The goal of the curriculum is to provide learning opportunities to University of Washington graduate students in the areas of Statistical Genetics, Population Genetics, and Computational Molecular Biology.

The curriculum consists of five 500-level classes:


The StatGen seminar, BIOST 581, is also an integral part of student education in Statistical Genetics.

The curriculum serves both the Statistical Genetics Ph.D. Tracks in the Ph.D. programs of the Departments of Statistics and Biostatistics, and is also the curriculum for the Interdisciplinary Graduate Certificate in Statistical Genetics.

The curriculum has prerequisite knowledge in Probability and Statistics (automatically satisfied by graduate students in Statistics and Biostatistics) and in Genome Sciences (normally automatically satisfied by graduate students in the biological sciences). Some experience in computing is also required.

Full details of the curriculum and other information relating to Statistical Genetics at the University of Washington may be found at www.stat.washington.edu/statgen/.

Details of the core courses, together with learning objectives for the STAT/BIOST 550-551-552 sequence may be found at www.stat.washington.edu/statgen/index.php?page=courses

The overall learning goals of the Statistical Genetics Core Curriculum are

1) to provide students with the knowledge, skills and tools they need to read current theoretical, methodological and applied literature in Statistical Genetics; to understand methods and to interpret analyses.

2) to provide students with the knowledge skills and tools they need to understand the models of Population Genetics and of Computational Molecular Biology; to be able to relate the models and data of statistical genetics to the constraints of inheritance and the molecular mechanisms of DNA replication and repair; to become familiar with the structure of molecular genetic data, including DNA sequence data, and to develop the skills to work with these massive data sets.

3) to be able to probe the Statistical Genetics literature, including literature relating to models for the analysis of population or molecular genetic data; to understand the strengths and weaknesses of alternative approaches; to choose appropriate approaches and to develop methods and models that extend our understanding of data that are the outcome of genetic and evolutionary mechanisms; that is, to be prepared to undertake high quality research in Statistical Genetics.