BIOLOGICAL SCIENCES 303
MICROBIOLOGY
96-1

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PREREQUISITES: BISC 101 AND 102, BISC 201 (now 221)

DESCRIPTION:
This course will cover the following topics to introduce students to the unique biology of microorganisms as well as to their importance to industry and medicine. Topics will include:

- Taxonomy and Evolution
- Microorganism growth and nutrition; sterilization
- Microbial diversity - structure and function of
  - bacteria - the elemental cycles
  - aquatic, soil and special environments
- fungi
- protozoa
- viruses
- Commensalism, mutualism and parasitism
- Immunology, vaccines, serology
- Selected diseases
- Antimicrobial agents
- Bacterial and yeast genetics
- Applied microbiology - food
  - sewage
  - industrial microbiology
  - bioremediation

Applied problems in microbiology will be presented in the ever-popular "Microbe-of-the-Week" series.

REQUIRED TEXT:

LABORATORY COURSE:
The lab exercises familiarize students with basic microbiology lab techniques such as use of the light microscope, sterile technique, plating, determination of bacterial growth, biochemical tests for bacterial identification, etc.