University Foundation Studies — *Standard (Two Terms) Course or Extended (Three Terms) Course

Unit descriptions — Science
(for students who wish to study Science and Engineering)

*These units are studied in both terms of the Standard (Two Terms) Course. They are also studied in Terms 2 and 3 of the Extended (Three Terms) Course which is available to international students only.

Academic English B (studied over two terms)
This unit provides students with the linguistic skills needed for the demands of university study. Topics include writing reports, writing summaries, making oral presentations and effective reading and note-taking.

Computer Studies
This unit includes an introduction to computing, Windows, Word, Excel, Access, PowerPoint and the Internet, as well as data storage management, databases design, communications, networks and introductory programming design. It is designed for computing students.

Mathematics
This unit teaches the student basic arithmetic and algebra involving surds, inequalities, absolute values and functions, calculus, trigonometry and the trigonometric functions.

Physics
Physics examines the general laws of motion and mechanics. Topics include work, energy, power, linear and angular momentum, vibrational motion, electricity and magnetism. Wave motion, sound, light, lenses and imaging systems are also studied.

Biology
The biology unit focuses on human physiology from cell theory to basic anatomy, as required for further study in the health sciences. It also introduces the key concepts in evolutionary theory, genetics and biotechnology, as necessary for further study in general biological science.

Chemistry
Examining the conventional notation and terminology used in chemistry, the unit focuses on developing practical and problem-solving skills in the context of topics such as atomic structure, the periodic table, chemical bonding, reactions of substances, chemical energy and organic chemistry. It emphasises the value of careful observation, scientific method, measurement and experimental design.

and either

Mathematics Extension
Topics such as advanced algebraic techniques including inequalities and mathematical induction, permutations and combinations, polynomials, the binomial theorem and binomial probability are studied.

or both

Scientific Method
Scientific Method develops skills and processes associated with science and science-based subjects.

and

Statistics for Academic Purposes
Areas studied in this unit include the use of a calculator as a statistical instrument, collecting and displaying data, and an investigation of correlation and linear regression.