

# Blended Learning Design Plan

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## DESIGN PARAMETERS

### **Course/programme description:**

Fundamentals of a computer System - This course is designed to familiarize students with basic computer architecture and peripheral devices. A student who successfully completes this course will also be able to gain strong foundation in the core fundamentals of digital technology. Basic concepts are reinforced by exercises, and hand-on applications. Students will also Tech-apart a desktop computer in the classroom under the guidance of the instructor.

Classes will consist of regular lectures and hands-on activities. Class lectures will be based on topics covered in the required readings from the course textbook. Interactive hands-on exercises will be conducted during class which will introduce the student to the basic skills for completing each hands-on homework assignment. Blackboard will also be used as a communication tool.

### **Course/programme context:**

- Features of a computer
- Classification of computers (According to size and technology used)
- Functions and devices of a computer system
- Basic components of a computer system

### **Student demographics and description:**

There may be students who will learn ICT as a subject for the first time and also those who have good computer literacy. As a south Asian country some students will face difficulties while learning in English Medium.

### **Available and required resources:**

- Pre-Course Activity  
Registration Required: 'Using your computer' free online course offered by the Learn My way Platform. Every student should send the certificate with the name to the instructor (only those who completed this pre-course activity will be eligible to enter to the course.  
course web address: <https://www.learnmyway.com/subjects/using-your-computer-or-device/>
- Download the soft copy of the text book here  
<https://www.e-thaksalawa.moe.gov.lk/moodle/course/view.php?id=620&lang=si>  
(Download the relevant chapter as instructed by the teacher.)
- Download the tutorials here  
[https://ict.apepanthiya.lk/ol\\_tutorials.html#tut](https://ict.apepanthiya.lk/ol_tutorials.html#tut)  
Download the relevant chapter as instructed by the teacher
- Videos- Every student should watch the videos assigned by the teacher before the lecture and the lecture will begin by a discussion of this video.
- Microsoft Teams Organization as a collaborative tool between the instructor and students.
- Educational Games (Every student should send a screenshot to the instructor via Teams organization after they finish the assigned game)

**Learning objectives:**

- Identifies the components of a computer system
- Briefly explain the features of the different classes of computers.
- Identifies the input and output devices of a computer system separately
- Describe the function of each component.
- Describe the function of a motherboard and identify the components
- Describe main physical components of a computer

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Learning objective	Activity description	Technology requirements/OER	Teaching/facilitation requirements
Identifies the components of a computer system	Let the students learn from the video during the class. Actively participate in the Microsoft Teams Forum and reflect learning after the class. Watch the video about computer Peripherals by Google after the class for extra knowledge. Homework – complete the educational game.	Video - Computer hardware basics <a href="https://vimeo.com/175359562">https://vimeo.com/175359562</a> Fundamentals of a computer system – Textbook <a href="https://www.ethaksalawa.moe.gov.lk/moodle/course/view.php?id=620&amp;lang=si">https://www.ethaksalawa.moe.gov.lk/moodle/course/view.php?id=620&amp;lang=si</a> Home work – Computer hardware identifying game <a href="https://www.purposegames.com/game/identify-the-computer-components-quiz">https://www.purposegames.com/game/identify-the-computer-components-quiz</a> -Click the correct device- Computer components- peripherals <a href="https://youtu.be/rEkOfvQ10wM">https://youtu.be/rEkOfvQ10wM</a>	Start the class through a discussion about the earlier experience of students related to using computers and digital devices. Explain about the main components of a computer system while showing the real components in the computer lab.
Briefly explain the features of the different classes of computers	Read the text book and Create a presentation using Google Slides as an online group activity at home prior to the class. The lesson will be explained by the teacher after the group activity in the classroom. Assignment- Answer the quiz given in the Google form. (The link will be shared)	As a resource for the presentation - Video - Classification of Computers <a href="https://youtu.be/TgWIKK62YRg">https://youtu.be/TgWIKK62YRg</a>  Google slides (G-Suite application) – to create group presentations  Quiz- (Will be created using google forms and the link will be shared in Teams Chat)	Guide the group work and involve all the students in all the activities actively. (Help students in creating the presentation online.) Advice them about finding information sources to create the presentation. Create and evaluate the quiz.
Identifies the input and output devices of a computer system separately	Explain input devices and output devices. Discuss examples for input and output devices. Discuss about different Printers.	Videos Printers - <a href="https://youtu.be/WM1MBAj1yAU">https://youtu.be/WM1MBAj1yAU</a>  Input and output devices quiz <a href="https://quizizz.com/admin/quiz/5d54aa9f6e4331001e383450/input-output-devices">https://quizizz.com/admin/quiz/5d54aa9f6e4331001e383450/input-output-devices</a>	Explain separately about the devices while showing them to the class. Let students explore more about peripherals

	Homework- Explore the functionality of scanners, OCR, OMR, plotters and sensors in the computer lab. Complete the quiz at home.		and design effective forums or activities to discuss more. Show the functionality of a printer, scanner and a projector in the computer lab.
Describe the function of a motherboard and identify the components	Discussion from the video about motherboard. Explain a motherboard using a real motherboard. Asking random questions about motherboard.	Video - Computer Components- Motherboard <a href="https://youtu.be/2oNVEjRhLuc">https://youtu.be/2oNVEjRhLuc</a>  Game- Identifying the parts of the motherboard <a href="https://www.purposegames.com/game/mode-rn-intel-motherboard-quiz">https://www.purposegames.com/game/mode-rn-intel-motherboard-quiz</a>	Explain about the motherboard using a real one.
Describes main physical components of a computer	Lecture - CPU, RAM, Secondary Storage Devices explained in detail using YouTube videos. Complete the game – Computer ports	Videos- Computer components- Storage <a href="https://youtu.be/DuLORywKo7M">https://youtu.be/DuLORywKo7M</a> Computer components - RAM <a href="https://youtu.be/wXfqkmyltIQ">https://youtu.be/wXfqkmyltIQ</a> Computer components- CPU <a href="https://youtu.be/6wmlWtkl1r8">https://youtu.be/6wmlWtkl1r8</a> Identifying Computer Ports Game - <a href="https://www.purposegames.com/game/identify-the-computer-ports-quiz">https://www.purposegames.com/game/identify-the-computer-ports-quiz</a>	Explain the main physical components of a computer system in detail.

## DESIGN RATIONALE

This course is basically designed according to the blended face-to-face driver model where students participate in lectures and complete readings, exploring and quizzes online at home. Although I have used a Pre-course activity where I've taken advantage from open Educational resources (OER) effectively to enhance digital skills and build computer literacy among the students who will participate in the 'fundamentals of a computer system' course. I have used the flipped classroom model where students watch a video prior to the class and complete group activities or involve in discussions in the class. It will help both students and Instructor to prepare for the class and will lead us to achieve desired outcomes of the course.