UNL44 Biology

About this Unit

The unit is a preparatory biology unit designed to help you gain the necessary knowledge to enter into tertiary study. This unit highlights basic concepts of biology and builds skills required to be successful in obtaining a health science or biological sciences degree. The unit explores modern biology by considering the structure and function of biological systems at various levels of organisation across a range of biological subjects.

This unit includes individual tutorial support with an experienced biology teacher. Tutorial support is available via email, phone and in the online classroom's discussion forums.

The unit has flexible enrolment dates to meet your needs. Start your study when you want and complete the unit any time within the 12 month enrolment window. This unit is equivalent to year 11/12 Biology. This unit requires a minimum of 220 hours or 18 weeks to complete.

Aim

The main aim of this course is to assist you in obtaining the skills and knowledge to confidently approach tertiary studies in any of the biology disciplines.

On successful completion of this course you will be able to:

- write short notes on or give definitions of the technical terms used in general biology
- write short notes to explain the meaning or significance of key concepts in biology write brief essays to outline the structure or functioning of biological systems or to explain the unifying concepts.

You will be able to demonstrate an understanding of the following key concepts:

- Cell theory
- Role of nucleic acids (DNA/RNA)
- Genetics and inheritance
- Homeostasis
- Evolution.

You will be able to apply these skills across a range of organisms:

- Microbes
- Animals
- Plants.

You will also be able to apply these skills (as appropriate) across a range of levels of biological organisation:

- Cells, tissues
- Organs, organ systems
- Individuals and ecological aggregates.

Structure

UNL44 Biology consists of a study plan within the online classroom as well as the Biology an Australian Perspective Second Edition by Lorraine Huxley and Margaret Walter - OXFORD, lecture notes and videos in the online classroom. A range of Activities are included for the learner to work through to develop experience in problem solving. Detailed solutions for all Activities are included in each Module.

Progress Tests and Lab Activities are also provided at appropriate points throughout the course. Students are required to successfully complete twelve (12) progress tests and eight (8) lab activities to be eligible to sit for the final examination.

Pre-requisite knowledge

Normally, candidates for UNL44 Biology should be competent in year 10 science. Students who feel they need to develop their mathematical skills are referred to UNL31 Introductory Mathematics, however this is not mandatory.

Specimen Examination

The Specimen Exam or Practice Exam is available once you have completed all progress test and lab activities. The Practice Exam allows students to work through similar problems under exam conditions which allow them to see if they are pacing themselves appropriately to be successful on the final exam. Most students who are successful on the practice exam find they are successful on the final exam as they are prepared for the type of questions and the exam format they will have during the final exam.

Hours of Study

In general the course should be completed in a minimum of 220 hours of study. The actual time required by an individual student to receive a successful result, however, will depend on the background, time available and needs of the learner. A majority of students take 540 hours to complete the course over the 12 months.

Assessment

The chapter questions, examples, progress tests and the Specimen Examination are designed to help students prepare for the final examination for UNL44 Biology. Examinations are prepared and assessed by the UNL44 Biology Teacher.

To be eligible to sit for the final, closed book, examination students are required to achieve a mark of 60% or higher each on ALL progress tests and lab activities. The formal, supervised examination covers the content specified by the study plan. Candidates, who successfully complete the course, are awarded a Statement of Achievement, which lists the percentage mark gained and a grade of Pass, Credit, Distinction or High Distinction. Any candidate who fails to obtain the minimum mark required for a Pass grade in the examination will be eligible to sit a second attempt.

Examinations are not held at set times. Rather, they are arranged through the Unilearn office after the student has successfully completed the required materials with a score of 60% or higher on each.

Practical Components

At the moment UNL44 Biology consists of eight practical lab activities, additional lab activities may be developed in the future. These lab activities account towards your final grade and can be done either in your home, office or even your backyard if required. Lab activities are hosted through our online classroom, so there is no need to go to a campus or book a room anywhere; they have been developed to be conveniently accessible online.

Biology consists of the following lab activities:

- Dichotomous Key Classification
- Gram staining bacteria
- Carrying Capacity
- Microscope Lab
- Onion Root Mitosis Lab
- Frog Dissection
- Genetics lab – Inheritable traits
- Genetics – Fruit Fly lab

Grading Scheme

Students are required to complete all required materials (progress tests and lab activities) with a score of 60% or above on each in order to be eligible to sit the final exam. A student's final grade is an accumulation of all required content and will be weighted as follows:

Progress Tests - 15%
Lab Activities - 15%
Final Exam - 70%

The final grading scale is as follows:

Pass (P) - 50-64%
Credit (C) - 65-74%
Distinction (D) - 75-84%
High Distinction (HD) - 85% and above

Content

Text - Biology an Australian Perspective, second edition.

UNIT 1: Introduction of Biology

Chapter 1 - The nature of biology

UNIT 2: The Diversity of Life

Chapter 2 – Classifying organisms
Chapter 3 – Overview of living organisms
Chapter 4 – Phylogenetic relationships
Chapter 5 – The effect of organisms on humans

UNIT 3: Ecology

Chapter 6 – Organisms and their environment
Chapter 7 – Populations