



Republic of the Philippines  
**POLYTECHNIC UNIVERSITY OF THE PHILIPPINES**  
**MULANAY CAMPUS**  
Mulanay, Quezon

**College of Business**  
Name of College

**Office Management Technology**  
Course/Department

**1.0 Course Title: INFORMATION TECHNOLOGY FUNDAMENTALS WITH APPLICATION**

**2.0 Course Code: OMT 111**

**3.0 Course Credit: 3 units (5 hrs.)**

**4.0 Course Description**

This course provides a foundation in the basic information technology (IT) skills necessary for information professionals. The course introduces students to, and provides practical exercises on, several areas of information technology including the personal computer (PC) and PC applications, computer hardware structure and operation, operating systems and software, data representation and number systems, basic concepts required for programming and information security. Upon completion of this course you should be able to intelligently discuss IT Fundamentals with IT professionals, explore the computer using Operating System Software, manage files and applications and acquired basic knowledge on troubleshooting and software installation. You should also understand enough about inevitable technological change to help you plan for your success.

**5.0 Pre-requisites Course/s: NONE**

**6.0 Vision and Mission Statements of the University**

**7.0 Goals of the College**

**8.0 Objectives of the Program**

**9.0 Course Objectives**

**General:**

- A. Provide foundation knowledge related to IT concepts including terminology, history, current examples and future trends in IT, basic concepts related to programming, as well as business context of IT required for other courses and careers,
- B. Develop a solid understanding of information technology concepts and so enhance decision making abilities with respect to IT infrastructure issues
- C. Acquired basic understanding of personal computers and their operations
- D. Explore and apply a variety of methods used in the workplace to communicate information.
- E. Acquired knowledge about information security and how to relate and use them in the workplace.

**Values Objectives:**

- A. Develop creative and independent learning strategy to further utilize the inputs and relate them necessarily to become productive future professionals.
- B. Appreciate the use and importance of using Information Technology based instructional materials and develops oneself on how to become responsible citizen and information users.
- C. Become responsive individuals in making recommendations – to increase the facility to make and justify recommendations in relation to IT architecture.

**10.0 COURSE CONTENTS****MIDTERM PERIOD**

**10.1** Class orientation; IT resources of the university

**10.2 COMPUTER SYSTEM (10 hrs)**

10.2.1 Introduction to Computers

10.2.2 Meaning, Characteristics, Capabilities and Limitations of Computers

10.2.3 Elements of Computer System/Computing Process

a. Hardware

- 1. The System Unit
- 2. Input Devices
- 3. Output Devices
- 4. Central Processing Unit
- 5. Storage Devices

b. Software

- 1. System Software
- 2. Application Software

c. Data

d. People (Personnel)

e. Procedures – The language of Computers.

10.2.4 Classifications of Computers

- a. According to Purpose
- b. According to Types of Data Handled
- c. According to Capacity
  - 1. Microcomputers
  - 2. Minicomputers
  - 3. Mainframe computers
  - 4. Supercomputers

10.1.5 History of Computing

10.1.6 Generations of Digital Computing

10.1.7 Application of Computers

- a. Uses of Computers
- b. Role of Computers in Education and in the workplace

**10.3 INFORMATION AND TECHNOLOGY (5 hrs)**

10.3.1 Meaning of Information and Technology

10.3.2 Information Technology

- a. Meaning of IT
- b. IT's Role in the Workplace
- c. Value of Information and Information Services
- d. Importance of Technology in Education
- e. Impact of Technology in our daily lives
- f. Advantages and Disadvantages of IT

10.3.3 Recent Trends in Information Science and Information Technology

10.3.4 Higher Education and Information Technology Trends.

**10.4 DIGITAL REPRESENTATION OF MULTIMEDIA (5 hrs)**

10.4.1 The Binary Number System

10.4.2 Reasons for employing binary in a computer.

- 10.4.3 The advantages and disadvantages of binary.
- 10.4.4 The binary representation of numbers, characters and program instructions. Octal and Hexadecimal forms
- 10.4.5 Conversion between decimal, binary, octal and hexadecimal integers. Binary addition.

#### **10.5 THE OPERATING SYSTEM (1 hr.)**

- 10.4.1 Operating Systems Defined
- 10.4.2 Significance of Operating Systems
- 10.4.3 Functions of the Operating System

#### **10.6 WINDOWS OS CONCEPT (10 hrs.)**

- 10.5.1 The windows Desktop
- 10.5.2 File Management and text editing
- 10.5.3 Hands-on Exercises