



Nature Care College

Chemistry 1C DISTANCE/BLENDED LEARNING

DESCRIPTION	This one-year unit of study is essential in helping you understand the human condition at a cellular level. The subject will explore the fundamentals of chemistry and enable you to identify the many substances in common use.
DURATION	One term (12 weeks) approximately 24 learning hours.
LEARNING OUTCOMES	By the conclusion of the units of study 1A, 1B & 1C, students should be able to: <ol style="list-style-type: none"> 1. Explain the types and components of matter and the principles of their interaction 2. Explain the interaction between particles and their consequences, in particular for living organisms 3. Explain the principles of electron and proton transfer reactions and their significance for living organisms 4. Explain the basic principles of organic chemistry and identify the range of compounds 5. Explain the basic principles of the organic chemistry of oxygen, nitrogen, sulfur and phosphorous 6. Apply knowledge of chemistry to biochemistry
TEACHING METHOD	<p>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.</p> <p>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.</p> <p>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.</p>
ASSESSMENT	<p>An Assessment Pack will be included in your Distance/Blended Learning folder.</p> <p>Pass mark: 60%</p>
COMPETENCIES PARTIAL COMPLETION	<p>Successful completion of this Unit of Study is in partial completion of the following Health Training Package HLT07 Units of Competency</p> <p>HLTAP501A - Confirm physical health status</p>
ENROLMENT	<p>You may enrol into this subject at any time. Unit of study fees must be paid in full when you enrol. All fees are <i>non-transferable and non-refundable</i>. You can enrol in person, over the telephone using a credit card, or by mail.</p> <p>Once you have enrolled you will be sent the Distance/Blended Learning Workbook together with a detailed instruction and information sheet.</p>

PRE-REQUISITES	Chemistry 1A, 1B
CO-REQUISITES	Nil
TEXTBOOKS	<p>Compulsory: Bettelheim & March. 2004. <i>Introduction to General, Organic & Biochemistry</i>. 9th Edition. Thomson</p> <p>Recommended Reading / References: Timberlake, K. 2003. <i>Chemistry</i>. 9th Edition. Pearson Education. Smith R, 2004. <i>Conquering Chemistry</i>. 4th Edition. McGraw Hill. <i>New Scientist</i> Journal</p>

SUGGESTED HOME STUDY PLAN:

TOPIC 1	<p>Oxygen containing Compounds Alcohols, phenols and ethers Aldehydes and Ketones Carboxylic acids and esters</p>
TOPIC 2	<p>Lipids Fatty acids and triglycerides Phospholipids and glycolipids Steroids</p>
TOPIC 3	<p>Optical Isomerism Enantiomers and chiral carbon atoms Chiral carbon atoms and enantiomers Fischer projections and notation Properties of enantiomers</p>
TOPIC 4	<p>Carbohydrates Monosaccharides Disaccharides Polysaccharides</p>
TOPIC 5	<p>Nitrogen Compounds Amines Amides Proteins Nucleic acids</p>
TOPIC 6	<p>Sulphur and Phosphorous Compounds: Sulphur compounds Phosphate compounds</p>
TOPIC 7	<p>Heterocyclic Compounds</p>