INTRODUCTION TO INFORMATION TECHNOLOGY

**Subject Aim:**

This subject is intended to:

1. This subject provides students with the basic Concepts of information technology and computing, as well as knowledge and practice on deploying and controlling common information technology applications. This subject is suitable for all students as a first subject in information technology, whether they intend to continue to study information technology or not. Students who intend to study information technology-related programmes are strongly recommended to take both COMP101 and COMP111.

**Learning Outcomes:**

Students will demonstrate their ability to:-

1. understand how a computer works;
2. understand the potentials of information technologies in business and industry;
3. use popular operating systems to carry out sequence of tasks;
4. appreciate the power of programmed computer operation;
5. understand the current trends in the development of popular information technologies such as the Internet and related tools;
6. appreciate IT-related intellectual property issues and their protection.

**Brief Syllabus Content:**

1. Introduction to Computer Systems
   Major components of computer systems: central processing units, storage devices and media, inputs/outputs; working principle of computers; contemporary types of CPU, memory, input/output devices currently in use.

2. System Software
   Functions and operations of system software; basic features and commands of MS Windows and Unix/Linux; script language and task control.

3. Communication, Multimedia and the Internet
   Communication and networking; Internet resources and tools; multimedia information creation and application.

4. IT Applications
   Introduce typical applications of information technologies such as office automation, knowledge management, education, entertainment, digital edutainment, manufacturing, geo-informatics, bio-informatics, etc.

5. Inside IT Applications
   Role of programming in IT applications, e.g. shell programs, macros in Excel, robotic control, concept of algorithm and programming, debugging.

6. IT Intellectual Property
   Security, privacy and ethics with software; copyright and patent law; trade secrets and registered design.

*Teaching activities: Lecture (LT)/Tutorial (TU)/Seminar (SM)/Drawing (DW)/Laboratory or Practical (LB)/Studio (ST)/Workshop (WS)/Project (PJ)/Field Study (FS)/Guided Study (GS)/Visit (VS)*

*Learning and Teaching Approach (tasks and activities designed to achieve learning outcomes):*
The course material will be delivered as a combination of mass lectures and small group supervised laboratory sessions. Students will get familiarized with common operating systems and environment, internet and multimedia tools. They will also attempt simple script, shell programs etc and appreciate exercising automatic control over the computer and applications.

**Assessment strategy** *(assessment of student performance resulting from learning tasks):*

| Coursework                      | 100% |

**Reading List:**

