Semester and year:
Course Number:
Meeting Times and Locations:

Instructor:
Office Location:
Phone:
Office Hours:
Email Address:

COURSE TITLE: BIO 103 – The Human Body
PREREQUISITES: None
COURSE CREDITS/HOURS: 4 credits / 3 hr lectures, 3 hr labs
GENERAL EDUCATION: Yes
COURSE DESCRIPTION: BIO 103 Human Structure and Function is a one-semester course that is concerned with basic chemistry, the human cell, tissues, and the integumentary, musculoskeletal, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary and reproductive systems. The course also includes a survey of metabolism and fluid and electrolyte balance. Lectures are supplemented by writing assignments, discussions and laboratory exercises including microscopy, dissection and various anatomical & physiological experiments which complement the lecture material.


*Do not, under any circumstances, purchase used Laboratory Manuals or Learning Guides.
SPECIFIC OBJECTIVES AND STUDENT ASSESSMENT

“The students will be able to”:

1. Contrast the differences between the anatomy and physiology of the human body. Students will be evaluated by lecture exams, laboratory exams, laboratory reports and laboratory practical exams.
2. Explain the different levels that make up the human body and how are they organized. Students will be evaluated by lecture exams and laboratory reports.
3. Explain the processes of life. Students will be evaluated by lecture exams.
4. Give an explanation on the anatomical positions of the human body. Students will be evaluated by lecture, laboratory exams, and laboratory reports.
5. Recognize directional terms and planes of the body. Students will be evaluated by lecture, laboratory exams and laboratory reports.
6. Identify body cavities and regional quadrants. Students will be evaluated by lecture, laboratory exams and laboratory reports.
7. Generalize the nature of atoms, chemical compounds, including organic and inorganic compounds. Students will be evaluated by lecture exams.
8. Distinguish the parts of the cell, including the plasma membrane, cytosol, and organelles. Students will model the proper use of a microscope. Students will be evaluated by lecture, laboratory exams, laboratory practical exams and lab reports.
9. Describe gene expression and normal cell division. Students will be evaluated by lecture exams.
10. Compare and contrast the types of tissues found in the human body. Students will be evaluated by lecture, laboratory exams and laboratory reports.
11. Summarize the structure and function of the Integumentary System. Students will be evaluated by lecture exams, laboratory exams and laboratory reports.
12. Summarize the structure and function of the Skeletal System. This will include bone histology, the types of bone and parts of bones. Students will be evaluated by lecture exams, laboratory lab practical exams, and laboratory reports.
13. Identify the different articulations of the body, including the different classifications. Students will be evaluated by lecture exams, laboratory reports and laboratory exams.
14. Recognize the organs in the Muscular System including the names of muscles and actions. Examine the physiology of muscle contraction. Students will be evaluated by lecture exams laboratory reports and laboratory practical exams.
15. Describe the Nervous System including histology and function of the Central and Somatic Nervous Systems, and Autonomic Nervous System. Students will be evaluated by lecture exams, laboratory reports and laboratory exams.
16. Describe the Endocrine System including an overview of glands and the effects of hormones. Students will be evaluated by lecture exams, laboratory reports and laboratory exams.
17. Identify the structures in the Cardiovascular System including the Heart, Blood, and Blood Vessels. Examine the physiology of the cardiovascular system. Students will be evaluated by lecture exams, laboratory exams, laboratory reports, and laboratory exams.
18. Describe the Lymphatic System including structures and their functions and nonspecific resistance to disease. Students will be evaluated by lecture exams, laboratory reports and laboratory exams.
19. Summarize the Respiratory System including structures and their functions. Students will be evaluated by lecture exams, laboratory reports and laboratory exams.
20. Identify the anatomy of the digestive system and explain the digestive process. Be able to explain basic carbohydrate, lipid and protein metabolism. Students will be evaluated by lecture, laboratory and laboratory practical exams and laboratory reports.
21. Summarize the Urinary System including structures and their functions. Students will be evaluated by lecture laboratory practical exams and laboratory reports.
22. Distinguish between water and electrolyte balances and imbalances including acid-base balances and imbalances. Students will be evaluated by lecture and laboratory exams.
23. Identify the male and female Reproductive System structures and point out their functions. Students will be evaluated by lecture, laboratory, practical exams and laboratory reports.
24. Be able to explain Development and Inheritance including embryonic growth and fetal growth. Students will be evaluated by lecture and laboratory exams and laboratory reports.

The above learning objectives will be assessed and or evaluated by the instructor using a variety of assessment tools including but not limited to lecture exams, laboratory exams, laboratory practical exams, quizzes, laboratory reports, research papers, presentations, projects, etc. The decisions concerning the type or types and the number of tools used in the assessment process of this course will be made by the course instructor.
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<thead>
<tr>
<th>Chapter</th>
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<tr>
<td><strong>Organization of the Human Body</strong></td>
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<tr>
<td>Levels of Organization, Life Processes, Homeostasis, Anatomical Position, Directional Terms, Planes, Sections, Body Cavities, Abdominopelvic Regions and Quadrants</td>
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<tr>
<td><strong>Introductory Chemistry</strong></td>
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<td>Chemical Compounds and Life Processes, Inorganic and Organic Compounds</td>
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<td><strong>Cells</strong></td>
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<td>Plasma Membrane, Cytosol, Organelles, Gene Action, Normal Cell Division</td>
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<td><strong>Tissues</strong></td>
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<td>Types of Tissues, Epithelial Tissue, Connective Tissue, Membranes, Muscle Tissue, Nervous Tissue</td>
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<tr>
<td><strong>The Integumentary System</strong></td>
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<tr>
<td>Skin, Accessory Organs, Homeostasis of Body Temperature</td>
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<tr>
<td><strong>The Skeletal System</strong></td>
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<td>Function, Types of Bones, Parts of the Long Bone, Histology, Ossification, Homeostasis, Divisions of the Skeletal System, Skull, Hyoid, Bone, Vertebral Column, Thorax, Pectoral Girdle, Upper Extremity, Pelvic Girdle, Lower Extremity</td>
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<td><strong>Articulations</strong></td>
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<td>Classifications of Joints, Synarthrosis, Amphiarthrosis, Diarthrosis, Common Disorders</td>
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<td><strong>The Muscular System</strong></td>
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<td>Types of Muscle Tissue, Functions of Muscle Tissue, Skeletal Muscle Tissue, Contraction, Cardiac Muscle Tissue, Smooth Muscle Tissue</td>
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<td><strong>Nervous Tissue</strong></td>
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<td>Organization, Histology, Functions</td>
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<td><strong>Central and Somatic Nervous Systems</strong></td>
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<td>Spinal Cord, Spinal Nerves, Brain, Neurotransmitter, Cranial Nerves</td>
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<td><strong>Autonomic Nervous System</strong></td>
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<tr>
<td>Comparison of Somatic and Autonomic Nervous Systems, Structure of the Autonomic Nervous System, Functions of the Autonomic Nervous System</td>
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<td><strong>Sensations</strong></td>
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<tr>
<td>Sensations, General Senses, Special Senses, Olfactory Sensation, Gustatory Sensation, Visual Sensation, Auditory Sensation and Equilibrium</td>
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LABORATORY SCHEDULE

Laboratory 1  Microscopy – Exercise 1  
               Introduction to the Human Body – Exercise 2
Laboratory 2  Cells – Exercise 3
Laboratory 3  Tissues – Exercise 4  
               Integumentary System – Exercise 5
Laboratory 4  Skeletal System – Exercises 6, 7, 8,
Laboratory 5  Skeletal System – Exercises 6, 7, 8 (con’t)
Laboratory 6  Muscular System – Exercises 9, 10,
Laboratory 7  Nervous System: Structure of the Neuron, The Nerve Impulse, Spinal Cord, 
               Reflexes – Exercise 12
Laboratory 8  Nervous System: The Brain, Sense Organs – Exercises 13, 14
Laboratory 9  Endocrine System – Exercise 15
Laboratory 10  Circulatory System: Blood and The Heart – Exercises 16 & 17
Laboratory 11  Blood Vessels, Cardiovascular Physiology, Lymph and Immune Systems – Exercises 18, 19, 20
Laboratory 12  Respiratory System – Exercise 21
Laboratory 13  Digestive System – Exercise 22
Laboratory 14  Fluid and Electrolytes  
               Urinary System – Exercise 23
Laboratory 15  Reproductive System – Exercises 25, 26  
               Development

EVALUATION:  

A. Unit Examination  #__________ ....... ____%  
B. Laboratory Work  ................. ____%  
C. Report / Project  ................. ____%  
D. Class Participation  ................. ____%  
E. Term paper/research project  ................. ____%  

TOTAL ..................................................100%
ADDENDA

Testing: All unit examinations **must** be taken in order to receive a grade.

Class Assignments: It is the student’s responsibility to make sure that all assignments are turned in on time. Late assignments will receive reduced grades due to tardiness. Grades will be decreased 10% for each day late.

Lab Attendance: For every lab missed your lab grade will drop 8%.

Smoking Policy: As of January 1, 1992, Bergen Community College facilities are smoke free. Smoking is not allowed in any building on campus.

Eating & Drinking: Eating and drinking in the classrooms, lecture halls, laboratories, and passageways is forbidden. Eating and drinking are permitted in the cafeteria and vending areas only.

Faculty Absence: A daily listing of cancelled classes will appear in designated glass cases. Students can consult these cases before going to class. If students find a class cancelled which has not been listed, they should report this to the Evening Office (L113) or the Divisional Dean’s Office, A325.

Laboratory Safety:

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All BCC students enrolled in credit courses are entitled to a WebAdvisor account. With WebAdvisor, you may register online, pay your bill, check your schedule, room assignments, GPA, and find out what courses you need to take. To find out more about WebAdvisor, or to sign up online, visit [http://go.bergen.edu](http://go.bergen.edu)! While there, please make sure you give us your preferred email address. You’ll find directions how to do this at [http://go.bergen.edu/email](http://go.bergen.edu/email).

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I have carefully read and fully understand the addenda.

Signed________________________________________ Date_________________________