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**Department of Mathematics**

**College of Basic Education**

**Salahaddin University-Erbil**

**Subject: Computer Skills, Scientific colleges**

**Course Book – 1st Year**

**Lecturer's name: Azhi Aziz Salih**

**Academic Year: 2021-2022**

**Course Book**

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| **1. Course name** | **Computer Skills** | |
| **2. Lecturer in charge** | **Azhi Aziz Salih** | |
| **3. Department/ College** | **Mathematics department** | |
| **4. Contact** | **e-mail: azhi.salih@su.edu.krd**  **Tel: (optional)** | |
| **5. Time (in hours) per week** | **Theory: 1**  **Practical: 2** | |
| **6. Office hours** | **As per lectures time table** | |
| **7. Course code** |  | |
| **8. Teacher's academic profile** | Assistant Lecturer with M-Tech (IT) Degree in Information Technology, database and network Design and coding. Instructor in cisco network academy, I have been teaching several courses, Java ,Object oriented programming, Computer Architecture (8086) , data structure , database information system , Advance database, Data Security , data communication and computer network. | |
| **9. Keywords** | **Excel, Word, Power point, programing, Software** | |
| **10. Course overview:**  Computers and computerized devices have become an integral part of society. In fact, many people use them in [schools](https://www.mapcon.com/us-en/educational-facility-maintenance-software), homes, and the workplace. It has become imperative to know basic computer skills to survive in the world. In college, many students acquire basic computer skills that equip them with the knowledge to operate a computer, such as sending emails, conducting Internet research, creating word processing documents and creating presentations. Word processing programs offer a variety of features that may be useful to students, depending on the course. Students also learn other programs, such as PowerPoint, to create slides that will accompany oral presentations and speeches. Lecturers offer basic computer literacy for students to gain familiarity with hardware and software functionality. Students can also find tutorials with step-by-step instructions on learning computer basics. The days of textbook only research and handwritten submissions are over. With the advent of web-enhanced courses, student must possess basic computer skills in order to execute commands in basic computer applications. These basic computer skills help students excel in college and eventually carry over with them into the workforce. Exercising and advancing computer literacy skills can also lead to greater opportunities.  Students will learn how to create and manage Word documents, organize information in tables, perform calculations on data, create graphs and charts, organize email Inbox, and manage email automatically.  Today, employers across most industries and fields expect candidates to have Microsoft Office skills, as it is the most universally utilized software in business. Having these skills, even at a basic level, will help with job prospects and increase the chance to be considered for most roles. | | |
| **11. Course objective:**   * Give student's in-depth understanding of why computers are essential components in business, education and society. * Introduce the fundamentals of computing devices and reinforce computer vocabulary, particularly with respect to personal use of computer hardware and software, the Internet, networking and mobile computing. * Provide hands-on use of Microsoft Office applications Word, Excel, Access and PowerPoint. Completion of the assignments will result in MS Office applications knowledge and skills. * Provide foundational or “computer literacy” curriculum that prepares students for life-long learning of computer concepts and skills * Recognize when to use each of the Microsoft Office programs to create professional and academic documents. * Use Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards. * Learning and studying software or programing as per department requirements. | | |
| **12. Student's obligation**   * Student should attend lectures (theory part) and practicing in computer laboratories. * Student should attend exams during the course. * Home works * Quizzes * Team work projects | | |
| **13. Forms of teaching**  To achieve the objectives of the course, the following methods and techniques will be followed during teaching process:   1. Lecture notes will be handled to the students at the beginning of each part to facilitate easier understanding of books and also to read references. 2. Power point presentation for parts of the course as required. 3. White board will be used to explain program commands, draw sketches and solve problems in the lab. 4. Computer labs for practicing the theoretical parts. | | |
| **14. Assessment scheme**  The student must provide the following quizzes and exams during the course:   |  |  |  | | --- | --- | --- | | Effort (50 %) | | Total | | Lab Practices\* | Mid-term Exam (Theoretical) | Theoretical | |  | | **35%** | **15%** | **50%** | | **100%** |   \* Quizzes and homework's are performed at the lab practices during the course.‌ | | |
| **15. Student learning outcome:**  Students are expected at the end of the year will have the abilities to:   * Identify the hardware components of a personal computer system * List major input and output devices * Explain the functions of processing, memory, storage and communication devices * Realize the significance of each hardware component in processing information * Identify general trends in the development of the different hardware components of a computer * General student knowledge (typing ability, excel, PowerPoint, data analysis, etc.) * Introduction to internet, e-mails, etc. * Learning scientific software or computer programing depending on the department requirements. * Application of programs in computer laboratories. | | |
| **16. Course Reading List and References‌:**  Students should read the lecture notes and the following references:   * **Microsoft Office 2016 Step by Step,** **Joan Lambert and Curtis Frye, Microsoft Press,2015.** * **Microsoft Office Home and Student 2013 Step by Step, Beth Melton, Mark Dodge, Echo Swinford, Ben Schorr, Microsoft Press, 2013** * **Other computer text books, computer magazines and internet.** | | |
| **17. The Topics:** | | **Lecturer's name** |
| * Introduction to C++ , Setting up C++ * Development Environment * C++ Program Structure , Variable Declaration and initialization * Practical Setting up C++ * Development Environment * C++ Data Types , * Basic Input/output , Operators in C++(Practice) * Loops (For ,While ,Do-While ) * Loops (Practice) * Decision Making in C++(Practice) , * If and else , Switch statement in C++ * If and else , Switch statement in C++(Practice) * Arrays in C++ * One Dimensional Array * Practical Arrays in C++ , One Dimensional Array * Arrays in C++ * Two Dimensional Array * Arrays in C++ * Two Dimensional Array * Strings in C++ * Strings in C++(Practice) * Functions in C++ * Functions in C++(Practice) * Different types of Functions in C++ (Continue…) * Different types of Functions in C++(Practice) | |  |
| **18. Practical Topics (If there is any)** | |  |
| Computer skills for first stage one hour theory and two hours practice per week, means each subject after theory the student will attend the computer lab for practice, also home works or team works they will do in home. | | Lecturer's name ------  2 hrs per week  Date ----- |
| **19. Examinations:**   1. ***Compositional:***   In this type of exam, the questions usually start with Explain how, what are the reasons for…? Why…? How….?  Example  Q\ What are the benefits of using online storage? Name four Internet services that provide online storage?  **Answer\ One of the biggest benefits of online storage is the ability to access data from anywhere. Online data storage also provides the ability to share files among different users. Examples: Sky drive Drop box** **Google drive I cloud**   1. ***True or false type of exams:***   In this type of exam, a short sentence about a specific subject will be provided, and then students will comment on the trueness or falseness of this particular sentence.  Example  Q\ State whether the following statements are true or false:   1. Texts, Pixels and Sounds are represented by Bits in computer memory. 2. Secondary memory stores data temporary.   **Answer\ 1. True 2. False**     1. ***Multiple choices:***   In this type of exam there will be a number of phrases next or below a statement, students will match the correct phrase.  Example:  Q\ Choose the correct answer:   1. One Megabyte equals to:   **A. 1000 Kbyte B. 1024 Kbyte C. 1000 Kbit D. 1024 Kbit**   1. Software is stored on storage devices in a special container called.   **A. Icon B. File C. DVD D. CD**   1. Which extension is used for PowerPoint presentations?   **A. doc B. dwg C. wav D. ppt** | | |
| **20. Extra notes:**   * Mobile phones should be turned off during the lecture time. * Students should come to the lecture on time, if you are late, ask for permission and come in quietly. * Class attending without lecture notes is not allowed. * Try not to leave the class without a good reason, if you need it, leave quietly after permission. * The Final Exam will include all topics of the lectures. * Students should come to the lab on time. Late students will not be admitted to the lab without an acceptable reason, and they will get a zero grade for the missing lab. * Leaving the group and wandering is not allowed. * Using memory devices (USB, CD, DVD ….) with the lab computers is not allowed. * Students are responsible for any loss or damage of devices. * Damage to devices must be reported immediately | | |
| **21. Peer review** | | |