CS-101(Principle of Information Technology)

(Major – Core)

Course Description

Course Code Number	CS-101	Course Title	Principle of Information Technology
Semester Hours	**3** Hours	No. of Credit Units	**3**
Prerequisite	None	Course Coordinator	Dr. Khine Moe Nwe Professor (Cloud Computing Lab)

Course Aim

The aim of this course is

- To help students understand the diverse contexts in which IT is used and the challenges inherent in the diffusion of innovative technology.
- To help students become more valuable, better and knowledge digital citizens to adapt emerging technologies.

Course Description

This course is intended to be at the university level in a curriculum and to provide foundation skills for subsequent courses. This course provides a basic grounding and fluency in the basic information technology (IT) skills necessary for information professionals. This course introduces students to, and provides practical exercises on, several areas of information technology including the personal computer (PC) and PC applications (PC hardware & software), networking, and information technology.

Major Topic covered in this Course

- Introduction: History of Computer, computer systems and systems software in their historical context.
- Exploring the Cyberspace: The Internet and the World Wide Web, the Internet Work, Multimedia, Webcasting, Blogs, E-Commerce and the Social Web.
- Hardware: Brief overview of computer architecture including CPU, peripherals devices, memory, internal and external interfaces, types of removable media, etc.
- Introduction to number system; binary, octal, hexadecimal system; and Coding System; BCD, EBCDIC, ASCII, UNICODE
- Networks: The nature and role of communications networks, overview of the software and associated protocols used for distributed services.
- Social ethical issues in Computing; privacy, sharing, hacking, data protection, cyber bullying, digital divide, harassment, etc.

- Software: System software, Operating systems that managing resources, processes and memory and file system and Application software the challenges of the digital age: Truth Issues, Security Issues, Quality of life Issues, Economic and political Issues.

Text Book

- Using Information Technology: A Practical Introduction to Computers and Communications, 11th Edition, by William Sawyer (e-book)
- Download Link: ftp://ftp.ucsy.edu.site

Reference Book

- Computer Fundamentals, 6th Edition by Pradeep K. Sinha, Priti Sinha
- Introduction to Computer, 6th Edition by Peter Norton (e-book: ftp://ftp.ucsy.edu.site)

Learning Outcomes

Upon the successful completion of this course, the student will be able to:

1. Get a basic knowledge of computer hardware and software, variety of skills and knowledge of information technology.
2. Understand the business areas to which computers may be applied.
3. Improved personal and interpersonal skills to adapt with emerging technology.
4. Enhance reading, writing, computing, communication, and reasoning skills and apply them to the information technology environment.

Course Organization

Student participation in this course will involve the following activities:

1. Attending the lectures
2. Preparing for and participating in the recitations
3. Practical assignments
4. Assignment / Reading the text
5. Moodle (LMS) / Quiz (After each lecture)
6. Exams

Assessment plan for the course

Paper Exam	50%
Test / Assignment	20%
Class participation	10%
Moodle	10 %
Quiz	10 %

Grading System

UCSY follows a letter grade system comprising of grades A, A-, B+, B, B-, C+, C, C-, D and F. All marks obtained by students during the semester will be used in the grading process. For undergraduate students, a grade of "C" or better is required in this course because it is a prerequisite for other courses in the program. **The student who gets the grade point less than 2 must take ReExam**.

The grading scale for this course is:

Marks obtained	Letter Grade	Grade Point
>=90	A	4
85-89	A-	3.75
80-84	B+	3.25
75-79	B	3
70-74	B-	2.75
65-69	C+	2.25
60-64	C	2
55-59	C-	1.75
50-54	D	1
0-49	F	0

Fail Grade and Re-Exam: C-, D, F (Grade point <2)

Class Attendance and Participation Policy:

- **Attendance**
  Class attendance is mandatory. Most of the material you will learn will be covered in the lecturers, so it is important that you not miss any of them. You are expected to show up on time for class, and stay for the whole lecture. Students are expected to attend each class, to complete any required preparatory work (including assigned reading) and to participate actively in lectures, discussions and exercises.
- Mobile phones must be silenced and put away for the entire lecture unless use is specified by the instructor. You may not make or receive calls on your cell phone, or send or receive text messages during lectures.
- You are responsible for all materials sent as email. Ignorance of such material is excuse. You are responsible for all materials presented in the lectures.
- Your conduct in class should be conducive towards a positive learning environment for your classmates as well as yourself.
- **Assignment, Quizzes, Moodle Test and Labs**
  We will take a short 3 to 5 quiz for every lecture and 30 points quiz moodle test after one or two chapters. Any assignment or quiz is simply missed, regardless of the reason why (e.g. illness, work, traffic, car trouble, computer problems, death, etc), and earns a grade of zero. You are strongly encouraged to complete all assignments and attend all quizzes so that you can check that you understand the material and can throw out bad grades, or grades for which you had to miss an assignment or quiz for a valid reason. Late submissions will not be accepted for any graded activity for any reason.
- There are no extra credit opportunities.
  Students may not do additional work nor resubmit any graded activity to raise a final

grade.

- **Test**

    Test will start after two or three chapters finished and the coordinator will announce the date for the test.

- **Exam**

    The exam will be conducted on-campus, in a classroom. The date/times/locations will be posed on Board as soon as possible.

    For this course, the following additional requirements are specified:

    All work submitted for a grade must have been prepared by the individual student. Students are expressly prohibited from sharing any work that has been or will be submitted for a grade, in progress or completed, for this course in any manner with a person other than the instructor and teaching assistant(s) assigned to this course). Specifically, students may not do the following, including but not limited to:

- Discuss questions, example problems, or example work with another person that leads to a similar solution to work submitted for a grade.

- Give to, show, or receive from another person (intentionally, or accidentally because the work was not protected) a partial, completed or graded solution.

- Ask another person about the completion or correctness of an assignment.

- Post questions or a partial, completed or graded solution electronically. (e.g. Web Site).

- All work must be newly created by the individual student for this course. Any usage of work developed for another course, or for this coruse in a prior semester, is strictly prohibited without prior approval from the instructor.

- Posting or sharing course content (e.g. instructor provided lecturer note, assignment directions, assignment questions, or anything not created solely by the student), using any non-electronic or electronic medium (e.g. web site, FTP site, any location where it is accessible to someone other than the individual student, instructor and/or teaching assistant(s)) constitutes copyright infringement and strictly prohibited without prior approval from the instructor.

Tentative Lecture

No.	Topic	Week	Remark
	Chapter 1 Introduction to Information Technology	Week 1+2	
1	The two parts of IT: Computer and Communications		
2	Infotech Is All Pervasive		
3	The "All-Purpose Pervasive		
4	Understanding your Computer		
5	Information Technology Headed		Assignment
	Chapter 2 The Internet and The World Wide Web	Week 3+4	
6	Connecting to the Internet How does the Internet Work?		
7	The World Wide Web Communicating over the Net		Assignment

	Ways of Communicating over the Net		
8	Number Systems - Binary, Octal, Hexadecimal number - Number conversion between Binary, Octal, Hexadecimal Coding System - EBCDIC, BCD, ASCII7, ASCII8.		Assignment
	Chapter 3 Software	Week 5	
9	System Software		
10	Application Software		Assignment
	Test I		
	Chapter 4 Hardware: The CPU and Storage	Week 6	
11	The System Unit		
12	Secondary Storage		Assignment
	Chapter 5 Hardware: Input and Output	Week 7	
13	Input Hardware		
14	Output Hardware		
15	Input and Output Technology, Quality of Life		Assignment
	Chapter 6 Communications, Networks and Safeguards	Week 8	
16	From Analog to Digital Age		
17	Networks		
18	Wired Communications Media		
19	Wireless Communications Media		
20	Cyber Threats, Hackers and Safeguards		Assignment
	Test II		
	Chapter 7 Personal Technology	Week 9	
21	Convergence, Portability and Personalization Portable media players		
22	High – Tech Radio Digital Cameras		
23	Personal Digital Assistants and Tablets PCs The New Television		
24	E Book Readers, Smart Phones, Videogame Systems		Assignment
	Chapter 8 Database and Information System	Week 10+11	
25	Managing Files: Basic Concept		
26	Database Management System		
27	Database Model		
28	Data Mining		
29	Database and the Digital Economy: E-Business& E-Commerce		
30	Information System in Organization		
31	Artificial Intelligence		Assignment
	Chapter 9 The Challenges of the Digital Age	Week 12+13	
31	Thrust Issues		
33	Security Issues		
34	Security		
35	Quality of Life Issues		
36	Economic and Political Issues		Assignment
	Chapter 10 System Analysis and Programming	Week 14+15	

37	Systems Development		
38	Programming: A Five-step Procedure		
39	Programming Languages used today		
40	Object-Oriented and Visual Programming		
41	Markup and Scripting Languages		Assignment
	Test III		