UNIVERSITI TEKNOLOGI MARA

BIO310: INTRODUCTION TO HUMAN BIOLOGY

Course Name (English)	INTRODUCTION TO HUMAN BIOLOGY APPROVED
Course Code	BIO310
MQF Credit	3
Course Description	This course introduces students to human biology, focusing on anatomy, physiology, functions, processes and homeostatic imbalance of organs, organ systems, and human genetics.
Transferable Skills	Transfer skill of communication in written form on human biology.
Teaching Methodologies	Lectures, Blended Learning, Tutorial, Collaborative Learning
CLO	CLO1 Construct models of anatomy, physiology and genetics in human biological systems. CLO2 Demonstrate good interaction with others in delivering specific disease and disorder related to human biological system. CLO3 Analyse the causes and effects of homeostatic imbalances in human biological systems.
Pre-Requisite Courses	No course recommendations

Topics
1. Blood 1.1) Human Blood 1.2) Blood Transfusion 1.3) Blood Disorders
2. Cardiovascular System 2.1) Heart Anatomy 2.2) Blood Circulation 2.3) Heart Physiology 2.4) Blood Pressure
3. Lymphatic System 3.1) Functions of Lymphatic System 3.2) Formation of Lymph 3.3) Lymphatic Pathway 3.4) Lymphoid Tissues and Organs
4. Immune System 4.1) Immunodeficiencies 4.2) Autoimmune Diseases 4.3) Hypersensitivities / Allergies
5. Urinary System 5.1) Kidney Anatomy 5.2) Ureter, Urinary Bladder and Urethra 5.3) Mechanism of Urine Formation
6. Body fluids, Water-Salt Balance and Acid-Base Balance 6.1) Body Fluids 6.2) Water-Salt Balance 6.3) Acid-Base Balance 6.4) Acid-Base Imbalance

7. Respiratory System 7.1) Control of Respiration 7.2) Respiratory Adjustments during Exercise and at High Altitudes 7.3) Homeostatic Imbalance of Respiratory System
8. Nervous System 8.1) Organization of Nervous System 8.2) Classification of Neurons 8.3) Central Nervous System 8.4) Peripheral Nervous System 8.5) Autonomic Nervous System
9. Senses 9.1) Sensory Receptors 9.2) Chemical Senses 9.3) Eye and Sense of Vision 9.4) Ear, Sense of Hearing and Equilibrium
10. Human Reproduction 10.1) Anatomy of Male Reproductive System 10.2) Physiology of Male Reproductive System 10.3) Anatomy of Female Reproductive System 10.4) Physiology of Female Reproductive System 10.5) Pregnancy and Human Development
11. Human Genetics 11.1) Vocabulary of Genetics 11.2) Sexual Sources of Genetic Variation 11.3) Mendel's Law of Inheritance 11.4) Types of Human Inheritance 11.5) Pedigree Analysis 11.6) Abnormalities in Chromosome Structure 11.7) Abnormalities in Chromosome Number

Assessment Breakdown	%
Continuous Assessment	60.00%
Final Assessment	40.00%

Details of Continuous Assessment

Assessment Type	Assessment Description	% of Total Mark	CLO
Assignment	Project (presentation and peer evaluation) to analyse the causes and effects of homeostatic imbalances in human biological systems.	20%	CLO2
Test	Ongoing Online Test (Blood, Cardiovascular System, Lymphatic system, Immune system, Urinary System,)	30%	CLO1
Written Report	Written report based on case study of any topics related to human diseases and disorders.	10%	CLO3

Reading List

Reference Book Resources

- **Mader, S.S. 2009, *Human Biology*, 11th Ed., McGraw Hill**
- **Marieb, E.N. 2000, *Essentials of Human Anatomy and Physiology*, 6th Ed., Benjamin Cummings**
- **Marieb, E.N. 2005, *Anatomy and Physiology*, 2nd Ed., Pearson/Benjamin Cummings San Francisco**
- **Seeley, R.R., Stephens, T.D. & Tate, P. 2007, *Essentials of Anatomy & Physiology*, 6th Ed., McGraw Hill**
- **Campbell, N.A., Reece, J.B., Urry, L.A., Cain, M.L., Wasserman, S.A., Minorsky, P. V. & Jackson, R.B. 2008, *Biology*, 8th Ed., Benjamin Cummings**
- **Solomon, E.P., Berg, L.R. & Martin, D.W. 2011, *Biology*, 9th Ed., Brooks/Cole, Cengage Learning**

Article/Paper List: This Course does not have any article/paper resources

Other References: This Course does not have any other resources