Unit 1: Introduction

- The brain is an astounding organ. It is wrinkled, soft, wet, and about the size of a 3-pound cantaloupe

- Consists of 100 billion neurons, and each neuron can have 1 to 10,000 connections with other neurons

- The brain has more combinations of activity between brain cells than elementary particles in the universe

- It makes you who you are – your personality, perceptions, memories, and late-night deep thoughts

- Rene Descartes’s dualist framework model splits the mind and brain. The mind was seen as a separate entity existing outside of our biology, yet in control of our actions and thoughts. The physical brain was thought to serve in part, as a connection between mind and body. The real challenge is figuring out how the brain produces the mental processes of the mind. What gives humans the ability to critically think? Have emotions?

- The neuron is the fundamental building block of the nervous system and an imperative cell for the brain

Unit 2: The Neuron

- Cells have various functions throughout the body. Some secrete hormones, others join to form protective barriers such as your skin, and others contract and form muscles in your body

- Neurons are specialized cells for communication. Their unique structure is what allows this

- A typical neuron contains two distinct zones: a receptive zone designed to receive signals from other neurons, and a transmission zone designed to pass on signals to other cells.

- Receptive zone: Made up of dendrites branching out from the cell body. The center is the nucleus

- Transmission zone: Consists of the axon, and terminal ends (or axon terminal). Connect with other neurons

- Glial cells support, nourish, and provide insulation for neurons

Unit 3: The Action Potential

Unit 4: The Synapse

Unit 5: Neural Development

Unit 6: Conclusion