

Information and Communications Technology 12

(eak ... 020110)

Content	Teaching Strategies/Learning Activities	Assessment	B.C. Curriculum Organizer Linkage
<p>A. Foundations of Computers, Computer Networks and Programming</p> <ul style="list-style-type: none"> - Introduction to Computers - LANs and the Internet - How Computers are Programmed <p>B. Starting with Python</p> <ul style="list-style-type: none"> - Python Program Structure - Variables - Mathematical Operations - Functions <p>C. Program Flow</p> <ul style="list-style-type: none"> - Conditionals and Iteration - Strings and Screen I/O - Lists, Tuples and Dictionaries - Files 	<p>1. Text used: <i>How to Think Like a Computer Scientist: Learning with Python</i>, A. Downey et. al.</p> <p style="text-align: center;">(Chapters 1 - 14)</p> <p><i>Note:</i> Both the text and programming language are available free on the Internet. Links to both are available on the ICT12 website (see page 3). Chapters from the text will be copied and made available to the students to ensure each has copies.</p> <p>2. Lessons, handouts and programs:</p> <ul style="list-style-type: none"> Historical Introduction to Computers How Computers are Programmed Mini-Project - History Case Studies - The Guessing Game - Weight - Airline Flight Analysis - Compound Interest - Read/Write 	<p>1. Assigned work will be reviewed at the beginning of the next class. After this review, homework will be collected/checked (randomly) at least once a week.</p> <p>2. Handouts and problems collected and checked upon completion. Programs checked upon completion.</p> <p>3. Chapter end tests:</p> <ul style="list-style-type: none"> Introduction to Computers (Feb. 24) Chpts 1-4 (Mar. 26) Chpts 5-7 (Apr. 12) Chpts 8-12 (May 5) Chpts 13-14 (May 12) <p>4. Class participation.</p>	<p>NICT - integrated within modules composing ICT 12</p> <p>ICTS (M1&2) M5.1-10</p> <p>ICTP (M1,2&3) M5.1-6 & 6.1-6</p>

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(continued)

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<p>D. Graphics</p> <ul style="list-style-type: none"> - Basic Computer Graphics - Graphics/Multimedia (2 and 3-Dimensions) 	<p>A variety of materials from the <i>Internet</i> and the manuals for <i>Paint Shop Pro</i> and <i>Rhinoceros</i> will be used.</p> <p>PSP Handouts</p> <ul style="list-style-type: none"> 1: PSP Basic Review 2: Creating Animations <p>Rhino Handouts</p> <ul style="list-style-type: none"> 1-2: Rhino Basics 3: Creating a Flashlight 4: Creating a Rubber Ducky 	<ol style="list-style-type: none"> 1. Assigned work will be reviewed at the beginning of the next class. After this review, student work will be checked at least once a week. <p><i>Note:</i> This portion of the course is very ‘product’ oriented. The majority of the student’s mark will be based on their completed projects and not traditional tests.</p> <ol style="list-style-type: none"> 2. All mini-projects will be checked upon completion. 3. The major project will be collected and checked upon completion. This project will be chosen by the student as noted in the timeline and may involve either programming or graphics or both. 4. Class participation. 	<p>ICTM(M2&3) M6.1-6 & 7.1-8</p>

Assessment and Evaluation

Students in this course will be graded according to:

Class work - assignments, individual programs, projects	(40%)
Tests - small quizzes, unit end tests	(20%)
Exams - mid-term and final exams	(40%)

Tentative percentages are given to the right of each category.

ICT 12 Course Software and Timeline

Links to important software (freely available on the Internet) and the course timeline can be found at the following internet address:

<http://members.shaw.ca/ekwasniewski>

As this is a very demanding course, you must be aware that:

1. Coming to class prepared to work is an essential element for your success in this course. Each student is expected to work on course work outside of regular class time. *You must find the extra time you need to work on your programming in the computer laboratory outside of regular class time **and** at home as homework.*
2. Completing assignments is to be taken seriously. Homework will be a significant part of your mark.
3. Please be sure to make backups of all your work . . . assume workstation hard drives and server work space will be purged at any time.

Explanation of Work Ethic Indicators

G

You arrive to class on time, prepared with all your supplies, notebooks, texts and other related materials. All your work (home and in class) is completed to the best of your ability. You are making every effort to meet deadlines and due dates and are doing your best to keep your notebooks up-to-date and in good order. During class you are attentive and focussed on the various tasks, assignments and projects. You work well in individual and group situations and you appear to be doing your best. You willingly participate and share ideas. You treat yourself, your peers and adults with the respect inherent in the Gospel values. You display good work habits and effort in all that you do.

S

Most of the time you arrive to class on time and are prepared with all your supplies, notebooks, texts and other related materials. Most of your work (home and in class) is completed to the best of your ability. Although you occasionally miss handing in an assignment, you are making an honest effort to meet deadlines and due dates. You usually do your best to keep your notebooks up-to-date and in good order. During class you are attentive and focussed on the various tasks, assignments and projects with only occasional lapses. You work fairly well in individual and group situations and, on most occasions, appear to be doing your best. You are willing to participate and share ideas. You treat yourself, your peers and adults with the respect inherent in the Gospel values. You display satisfactory work habits and effort most of the time.

N

You frequently arrive unprepared for class. You are sometimes missing supplies, notebooks, texts and other related materials. On occasion, you are reluctant to put forth the effort to keep your materials and assignments organized. Homework and assignments are often incomplete or poorly done. During class, you are sometimes unfocussed and easily distracted. You participate infrequently in class discussions. You sometimes treat yourself, your peers and adults with a lack of the respect inherent in the Gospel values. Your work habits need to improve.