

CHAPTER 17 – LEARNING OBJECTIVES

After completing this chapter, the successful student will be able to:

1. Define all the terms in the chapter, regardless whether they are specifically mentioned in these learning objectives.
2. Describe the one gene-one polypeptide hypothesis.
3. Discuss the genetic code.
4. Describe what is meant by the genetic code being redundant.
5. Describe the importance of the reading frame to gene expression.
6. Discuss the process of transcription, including cellular location, enzymes needed, and what happens during initiation, elongation, and termination.
7. Discuss what happens during mRNA processing.
8. Describe what tRNAs are used for.
9. Discuss what an anticodon is and where it is found.
10. Describe what rRNA is.
11. Discuss the structure of a ribosome, including the A, P, and E sites.
12. Discuss the process of translation, including initiation, elongation, and termination.
13. Discuss the different categories of mutations that can occur.
14. Discuss sickle cell anemia, what causes it, and why it makes people sick.