

Anatomy and Physiology I

Learning Guide: Cytology

Overview – The cell is the structural and functional unit of the body. Therefore, the study of cytology will be foundational to understanding tissues, organs, and their physiology.

This module is divided into two parts. The [Learning Guide](#) provides elaborates on these.

- **Part 1 – Cell Membrane Structure and Function** - This part will cover the cell membrane structure and function and give special attention to transport mechanisms across the cell membrane.
- **Part 2 – Cellular Organelles** – Here will consider the structure and function of select cellular organelles. Of particular importance will be the organelles are involved in protein synthesis.

Learning Objectives

- Describe the structure of the cell membrane
- Identify the processes where cellular transport occurs through the cell membrane
- Explain how protein synthesis occurs, integrating nuclear and ribosomal activities.
- Identify the cellular organelles structurally
- Describe the functions of the cellular organelles under consideration

Getting Started – The [Lecture Outline](#) will provide a detailed guide through the topic of Cytology. A few ancillary [handouts](#) provide illustrations and support for the more complex topics. A visual approach to this material is best. Use your textbook as well as internet resources to provide visuals. I will sequentially walk through the course material using the lecture outline.

Exam – The cytology exam is a typical exam employing a variety of question types that examine the unit's material. There is a [guided essay](#) on protein synthesis. Use the handout and video support in preparation for this topic. Remember to have a working knowledge of the vocabulary and the processes described. A clear understanding of the osmosis handout is also important.

Final Point – Cytology is the third of the first four modules that are foundational for upcoming modules on body systems. The stronger the foundation, the easier and more enjoyable subsequent topics will be.