



“ඉගෙනීමට මුල් තැන”

TERM NOTE – 2017

GRADE 11

Information & Communication Technology

Provincial Department of Education North Central Province

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Index No.	Competency	Competency Level	LESSON	PERIOD	INITIATE DATE (PROPOSED)	END DATE (PROPOSED)	START DATE	END DATE	COMMENTS
1	1.Writes programs to solve problems	Analyzes the problem	Identification of inputs and outputs	1	01/02 -	01/03			
			Identification of possible alternate process steps	1	01/04 -	01/06			
		Uses control structures in developing algorithms to solve problems.	Introduction to algorithms: purpose	2	01/09 -	01/10 -			
			Control structures for developing algorithms		01/10 -	01/13 -			
			Sequence Selection Iteration (Repetition)		01/10 -	01/13 -			
		Uses different tools to present algorithms.	Tools for developing algorithms	2	01/16 -	01/18			
			Flow charts Pseudo codes Conversion of flowcharts into pseudo codes	2	01/18 -	01/20			
		Uses data types in programming	Identifiers, reserved words and key words ds in a computer programming language	1	01/23-	01/23			
			Variables and constants in computer programming	1	01/24 -	01/25			

Index No.	Competency	Competency Level	LESSON	PERIOD	INITIATE DATE (PROPOSED)	END DATE (PROPOSED)	START DATE	END DATE	COMMENTS
			Description of data types						
			Purpose of data types Use of meaningful names for identifiers	1	01/27	01/27			
			Basic Data Types:	1	01/30	02/01			
			Numeric (integer, floating point) Character Logical		02/02	02/03			
2	Monthly Test (January)				01/30.				
3	Writes programs to solve problems Contd.,	Uses operators in programming	Purpose of operators	1	02/06	02/07			
Basic operators			1	02/08	02/09				
Arithmetic operators Comparison operators Logical operators: AND, OR, NOT			2	02/13	02/14				
Operator precedence Expressions			1	02/15	02/16				
Develops programs involving selection control structure		IF-EndIf and If-Else-End If statement	2	02/20	02/21				
	Use of switch/case when single variable has multiple conditions	2	02/22	02/23					

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			Conversion of flow charts into pseudo codes and subsequent coding into a programming language	1	02/27	02/27			
4	Monthly Test (February)				02/28.				
5	Writes programs to solve problems Contd.,	Develops programs involving basic iterations.	Use of iterations (repetitions) in:	2	03/06 -	03/07.			
			Cases where the number of iterations are known	1	03/08 -	03/08.			
			Cases where the number of iterations are unknown	1	03/09	03/10			
			Checking of the condition for iterations	1	03/13	03/14			
			Beginning of the iteration End of the iteration	1	03/15 -	03/15			
			Conversion of flow charts into pseudo codes and subsequent coding using a programming language	1	03/16 -	03/16			
6	Revision				03/17	03/17			

Index No.	Competency	Competency Level	LESSON	PERIOD	INITIATE DATE (PROPOSED)	END DATE (PROPOSED)	START DATE	END DATE	COMMENTS
7	1st term Test				03/20 -	03/31			
8	Writes programs to solve problems Contd.,	Develops programs with nested control structures	The purpose of using nested control structures	1	04/26 -	04/26			
			Use of control structures within another control structure	1	04/27 -	04/27 -			
			Selection within selection Iteration within iteration Iteration within selection Selection within iteration	1					
			Conversion of flowcharts into pseudo codes and subsequent coding into a programming language		04/28 -	04/28			
		Develops programs using one dimensional arrays.	The purpose of the use of arrays	1	05/02 .	- 05/03			
			Definition of the one dimensional array	1	05/02 .	- 05/03			
			Properties of an array						
			o Indexo Contiguous locationso Random access	1	05/03 .	- 05/05			
			Array Operations		05/03 .	- 05/05			

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			Declaration Accessing values Assignment of values	1	05/03 .	- 05/05			
		Structures programs through the use of sub-programs.	The purpose of the use of sub-programs	1	05/08 -	05/09			
			Improvement of code reusability, Readability Maintainability						
			Types of sub-programs:value turning and not returning						
			Structuring of programs using sub-programs	1	05/12 -	05/12			
			Development of basic programs with a single sub-program						
			Explores the evolution of programming languages.	Low-level languages	1	05/15 -	05/16		
		Machine language Assembly language							
		High-level languages Types of high-level languages:		1	05/17-	05/18			

Index No.	Competency	Competency Level	LESSON	PERIOD	INITIATE DATE (PROPOSED)	END DATE (PROPOSED)	START DATE	END DATE	COMMENTS
			Procedural vs Declarative Structured vs Object oriented Programming vs scripting						
			Methods used to convert source code to machine code						
			Interpreters Compilers	1	05/18-	05/19			
			Testing and debugging						
9	2. Explores the Systems Development Life Cycle of information system development.	Describes the concept of information system.	Definition of a system Components of a system	1	05/22 -	05/23			
			Input Process Output	1					
			Manual systems Computer based systems Information systems	1					
			Importance of Information in decision making Inputs, outputs, data-flows and processes	1	05/22 -	05/27			
10	Monthly Test (May)				05/29.				
11	Explores the Systems	Explains the Systems Development life cycle.	The system development life-cycle	1	05/29 -	06/02			

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	Development Life Cycle of information system development Contd.,		Identification of requirements Design of the solution Implementation of the solution Testing of the solution Deployment of the solution Maintenance of the system.	1	05/29 -	06/02			
			Difference between phased system development life-cycle and iterative increment life-cycle						
12	3. Uses the Internet for information search and communication effectively.	Uses the Internet to access information	Introduction to the Internet: URL, IP address and domain names.	1	06/05 -	06/07			
			Client-server operation:						
			Bi-directional information flow between browser and the server	1	06/12-	06/12-			
			Functions of the Internet: E-mail, WWW, ftp, remote access, file-sharing, streaming of media, cloud computing, search engines.	1	06/13-	06/16-			
			Domain name server and its purpose	1					

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		Uses the Internet for communication	e-mail accounts: Sending and receiving mails- to, from, bcc and cc, attachments, subject	1	06/19 -	06/19			
			Instant messaging services Video-based communication	1	06/20-	06/21			
			Video-based communication Social media networking	1	06/22-	06/23			
13	Monthly Test (June)				Jun-30				
14	4. Develops Multimedia contents to express ideas effectively.	Creates effective still graphics using suitable graphic software.	Digital image elements: pixel, resolution, size, color	2	06/27 -	06/30			
			Image capacity and compression: lossy formats and lossless formats	1	07/03 -	07/03 -			
			Image types: raster and vector Graphic types: raster and vector	1	07/04 -	07/04 -			
			Working knowledge of graphic software to perform the following basic operations						

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			Open, save and edit Importing images Sizing and transformation Selections, cut, crop, replace Working with layers Text editing and effects	1	07/06	07/07			
15		Creates effective 2D animations using suitable 2D animations software	Animation basics: Layers, frames, timing, frame rate	1	07/10	- 07/10			
			Geometrical objects and shapes	1	07/11	07/12			
			Frame types: frame, key frame, initial frame, destination frame, blank key frame.	1	07/12	07/12			
			Animations o Frame by frame animation o Basic Tweening	1	07/13	07/13			
			Publishing						
		Edit Audio and video contents using suitable software	Recording audio content.	1	07/14-	07/14-			
		Editing (extracting a relevant segment from original content)		1					

Index No.	Competency	Competency Level	LESSON	PERIOD	INITIATE DATE (PROPOSED)	END DATE (PROPOSED)	START DATE	END DATE	COMMENTS
		Effectively integrates multimedia contents	Integration of background images with animations	2	07/17-	07/18			
			Integration of audio and video						
16	2 nd Term Test				07/19 -	07/31			
17	5. Develops websites incorporating multimedia technology.	Structures information for development of websites.	Contents for websites Analysis of the purpose and the audience	1	09/06 -	09/07			
			Organization of the content/messages Design of the layout and structure: scheme, color, font. Selection of media assets	1	09/08 -	09/08			
		Uses HTML basics.	Difference between hypertext and normal text. Features of HTML	1	09/11 -	09/11 -			
			HTML document structure – Head,Title, body	1	09/12 -	09/13			

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			HTML basics o Line and paragraph breaks o Text: format and color o Insertion of images o Use of hyperlinks o Lists o Tables	1	09/14 -	09/15 -			
		Develops web sites using web development tools	Web authoring tools Text Formatting Page Layout	1	09/18 -	09/19			
			Use of Multimedia building blocks: text, graphics, audio and video	1	09/20- -	09/22- -			
			Hyperlinks	1	09/25 -	09/26			
			Methods of web development o Static vs dynamic webs o Content managed web development		09/27 -	09/28 -			

Index No.	Competency	Competency Level	LESSON	PERIOD	INITIATE DATE (PROPOSED)	END DATE (PROPOSED)	START DATE	END DATE	COMMENTS
			Content Management Systems (CMS) o The purpose of the process of CMS based web development: o Work-flow and roles in CMS o Content creation, editing, publishing, and use Roles: Creator, editor, publisher, administrator, user	1	09/27 -	09/28 -			
18	Monthly Test (September)				10/29				
19		Demonstrates preparedness to publish web sites	Internet Service Providers for Web hosting: Maintenance of a website	1	10/02 -	10/03			
20	6. Compares and contrasts benefits and issues related to ICT in society	Investigates the contribution of ICT to the health sector	ICT in Healthservices o Tele Medicine o Tele monitoring	1	10/03-	10/03			
			Computer controlled medical equipment o Computer Axial Tomography-(CAT) scanner o Magnetic , Resonance ,Imaging						
			Maintenance of medical history records. o Clinical history						

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			<ul style="list-style-type: none"> o Medication 						
			Test reports						
		Investigates the contribution of ICT to education	ICT Assisted Learning (e-learning) <ul style="list-style-type: none"> o Interactive teaching and learning material o Web-based learning Learning Management Systems (LMS) School Management Information Systems	1	10/09 -	10/10			
		Investigates the contribution of ICT to agriculture	Computer controlled agricultural equipment :Green houses Information searching on agriculture						
			Virtual competitive market for agricultural products Optimization of agricultural productivity Detection and control of pests	1	10/12	10/13 -			
			Optimization of fertilizer use Weather prediction						
		Investigates the usage of ICT in different industries.	Architecture: Computer- Aided Design(CAD) Manufacturing - Computer Aided Manufacture (CAM)/Computerized machines in	1	10/16 -	10/17			

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			production Production -Robotic						
		Explores the contribution of ICT to Business	e-Business o Internet based (on-line) shopping o Internet based (on-line) - Share market, transactions o Safety measures	1	10/19-	10/20			
			Advertising Outsourcing IT- Business Process (IT BPO)						
		Explores the contribution of ICT to Entertainment	Movies and cartoon production Digital sound editing Games Simulations	1	10/23	10/24			
		Assesses issues related to ICT with respect to ethical and legal aspects	Legal Issues o Data theft o Unauthorized access to systems Intelligent property: copyright, patents and piracy.	1	10/25-	10/27			
			Privacy,Forgery,ICT legislation, framework in SriLankaEthical issues: Fair use, plagiarism						

Index No.	Competency	Competency Level	LESSON	PERIOD	INITIATE DATE (PROPOSED)	END DATE (PROPOSED)	START DATE	END DATE	COMMENTS
21	Monthly Test (October)				10/30				
22	Compares and contrasts benefits and issues related to ICT in society Contd.,	Explores issues and precautions related to ICT infrastructure protection.	Physical Security UPS Hardware firewalls Restricted access via door-locks CCTV surveillance, Surge protectors	1	10/30 -	11/01			
			Logical Security - Passwords, Software firewalls, Backups Protection against- malware: spam, virus, key-loggers	1	11/02 -	11/02			
			Environmental factors- Dust, Humidity, Temperature, Institutions for information security of Sri Lanka						
		Investigates health and safety issues inherent in the use of ICT.	Ergonomics and Health issues Repetitive Strain Injury: eye-strain, backaches	1	11/06 -	11/07			
		E-waste: Hazardouselements and its impact on the environment. Safe disposal and destruction of electronic equipment.	1	11/07-	11/08				

Index No.	Competency	Competency Level	LESSON	PERIOD	INITIATE DATE (PROPOSED)	END DATE (PROPOSED)	START DATE	END DATE	COMMENTS
		Assesses issues associated with ICT and society.	Digital divide Digital bridge De-skilling Techno-rich employment Equal Opportunities Misuse of ICT and precautions to be taken (social media)	1	11/09-	11/10			
23	Revision				11/13 -	11/17			
24	3rd term test				11/20 -	11/30			