

BMD 330 and 334: Human Physiology
Chapter 9 Objectives

Synaptic Transmission and Neural Integration

1. Describe the communication across electrical synapses.
2. Describe the communication across chemical synapses. Explain how neurotransmitters are released and what happens to them in the synaptic cleft.
3. Describe the signal transduction mechanisms at chemical synapses, comparing actions at ionotropic and metabotropic receptors.
4. Describe excitatory synapses.
5. Describe inhibitory synapses.
6. Describe the process of neural integration and the role of the axon hillock in this process.
7. Describe the major classes of neurotransmitters, including chemical structure, synthesis, degradation, and signal transduction mechanism.