

Correlation of the textbook *Computer Engineering: An Activities-Based Approach Second Edition* to the Ontario Computer Engineering Curriculum Policy Document for Grade 10 TEE20

<b>Expectation Code</b>	<b>Expectation</b>	<b>Page Number in textbook</b>
<b>Theory and Foundation</b>		
Overall Expectations		
TFV.01E	– describe how the internal components of the computer enable the peripherals to function;	Pages 17 – 20
TFV.02E	– describe a problem-solving model such as the input, processing, output model;	Page 331
TFV.03E	– explain internal numbering and character representation systems;	Pages 20 – 23, 298 – 311
TFV.04E	– describe and illustrate the functions of logic gates;	Pages 106 – 124
TFV.05E	– describe the fundamental programming constructs.	Pages 322 – 368
Specific Expectations		
Computer Logic		
TF1.01E	– describe the relationship between the binary number system and computer logic;	Pages 301 – 308
TF1.02E	– define a standard way of representing characters in binary code;	Pages 298 – 301
TF1.03E	– describe the function of the fundamental logic gates, including the function of each pin: AND, NAND, OR, NOR, XOR, XNOR, and NOT.	Pages 106 – 124
Hardware, Interfaces, and Networking Systems		
TF2.01E	– use precise terminology in relation to all hardware, interfaces, and networking systems;	Pages 23 –28, 369, 385 – 386, 52 – 86
TF2.02E	– identify the basic internal and external components of a computer;	Pages 23 – 28
TF2.03E	– describe the primary function of each basic component;	Pages 23 – 28
TF2.04E	– identify computer internals and peripheral devices and describe their relationship.	Pages 23 – 28
Programming Concepts		
TF3.01E	– define constants, variables, expressions, and assignment statements, including the order in which the operations are performed;	Pages 331 – 336
TF3.02E	– describe how computers store and work with different types of data, including numbers and characters.	Pages 298 – 308
<b>Skills and Processes</b>		
Overall Expectations		
SPV.01E	– connect and use correctly a variety of	Pages 23 – 25

	computer components and peripherals;	
SPV.02E	– demonstrate the use of an operating system, including a network;	Pages 28 – 29, 52 – 53
SPV.03E	– use logic gates to construct simple circuits;	Pages 142 – 186
SPV.04E	– apply fundamental programming constructs to develop programs that interact with external components.	Pages 395 - 422
<b>Specific Expectations</b>		
<b>Computer Logic</b>		
SP1.01E	– convert positive integer numbers to binary form;	Pages 20 – 23, 303 – 304
SP1.02E	– derive the truth tables of the fundamental logic gates;	Pages 110 – 124, 148 – 194
SP1.03E	– write Boolean equations for the fundamental logic gates.	Pages 110 – 124, 148 – 194
<b>Hardware, Interfaces, and Networking Systems</b>		
SP2.01E	– set up a desktop computer system and install software;	Pages 28 – 32
SP2.02E	– build an interface to connect the computer to a simple peripheral device;	Pages 378 – 422
SP2.03E	– trace the operation of a system consisting of a program, an interface, hardware, and directories;	Pages 389 - 393
SP2.04E	– use appropriate file management techniques;	Pages 319 – 323
SP2.05E	– use correctly a variety of network system software;	Pages 29 – 31
SP2.06E	– use Internetworking services correctly to access and navigate global information resources.	Page 32
<b>Programming Concepts</b>		
SP3.01E	– use input and output statements in a program;	Pages 331 – 338
SP3.02E	– use a decision structure and a repetition structure in a program;	Pages 338 - 352
SP3.03E	– design, write, and test a computer program to control a simple peripheral device.	Pages 369, 385 – 422
<b>Impact and Consequences</b>		
<b>Overall Expectations</b>		
ICV.01E	– describe the evolution of computer electronics;	Pages 2 – 7, 17 – 19
ICV.02E	– identify the social impact of computers and associated technologies;	Pages 42 – 43
ICV.03E	– identify related computer careers.	Pages 42 – 43
<b>Specific Expectations</b>		
IC1.01E	– use appropriate strategies to avoid potential health and safety problems associated with computer use, such as posture problems, eye strain, and musculoskeletal injuries;	Pages 94 – 104
IC1.02E	– use safe practices in the handling of computer	Pages 98 – 99,

	hardware and electronic components;	381 – 383
IC1.03E	– identify important scientific advances in computer electronic components;	Pages 2 – 7, 25 – 28
IC1.04E	– describe the development of computer engineering technology and its impact;	Pages 37 – 43, 87 – 88
IC1.05E	– describe careers related to computer engineering;	Pages 37 – 43
IC1.06E	– analyse the influences of computers on the engineering profession;	Pages 37 – 43
IC1.07E	– describe how computer engineering has evolved and how it has affected people’s security, safety, and privacy;	Pages 37 – 43
IC1.08E	– demonstrate understanding of the importance of ethical computer use;	Pages 37 – 43
IC1.09E	– demonstrate compliance with acceptable-use policies;	Pages 322 - 323
IC1.10E	– identify computer skills that are important to employers.	Pages 37 – 43