

Microbiology

Microbiology is a fundamental course in nursing that focuses on the study of microorganisms, such as bacteria, viruses, fungi, and parasites, which can cause disease in humans. Nurses must understand how these microbes interact with the human body, how infections develop and spread, and how they can be prevented or treated.

Definition and Scope

Microbiology is the branch of science that deals with **microscopic organisms**. In nursing, it is primarily concerned with **medical microbiology**—the study of pathogens that cause diseases and how the body defends itself. This course emphasizes both **theoretical knowledge** and **practical skills** needed to prevent and manage infections in healthcare settings.

Nurses are frontline caregivers who play a key role in infection prevention and control. A strong understanding of microbiology helps nurses:

- Recognize signs and symptoms of infection.
 - Follow proper sterilization and disinfection procedures.
 - Use personal protective equipment (PPE) correctly.
 - Educate patients and families about hygiene and disease prevention.
 - Administer antibiotics and antivirals with awareness of microbial resistance.
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