Communication Technology 9
Course Outline – 2018/19

Introduction

Current trends indicate that the majority of new jobs today and in the future will require some form of post-secondary education and that the completion of senior high school will no longer be sufficient. Alberta faces a range of emerging challenges, including the changing nature of work and career paths; the requirement of greater skills and knowledge in many occupations; the introduction of new technologies; changing patterns of education and training; the globalization of the marketplace; labour shortages; and the need for highly skilled, educated and innovative people.

Technological education contributes to learning in other areas of the curriculum by providing practical contexts and applications for the knowledge and skills acquired. For example, the technological education program relates to science in that students use scientific principles to design buildings and machines, and to history and social sciences and the humanities in that students assess the impact of the introduction of technologies on historical events.

Technological education relies on English and literacy skills for the description of specifications, proposals, and evaluations, and has ties to the arts through its use of various media to model and present ideas and products. In technological education, students also consider the options provided by various technologies as they affect health and physical well-being. The connection to business studies is evident in the application of business principles to the study of the production and marketing of products in technological education.

The technologies grouped under technological education are connected in a number of ways. Each is based on expectations that are organized in identical strands to ensure consistency and rigour in instruction and to enable teachers to integrate the components of various courses. For example, transportation is a vital consideration in courses dealing with construction, manufacturing and fabrication, travel and tourism, and personal services. Similarly, knowledge and skills from computer and information science and computer engineering technology can be readily integrated into other courses in technological education.

Course Expectations

The CTF curriculum supports learning experiences that allow students to explore occupational areas common to CTS and CTF through challenges or tasks. CTF is not a prerequisite for CTS high school courses. CTF challenges or tasks that integrate at least two occupational areas provide students with an opportunity to experience the interconnectedness of skills, knowledge and technologies associated with various occupational areas.

Students engaging in CTF challenges or tasks, alternate between the processes of **planning**, **creating**, **appraising** and **communicating** in non-linear manner.

CTF is exploring interests, passions and skills while making personal connections to career possibilities.

- I explore my interests and passions while making personal connections to career possibilities.
- I use occupational area skills, knowledge and technologies.
- I follow safety requirements associated with occupational areas and related technologies.
- I demonstrate environmental stewardship associated with occupational areas.

CTF is planning, creating, appraising and communicating in response to challenges.

- I plan in response to challenges.
- I make decisions in response to challenges.
- I adapt to change and unexpected events.
- I solve problems in response to challenges.
- I create products, performances or services in response to challenges.
- I appraise the skills, knowledge and technologies used to respond to challenges.
- I communicate my learning.

CTF is working independently and with others while exploring careers and technology.

- I develop skills that support effective relationships.
- I determine how my actions affect learning.
- I collaborate to achieve common goals.

Course Description

CTS courses are competency-based instructional units defined by learning outcomes that identify what a student is expected to know and be able to do. Courses include outcomes with practical applications, and each course represents approximately 25 hours of access to instruction. CTS courses are weighted at 1 credit each and are divided into three levels of achievement: introductory, intermediate and advanced. Some courses require one or more prerequisites, which are essential for maintaining safety standards, appropriate instructional sequence and articulation with post-secondary programs.

This course requires students to complete a range of communications technology projects. These may include creating printed stationery, short videos, computer-generated animations, and graphical information displays. Students will be exposed to a number of computer software in order to learn how information can be created and transferred using electronic, live, and graphic communications methods. The knowledge and skills they will develop will provide a basis for careers in areas such as publishing, advertising, print production, animation, photography, programming, music, and journalism.

With the move to personal computing devices, and with the Board's recommendation of Chromebooks as the basic computer, this course is designed such that the programs used in this course will be available to all students regardless of their equipment.

Introductory Module

Communication via "<u>Blogging</u>" (Timeline: 1 class) 5%

Blogging is a method of presenting information in timely one-way manner. You basically inform the world with news and media, allowing anyone to "go and get it" if they so desired. There is little or no communication with your audience, who has to wait for any update.

This is an introduction to the world of internet communication; there are no projects and marks are for formative evaluation.

In fact, students and parents can and are kept informed through my blog at etrekking.blogspot.com

Core Modules

1. Prezi Presentations (Timeline: 5 classes)   10%

Most students have the standard proficiency in using Microsoft Powerpoint. Prezi offers a similar style to presentations with the added advantage of being in the "cloud". Thus presentations can be easily created and retrieved, making the information more readily accessible.

Students will go to http://prezi.com and create an account. Their school id will function. It is expected that students will create a minimum of three presentations on topics of their choice as well as two on topics provided by the teacher.

Projects: A presentation on each of two topics of the student's choice as well as a major project on topic chosen by teacher.

2. Introduction to Computer Science: Hour of Code (Timeline: 5 classes) 10%

Programming skills is quickly becoming a necessity in the age of Communication. In this module, students are exposed to variety of programming languages and skills, from Grade 6 level to Grade 9. Most of the tasks involved in this website usually can be completed in an hour (hence the name: *Hour of Code*).

The projects are presented in either a simple online learning format or as a computer game. The tasks are completed with the advantage of immediate feedback and explanation for "errors or mistakes" by the student.

3. **Introduction to Computer Science**

Module 1: Microsoft Makecode (Timeline: 2 classes) 5%

This module will introduce the concepts of computer algorithms, computer commands, and programming sequences. The codes will be tested and students will gain understanding through application. Students will have acquired a basic knowledge of Python and Javascript.

> Main concepts:
> 1. Understanding the interface
> 2. Program elements
> 3. Program algorithms

Module 2: AppInventor (Timeline: 10 classes) 15%

Cell phones and games on cell phones are quite ubiquitous in the generation of students. As well, over 705 of cellphones use the Android OS, thus it makes sense for students to learn game programming by creating games for this OS. AppInventor was developed by a group at MIT and has been license by Google for "free use". The website is http://appinventor.mit.edu/explore

As with Prezi, the students will be using their school id for creating an account. There are tutorials on the site, with three levels of programming proficiencies. Students will have to complete all three levels as well as creating their own game at each level.

> Projects: 3 applications

Module 3: Scratch (Timeline: 10 classes) 15%

This module continues from the previous one. Here the students deepen their understanding of Computer Science by using the Scratch program to create a number of games, from the Beginner's level to the Intermediate by creating simple games Students will be introduced and will learn the concepts of loops, computer logic, and computer graphics.

Module 4: Web Programming with HTML (Timeline: 5 classes) 10%

Information is present on the Internet as "webpages". This module looks at the programming language that runs websites. Students will learn the basics of the HTML language through a simple webpage project. All work will be online. As well, they will create a simple webpage using Adobe Spark.

> Project: A Webpage using spark.adobe.com

Creating Online Stories with TWINE (Timeline: 10 classes)   15%

TWINE is a simple program for students to communicate via the method of storytelling. The program can be used as an online version (at http://twinery.org) or on one's own computer by downloading and installing it from the program's website.

Despite its simplicity, Twine can be used and will be used for making a complete website: a home page with ancillary pages.

> Project: A personal webpage.

Introduction to Design with Canva (Timeline: 2 classes)   5%

Canva is a basic design program which is available as an online application. Through a series of lessons, students will learn how to "create" simple posters, cards, and other print-based messages.

The interface is simple, and students can use free media or their own photos and drawing. This program provides a great introduction for students interested in careers involving graphic arts and digital design.

> Project: A number of posters

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Creating Music with Looplabs (Timeline: 2 classes)   10%

Music is a unique form of communication. From drum beats to rap, ballads to opera, music has been a part of the human evolution. Looplabs offers students a great programming platform to create "whatever they can imagine".   Best of all, it is an online application.

> Project: A music score.

Course Expectation:

 Minimum of 50 classes, (20 weeks or 5 months, based on 5 classes every two weeks).

Students should be able to easily complete all projects, and as most resources are online, can also work on the projects off school hours.

The final course mark in **ComTech9** will be based on the portfolio of the student's semester work. All modules will contribute to the final mark and will have equal weighting. There is no final exam.

The following rubric will be used for determining the mark for each module.

Criteria/Score	9-10	7-8	5-6	0
Completion	The project is completed on time or even ahead of schedule'	Project required an extra class.	Project delayed by a week.	
Success	Projects meets all stated expectations: games "work", presentations at or above standards, etc.	Projects need some changes or adjustments.	Majors changes needed or project is unrelated to assignment.	Project does not "work"
Ergonomics	Choice of colour and layout leading to clear and precise understanding of the assignment.	Meets basic expectations.	Project needs corrections; does not meet basic standards.	High degree of difficulty in attempting to use final project

NOTE: If no project is submitted, it is obvious that the "Success" and "Artistic" criteria cannot be assessed, hence student will be awarded a "Non-compliant" mark of "zero". See next section for additional information.

Attendance, Missing or Incomplete Work

Regular attendance and punctuality is mandatory. It is the student's responsibility to obtain and learn any materials missed when absent. If a student is to absent him-/herself from class for any reason, such absence will be documented. If it is deemed that such absences become regular occurrences on the part of a particular student, there can be consequences especially if it leads to a deterioration of student work and progress.

The primary purpose of student assessment and evaluation is to **support student learning** and to have all students improve their performance. Student work is considered missing or incomplete if it is not handed in on the due date either because the student does not have the work or because the student is absent (unexcused), or if it is partially completed on the due date but not ready for submission.

The following process will be followed in the case of missing or incomplete student work unless otherwise stated in the Program of Studies:

1. The student must meet with the teacher at an agreed upon time. The purpose of the meeting is to:

a.   Check student progress and determine why the assignment is missing or incomplete
b.   Provide help or assistance to the student
c.   Set a revised due date to hand in the missing or incomplete work within a reasonable amount of time, as determined by the teacher, that reflects the nature of the assignment
d.   Make a documented plan for completing the assignment. The plan may include such things as:

        i)   Staying in at lunch, on a spare, or after school

        ii)   A timeline for completing the work

Missing or incomplete work may be recorded in PowerSchool as Not Handed In ("NHI") with a value of zero until the terms of the arrangement between teacher and student are met. If the terms of the agreement are not met, a 'reluctant zero' will be granted for the assignment.

Upon receiving the completed work or at the expiration of the prearranged agreement, a mark indicating achievement earned (without penalty) must be recorded OR, in the case of the work still being missing or incomplete, the "NHI" *may* be changed to a zero (0).

Student Success Centre (SSC)

New, beginning this school year, is the establishment of the Student Success Centre. If the situation (where the student has repeatedly refused or will not complete any course work) is not resolved, students with missing and incomplete work will be sent to the Student Success Centre for additional opportunities to complete missing assessments. The teacher will communicate with the SSC, who will expect the student to attend the SSC to complete the work. The session at the SSC will run for 47 minutes, and the student must stay for the duration. If the student misses the scheduled time in the SSC, they may be referred to administration to discuss the consequences of this choice moving forward.

The Student Success Centre will be held in the same space as E-Campus and will be available for students to complete school work/assessments/assignments.

Academic Dishonesty

Cheating is a serious offense and will NOT be tolerated. Cheating also includes possession of materials not allowed in an examination room or area (e.g. cell phones).

Plagiarism is a serious violation of academic integrity. Offering the work of another as one's own without proper acknowledgement is plagiarism. Therefore, any student who fails to give appropriate credit for ideas or material he or she takes from another, whether it is a fellow student or a published resource writer, is guilty of plagiarism.

Any circumstance of academic dishonesty will be dealt with by the classroom teacher in consultation with subject area Coordinators. In instances of repeated offenses, a referral to administration will be made.

Cell Phones and Other Hand-held Electronic Devices

A cell phone is a distraction to learning and it is a school policy that use of cell phones in the classroom as well outside of the classroom during a schedule class is prohibited. Cell phones will be left in front of class upon start of instruction and they will be returned upon the sounding of the "end-of-class" bell.

Though it is possible to monitor the non-use of electronic devices in class difficult it may be with over thirty students in the class, such is not the case when the student is out of the classroom. This is why devices must be surrendered at beginning of class.