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የ ትምህርትሚ ስቴር
FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA
MINISTRY OF EDUCATION

General Education Curriculum

Information Technology (Flow Chart, Minimum Learning Competency& Syllabus)

Grades 7-8

Developer profile

No.	Name	E-mail	Institution	Qualification
1	Dr. Temtim Assefa	temtim@yahoo.com	Addis Ababa University	• PhD in Information Systems • Assistant Professor of Information Systems
2	Mr. Chala Diriba	chala.dire@gmail.com	Jimma University	• Assistant Professor of Information Science • MSc in Information Science
3	Mr. Belete Beizen	beleb2009@gmail.com	Bahir Dar University	• Assistant Professor of Information Science • MSc in Information Science
4	Mr. Derejaw Lake	der.lake23@gmail.com	Bahir Dar University	• MSc in Computer Science
5	Mr. Workineh Tesema	workina.info@gmail.com	Jimma University	• Assistant Professor of Information Technology • MSc in Information Technology
6	Mr. Tegegn Gobana	uniqute2006@gmail.com	Hawassa University	• Assistant Professor of Information Technology • MSc in Information and Communication Systems Engineering

Introduction

ICT has now become part of our daily life. If we communicate with our families or get daily news, we use ICT. We use ICT tools to effectively learn in the classroom as well as outside the classroom. It is one of the necessary skills to get employment opportunity and accomplish our tasks in the office. All government and private organizations provide ICT enabled services.

Knowledge is now double every thirteen months. Every minute, there is new information posted on Internet. It is practically impossible to access and use this information by traditional methods. We have to be ICT literate to access, evaluate and use information available on online sites. The education paradigm is now shifted from teaching students' facts to teaching students to retrieve and interpret information. Students acquire the bigger part of knowledge outside the classroom. This is clearly stated in Ethiopian General Education Curriculum Framework vision statement.

> *The vision of the Ethiopian general education curriculum is to cultivate all-rounded, ethical, self - reliant and responsible lifelong learners who are competitive regionally and globally and are equipped with 21stcentury skills instrumental to thrive in a knowledge - based and technology - led economy as citizens of an interdependent and democratic society.*

This curriculum is developed to produce citizens who are innovative, inventive, productive, self-directed, responsible and active contributors to national development. It also enables students to be lifelong learners. Internet provide us rich learning environment with a variety of educational resources to materialize the vision of lifelong learners.

Curriculum design assumptions:

- Make students lifelong learners
- Promote creativity and problem solving capability of students
- Engage students in active learning
- Help students acquire transferable knowledge and skills
- Enable students to acquire ICT competency to be active citizens of the society

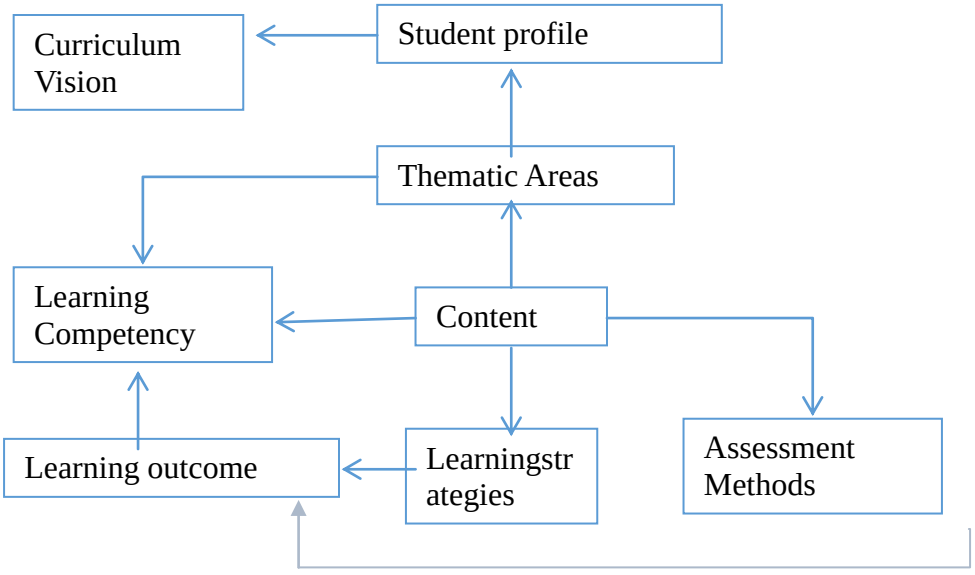
Curriculum development follows at the minimum the following basic steps. These are need assessment, curriculum design, curriculum development, implementation and evaluation. This document covers the need assessment and the curriculum design steps. The needs assessment was undertaken by reviewing different documents produced by Ministry of Education (MOE). The Ministry produces the following documents which are used as inputs for needs assessment.

1. Position Paper on Teaching ICT in Ethiopian Schools by Ministry of Education
2. Ethiopian General Education Curriculum Framework, December 2020
3. Previous Ethiopian ICT textbook from Grade 9 to 12,

In addition, the curriculum developer team reviewed other country experiences and literature on curriculum design and development.

In the curriculum design phase, the Team developed draft curriculum. During this time, the Team undertook intensive discussion on different aspects of curriculum development. The draft curriculum was given for International (Cambridge International) and local (Elixir) consultant for quality assurance review. After the review, there was face to face and online discussion on comments given by the consultant. The Curriculum Developer Team revised the draft curriculum and produces second version of the curriculum for validation by the stakeholders. The stakeholders include teachers, school administrators and Educational Bureau officers.

The curriculum framework has the following structure.



The curriculum was designed to encourage active learning methods. Students are the center of the curriculum design unlike the traditional teacher center design. It enables students to acquire knowledge and skills that is transferable in the real life. It is also increases students' creativity and problem solving capability. When students complete Grade 8, they will acquire the following student profiles:

- Develop knowledge the difference between software and parts of computer hardware
- Develop proper attitude towards rules and regulation of computer utilization in computer lab.
- Create files
- Find explanation and solution for their study using internet
- Develop Knowledge to identify the screen elements of Word and Spread sheet.
- Experience skill to write, save and retrieve files on word processors and spread sheets.
- Prepare reports by enhancing the document.

Student profile shows that students are expected to have broader knowledge on ICT which includes operation of hardware and software to the use of ICT for creativity.

Flow Chart(FC) Grade 7-8

Grade	Theme					
	Information System	**Hardware**	**Productivity**	**Creativity**	**Security and safety**	**Programming**

7	• Definition ofICT
	• Basic elements ofICT System
	  ○ Data
	  ○ Information
	  ○ User
	  ○ Technology
	  ○ Communication
	• ICT in dailylife
	• Definition ofcomputer
		• Introduction to computer hardware
		• Basic parts of the computerhardware
		• Functions of hardware components
			• Definition ofsoftware
			• Types ofsoftware
			  ○ Systemsoftware
			  ○ Application software
			• Overview of WordProcessing
				• Definition of theInternet
				  • Internet vs web
				• Webpage
				• website
				• Browser
				• Search Engine
				• Web server
				• Web address
				• Accessing theInternet
					• impact of not caring for a computer
					• Cleaning computer components
					• Starting Up and Shutting Down Computer
						• Fundamentals of Logo
						• Graphical elements of Logo
						• writing procedures

8	• Generation ofcomputers
	  ○ First generation
	  ○ Second generation
	  ○ Third generation
	  ○ Fourth generation
	  ○ Fifth generation
	• Functions ofcomputers
	• Types ofcomputer
	• Characteristics ofcomputers
		• Components of hardware
		  • Peripheraldevices
		  • Input devices
		  • Outputdevices
		  • Storage
		  • Processors
			• Systemsoftware
			  • Operatingsystem
			  • Utility software
			  • Driver software
			• Applicationsoftware
			  • WordProcessing
			  • Spreadsheet
			  • Power point presentation
				• Internet services
				  ○ Browse information on the Internet
				  ○ E-mail
				  ○ WWW
				  ○ FTP
				  ○ HTTP
				  ○ Social networks
				• Opportunities and Risks of Internet
					• Computer Ergonomics
					  • physical
					  • cognitive
					  • organizational
					• Handling of portable devices
					• Opportunity and threat of Network
					• Utilization of smart phones
					• Information and computer misuse
						• Programming withLogo
						  • Using recursiveprocedures
						  ○ Usingprimitives
						  ○ Using Variables
						  ○ Conditional Statement
						  ○ UsingRND

Minimum Learning Competency (MLC)Grade 7-8

Grade	Theme					
	Information System	**Hardware**	**Productivity**	**Creativity**	**Security and safety**	**Programming**
7	• Explain ICT and its benefits in daily life	• Identify and describebasic computer hardware	• Identify and describe basic software	• Describe basic concepts of internet • Search for information on the internet	• Properly handle computer	• Explain programming with LOGO
8	• Describe evolution of computers • Explain types and characteristics ofcomputers	• Explain the function of different type of hardware components	• Able to use of basic application software	• Able to use different services of internet	• Apply safety measures while using computer • Apply safety measures to handle portable devices	• Perform programing with LOGO

Syllabus Grades 7 -8

Grade 7

Unit One: Fundamentals of ICT

Learning Outcomes: At the end of this unit, learners will be able to:

- DefineICT
- Explain the term technology and informationtechnology
- Identify basic elements ofICT
- Discuss the definition ofcomputer

Competency	Contents	Learning Strategies	Assessment

• Explain ICT and its benefits in daily life	• Definition of ICT
	• Basic elements of ICT system
	  ○ Data
	  ○ Information
	  ○ User
	  ○ Technology
	  ○ Communication
	• ICT in our dailylife
	• Definition of computer
		• Let students defineICT
		• Let students list down basic ICTcomponents
		• Let students discuss on ICT use in their daily life ingroup
		• Demonstrate current ICT equipment.
			• Observe students while they discuss about ICT components.
			• Examine students to mention ICTcomponents
			• Provide feedback on studentactivities.
			• Observe students while presentingtheinfluence of ICT in dailylife.

Unit Two: Computer Hardware

Learning Outcomes: At the end of this unit, learners will be able to:

- Explain computer Hardware
- Identify the hardware components of thecomputer.
- Recognize the functions of the hardwarecomponents.

Competency	Contents	Learning Strategies	Assessment
• Identify and describe basic computer hardware	• Introduction to computer hardware • Basic parts of the computer hardware • Functions of hardware components	• Let students explain computer hardware • Let students show thehardware parts of a computer • Let students explain the hardware components of a computer and their functions	• Do students explain computer hardware? • Examine students identify the different Hardware components? • Can Student explain functions of the computer hardware components?

Unit Three: Computer Software

Learning Outcomes: At the end of this unit, learners will be able to:

- ExplainComputer Software
- Explain application and systemsoftware
- Discuss system software withexample
- Discuss application software and provideexample
- Differentiate between hardware andsoftware

Competency	Contents	Learning Strategies	Assessment

• Identify and describe basic software	• Definition ofsoftware
	• Types ofsoftware
	  • Systemsoftware
	  • Application software
	• Overview of WordProcessing
		• Let students explain computer software
		• Let students identify system software andapplicationsoftware
		• Let students explain the difference between hardware andsoftware
		• Let students open word processor and identify word processor elements
			• Observe students to whether or not list the function of software.
			• Examine students to differentiate hardwarefromsoftware
			• Examine students to identify word processor elements

Unit Four: Internet

Learning Outcomes: At the end of this unit, learners will be able to:

- Explain Internet
- Identify the internet and the world wideweb
- List and describe different types ofbrowser
- Open a browser and identify the screenelements
- Use web addresses to accesswebsites

Competency	Contents	Learning Strategies	Assessment
• Describe basic concepts of internet • Search for information on the internet	• Definition of theInternet • Internet vs web • Webpage • website • Browser • Search Engine • Web server • Web address • Accessing internet	• Let student identify webpage, website, web server and browser • Let students to list the screen elements of browsers • Let student browse information from internet • Let students explain the difference between internet and web	• Observe studentswhile browse information in internet. • Examine students whether or not identify webpage, website, web server and browser • Observe students able to list screen elements of browser. • Check students differentiate internet and web

Unit Five: Security and Safety of Computer

Learning Outcomes: At the end of this unit, learners will be able to:

- Carefully Handle components of the computersystem
- Properly clean hardware components of thecomputer
- Turn on and shut down the computer systemproperly

Competency	Contents	Learning Strategies	Assessment
• Properly handle acomputer	• Care for a computer • Cleaning computer components • Starting up and shutting down computer	• Have students examine improperly and properly handled computer • Let students clean a computer • Let student start and shutdown acomputer	• Observe students whether or not able to identify properly and improperly handled computers • Examine while students' clean computer. • Observe while students start up and shutdown a computer

Unit Six: LOGO

Learning Outcomes: At the end of this unit, learners will be able to:

- ExplainLOGO
- Describe graphical elements of LOGO
- Write procedures on LOGO environment

Competency	Contents	Learning Strategies	Assessment
• Explain programming with LOGO	• Fundamentals of Logo • Graphical elements of Logo • writing procedures	• Providestudent LOGO application • Let students draw different shapes onLOGO using procedures • Encourage students to explain the graphical element of LOGO	• Observe students explain LOGO • Examine students able to descript graphical elements of LOGO • Observe students able to write procedures on LOGO environment

Unit One: Computer System

Grade 8

Learning Outcomes: At the end of this unit, learners will be able to:

- Explaincomputers generation
- Explain functions of thecomputer
- Identify types ofcomputer
- Describe the characteristics ofcomputer

Competency	Contents	Learning Strategies	Assessment

• Describe evolution of computers
• Explain types and characteristics ofcomputers
	• Generation ofcomputers
	  • First generation
	  • Second generation
	  • Third generation
	  • Fourth generation
	  • Fifth generation
	• Functions ofcomputers
	• Types ofcomputer
	• Characteristics ofcomputers
		• Encourage students to compare the difference among each generation ofcomputers
		• Ask students to present their work to the class on generation of computers
		• Form a group each consisting of three to discusses on the following issues:
		  • Functions of computer
		  • Types of computer
		  • Characteristics of
		  • computer
			• Review and provide feedback on the performance of each group
			• Observe the participation of students in the group activity
			• Examine presentation of students on generation of computers

Unit Two: Computer Hardware

Learning Outcomes: At the end of this unit, learners will be able to:

- Explaincomputerhardware
- ExplainPeripheral, Input, output, storagesand processor devices

Competency	Contents	Learning Strategies	Assessment
• Explain the function of different type of hardware components	• Components of hardware • Peripheraldevices • Input devices • Outputdevices • Storage • Processors	• Provide students to explain computer hardware • Encourage students to explain peripheral, input, output, storages and processor devices.	• Observe students' description of computer hardware • Examine students explanation on peripheral, Input, output, storages and processor devices

Unit Three: Computer Software

Learning Outcomes: At the end of this unit, learners will be able to:

- Explain Operating System, utility and driver software
- Create and save the word processing document
- Format word document
- Create and save spreadsheet files
- Format in spreadsheet
- Prepare presentation

Competency	Contents	Learning Strategies	Assessment

• Able to use word processor, spread sheet and power point presentation	• Systemsoftware
	  • Operatingsystem
	  • Utility software
	  • Driver software
	• Applicationsoftware
	  • WordProcessing
	  • Spreadsheet
	  • Power point presentation
		• Provide the students sample letter or other pre typed assignment and produce word document
		• Demonstrate student to formatworddocument
		• Let students practice computing data on worksheet and format it
		• Encourage students to prepare power point presentation
		• Encourage student to report the assignments on power point
			• Checking whether or not the students can write documents into word processor
			• Examine students able to compute data on spread sheet
			• Observe student able to format in a spreadsheet
			• Observe a student power point presentation
			• Examine students power point presentation

Unit Four: Internet

Learning Outcomes: At the end of this unit, learners will be able to:

- Describe Internet Services
- Browse information on the Internet
- Explain uses of e-mail and socialnetwork
- Explain how Internet and WWW areused
- Explain file transfer and text transmission protocol
- Create email address and exchange mail
- Create Facebook and telegram account

Competency	Contents	Learning Strategies	Assessment

• Able to use different services of internet	• Internet services
	  • Browse information on the Internet
	  • E-mail
	  • WWW
	  • FTP
	  • HTTP
	  • Social networks
	• Opportunities and Risks of Internet
		• Let student browse information on the internet
		• Let students describe advantage and disadvantage of internet
		• Encourage students to create e-mail address and exchange mail
		• Let students to create Facebook account using their e-mail address
		• Let students to discussion on opportunities and risks of the Internet
			• observe students to access the internet
			• Observer students' discussion on opportunities and risks of the Internet
			• Examine students e-mail exchange
			• Observer students social media usage

Unit Five: Security and Safety

Learning Outcomes: At the end of this unit, learners will be able to:

- Explain Computer Ergonomics
- Carefully handle portable devices
- Describe opportunity and threat of network
- Explain proper utilization of smart phone

Competency	Contents	Learning Strategies	Assessment

• Apply safety measures while using computer
• Apply safety measures to handle portable devices
	• Computer Ergonomics
	  • physical
	  • cognitive
	  • organizational
	• Handling of portable devices
	• Opportunity and threat of Network
	• Utilization of smart phones
	  • Information and computer misuse
		• let students explain basic of computer Ergonomics
		• Encourage students to demonstrate portable devices
		• Provide smart phones to students and show its proper utilization
		• Let students demonstrate how to use smart phones
		• Let students report on opportunity and threat of network
			• Examine students' explanation of computer Ergonomics
			• Examine students' activity on use of smart phone
			• Observe students proper handling of portable devices
			• Observe students report on opportunity and threat of network

Unit Six: LOGO

Learning Outcomes: At the end of this unit, learners will be able to:

- Describe the use of variable in writingProcedure
- Explain primitives
- Write program using conditional statement
- Create recurringprocedure

Competency	Contents	Learning Strategies	Assessment
• Perform programing with LOGO	• Programming withLogo • Using recursiveprocedures • Usingprimitives • Using Variables • Conditional Statement • UsingRND	• Encourage students to write a program using conditional statement • Let students write procedure • Provide students an assignment writes a program with LOGO	• Observe students'activities whether or not they write program using conditional statement • Examine students programing with LOGO • Examine Student assignment on programming LOGO