

Student Learning Objectives

By the end of this class you should understand the following:

- The purpose and mechanism of codons
- The two steps of protein synthesis (transcription and translation)
- The purpose and process of removing introns
- The major components of transcription and translation and their functions
- The terminology and function of amino acid chains
- The process of protein folding and what disorders are caused by folding errors
- Major pathways of gene expression and regulation

Support videos:

- Khan Academy
 - <http://www.youtube.com/watch?v=w8VOfmG985U>
- Crash Course
 - <http://www.youtube.com/watch?v=itsb2SqR-R0>
- Dancing Hippies
 - <http://www.youtube.com/watch?v=u9dhO0iCLww>

Vocabulary:

- Codon
- Amino Acid
- Peptide bond
- Transcription
- Translation
- mRNA
- Promoter
- Intron
- Exon
- rRNA
- tRNA
- Anticodon
- Protein folding
 - Primary structure
 - Secondary structure
 - Tertiary structure
 - Quaternary structure
- Prion
- Gene inactivation
 - Chromatin remodeling
 - Gene silencing
- RNAi