University of Halabja

College of Science

Department of Computer Science

SUBJECT OUTLINE

Academic Year: 2023-2024

1. Information on the Programme	
Higher Education Institution	**University of Halabja**
College	**College of Science**
Department	**Computer Science**
Discipline Name	**Principle of Computer**
Field of Study	**Computer Organization and Architecture**
Cycle of study[1]	**First Cycle**
Form of Education	**Full time**

2. Information on the Discipline			
Discipline Code	**1010104**	**ECTS**	**4**
Language	**English**	**Assessment type**[2]	**Exam**
Lecturer	**Mohammed S. Hadi**	**Home page**	https://moodle.uoh.edu.iq/
E-mail	**mohammed.hadi@uoh.edu.iq**	**Tel**	**+964(0)7503559685**
Study Year	**1**	**Semester**	**1st**
Discipline Status			
Content[3]	**FD**	**Mandatory**[4]	**MD**

3. Prerequisites (if applicable)	
Curriculum-related	- Basic knowledge and skills of technology. - The good level in the field of Mathematics and English language. - Operating System (Microsoft Windows 10) and Application programs especially (Microsoft office 21) will be used as the primary and you will be expected to master it in the first few weeks. - Before you come to class, you must install all of them.
Skills-related	Computer Applications

	Discipline Name	**Principle of Computer**			**ECTS:**	**4.00**									
	4. Workload (WL)		**108**	**Total Contact Hours:**		**52**	**Total Self Study Hours:**			**56**					
	No. of Weeks	**1st Week**	**2nd Week**	**3rd Week**	**4th Week**	**5th Week**	**6th Week**	**7th Week**	**8th Week**	**9th Week**	**10th Week**	**11th Week**	**12th Week**	**13th Week**	**14th and 15th Week (Final Exam)**	**Total**
Contact Hours	**Theoritical**	2	2	2	2	2	2	2	2	2	2	2	2	2		26
	Practical	2	2	2	2	2	2	2	2	2	2	2	2	2		26
Self Study	**Curriculum (articles+media+net)**	3														3
	Curriculum (Books)	2														2
	Homeworks				2		2									4
	Quizzes					3				3						6
	Assignment											8				8
	Report								5							5
	Presentation											6				6
	Midterm Exam (Thr. + Pr.)							8								8
	Final Exam (Thr. + Pr.)														14	14

5. Conditions (if applicable)	
For the Theoretical and Practical/Lab Lectures	• Using whiteboard, markers and Data show. • Students must bring pen (or pencil) and paper (or Notebook). • Mobile phones must silent during the class time. • Raise hand for questions and great needs. • Commitment to time. • Using the computers in computer lab. • Students can bring their laptops in lab (Recommended). • Students must shut down all computers in lab before exiting. • Students must attend 90% of lectures.

6. Cumulated specific competences	
Professional competencies	Technology Awareness, Adaptability
Transversal competences	Teamwork and Collaboration, Communication Skills, Analytical Thinking, Problem Solving.

7. Discipline objectives (based on the cumulated specific competences)	
General objective	Help students develop an understanding and critical thinking skills so they can decide on their desired specialty upon graduating from the university
Specific objectives (Learning Outcomes) Bloom's Taxonomy based	● **Remembering:** computer software and hardware components and their functions. ● **Understanding:** the features of software and hardware components are complement each other for optimal performance ● **Appling:** - The students' ability to use the software based on their requirements. - Ability to replace and modify hardware components. ● **Analyzing** the computer science principles in a manner that allows students to gradually identify and develop their skills in specific fields. ● **Evaluate** Comparing the features or characteristics of computers to determine which one is suitable for specific tasks based on their performance. ● **Create** and construct projects and presentations that explain the evolution of computing technology over time.

8. Content		
Number of Weeks	**Teaching (Theoretical Works)**	**Observation**
First week	General Information	2 hours
Second week	Introduction to Computer Fundamentals	2 hours
Third week	Computer System (Input & Output Units)	2 hours
Fourth week	Computer System (Memory & Processing Units)	2 hours
Fifth week	Computer System (Software) + Quiz	2 hours
Sixth week	Computer Number System	2 hours
Seventh week	**Midterm Exam**	2 hours
Eighth week	Computer Networks & Communication	2 hours
Ninth week	Cloud Computing	2 hours
Tenth week	Cyber Security	2 hours
Eleventh week	**Assignment + Presentation**	2 hours
Twelfth week	Computer Database	2 hours
Thirteenth week	Artificial Intelligence	2 hours
14th and 15th weeks	**Final Exam**	

Number of Weeks	Teaching (Practical Works)	Observation
First week	General Information	2 hours
Second week	Microsoft Windows instructions	2 hours
Third week	Microsoft Windows Installation	2 hours
Fourth week	Word Processing with Microsoft office Word	2 hours
Fifth week	Word Processing with Microsoft office Word	2 hours
Sixth week	Presentation with Microsoft office Power Point	2 hours
Seventh week	**Midterm Exam**	2 hours
Eighth week	Data Analysis with Microsoft office Excel	2 hours
Ninth week	Google Platforms + Quiz	2 hours
Tenth week	Computer Security	2 hours
Eleventh week	**Assignment + Presentation**	2 hours
Twelfth week	Data Management with Microsoft office Access	2 hours
Thirteenth week	Implementation of Artificial Intelligence	2 hours
14^{th} and 15^{th} weeks	**Final Exam**	

9. References

For Theoretical Lectures

1- *William Stallings, "Computer Organization and Architecture Designing for Performance 10th Edition", Pearson Education , 2016.*

2- *J. Glenn Brookshear, and Dennis Brylow, "Computer Science- An Overview (12th Global Edition)", Pearson Education, 2015.*

3- *Scott, J Clark, "But How Do It Know," The Basic Principles of Computers for Everyone, 2009.*

4- You can get more informations about "*Computer Fundamentals"* via this link *"https://www.tutorialspoint.com/computer_fundamentals/index.htm". "https://www.javatpoint.com/computer-fundamentals-tutorial"*

For Practical Lectures

1- *Click here to visit the "Customguide" website to find the quick references of Microsoft Windows 10.*

2- *Click here to visit the "Customguide" website to find the quick references of Microsoft Office applications including (Word 21, Excel 21, Powerpoint 21, Access 21).*

10. Corroborating the Discipline content with the expectations of the epistemic community representatives, of the professional associations and of the relevant employers in the corresponding field.

1. **Lecturer**
2. **Course Trainer**
3. **Review Researcher**

11. Assessment			
Type of activity	**Assessment criteria**	**Assessment type**	**Final grade Percentage**
Activity during semester	**Oral Exam/ Writing Exam and Practical**	**Class Activity**	**3%**
		Quiz	**4%**
		Homework	**4%**
		Report	**4%**
		Assignment	**5%**
		Presentation	**5%**
Theoretical	**Written Exam**	**Midterm Exam**	**15%**
Practical/Laboratory	**Practical Exam**	**Midterm Exam**	**10%**
Theoretical	**Written Exam**	**Final Exam**	**25%**
Practical/Laboratory	**Practical Exam**	**Final Exam**	**25%**
Grade Range: 0 to 100			
Minimum Pass Mark: 50			

Notes:

1 Cycle of studies - choose one of the three options: Bachelor «1», Master «2», Ph.D. «3»

2 (Exam: oral examination, written exam), and (Continous Evaluation(CE), portfolio).

3 Discipline status (content) - for the Bachelor level, choose one of the options: FD (fundamental (General) Discipline), PF (Preparatory Discipline in the Field), SD (Specialty Discipline), CD (Complementary Discipline), DU (Discipline based on the university's options).

4 Discipline status (compulsoriness) - choose one of the options:

- MD (Mandatory Discipline),
- OD (optional Discipline),
- ED (Elective (Facultative) Discipline).

5 ECTS (European Credit Transfer and Accumulation System), 1 ECTS = 27 hours workload; ECTS=WL/27, The first week is registration and introduction to the course.