Westside Secondary School

300 Alder Street   Orangeville, Ontario
L9W 5A2   (519) 938-9355
www.ugdsb.on.ca/westside

Course Outline

Course: **TEJ2O1**	**Teacher:** **Ms. Jackie Griffith**	**Program Leader:**	**Mr. Jim Wardle**
Computer Technology	**Voice Mail:** **539**	**Email:**	**jgriffith@ugcloud.ca**

Course Description:

This course introduces students to computer systems, networking, and interfacing, as well as electronics and robotics. Students will assemble, repair, and configure computers with various types of operating systems and application software. Students will build small electronic circuits and write computer programs to control simple peripheral devices or robots. Students will also develop an awareness of related environmental and societal issues and will learn about secondary and post-secondary pathways and career opportunities in computer technology.

Big Ideas (overall learning outcomes for the course):
- gain an understanding of the fundamental concepts in technology
- achieve a higher level of technological competence
- develop a creative and flexible approach to problem solving
- develop the skills, including critical thinking skills, and the knowledge of strategies required to do research, conduct inquiries, and communicate findings accurately, ethically, and effectively
- develop lifelong learning habits
- make connections that will help take advantage of potential postsecondary educational and work opportunities

Overall Curriculum Expectations: (by the end of this course, students will):

Computer Technology Fundamentals - identify and describe the functions of electronic and computer components; demonstrate a basic understanding of computer networks and their components; demonstrate a basic understanding of binary numbers and digital logic.

Computer Technology Skills - install and configure the hardware and operating system of a workstation; construct and test simple interfaces and other electronic circuits; assemble and configure a simple computer network; install and use a variety of software; apply fundamental programming concepts to develop a variety of simple programs, including a program to control an external device

Technology, The Environment, and Society - identify harmful effects of the widespread use of computers and associated technologies on the environment; identify effects of the widespread use of computers and associated technologies on society.

Professional Practice and Career Opportunities - follow appropriate health and safety procedures when assembling, using, and maintaining computer systems; demonstrate an understanding of ethical and security issues related to the use of computers;   identify various careers related to computer technology, and describe the education and/or training required for them.

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Assessment and Evaluation:
Formative assessments are used to improve student learning by providing varied opportunities to demonstrate an understanding of course expectations in preparation for summative evaluations. Summative evaluations test groups of key expectations. Failure to complete a summative evaluation may result in the expectations of the course not being met and the credit not being granted.

Late Policy:
Students are expected to complete all assigned work and submit it by the teacher's established due date. Every attempt will be made to encourage students to complete all assigned work on time so their grade represents their actual achievement. For late and missed summative assessments, please see the Westside's Student Contract for Missing Evidence of Learning.

More details about Westside's Assessment and Evaluation Policy is available at:
http://www.ugdsb.ca/westside/wp-content/uploads/sites/74/2016/12/Westside-Assessment.pdf

Learning Skills:
Your learning skills will be assessed in the following manner:

1	Responsibility
2	Organization
3	Independent Work
4	Collaboration
5	Initiative
6	Self-Regulation

The learning skills will be evaluated using a 4-point scale:

E – Excellent
G – Good
S – Satisfactory
N – Needs Improvement

70% Summative Assessment:
Formative assessments are used to improve student learning by providing varied opportunities to demonstrate an understanding of course expectations in preparation for summative evaluations. Summative evaluations test groups of key expectations. Failure to complete a summative evaluation may result in the expectations of the course not being met and the credit not being granted.

Category	Concentration
Knowledge and Understanding	25%
Thinking and Inquiry	25%
Communication	25%

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Application	25%

Unit of Study	Term Work (70%)
	Summative Evaluations
Networking	Simple networking schematics and interfacing
Computer Hardware	Assemble and Upgrade a Personal Computer
Operating Systems	Install and Configure a single-user Operating System
Programming	Basic Programming for Arduino and use of Khan Academy
Reverse Engineering	Unethical Computer Hacking and Safe Computer Use
Societal	Research Assignment regarding the Impact of Technology
Career Explorations	Explore appropriate Careers in Information Technology
	Final Summative (30%)
All units 10%	Culminating Activity
All units 20%	Final Exam (on Exam Day)