

# Immunology 201

55-MINUTE ONLINE COURSE | LEVEL 2

SUGGESTED PREREQUISITES: IMMUNOLOGY 101

## OVERVIEW

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**Immunology 201** online course builds on Immunology 101 course to give a detailed description of the two types of immune system, the non-specific and the specific immune systems. This course will put all the details of the immune system into practice, taking you on a journey from how disease occurs to how your body fights disease. By understanding this complex process, you will have a better understanding of how these steps are exploited by the biopharma industry to create cutting-edge immunotherapies in biotechnology.

### Five Takeaways:

1. List of immune response functions.
2. Explanation of how the non-specific immune system recognizes, responds to and eliminates a pathogen.
3. Road map of the specific immunity cell types, each of their functions and how they eliminate disease.
4. Knowledge of how immune system memory works to fight reinfection.
5. Process of the immune response from pathogen recognition to elimination.

## AGENDA

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- **Non-Specific Immunity** explains how your body recognizes, responds to, and eliminates a pathogen. To understand how vaccines, antiviral drugs, and antibiotics work, you must first understand your body's initial response to pathogenic infection.
- **Specific Immunity** (activation of B-cells and T-cells) occurs when pathogens have successfully compromised your non-specific immunity, infected your body, and made you sick. Biopharma has mimicked the best that B-cells and T-cells have to offer to amass a trove of medications. Learn how medications work by learning how specific immunity fights disease.
- **Immune System Activation: Putting It All Together** describes the immune response in its entirety so you can better understand pharmacology, the branch of biopharma concerned with uses, effects and modes of action of drugs.