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Nature Care College

Biochemistry 1A

DISTANCE/BLENDED LEARNING

DESCRIPTION	Time to explore the microcosm in detail! With an emphasis on organic chemistry, this unit of study describes the structure and interactions of substances as they relate to biochemical processes within the human body.
DURATION	One term (12 weeks) approximately 24 learning hours.
LEARNING OUTCOMES	By the conclusion of the unit of study 1A, 1B & 1C, students should be able to: 1. Identify structural components of chemical compounds relevant to biochemical reactions 2. Identify the organic compounds involved in biochemical reactions 3. Describe cellular reproduction in the human body 4. Explain the effect of diet on metabolism 5. Describe chemical and biochemical reactions in metabolism 6. Identify the toxic effects of Chemical compounds 7. Outline the methods of biochemical diagnosis 8. Identify the base of chemotherapy
TEACHING METHOD	This subject will be studied by the method known as “Distance/Blended Learning”. This form of study involves your completion of all learning outcomes without formal attendance at lectures or other types of classes. The benefits of this system are considerable as it contributes significant flexibility to your study programme. It also encourages students to take responsibility for their own learning, enhancing those mandatory skills of self-education. There will be considerable support from the College to aid you in your studies. A tutor will be available to answer any academic questions students may have. Details regarding this will be in the information and instruction sheet that will be sent to you upon enrolment.
ASSESSMENT	**An Assessment Pack will be included in your Distance/Blended Learning folder.** **Pass mark : 60%**
COMPETENCIES PARTIAL COMPLETION	Successful completion of this Unit of Study is in partial completion of the following Health Training Package HLT07 Units of Competency HLTAP501A - Confirm physical health status
ENROLMENT	You may enrol into this subject at any time. Unit of study fees must be paid in full when you enrol. All fees are *non-transferable and non-refundable*. You can enrol in person, over the telephone using a credit card, or by mail. Once you have enrolled you will be sent the Distance/Blended Learning Workbook together with a detailed instruction and information sheet.

Nature Care College Pty Ltd ABN 77 105 282 264
46 Nicholson Street, St Leonards NSW 2065
Tel: +61 (0)2 9438 3333 Fax: +61 (0)2 9436 0503
email: info@naturecare.com.au website: www.naturecare.com.au

PRE-REQUISITES	Chemistry 1A, 1B, 1C
CO-REQUISITES	Nil
TEXTBOOKS	**Compulsory:** Bettelheim & March. Introduction to General, Organic & Biochemistry. 9th ed. Thomson; 2004 **Recommended Reading / References:** Devlin T.M. The Textbook of Biochemistry with Clinical Correlations. 6th ed. John Wiley & Sons; 2001 Gilham B, Papachristodoulou DK, Thomas JH. Wills Biochemical Basis of Medicine.3rd ed. Arnold; 2004 Koolman J, Rohm K.H. Colour Atlas of Biochemistry. Stuttgart :Theime;1996 Lehninger A. Principles of Biochemistry. USA: Worth; 2000 Mathews C, Van Holde K. Biochemistry. USA: Benjamin/ Cummings; 1990 Rose S. The Chemistry of Life. USA: Penguin;1991 Stryer L. Biochemistry. 2nd ed. USA:Freeman;1995 Tortora, G.J. & Grabowski, S.R. Principles of Anatomy and Physiology, 10th ed. John Wiley & Sons Inc; 2003

SUGGESTED HOME STUDY PLAN:

WEEK 1	Review of Chemistry
WEEK 2	Cells, fine structure, investigations
WEEK 3	Carbohydrates
WEEK 4	Lipids in detail, classification and function
WEEK 5 & 6	Amino acids, proteins, classification, structure and function
WEEK 7	Enzymes – mechanisms, functions, co-enzymes, classes.
WEEK 8	Nucleic acid structures
WEEK 9	DNA, RNA – structure, replication, genetic code.
WEEK 10 & 11	Micro – organisms
WEEK 12	**Assessment due**