Canterbury High School

Ottawa-Carleton District School Board
Communications Technology
Semester II – 2010 / 11 – Course Outline

Course Title: Communications Technology grade 12	Grade Level: 12
Course Code: TGJ4M	Credit Value: 1.0
Prerequisite: none	

Teachers:Steve Willcock

Course Overview: 110 hours

This course examines communications systems and design and production processes in the area of electronic, live, recorded and graphic communications. Students will develop knowledge and skills relating to the assembly, operation, maintenance and repair of the basic and more complex components of a range of communications systems. Students will also study industry standards and regulations and health and safety issues, and will explore careers, the importance of lifelong learning and the impact of Communications Technology on society and the environment.

Theory and Foundation Overall Expectations

By the end of the course students will:

Apply design process to develop solutions, products, processes, or services in response to complex challenges or problems in electronic, live, recorded or graphic communications.

Describe the process used to plan an independent project in communications technology.

Explain how to maximize the performance: electronic, live, recorded, and graphic communications.

Describe the different industry standards that apply to electronic, live, recorded or graphic communications.

Describe the different forms of current communication systems and how they interface with one another.

Skill and Process Overall Expectations

By the end of the course students will:

Design and plan solutions to problems both individually and as a member of a team.

Select and safely use the appropriate technologies and resources to solve problems in electronic, live, recorded or graphic communications.

Organize and maintain complex communications systems.

Use industry recognized standards and formats when developing and recording solutions to problems.

Use mathematical and language skills effectively and apply scientific skills in the design and set up of electronic, live, recorded and graphic communications systems.

Impact and Consequences Overall Expectations

By the end of the course students will:

Informed decisions related to social and environmental and economic consequences and impacts of communications technology.

Implement safe work practises when performing communications technology tasks.

Identify the role of health and safety legislation in schools and in the communications sector.

Describe post secondary programs associated with the communications technology sector and evaluate the appropriateness of the programs to their career plans.

Skill and Process Overall Expectations

By the end of the course students will:

Effectively plan organize, direct and control a variety of communications activities, use current technology and production skills to develop a process or a product in response to a communications challenge or problem.

Set up, operate and maintain a communications system and analyze its efficiency.

Use effective techniques to carry out and document the steps in pre-production, production, and post production.

Use mathematical skills and language skills effectively and apply scientific skills in the design of electronic, live , recorded and graphic communications systems.

Impact and Consequences Overall Expectations

By the end of the course students will:

Describe the social and environmental and economic impact of communications technology

Demonstrate and understanding of the health and safety rules and regulations applicable to a communications technology program.

Identify career opportunities in the communications technology sector and the skills education and training required.

Units of Study:

Units: Titles and Times

Unit 1	The Social and Economic Context of Communications Technology	18 hours
Unit 2	Audio-Visual Production: Music Video	24 hours
Unit 3	Illustrated Print Publication	25 hours
Unit 4	Multimedia Production	43 hours

Unit Overviews

Unit 1: The Social and Economic Context of Communications Technology
Time: 18 hours

Unit Description

This unit explores social and economic implications of the projects and activities completed in the course. Beginning with an examination of safe work practices and relevant workplace legislation, students design and produce a document describing safe and appropriate use of the communications technology equipment and facilities. This document, along with demonstrations of the practices described, serves as the students' passport to the use of equipment and facilities in later units and activities. Students move on to case studies of local and global applications of communications technologies in order to discover and analyse the range of impacts (i.e., health, environmental, social and economic) inherent in communication practices. This is followed by a study of the industry standards and conventions related to the communication products created in subsequent units. Students complete the unit by investigating the training and career opportunities aligned with skills, interests and lifestyle preferences.

Unit 2: Audio-Visual Production: Music Video

Time: 24 hours

Unit Description

In this unit students utilize the skills and concepts of audio/visual production to produce a music video in analogue or digital formats. Including and expanding upon design concepts and production skills developed in the Grade 11 Communications Technology Curriculum, students produce a promotional video for a band (either real or imaginary), enabling them to also develop and refine design and problem-solving skills associated with media production. Students employ a variety of skills, including designing and implementing a lighting plot and setting up audio recording/mixing equipment. In addition, students create a shooting script, plan camera locations and movements, videotape and edit a live performance. Throughout the unit cooperative work strategies and video content reflect the moral and ethical philosophy of the gospel values. This unit prepares students for post-secondary education leading to careers in audio/visual production.

Unit 3: Illustrated Print Publication

Time: 25 hours

Unit Description

Students apply their understanding of desktop publishing to produce an original illustrated book for print production. This unit expands upon the graphic communications skills developed in the Grade 11 Communications Technology course. To prepare information for publishing, students select a theme that reflects a personal interest. Students use the format of a coffee-table book and include text and original photographic images. They select a book style to best deliver their theme, generate a variety of design ideas to lay out their theme, create photographic images (35 mm and/or digital), compose text, generate a folded mock-up of the imposition of their book, and produce a prototype for print production. Using their mock-up as a guide, students determine page layout, apply typographical principles, and generate photographic images. Students also create a full-colour cover that enhances the presentation quality of the book. Students select and use a variety of computer hardware and software to create the publication. This unit prepares students for post secondary study in graphic design and communications.

Unit 4: Multimedia Production

Time: 43 hours

Unit Description

In this unit, students explore methods of creating and delivering multimedia content for Internet and CD-Rom delivery. Students study factors such as bandwidth and data rate in order to prepare multimedia and interactive content for different methods of distribution. Students first produce a detailed analysis of a variety of transmission channels and their uses in local and global file sharing. Then, in an independent project exploring the limitations and potential of the World Wide Web for delivery of multimedia, students produce a website with media content available for varying connection speeds (e.g., modem and broadband). At this point students have the option of linking their website project to previous activities (e.g., a website for their music video or a multimedia version of their illustrated book) or of choosing a new topic and producing completely new content. The culminating activity of the unit serves as part of the final evaluation for the course. This activity requires students to author an interactive interface for a digital portfolio documenting their projects and skills. In their portfolio students describe the skills they have acquired, analyse their skills in the context of careers in communications technology, and demonstrate technical proficiency by producing content optimized for CD-ROM delivery.

Teaching/Learning Strategies

Students use and explore communications technologies by means of the following learning strategies:

Brainstorming – group generation of initial ideas expressed without criticism or analysis;

Collaborative/Cooperative Learning – small group learning and decision making providing high levels of student engagement and interdependence;

Computer-assisted Learning – learning of new material through online methods of instruction;

Conferencing/Discussion – student-to-student discussion and teacher-to-student conferencing to encourage confidence and motivation to success in all learners;

Design Process – the stages of development of a product or process, including developing a focus, developing a framework, choosing the best solution, implementing a plan and reflecting on the process and the product;

Independent Study – exploration and research of a topic interesting to students.

Problem Solving – identifying and working through a problem;

Report/Presentation – oral, visual, written and electronic presentation of researched topic to class;

Teacher-directed Class Discussion – students actively participate by taking turns discussing current issues.

Assessment & Evaluation of Student Achievement

The assessment techniques described below focus on both the process and product of student learning.

Assessment/Evaluation Techniques

Performance Assessment
- Skills demonstrations
- Presentation
- Finished product
- Portfolio

Personal Communication
- Conferencing
- Student-teacher
- Teacher-group
- Daily activity log or journal
- Critique peer conferencing

Assessment Tools
- Marking schemes
- Rubrics
- Anecdotal comments with suggestions for improvement
- Rubrics

Purposes of Assessment
- Diagnostic – occurs at the beginning of a term, unit of study, or whenever information about prior learning is useful.
- Formative – during the learning process, provides ongoing feedback to the teacher about the quality of learning and the effectiveness of instruction.
- Summative – is usually carried out at the end of a learning process (may include feedback and/or judgment

Summary of Evaluation
Students are formally evaluated on their demonstration of curriculum expectations using the categories of skills and knowledge set out in the Achievement Chart (see page 205 Technological Education 2000). Seventy per cent of the grade will be based on assessments and evaluations conducted throughout the course. Thirty per cent of the grade will be based on a final summative project.

Term 1 unit projects: 35%
Term 2 unit projects: 35%
Summative Project: 30%

Total Mark: 100%