Republic of Yemen

Ministry of Higher Education & Scientific Research

21 SEPTEMBER UNIVERSITY of MEDICALS & APPLIEED

SCIENCES

Faculty of Laboratory medicine..

Course Specification of Computer Skill
Course No. (05.03.315)

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Prepared by:	Reviewed by:	Head of the Department:	Vice Dean for Quality affairs	Dean of College:
Dr.abulrahman obaid			Dr\Gamil Taher Abdul Mughni	Associate Prof. Dr. Ebtesam Al-Zabedi

I. Course Identification and General Information:						
1	**Course Title:**	Computer Skill				
2	**Course Code & Number:**	05.03.315				
3	**Credit Hours:**	**Theory Hours**				
		Lecture	**Exercise**	Practical	**Credit Hours**	
		2	0	2	3	
4	**Study Level/ Semester at which this Course is offered:**	first Level / 2st Semester				
5	**Pre –Requisite (if any):**	English				
6	**Co –Requisite (if any):**	None				
7	**Program (s) in which the Course is Offered:**	Faculty of Laboratory medicine				
8	**Language of Teaching the Course:**	English				
9	**Study System:**	semester				
10	**Mode of Delivery:**	Regular				
11	**Location of Teaching the Course:**	University Campus				
12	**Prepared by:**	Dr.abulrahman obaid				
13	**Date of Approval:**	2023				

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II. Course Description:

This course provides an introduction to computer skills and applications, including basic computer operations, file management, word processing, spreadsheets, presentation software, and internet usage. It covers topics such as keyboarding, software installation, troubleshooting, and security.

III. Alignment Course Intended Learning Outcomes with program outcomes

III. Course Intended Learning Outcomes (CILOs)		**Referenced PILOs**
A. Knowledge and Understanding: ***Upon successful completion of the course, students will be able to:***		
a1	**Demonstrate** knowledge of basic computer operations, file management, and software installation	**A1**
B. Intellectual Skills: ***Upon successful completion of the course, students will be able to:***		
b1	**Use** word processing, spreadsheet, and presentation software to create and edit documents, spreadsheets, and presentations.	**B2**
C. Professional and Practical Skills: ***Upon successful completion of the course, students will be able to:***		
c1	**Apply** security measures to protect computer systems and data.	**C4**
D. Transferable Skills: ***Upon successful completion of the course, students will be able to:***		
d1	**Communicate** effectively about computer technology concepts, principles, and applications.	**D1**

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IV. Alignment Course Intended Learning Outcomes with Teaching Strategies and Assessment methods :			
(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
a1	**Demonstrate** knowledge of basic computer operations, file management, and software installation	Lectures Practical session	Exam Practical Exams
(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
b1	**Prefrom** word processing, spreadsheet, and presentation software to create and edit documents, spreadsheets, and presentations.	Lectures	Exam
C Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
c1	**Apply** security measures to protect computer systems and data.	Practical session	Practical Exams
(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:			
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies
d1	Communicate effectively about computer technology concepts, principles, and applications.	Practical session	Seminars

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V. Course Content:

A – Theoretical Aspect:

NO.	Units/Topics List	Sub Topics List	Number of Weeks	contact hours	Learning Outcomes (CILOs)
1	Basic Computer Concepts	Digital and Analog Computers. Characteristics of Computer. History of Computer. Generations of Computer. Classification of Computer. The Computer System. Application of Computers.	1	2	a1, d1
2	The Computer System Hardware	Central Processing Unit. Memory Unit. Microprocessor. Interconnecting the Units of a Computer. Performance of a Computer. Inside a Computer Cabinet.	1	2	b1
3	Computer Memory.	Memory Representation. Memory Hierarchy. CPU Registers. Cache Memory. Primary Memory. Secondary Memory. Access Types of Storage Devices Magnetic Tape Magnetic Disk Optical Disk. Magneto-Optical Disk. Using the Computer Memory.	1	2	a1
4	Input and Output Devices	Input-Output Unit. Input Devices. Human Data Entry Devices Source Data Entry Devices. Output Devices.	1	2	a1, d1

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		□ I/O Port. □ Working of I/O System.			
5	Data Organization and Representation	▯ Number System. ▯ Conversion from Decimal to Binary, Octal, Hexadecimal. ▯ Conversion of Binary, Octal, Hexadecimal to Decimal. ▯ Conversion of Binary to Octal, Hexadecimal. ▯ Conversion of Octal, Hexadecimal to Binary. ▯ Binary Arithmetic. Signed and Unsigned Numbers. ▯ Binary Data Representation. ▯ Binary Coding Schemes	1	2	d1
7	MED TERM		1	2	a1,b1, d1
8	Operating System Basics.	▯ Objectives of Operating System Types of OS. ▯ Functions of OS. ▯ Process Management. ▯ Memory Management. ▯ File Management. ▯ Device Management. ▯ Protection and Security. ▯ User Interface. ▯ Examples of Operating Systems	1	2	,b1
9	Data Communicatio n and Computer Network.	▯ Importance of Networking. ▯ Data Transmission Media. ▯ Data Transmission Across Media. ▯ Data Transmission and Data Networking. ▯ Computer Network Topologies.	1	2	b1,d1

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10	Introduction of MATLABPR OGRAMS. a1,a2,b1,b2, d1,d2	MATLAB ScreenMenus – Toolbars – Computing with MATLAB – Script Files and the Editor/Debugger – MATLAB help System. Arrays, Matrices and Matrix Operations. User-Defined Functions. Graphing Functions: XY Plots – Sub-Plots – XYZ plots- Mesh and surf plots	1	2	a1,d1
11	FINAL THEORTICAL		1	2	a1,b1,d1
			11	22	

B - Practical Aspect: (if any)				
Order	**Tasks/ Experiments**	**Number of Weeks**	**contact hours**	**Learning Outcomes**
1	**Orientation (Course Syllabus and regulations)**	**1**	**2**	
2	**Hardware Components of the Computer Basics Hardware** -The primary hardware component for computer assembly, CPU, Motherboard, RAM, Storage Drives, Adapter Cards, Graphics Adapter, Case, Power Supply, Cooling Systems, Input Devices, Output Devices Choosing the Parts for computer assembly - The criteria for choosing hardware parts based in user requirement	1	**2**	c1
3	**Operating system** Format, disk partition, BIOS setup, BOOT configuration and Installing Windows 10 Installing Linux Ubuntu 16.04 Features of Windows 10	1	**2**	c1

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	The Desktop Structure of Windows Windows Explorer The Search The Recycle Bin Configuring the Screen Configuring the Mouse Adding or Removing Programs Adding New Hardware System Tools The Scandisk Management of disks, folders, and files Print management Windows 7 Help			
4	**MS word** Start word, create a new document, save, Open and Close the document, change page display modes, Use the page view magnification, Modify the toolbar display, Document Exchange, Insert Data, Undo command, Insert a new paragraph, Insert symbols, Page break, Select data, Copy, Move, Delete Search, Replace, Use Italics , bold, Underlining, colors text, Use alignment and justification , change line spacing , Add borders to a document, Use lists, Insert page numbering, Headers and Footers, Spelling & Grammar, Document setup, Preview and printing document, Create tables, change cell attribute, formatting , cell size, color, etc, add auto shapes and change line and fill colors, move and resize graphics, footnotes and endnotes	1	**2**	c1
5	**MS – power point** Getting started with Power point , power point window, create a title slide, change the text font and size, resize or move the text boxes, create a table slide, create an organization chart, saving a	1	**2**	c1

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	presentation , closing the current presentation, opening an existing presentation, page setup and line spacing, adding new slides, duplicate a slide, adding slides form another presentation, delete a slide ,moving between slides, design a templates, changing background , slide numbering, animation effects, sounds and video, change slide layout , slides view, re-arranging slides, slide transitions , on screen assistance, speaker notes, printing presentation.			
6	**Med exam**	1	**2**	
7	Starting Microsoft excel application, open an existing workbook, create a new workbook, save a new work book, save an existing workbook, preview a workbook, print a workbook or a worksheet, close the workbook and exit the excel application, Insert data, select data, copy, move, delete, search and replace, sort data, arithmetic and logical formulas, working with functions, renaming worksheet tabs, Rows and columns, format cells, numbers, format cells –text, format cells, ranges, produce different types of charts from excel figures to analyze data.	1	**2**	a1,c1
	MATLAB Description, Desktop Basics, Matrices and Arrays, Array Indexing, Workspace Variables, Character Strings, Calling Functions, 2-D and 3-D Plots, Programming and Scripts, Network and Internet Connection Start Network Connections Create a New Connection Manage a Network Connection Network Setup Windows Firewall Help and Documentation	1	**2**	b1,c1
8	**Network and Internet Connection** Start Network Connections	**1**	**2**	c1

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	Create a New Connection Manage a Network Connection Network Setup Windows Firewall Sharing of Files Wireless Network Setup Set Up a Wired Network Automatic Wireless Network Connections Set up Internet Properties—Internet Options Choose an Internet Connection			
9	**Security** Computer Security basics, Malware types and how to avoid them, antivirus software, removable devices security software	**1**	**2**	c1
10	**Final exam**	**1**	**2**	a1,b1,c1
Number of Weeks /and Units Per Semester		**10**	**20**	

V. Teaching Strategies of the Course:	
1-	Lectures
2-	Practical session
3-	Seminars

VI. Assessment Methods of the Course:	
No	**Assignment**
1	Written Exams (Short Essays) and Quizzes
2	Multiple Choice Questions (MCQ)
3	Practical Exams (PE)

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VII. Assignments:

No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes
1	**Midterm Exam**	8	20	20%	a1,,b1, ,c1,d1
2	**Practical exam**	12	30	30%	a1, ,b1,c1,d1
3	**Final Exam**	16	50	50%	a1,b1,c1,d1
	Total	100		100%	

X. Learning Resources:

1- Required Textbook(s)

1-	Anita Goel – 2010 - Computer Fundamentals – 1 - India - Pearson Educ.
2-	Gary B. Shelly – 2012 - Discovering Computers 2012: Introductory – 12 Edition - Course Technology, Inc.

2- Essential References.

1-	Palm III, 2005, Introduction to MATLAB 7 for Engineers, McGraw-Hill International -1 Edition.
2-	Electronics and Circuit Analysis using MATLAB , 1999,Ed. John Okyere Attia - Boca -2 Raton : CRC Press LLC

3- Electronic Materials and Web Sites *etc*.

1-	http://ece.goto-school.com
2-	http://www.mathworks.com

X. Course Policies: (Based on the Uniform Students' By law .

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1	**Class Attendance:** Class Attendance is mandatory. A student is considered absent and shall be banned from taking the final exam if his/her absence exceeds 25% of total classes.
2	**Tardiness:** A student will be considered late if he/she is not in class after 10 minutes of the start time of class.
3	**Exam Attendance/Punctuality:** No student shall be allowed to the exam hall after 30 minutes of the start time, and shall not leave the hall before half of the exam time has passed.
4	**Assignments & Projects:** Assignments and projects must be submitted on time. Students who delay their assignments or projects shall lose the mark allocated for the same.
5	**Cheating:** Cheating is an act of fraud that results in the cancelation of the student's exam or assignment. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply.
6	**Forgery and Impersonation:** Forgery/Impersonation is an act of fraud that results in the cancelation of the student's exam, assignment or project. If it takes place in a final exam, the penalties stipulated for in the Uniform Students' Bylaw (2007) shall apply**.**
7	**Other policies:** The University official regulations in force will be strictly observed and students shall comply with all rules and regulations of the examination set by the Department, Faculty and University Administration.