Explanation of Course Numbers

- Courses in the 1000s are primarily introductory undergraduate courses.
- Those in the 2000s to 4000s are upper-division undergraduate courses that can also be taken for graduate credit with permission and additional work.
- Those in the 6000s and 8000s are for master’s, doctoral, and professional-level students.
- The 6000s are open to advanced undergraduate students with approval of the instructor and the dean or advising office.

**GENO 6223. Bioinformatics. 2 Credits.**
The application of bioinformatics concepts and methods through the use of molecular biology databases and tools, covering molecular evolution, and protein sequence, structural, functional analysis. Recommended background: Prior completion of an undergraduate course in biochemistry.

**GENO 6236. Medical Genomics. 2 Credits.**
The structure and function of genes and genomes; genomic theories, methods, and data analysis including bioinformatics and database mining.

**GENO 6237. Proteomics and Biomarkers. 2 Credits.**
Experimental proteomics, protein/proteome analysis, bioinformatics of proteomics, systems biology, and structural genomics. Prerequisite: GENO 6236. Recommended background: Prior completion of a course in bioinformatics or one related to computer science.

**GENO 8231. Introduction to Genomics, Proteomics, and Bioinformatics. 3 Credits.**
Implementation of genomics, proteomics and bioinformatics approaches to biological systems. Students must have completed a course in biochemistry and molecular biology prior to enrollment. Prerequisites: BMSC 8210 and BMSC 8212.

**GENO 8234. Genomics and Precision Medicine Seminar. 1 Credit.**
Current and emerging topics with presentations and discussions facilitated by leading experts from GW and outside institutions; student-led journal club and oral presentation opportunities. May be repeated for credit. Prerequisites: BMSC 8210, BMSC 8212 and BMSC 8230.

**GENO 8998. Advanced Readings and Research. 3-12 Credits.**
Restricted to doctoral candidates preparing for the qualifying examination. May be repeated for credit.

**GENO 8999. Dissertation Research. 3-12 Credits.**
Restricted to doctoral candidates. May be repeated for credit.