BIOINFORMATICS AND COMPUTATIONAL BIOLOGY CERTIFICATE

A certificate of specialization in BCB is also available for Ph.D. students seeking some formal training in bioinformatics and computational biology, but who wish to pursue their degree in a related discipline.

Course Requirements

Code	Title	Hours
Core Courses		**7**
BCB 710	Bioinformatics Colloquium [1]	
BCB 720	Introduction to Statistical Modeling	
3 BCB Core Modules or Approved Electives		**3**
3 BCB Core Modules:		
BCB 670	Structural Bioinformatics	
BCB 715	Mathematical and Computational Approaches to Modeling Signaling and Regulatory Pathways	
BCB 717	Structural Bioinformatics	
BCB 722	Population Genetics	
BCB 724	Data Communication	
Approved BCB Electives:		
With DGS Permission students may substitute 1 one-credit hour elective for 1 one-credit hour core module. These courses may include, but are not limited to the electives listed below. These courses would all be accepted with permission for substitution.		
Minimum Hours		**10**

Code	Title	Hours
BCB Electives		
BCB 645	Quantitative Genetics of Complex Traits	1
BCB 718	Computational Modeling Laboratory	1
BCB 723	Topics in Statistical Genetics and Genomics	1
BCB 726	Machine Learning for Computational Biology	1
BCB 730	Fundamentals of Quantitative Image Analysis for Light Microscopy	1
BCB 750	MOLECULAR DYNAMICS	1

[1] This 1-credit course must be taken 4 times; 2x in Fall semesters and 2x in Spring semesters.

Non-Course Certificate Requirements

- Students are required to present research at BCB Colloquium in their final year at UNC.