BIO 116
ANATOMY & PHYSIOLOGY FOR PRE-HOSPITAL HEALTHCARE

3 Credit Hours

Prepared by:
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BIO: 116 ANATOMY & PHYSIOLOGY FOR PRE-HOSPITAL CARE

I. CATALOG DESCRIPTION

A. Course pre-requisites/co-requisites:
   Reading proficiency

B. 3 semester credit hours

C. Anatomy & Physiology for Pre-Hospital Healthcare covers vital human bodily functions and associated structures. An overview of cells, tissues, organs and organ systems and their correlation to normal physiology is emphasized. The relationship between structure and function is examined as well as the concept of homeostasis. Emergency Medical Technology, Fire Science Technology, and Biomedical Technology students only. (F, S, Su)

II. EXPECTED LEARNING OUTCOMES/CORRESPONDING ASSESSMENT MEASURES

<table>
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<tr>
<th>Expected Learning Outcomes</th>
<th>Assessment Measures</th>
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<tr>
<td>Describe the levels of organization in the human body from molecules to cells to tissues to organs and understand their relationships to one another in body systems.</td>
<td>Exams and quizzes</td>
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<tr>
<td>Describe the structure and organization of the central nervous system, spinal and cranial nerves, and autonomic nervous system and explain how they regulate body functions and maintain homeostasis.</td>
<td>Exams and quizzes, case studies, online discussion topics, online and in-class assignments</td>
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<tr>
<td>Describe the structure of the heart and trace major circulation patterns; explain the electrical and mechanical patterns associated with heart function and the factors that influence blood pressure; explain blood type and factors that influence transfusions.</td>
<td>Exams and quizzes, case studies, online discussion topics, online and in-class assignments</td>
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<tr>
<td>Describe the structure and function of respiratory airways and understand alveolar gas exchange and blood gas measurements.</td>
<td>Exams and quizzes, case studies, online discussion topics, online and in-class assignments</td>
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<tr>
<td>Describe the structure and function of the kidneys and related structures and explain the importance of fluids and electrolytes in maintaining homeostasis.</td>
<td>Exams and quizzes, case studies, online discussion topics, online and in-class assignments</td>
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<tr>
<td>Recognize major structures and the contribution to homeostasis of the following systems: integumentary, skeletal, muscular, endocrine, digestive, and reproductive.</td>
<td>Exams and quizzes, case studies, online discussion topics, online and in-class assignments</td>
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III. OUTLINE OF TOPICS

A. Structure and function of the body
   1. Organization
   2. Organ systems

B. Cells
   1. Parts of the cell
   2. Movement of substances through cell membranes

C. Tissues

D. Integumentary system

E. Skeletal system and joints

F. Muscular system

G. Nervous system
   1. Peripheral nervous system
   2. Central nervous system
   3. Autonomic nervous system
   4. Senses

H. Endocrine system

I. Blood

J. Cardiovascular system
   1. Blood vessels
   2. Heart
   3. Lymphatic vessels

K. Respiratory system

L. Digestive System

M. Urinary system
   1. Fluid balance
   2. Electrolyte balance
   3. pH balance

N. Reproductive systems

IV. METHOD(S) OF INSTRUCTION:
A. Lecture or PowerPoint presentations to support text reading assignments

B. Case studies

C. Group discussions

D. Online resources (videos, self-quizzing, etc.)

V. REQUIRED TEXTBOOK(S):


VI. REQUIRED MATERIALS:

A. Textbook with *Evolve* web support

B. Online access to STARS and Blackboard.

VII. SUPPLEMENTAL REFERENCES

A. Library resources: present offerings and anticipated texts, journals, video/audio tapes, software, etc.

B. Internet references

VIII. METHOD OF EVALUATION

A. Exams 70%

B. Online discussion topics and assignments 20%

C. Case studies 10%

C. Grading scale:

- 90-100% = A
- 80-89% = B
- 70-79% = C
- 60-69% = D
- Below 60% = F

IX. ADA STATEMENT

Any student requiring special accommodations should inform the instructor and the Coordinator of Disability Support Services (Library; phone 636-481-3169)
X. ACADEMIC HONESTY STATEMENT

Students who are caught cheating or plagiarizing material in this course will not receive credit for the assignment in question and may be dropped from the course with a failing grade. A detailed description of the Academic Honesty Policy statement can be found in the Jefferson College Student Handbook or online at:
http://www.jeffco.edu/jeffco/index.php?option=com_weblinks&catid=26&Itemid=84

XI. ATTENDANCE STATEMENT

Students earn their financial aid by regularly attending and actively participating in their coursework. If a student does not actively participate, he/she may have to return financial aid funds. Consult the College Catalog or a Student Financial Services representative for more details.