**Course Description**

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| **Course Title** | | | | Human Physiology | **Course Code** | | **BHS140** |
| **Program** | | | | Therapeutic nutrition and dietetic | **Level** | | 1st level |
| **Credit Hours** | | | | 3 | **Pre-requisites** | | **BHS120** |
| **Course Description:** | | | | | | | |
| This introductory physiology course introduces basic concepts in the physiology of the human body. The course familiarizes students with fundamental definitions and principles related to physiology. It helps students understand body cellular physiology, including the functions of cell components, transport mechanisms across the cell membrane, functions of total body water, and the functions of blood components. Additionally, the course provides an overview of the physiology of the nervous system, cardiovascular system, respiratory system, digestive and renal systems, and the endocrine system. The teaching methods will include lectures, clinical practice, self-learning, discussions, and assignments. Students will be evaluated through reports, written exams, and practical exams. Biology is a prerequisite course. | | | | | | | |
| **Topics Covered:** | | | | | | | |
|  | 1. Physiology of the cell. 2. Transport across the cell membrane. | | | | | | |
|  | 1. Body fluids 2. Osmosis, tonicity, and water balance | | | | | | |
|  | 1. Composition and functions of the blood. 2. RBCs, formation and general functions | | | | | | |
|  | 1. WBCs: structures, classifications, and functions 2. Hemostasis and its disorders | | | | | | |
|  | Mid-term | | | | | | |
|  | 1. Introduction to cardiovascular system 2. Heart and blood vessels 3. Blood pressure | | | | | | |
|  | 1. Introduction to respiratory system 2. The kidney and its units | | | | | | |
|  | 1. Introduction to gastrointestinal system 2. Endocrine system | | | | | | |
|  | Final exam | | | | | | |
| **Course Learning Outcomes:** | | | | | | | |
| After completing this course, students would be able to: | | | | | | | |
|  | Recognize the functions of the different organelles in the human cell, and the transport system across the cell membranes. | | | | | | |
|  | Outline the compartments, composition, and functions of the body fluids. | | | | | | |
|  | Describe the general organization and functions of cardiovascular, endocrine, respiratory, renal systems and nervous system, and explain their role in the maintenance of homeostasis. | | | | | | |
|  | Distinguish between normal and abnormal laboratory tests. | | | | | | |
|  | Integrate physiology with other basic and clinical sciences. | | | | | | |
|  | Perform hematological tests: estimation of blood hemoglobin, hematocrit, ESR, blood groups, and hemostasis tests. | | | | | | |
|  | Detect disturbances in body functions in abnormal laboratory tests. | | | | | | |
|  | Communicate effectively with students by discussing results obtained from experimental physiological lab. | | | | | | |
|  | Present physiological data in a graphical form. | | | | | | |
| **Textbooks:** | | | | | | | |
|  | | Guyton and Hall (2006), Textbook of Medical Physiology, 12th edition, Saunders Elsevier: Philadelphia. | | | | | |
|  | | Laurie Kelly (2009), Essentials of Human Physiology for Pharmacy, 2nd edition, CRC Press/Taylor & Francis: Boca Raton. | | | | | |
| **Course Assessment:** | | | | | | | |
| **No.** | | | **Assessment Tasks** | | | **Mark** | |
|  | | | Homework/Tasks/Assignments | | | 10 | |
|  | | | Midterm Exam | | | 20 | |
|  | | | Practical exam | | | 20 | |
|  | | | Final Exam | | | 50 | |
| **Total** | | | | | | **100** | |