



COURSE OUTLINE: Info Tech 11/12, Year 2015-2016

Taught By: A. WONG

Course Description:

Information Technology 11/12 develops practical computer skills and teaches software use while fostering inquiry skills. This process helps students become more knowledgeable and develop as thinkers. Students will also reflect upon their progress as learners. During the year, students focus on one or two communication options essential to our modern world. Students will work on producing professional quality results and maintain an electronic portfolio that can be submitted with their resume to employers or post-secondary institutes. Example projects: students can collaborate with students from the film and television program by providing CGI or computer animation to their projects; students can collaborate with engineering students on a robotics project (programming portion); students can create professional looking games for Java or iOS; students can create their own short computer animation; or students can work on their own audio production. Students completing an iOS project may submit it to iTunes for publishing.

Objectives:

The Aims and Objectives of the study of Information and Communication Technology are to:

- develop an appreciation of the significance of technology for life, society and the environment
- use knowledge, skills and techniques to create products/solutions of appropriate quality
- develop problem-solving, critical- and creative-thinking skills through the application of the design cycle
- develop respect for others' viewpoints and appreciate alternative solutions to problems
- use and apply information and communication technology (ICT) effectively as a means to access, process and communicate information, and to solve problems.

At the end of the course the student should be able to (depending on areas chosen):

- identify information technology tools used to access information
- protect information using information technology tools
- enter information accurately using appropriate keyboarding techniques and software that allows for the storage, retrieval, and editing of material
- demonstrate the ability to formulate questions and to use a variety of sources and tools to access, capture, and store information
- use appropriate information technology terminology
- evaluate a variety of input and output devices
- demonstrate the ability to install software
- describe and practice appropriate safety procedures when working with information technology tools
- apply a variety of troubleshooting techniques related to information technology

- demonstrate an awareness of the impact of information technology tools on society
- identify careers and occupations that use information technology
- apply management skills to complete a project
- use a variety of information technology tools to help them solve problems
- apply predetermined search criteria to locate, retrieve, and evaluate information
- evaluate information retrieved electronically for authenticity, bias, and timeliness
- synthesize information from a variety of electronic sources for their presentations
- identify and consider ethical and legal issues when presenting information
- use a variety of software to present messages
- demonstrate the ability to arrange information in different forms to create new meaning
- analyze the effects of information technology on presentations
- describe the effect of multimedia presentations on intended audiences

Course Content for Term:

Students will concentrate on one or two areas based on desire and availability of hardware/software. The four areas are: Applied Digital Communications, Digital Media Development, Computer Information Systems, and Computer Programming.

- Photoshop (DMD)
- Audio and/or music production (DMD)
- Video production (DMD)
- Computer modeling/animation with Blender (DMD)
- Creating a secure network server (CIS)
- Creating a website on free hosting sites (CIS)
- Computer building, maintenance, diagnosis, and repair (CIS)
- Computer programming with Java and/or iOS (CP)
- Web programming with HTML and/or PHP/MySQL (CP)

General Assessment:

- Assessment will be based on projects (80%), presentations (10%) and quizzes (10%).
- There will NOT be a final exam.
- Students may earn bonus marks through extra work.

Classroom resources:

- iMac's
- We hope to use mostly free software so that student may install it at home such as Blender, Linux, Eclipse, Xcode, Visual Studio Express, BIZ.NF, Wix.com, iMovie, Garage Band, QuickTime

Resource Materials to be supplied by students:

- It is helpful if a student has an available home computer to complete assignments
- Cost may be required depending on the curriculum options the student chooses.