						STAT973	Theory of Multivariate