COURSE
BIO 203: Human Anatomy and Physiology I, 4 credits

BIO-203 Human Anatomy and Physiology I
This is the first semester of an integrated course on the structure and function of human body systems and processes. It is required for allied health programs and appropriate for biology and related pre-professional fields. The course includes cell biology, biochemistry, histology and the endocrine, nervous, skeletal, muscular and integumentary systems. Laboratory fee required. Total of 45 hours of lecture and 45 hours of lab. Prerequisites: Prerequisite: ENG 099 and MAT 099 or appropriate scores on placement test; CHM 101 or BIO 119 (with a “C” or better), or successful completion of the A&P placement exam with a 75% or better. Semesters offered: Fall, Spring. 4 Credits

Total Hours of Coursework:
To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute “academic” hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit.

For most classes, students should expect to do at least 2 hours of coursework outside of class for each hour of in-class coursework.

INSTRUCTOR
R. Beecroft, T. Bidle, V. Fowlkes, B. Murphy

TEXTBOOK
Human Anatomy and Physiology, McKinley, O’Loughlin, and Bidle ISBN: 9780077927042
Human Anatomy and Physiology Lab Manual, Terri Bidle (Available at HCC Bookstore)
Anatomy and Physiology Coloring Book (Optional)

STUDENT LEARNING OUTCOMES
Upon completion of Human Anatomy and Physiology I, students will:
1. Exhibit the ability to use core content of the Anatomy and Physiology curriculum
2. Apply physiological and anatomical principles to the diseased state.
3. Demonstrate transfer of information from diagrams, models and non-human models to the human organism.
4. Students will be able to access, process, analyze and synthesize scientific information.

COURSE CONTENT OBJECTIVES:
1. Students will be able to use and understand descriptive anatomical and directional terminology.
2. Students will be able to explain the basic concept of homeostasis and how homeostatic mechanisms apply to body systems.
3. Students will be able to relate chemical concepts to physiology.
4. Students will be able to relate specialization of differentiated cells to differences in function.
5. Students will understand the relationship between genes (DNA), gene transcripts (RNA), gene products (proteins) and cell differentiation and function.
6. Students will be able to describe the basic tissues and membranes of the body, their location, and explain their functions.
7. Students will be able to identify and describe gross and microscopic anatomical components of the endocrine system and explain the functional roles of their respective hormones in communication, control, and integration.
8. Students will be able to identify and describe the major gross and microscopic anatomical components of the nervous system and explain their functional roles in communication, control, and integration.
9. Students will be able to identify and describe the major gross and microscopic anatomical components of the special senses and briefly describe the physiology involved in their function.
10. Students will be able to identify and describe the major gross and microscopic anatomical components of the skeletal system and explain their functional roles in osteogenesis, repair, and body movement.
11. Students will be able to identify and describe the major gross and microscopic anatomical components of the muscular system and explain their functional roles in body movement, maintenance of posture, and heat production.
12. Students will be able to identify and describe the major gross and microscopic anatomical components of the integumentary system and describe the functions of the system.

Minimum Clock Hours Required for this Course

<table>
<thead>
<tr>
<th>Reading/studying for lecture exams</th>
<th>Weekly quizzes/exams x 4 hr/week = 60</th>
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<tbody>
<tr>
<td>Reading/studying for laboratory exams</td>
<td>Quizzes/Exam x 3 hours/week = 45</td>
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<tr>
<td>Homework and other assignments</td>
<td>10 hours</td>
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<td><strong>Total out of class time</strong></td>
<td><strong>115 hours</strong></td>
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ASSESSMENT PROCEDURES

Lecture .................................................................75% of grade
   4 exams
   Cumulative exam
   Quizzes
Lab................................................................. 25% of grade

A 100%-90%, B 89% - 80%, C 79% -70%, D 69%-60% F  59% and below
### Minimum Clock Hours Required for this Course

<table>
<thead>
<tr>
<th>Component of Course</th>
<th>Hours In Class/Lab</th>
<th>Hours/Item Outside of Class</th>
<th>Total Hours/Semester Outside of Class</th>
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<tbody>
<tr>
<td><strong>Lecture</strong></td>
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<tr>
<td>Quizzes</td>
<td>37.5 hours</td>
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<tr>
<td>Units Exams</td>
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<tr>
<td>Cumulative exam</td>
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<tr>
<td><strong>Laboratory</strong></td>
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<td>Unit laboratory assessment</td>
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<td>Laboratory Final</td>
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<td><strong>Total</strong></td>
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**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 or at 240-500-2530.