

COURSE OUTLINE

MEDICAL BIOLOGY

This course teaches a foundation of biological topics sufficient to appreciate the main systems of the body and some of the more common diseases that affect the human body and mind. The course begins with an overview of the human body and then focuses on important themes in Medical Biology such as central nervous system coordination and disease, cardiovascular disease, blood, the immune system and infectious disease.

Students have a wide range of interests: many wish to have a better grasp of how the parts work together, others have a scientific interest in the details, some are searching for general ideas about Biology to link up with their other studies. For this reason, individual tutorials are used to take the work in whichever direction is preferred.

The following topics are considered: -

- **Overview of the Human Body**

This provides an introduction to the human body as a physiologically integrated organism. The major systems are discussed with emphasis placed on their interrelationships in order to maintain the internal environment of the body (homeostasis) and the consequences when these break down.

- **The Central Nervous System**

The role of the Central Nervous System (CNS) in physical and biochemical coordination is discussed. Emphasis is placed on the structure, function and diseases of the CNS.

- **The Cardiovascular System**

Cardiovascular disease is one of the largest causes of disease and mortality in the Western world. This module discusses the causes, pathology and treatment of heart disease.

- **Diseases of the Blood**

The causes, pathology and treatment of diseases of the blood system are considered.

- **Genetic Disease**

This section of the course looks at a range of genetic diseases like phenylketonuria (PKU) and diabetes and examines the benefits and problems which have arisen from knowledge of the human genome.

- **The Immune System**

This module gives an overview of the immune system and the ways that it can be compromised by, for instance, the HIV virus in AIDS.

- **Parasites and Tropical Diseases**

International travel and global rise in temperature have created an increased risk of diseases from disorders like malaria and Chagas disease.

- **Infectious Disease and Antibiotics**

Sources of infectious disease are discussed and examples given of antibiotic action.

- **Cancer**

An introduction to the types and causes of this increasingly prevalent disease.

Course aim

To gain a perspective on the human body and its systems with normal and abnormal functioning.

Assessment Process

The weighting of the assessment is principally focused on the work done on written research papers and by an end of course test. These marks, combined with an assessment of student performance in class, make up the final grade for the course, as shown.

Grade breakdown

- 40% Research papers
- 40% Test
- 10% Class Participation
- 10% Attendance

Assessment Criteria

Distinction Grade A	Appropriate, accurate and well-detailed knowledge of medical biology. Excellent organisation and structure of arguments, displaying substantial evidence and appropriate balance. Excellent communication skills.
Credit Grade B	Appropriate and detailed but slightly limited medical biology knowledge. Arguments presented coherently, but balance not always achieved. Oral and written skills good.
Merit Grade C	Limited medical biology knowledge, but generally accurate. Reasonable arguments constructed and some evidence of breadth or depth is displayed. Oral and communication skills satisfactory.
Pass Grade D	Description of issues is weak and understanding is muddled and incomplete. Basic knowledge displayed orally and in written form. Weak communication skills.
Fail	Failure to reach a minimum standard of communication, content and argument.

Recommended Reading

Ross & Wilson: Anatomy & Physiology In Health & Disease K J W Wilson & A Waugh Churchill Livingstone (1996; 8th Edn). *ISBN: 0443051569*

<http://www.bookshop.blackwell.co.uk> or www.Amazon.co.uk