**UNIVERSITY OF SARGODHA**

**Institute of Social Work**

COURSE OUTLINE Fall 2020

Course Title: Computer Applications

Course Code: SOWK-6211

Credit Hours: (3+0)

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DESCRIPTION AND OBJECTIVES

The course introduces students to information and communication technologies and their application in the workplace. Objectives include basic understanding of computer software, hardware, and associated technologies. How computers can be used in the workplace, how communications systems can help boost productivity, and how the Internet technologies can influence the workplace.

INTENDED LEARNING OUTCOMES

Upon successful completion of this course, the student will:

* Get basic understanding of computer software, hardware, and associated technologies.
* Learn how computers are used in the workplace
* Learn how communications systems can help to boost productivity
* Learnhow the Internet technologies can influence the workplace.

COURSE CONTENTS

Following contents will be covered in this course

* Basic Definitions & Concepts
* Hardware: Computer Systems & Components, Storage Devices, Number Systems
* Software: Operating Systems, Programming and Application Software,
* Introduction to Programming
* Databases and Information Systems Networks
* Data Communication
* The Internet, Browsers and Search Engines
* Email Collaborative Computing and Social Networking
* E-Commerce
* IT Security and other issues

READINGS

[TB 1] Discovering Computers 2011: Digital Technology, Data and Devices by Misty E. Vermaat, Susan L. sebok

[RB 1] Computing Essentials 2017 by Timothy J. O'Leary and Linda I. O'Leary, McGraw Hill Higher Education; 26th edition

[RB 2] Computers: Understanding Technology by Fuller, Floyd; Larson, Brian: edition2015

 COURSE SCHEDULE

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| **Week**  | Topics and Readings | Books with Page No. |
| 1 | Introduction to Computers: Data and Information, Information Processing Cycle, the Components of a Computer, Advantages and Disadvantages of Using Computers. Networks and the Internet. Computer Software, Categories of Computers, Elements of an Information System, Examples of Computer Usage, Computer Applications in Society.  |  [TB- Ch 1] |
| 2 | The Internet and World Wide Web: Key Concepts of the Internet, Evolution of the Internet, The World Wide Web, E-Commerce. | [TB- Ch 2] |
| 3 | Application Software: Business Software, Graphics and Multimedia Software, Software for Home, Personal, and Educational Use, Web Applications. | [TB- Ch 4] |
| 4 | The System Unit: Processor, Data Representation, Memory, Expansion Slots and Adapter Cards, Ports and Connectors, Buses, Bays, Power Supply.  | [TB- Ch 6] |
| 5 | Input, Output and storage Devices: Introduction with brief detail major I/O and storage devices. | [TB- Ch 7] |
| 6 | Operating System: Basic Concepts of operating system, Windows installation and trouble shooting. | [TB- Ch 9] |
| 7 | Use of Microsoft Office tools (Word, Power Point, Excel) or other similar tools depending on the operating system. | Practical Work |
| 8 | Mid-term Examination |  |
| 9 | What are Databases, Introduction to Big data. | [TB- Ch 11] |
| 10 | Use of multimedia devices | [TB- Ch 7] |
| 11 | Use of Social media and ethics, introduction about cyber law. | [TB- Ch 5] |
| 12 | Introduction to Open source software. | [TB- Ch 4] |
| 13 | Introduction to Networks, wireless networks, cloud computing. | [TB- Ch 10] |
| 14 | Use of software(s) specific to field of study of the students | Practical Work |
| 15 | Other IT devices/systems specific to field of study of the students | Depend on Teacher |
| 16 | Lab work should be carried out to develop students’ Computer Skills, Operating Systems Installation and Utility Software Skills, E-Mail Skills, Word Processing Skills, Spreadsheet Skills, Electronic Presentation Skills, Web Surfing Skills. | Practical Work |

RESEARCH PROJECT /PRACTICALS/LABS/ASSIGNMENTS

For the assessment of course objectives, give various course assignments and project during the semester and analyze their score at the end of semester. Also perform Lab session (1 hour/week) to improve the students with the basic computer using skills.

**Assignments:**

Assignments can be given from the following contents

* Handouts provided by the class instructor
* Discussion during lectures
* Selected questions out of your textbook.

**Projects:**

* These consist of activities for directly applying and integrating the concepts presented in the course.
* In some cases, student will be given a case scenario to use in the development of the project in Microsoft tools.
* These projects will require using critical thinking skills, logical analysis, and creativity.
* They may be individual or group projects.

ASSESSMENT CRITERIA

**Sessional Marks: 20 Marks**

* Quiz 5 Marks
* Assignment 10 Marks
* Class Participation 5 Marks

**Mid Semester Exam: 30 Marks**

**Final Semester Exam: 50 Marks**