Students must:

- demonstrate thorough knowledge of neuroanatomy, including the lobes of the brain, major anatomical landmarks, cranial nerves, and major subcortical structures.

- demonstrate an understanding of the sequence of events that results in an action potential and neural transmission.

- be able to analyze the behavior of neurons in circuits, and be able to predict how other neurons in the circuit will react when other neurons are depolarized or hyperpolarized.

- demonstrate and understanding of sensory systems, including signal transmission, neuroanatomical connections, and response properties of neurons in primary cortical areas.

- demonstrate knowledge of principles of associative learning, mechanisms of neuroplasticity, and properties of different memory systems and the brain systems that support them.