

## **ECA Science methods-Anatomy and Physiology I Fall 2018**

**Instructor Information:** Mrs. Pooja Uikey ([uikey@earlycollegealliance.info](mailto:uikey@earlycollegealliance.info)), 7344873120

**Course Description:** ECA Science Methods course Anatomy & Physiology is a high school level Science course with a lab component that can fulfill the ECA Biology requirement or can be taken as an ECA Science elective. Each semester course work would provide one Science credit (0.75 credit for lecture and 0.25 credit for lab)

**Learning objectives:** Upon successful completion of this course, the student will be able to:

1. Organize anatomical structures with respect to hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
2. Differentiate between specialized cells and major tissue types with respect to structure, function and location within the human body.
3. Explain how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.
4. Identify anatomical structures of the following body systems: integumentary, muscular, skeletal and nervous.
5. Explain cellular division (mitosis) and differentiation in producing and maintaining complex organisms.
6. Explain the role of DNA in determining the structure of. Relate the skin cancers to DNA mutations. Explain how DNA and chromosomes play role in coding the instructions for characteristic traits passed from parents to offspring.
7. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence with help of the evolution in human skeletal system.
8. Explain how the cellular, aerobic and anaerobic respiration helps maintain the physiology of the muscular system.
9. Identify the physiological processes of the following body systems: integumentary, muscular, skeletal, nervous system and their role in maintaining homeostasis.
10. Predict the outcome of deviation from the homeostatic state and relate it to the disease process.
11. Perform dissections, and participate in all structure and system identification laboratory activities.

### **Syllabus and Grades**

Syllabus and access to Mastering A&P will be available online on CANVAS. Students must have an access to computer and internet at home or will have to stay after school to work in the library for some homework assignments. Student copy of the syllabus is handed out to the students. Please refer to the syllabus for the Instructor policies, late assignment policies and attendance.

Grading: Assignments and exams graded on accuracy. Grades will be posted on Power school for lab and lecture separately. Students will be earn a semester grade according to the following scale:

A = 93 – 100%    B = 83 - 86.9%                      C = 73 - 76.9%

A- = 90 - 92.9%    B- = 80 - 82.9%                      LCR = 55 - 72.9%

B+ = 87 – 89%    C+ = 77 - 79.9%                      LNC = 54.9 – 0%

\* LCR = Less than proficient, credit

\*\* LNC = Less than proficient, no credit

**Credentials:** Students will be credentialed based on 5 categories of soft skills. You can find details to each category in the syllabus.

1. College ready attendance
2. College ready preparation
3. College ready performance
4. College ready communication
5. College ready self-advocacy

**Lab:** This class has a lab component to it. Your student will be in lab once a week. Attendance is imperative in Lab. Make sure that the student dresses appropriately (hair ties, closed toe shoes) for lab. Student needs to complete the prelab quiz on Canvas. Homework will be assigned after each lab and will be due the following week in lab. It is important to follow the lab safety rules.

### **Help your student succeed!**

**Communicate** with your student to understand if the student is fulfilling the below mentioned requirements to be at a good academic standing in the class.

**Understand:** if your student is struggling in the class and help them accordingly to try to resolve it. This can be done by checking Powerschool for the grades and asking questions such as.

*How was class today? What did you do in lecture today or lab this week? Could you briefly explain what did you learn? What was the homework/ assignment? How did you do on your last quiz? How do your overall grades for this class look like in power school? Where do you struggle in this class and what are your strengths? Did you see your teacher during her office hours for the questions you have? Did you check your email and Canvas for any posted assignments and/ or announcements?*

This class focuses a lot by example learning, so if you could share any examples, which are related to medical conditions, minor or major, and its relation to the Biological concepts, that will give your student food for thought and help him/her relate to what they are learning in class.

Supporting your student by communicating with them on a regular basis will help your student succeed in the course.

**Questions:** Please call or email if you have any questions.