

## Grade 11 - Computer Engineering Technology TEJ3M1

<p><b>Course Description:</b></p> <p>Computer engineering technology examines computer systems and control of external devices. In this course, students assemble computers and small networks by installing and configuring appropriate hardware and software.</p> <p>Students complete IT Essentials: Hardware and Software as a preparation for CompTIA A+ Certification.</p> <p>Students will develop knowledge and skills in electronics, robotics, programming, and networks, and will build systems that use computer programs and interfaces to control and/or respond to external devices. Students will also develop an awareness of related environmental and societal issues, and will learn about college and university programs leading to careers in computer technology.</p>	<p><b>Level:</b> Mixed (University/College)</p> <p><b>Credit Value:</b> 1.0</p> <p><b>Pre-requisite:</b> None</p> <p><b>Department:</b> Technology</p> <p><b>Course Fees:</b> None</p>
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<p><b>Textbooks &amp; Resources:</b></p> <ul style="list-style-type: none"> <li>• Growing Success: Assessment, Evaluation and Reporting in Ontario Schools</li> <li>• The Ontario Curriculum, Grades 11 and 12: Technological Education, 2009 (revised)</li> <li>• All CISCO resources can be found at <a href="http://cisco.netacad.net">http://cisco.netacad.net</a>. There is no text-book for this course. Examples, exercises, assignments and other electronic resources will be placed online if they are not on the main Cisco website. Students will need a binder for notes and handouts, and a USB memory for saving backup copies of their work.</li> <li>• Robotics with the Boe-Bot by Andy Lindsay. Electronic version of this text can be found at <a href="http://www.parallax.com">http://www.parallax.com</a></li> </ul>
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<p><b>Course Evaluation:</b> Student Evaluation consists of three components:</p>							
<p><b>1) Learning Skills &amp; Work Habits:</b></p> <p>Students are evaluated on 6 Learning Skills &amp; Work Habits. They are:</p> <ul style="list-style-type: none"> <li>• Responsibility</li> <li>• Organization</li> <li>• Independent Work</li> <li>• Collaboration</li> <li>• Initiative</li> <li>• Self-Regulation</li> </ul>	<p>These six attributes are evaluated on a scale of Excellent (E), Good (G), Satisfactory (S) &amp; Needs Improvement (N) and reported on the report card. They <b>are not</b> included in the course mark, unless specified in the curriculum expectations.</p>						
<p><b>2) Term Mark (Assessment of Learning):</b></p> <p>Student performance standards for knowledge and skills are described in the curriculum Achievement Chart. The curriculum is assessed in four categories:</p> <ul style="list-style-type: none"> <li>• Knowledge and Understanding 25%</li> <li>• Thinking and Inquiry 25%</li> <li>• Communication 10%</li> <li>• Application 40%</li> </ul>	<p>Evaluation of these four categories generates the term mark. The term mark accounts for 70% of the final mark.</p> <p><b>It is the student's responsibility to submit evidence of learning.</b></p>						
<p><b>3) Final Evaluation (Assessment of Learning):</b></p> <p>The final evaluation, administered at or towards the end of the course is based on the evidence shown to the right. The final evaluation accounts for 30% of the final mark.</p>	<p>The final evaluation consists of:</p> <table style="margin-left: 20px;"> <tr> <td>Independent Study</td> <td style="text-align: right;">10 %</td> </tr> <tr> <td>Unit</td> <td style="text-align: right;">20 %</td> </tr> <tr> <td>Exam</td> <td></td> </tr> </table>	Independent Study	10 %	Unit	20 %	Exam	
Independent Study	10 %						
Unit	20 %						
Exam							
<p><b>Final Mark = 70% Term Mark + 30% Final Evaluation</b></p>							
<p>For a detailed description on Course Evaluation, see "How Did I Get That Mark!" at <a href="http://www.satec.on.ca">www.satec.on.ca</a></p>							
<p><b>Course Conduct Policies:</b> See Student Agenda.</p>							

**Please retain this page in the front of your notebook for future reference.**



**Scarborough Academy for Technology,  
Environment & Computers @ WA Porter CI**

40 Fairfax Crescent, Scarborough, Ontario, M1L 1Z9  
Phone: (416) 396-3365 Fax: (416) 396-3371

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### Course Outline:

Unit	Description	Approximate Length	Major Unit Evaluation
1	<b>IT Essentials:</b> Chapter 1: Introduction to the Personal Computer Chapter 2: Lab Procedures and Tool Use Chapter 3: Computer Assembly	2-3 weeks	Hands on lab Quizzes Unit Test
2	<b>IT Essentials Continued:</b> Chapter 4: Preventive Maintenance and Troubleshooting Chapter 5: Operating Systems Chapter 6: Networks	2-3 weeks	Hands on lab Quizzes Unit Test
3	<b>Integrated Circuits:</b> Logic Gates and Boolean Algebra Karnaugh Maps Adders and Subtractors Counters Design of Integrated Circuits	5-6 weeks	Hands on lab Quizzes Unit Test
4	<b>Electronics and Robotics:</b> Basic Electronic Components Programming in PBasic Navigation using Motors Sensing Objects using Whiskers Advanced Sensors	5-6 weeks	Hands on lab Quizzes Unit Test ISU

**Note: The order the units are delivered may change due to student needs and resources available during the course.**

### General Information:

Your Teacher can be contacted in person in IT2 or via email.

IT Essentials: Hardware and Software- Industry recognized certificate

This course meets ICT SHSM program requirements.

