Extra Credit Opportunities (second assignment)
Biology 105 (Fall semester 2013)

You may choose ONE of the following extra credit opportunities. Please submit your completed assignment by **Tuesday, December 10**. No late or incomplete assignments will be accepted.

1.) Important Concepts (20 points)

Answer the “Important Concepts” questions/prompts for the following lecture topics: (1) Blood, (2) Cardiovascular System, (3) Immune System and Disease, (4) Respiratory System, (5) Digestive System, and (6) Renal System. You do NOT need to include definitions for the vocabulary terms. Your answers MUST be complete, thorough, and accurate. Please make it very clear which topic and which question you are addressing. Your assignment must also be typewritten, neat, well-organized, and edited for correct spelling and grammar.

2.) Cardiovascular Physiology (20 points)

Create a visual representation of the anatomy of the human heart, including all of the interior and exterior structures, as well as the coronary circulation (pages 220-222 in the textbook are a good reference for this). You may use the artistic medium of your choice (e.g. drawing, painting, sculpting, computer graphics, pen and ink, collage). If you have questions about acceptable forms of expression for this assignment, please check with me! Your representation of the heart MUST be complete and detailed. In addition to your visual, include a written description of the pathway of blood flow through the heart, clearly noting whether oxygen-rich or oxygen-poor blood is present in each structure. Please also include a brief description of one of the cardiovascular system disorders we discussed in class. This description should be about 300 words in length, and you may include such information as the causes, effects, and treatments of the disorder, as well as preventive actions that can be taken to avoid the disorder (you may need to do some additional research to fulfill the length requirement). Your written descriptions must be typewritten, neat, well-organized, and edited for correct spelling and grammar.

3.) Current Biological Topics (20 points)

Find an article about a current topic in the field of biological science. Your article must come from a reputable source. This could be a scientific journal, or a publication such as *Newsweek* or *Time*. You may also choose a chapter in a book, but the book cannot be a textbook. If you have questions about acceptable topics or sources for articles/chapters, please check with me!

Write a summary and discussion of the article in **your own words**. You are welcome and encouraged to include your own opinions about the topic, but regardless of whether you include your opinions, you must present a thorough discussion of the topic. Do not use direct quotes unless absolutely necessary. Your summary should be between two and three pages in length (typed, 12 point font, one inch margins, double-spaced). Your article must be thoughtful, accurate, neat, well-organized, and edited for correct spelling and grammar. At the top of the first page, please provide the citation information for your article or book using the following format from the American Journal of Physiology:
Article –


Book –
