

# Hagerstown Community College

## Master Syllabus

**COURSE:** EMS 155 Anatomy and Physiology for EMS Providers

**DATE:** Fall 2019

**INSTRUCTOR:** Bev Witmer

**COURSE DESCRIPTION:** This course is an integrated course of the structure and function of the human body systems and processes. Included in this course are cell biology, biochemistry, and histology, the body systems, as well as fluid and electrolyte balance, metabolism and homeostasis. Total course 60 hours

**TEXTBOOK:** Essentials of A&P for Emergency Care, Bruce Colbert, 2011 Pearson

### STUDENT LEARNING OUTCOMES:

- Explain the relationship of various mechanisms in the delivery of substrate to the cells in the capillaries.
- Explain the mechanisms controlling blood flow to specific areas of the body
- Identify the affected organs of the ANS and how the ANS is modulated through physiologic function, toxins, and medications.
- Describe the anatomy of the respiratory system, and physiological processes of ventilation.
- Explain the relationships between cardiac output, stroke volume, ejection fraction, preload, Starling's law, peripheral vascular resistance, blood volume, A/V shunting, and vasoconstriction.
- Identify key skeletal attachments and understand their affect in traumatic injury
- Explain compensatory mechanisms utilized by the body to compensate for changing blood volume and metabolic needs.
- Discuss the phases of the cardiac cycle, and how action potentials differ between varying cardiac tissues

### MINIMUM CLOCK HOURS REQUIRED FOR THIS COURSE

<b>Activity</b>	<b>Direct Faculty Instruction In-Class 50 Hours Required</b>	<b>Student Work outside of the Classroom 100 hours required</b>
In-class "lecture"	50 hours	
Reading chapters		30 hours
Quiz/activity for each chapter	Included in lecture time	24 hours prep
13 lecture exams	Included in lecture time	26 hours exam prep

<b>Activity</b>	<b>Direct Faculty Instruction In-Class 50 Hours Required</b>	<b>Student Work outside of the Classroom 100 hours required</b>
Cumulative final exam (Academic Testing Center)	Included in lecture time	20 hours exam prep
<b>Total Hours</b>	<b>50 hours</b>	<b>100 hours</b>

*If the course is offered in different formats such as hybrid, on-line, face-to-face a separate “Minimum clock hours” table is required for each format.*

**Services for Students with Disabilities:** Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at [dss@hagerstowncc.edu](mailto:dss@hagerstowncc.edu) or at 240-500-2530.