Bemidji State University

BIOL 4447: Genomics

A. COURSE DESCRIPTION
   Credits: 3
   Lecture Hours/Week: *.*
   Lab Hours/Week: *.*
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None
   Genomics is the study of the content, structure, organization, evolution, and conservation of whole genomes. Because of its reliance on precision instrumentation and scale, and the unprecedented volume of data produced, genomics is unusual among biological disciplines in its integration of engineering, statistics, and information science. Genomics also requires the biologist to engage in systems thinking by taking a wide view of the dynamic physical and informational network that comprises a single genome. One must further consider the human genome as itself a component of an even larger network of genomes that make up the holobiont—that's us plus our always-changing resident community of microbial pals. After covering these and other topics, and carrying out a substantial genome annotation project for the lab component of the course, we explore personal genomics, or how all this information and understanding affects our lives as 21st century human beings. Prerequisite: BIOL 2360.

B. COURSE EFFECTIVE DATES: 08/21/2017 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
   None

D. LEARNING OUTCOMES (General)
   None

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted