

Name \_\_\_\_\_

Bio 205

## Protein Synthesis Worksheet

1. Refresh your memory regarding the differences between transcription and translation.
  - a. In what region of a prokaryote does transcription take place? \_\_\_\_\_
  - b. Where would translation take place? \_\_\_\_\_
  - c. Where in a eukaryote does transcription take place? \_\_\_\_\_
  - d. Where in a eukaryote does translation take place? \_\_\_\_\_

2. Practice the process of transcription by making a mRNA strand for the following DNA strand.

**DNA** 5' GGG ATC GAT GCC CCT TAA AGA GTT TAC ATA TTG 3'

**mRNA**

3. Now it's time to practice the translation process.
  - a. Go to the Blackboard website for Bio 205 and click on the assignments button.
  - b. Click on the link titled "Protein synthesis link." You will be taken to another website where you can practice translation.
  - c. Read the introductory material, then scroll down to the bottom of the page at this website to the section titled "Steps in translation." Watch this animation.
  - d. Now hit the back button once. Find the section titled "Practice exercises" putting it all together. Do each of the three exercises.
  - e. When you complete the third exercise, you will have manufactured a protein. Write the amino acid sequence for the protein you made below:

4. Review what you learned in class about mutations.

a. Def \_\_\_\_\_