**Course Description**

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| BHS120 | **Course Code** | Biology | | **Course Title** | | |
| 1st Level | **Level** | Therapeutic nutrition and dietetic | | **Program** | | |
|  | **Pre-requisites** | 3 | | **Credit Hours** | | |
| **Course Description:** | | | | | | |
| This course is concerned with the fundamental biological knowledge about living organisms. The topics cover the history of evolution, function and chemical structure of macromolecules, difference between prokaryotic and eukaryotic cells, cell function, cell division, enzymes and material transport in living organisms.  The practical part will be focus on structure and function of living cells, mitosis and meiosis division in plant and animal cells, active and passive transport, properties and function of enzymes in living organism. The teaching will include lecture, collaborative learning, self-learning, dialogue, brain storming, discussion and assignment. The students will be evaluated through report, written exam and practical exam | | | | | | |
| **Topics Covered:** | | | | | | |
| **First: Theoretical Aspects** | | | | | | |
| Overview and Introduction to Biology | | | | | | 1 |
| Macromolecules | | | | | | 2 |
| Cells | | | | | | 3 |
| Mid exam | | | | | | 4 |
| Membrane structure and function | | | | | | 5 |
| Energy and the cell | | | | | | 6 |
| Enzymes | | | | | | 7 |
| Cell division | | | | | | 8 |
| Final exam | | | | | | 9 |
| **Second: Practical / Tutorial / Clinical Aspects** | | | | | | |
| Microscope (structure, types and function) | | | | | | 1 |
| Macromolecules (carbohydrates, lipids, protein and nucleic acid) | | | | | | 2 |
| Cells (bacteria, plant and animal cells) | | | | | | 3 |
| Membrane structure and function | | | | | | 4 |
| Enzymes | | | | | | 5 |
| Cell Division (bacteria, plant and animal cell) | | | | | | 6 |
| Final exam | | | | | | 7 |
| **Course Learning Outcomes:** | | | | | | |
| **For students undertaking this course, students at the end of this course will be able to:** | | | | | | |
| Define scientific terms related to biology and differentiate between prokaryotic and eukaryotic organisms. | | | | | | 1 |
| Describe the structure, properties and function of macromolecules and enzymes. | | | | | | 2 |
| Recognize techniques and procedures used for quality control and quality assurance systems in biological labs. | | | | | | 3 |
| Correlate laboratory findings with processes of living cells. | | | | | | 4 |
| Explore and solve familiar and unfamiliar problems related to biological science | | | | | | 5 |
| Compare critically the function of various organs and systems in living organisms. | | | | | | 6 |
| Operate different equipment’s and instruments and use emerging technologies in identification and recognition of living organisms. | | | | | | 7 |
| Demonstrate proper handling of microscope to view the cells and using chemicals safely. | | | | | | 8 |
| Evaluate the results obtained in the laboratory of biology and compare them with published results. | | | | | | 9 |
| **Textbooks:** | | | | | | |
| Solomon E.; Berg L. and Martin D. (2008): Biology. 8th edition. Thomson Books Cole, Belmont. USA (College Publishing). | | | | | | 1 |
| 2. Albert B.; Johnson A. and Walter P. (2008): Molecular Biology of the Cell. 5th edition. Garland Science, New York, USA. | | | | | | 2 |
| **Course Assessment:** | | | | | | |
| **Mark** | | | **Assessment Tasks** | | **No** | |
| 5 | | | Report | | 1 | |
| 5 | | | Single work and assignment | | 2 | |
| 15 | | | Midterm Exam | | 3 | |
| 25 | | | Practical part (Final) | | 4 | |
| 50 | | | Final Exam | | 5 | |
| **100** | | | **Total** | | | |