

# MICR COURSE STUDENT LEARNING OUTCOMES

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## MICR 100 - Microbes and Society

Students will be able to describe the ubiquity of microorganisms in various environments and their essential roles in ecosystem functioning, including nutrient cycling, decomposition, and primary production.

Students will be able to discuss the historical and contemporary impact of microbiology on human society, including its role in understanding and combating disease, advancing public health, and influencing agricultural and industrial practices.

Students will be able to differentiate between prokaryotic and eukaryotic cells and their key structural features.

Students will be able to identify the major groups of microorganisms, including bacteria, archaea, fungi, viruses, and protozoa, and their unique characteristics.

Students will be able to describe the role microorganisms play in causing infectious diseases and identify methods for controlling microbial growth through environmental procedures and antimicrobial therapies.

Students will be able to explain the applications of microbiology in areas such as biotechnology, industrial processes, and food production.

Students will be able to demonstrate an understanding of the scientific method and its application to microbiological research by conducting, analyzing, and communicating experimental findings.