# Unit 4

Chapter One: Immunologuy

- **What immune system process is phagocytosis found? What cells utilize it?**
    - Innate immune system
    - Neutrophils and Macrophages

- What is the difference between innate and adaptive?
    - Innate, is passed from mother during gestation, first line of defense, quick response
    - Adaptive, Develops over time, cells learn how to fight off antigens through exposure, slow response

- What is the immunes system main function?
    - The bodies mechanism of maintaining homeostasis, distinguishing harmful from no harmful organism.
- What is the difference between a Pathogen and a Antigen?
    - Pathogen, any organism with potential to cause and infection
    - Antigen, Has the ability to cause a immune response

- What is produced by the body cells and know as the "security badge"?
    - MHC 1
- What is known as the true first defence ?
    - Skin
    - Mucous Membranes
    - All epithelial cells

- What activates the inflammatory response and what are the four steps?
    - Mast cells: Histamine-Vasodilation
    - Heat, Pain, Redness, Swelling

- How do Killer T-Cells remove pathogens?

- What cells are associated with a allegren response and how do they respond?
    - Eosinophil, and Basophil

Chapter 2: Renal System

- What is the function of renal system?
    - Regulates, blood volume and pressure
    - Concentration of blood ions (plasma)
    - Blood pH by control of H+ and HCO3-ion secretion
    - Removal of waste products and reabsorption of filtered nutrients

- What is the main function of the Kidney
    - Is production of urine, contributes to homeostasis by regulation composition of blood plasma
    - Blood filtration
    - Fluid Balance
    - Hormone production: erythropoietin

- What are some key components of the kidney
    - Hilus, blood lymph nerve and uterus enter/leave
    - Cortex: outer layer if parenchyma, houses the nephron
    - Medulla: Inner portion of parenchyma, darker in color
    - Renal pelvis: uterine collection chamber
    - Glomerular Capsule: Blood passes between capillaires, filtration, solute exchange