

**Department:** MCB

**Course No.:** 3601W

**Title:** Physiology of Archaea and Bacteria

**Credits:** 4

**Contact:** Kenneth M. Noll

**WQ:** W

**Catalog Copy:** MCB 3601W. Physiology of Archaea and Bacteria

Second semester. Four credits. Two class periods and one 2-hour computer lab period.

Prerequisite: MCB 2000, MCB 2610 or MCB 3010; ENGL 1010 or 1011 or 3800.

Examination of biochemical energy generation, regulation of metabolism, and cellular structures of archaea and bacteria. Physiological processes as they occur in nature and the biotechnology industry. Analysis of microbial genome sequences using computational methods in the laboratory.

**W Criteria:** The course meets the Senate guidelines for W courses, maximum enrollment in the section is 19 students, fifteen pages of writing will be assigned with each being rewritten, and instruction in writing will be provided by the instructor. In earlier versions of this course, staff from the library have presented information on use of library resources and this will be continued in this course. Numerous writing samples will be provided to students and feedback both from the instructor and other students will be provided. Failure of the writing portion of this course will result in a failing grade for the course.

**Supplementary Information:** Versions of the lecture portion have been offered for two semesters as W courses, so different topics and writing assignments have been tested in the classroom. The instructor has attended many workshops provided by the Writing Center and so is very familiar with writing strategies applicable to the classroom. The instructor has also worked with the DOE genome sequencing facility (JGI) and so has experience with the software the students will use. Dr. Noll will apply to attend the DOE workshop in January 2011 to become a collaborator in their undergraduate research program. Communication with that program suggests it is very likely that he will be allowed to do so.