MODULE DESCRIPTOR FORM

Module Information					
Module Title	SYSTEM ADMINISTRATION			**Module Delivery**	
Module Type	CORE			**Lecture ✓** **Practical ✓**	
Module Code	IT1204				
ECTS Credits	7				
SWL (hr/sem)	175				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Information technology		**College**	College of Sciences	
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Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	PhD	
Module Tutor	Asst. Lecturer Ali Abdulhussein Ibrahim		**e-mail**	ali.abdulhussein19@uowa.edu.iq	
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Review Committee Approval	2024-1-20		**Version Number**	1	

Relation With Other Modules			
Prerequisite module	None	**Semester**	None
Co-requisites module	None	**Semester**	None

Department Head Approval

Dean of the College Approval

Module Aims, Learning Outcomes and Indicative Contents	
Module Aims	1. To provide a comprehensive understanding of command-line interfaces, programming languages, open-source software and software licenses, data backup, and data encryption. 2. To differentiate and compare various elements within each topic, such as CLI types, elements of programming languages, different software licenses, backup methods, and encryption types. 3. To understand and evaluate the role and importance of these elements in the field of computer science and daily computing.
Module Learning Outcomes	1. Understand and articulate the concept of command-line interfaces, their types, and their comparison with graphical user interfaces. 2. Understand the basic elements of programming languages, including syntax, type systems, standard libraries, specifications, and implementations. 3. Understand the concept of open-source software and be able to distinguish between open-source and proprietary software licensing models. 4. Comprehend the importance of data backup and different backup methods. 5. Understand the fundamental principles of data encryption, the different types, and their application in operating systems and third-party programs.
Indicative Contents	1. Command-line interfaces: Definition, types, comparison with GUI, shell CLI. 2. Programming languages: Basic elements, syntax, type systems, standard libraries, specifications, and implementations. 3. Open-source software and software licenses: Definition of open-source software, comparison of open-source licenses, proprietary software licensing models, software cracking and piracy. 4. Data backup: Importance of data backup, data backup concepts, backup methods, backup media management. 5. Data encryption: Introduction to data encryption, importance of encryption, basics of encryption, types of data encryption on PC, OS built-in and thirdparty encryption programs.

Learning and Teaching Strategies	
Strategies	The learning and teaching strategies for studying the database subject in an IT department involve a balanced approach of theoretical understanding and practical application. Lectures, interactive discussions, and case studies provide

	the necessary theoretical foundation. Practical exercises, group work, and projects enable hands-on experience with database management systems. Workshops, demos, and industry examples offer real-world insights. Online resources, assessments, and feedback aid in reinforcing learning. Virtual labs and continuous learning emphasize practical skills development and staying updated with industry trends. These strategies ensure a comprehensive understanding of databases and their relevance in the IT field.

Student Workload (SWL)			
Structured SWL (h/sem)	60	**Structured SWL (h/w)**	4
Unstructured SWL (h/sem)	112	**Unstructured SWL (h/w)**	7.5
Total SWL (h/sem)	172 + 3 final = 175		

Module Evaluation

		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	4% (8)	3,10	1,2,4
	Lab	4	5% (20)	3,5,7,10	1,2,3,4
	Project	1	4% (4)	13	All outcome
	Homework	4	2% (8)	6,11	All outcome
Summative assessment	**Midterm Exam**	2 h	10% (10)	7	
	Final Exam	3 h	50% (50)	15	
Total assessment			100% (100)		

Delivery Plan (Weekly Syllabus)	
	Material Covered
Week 1	Introduction, types of CLI, operating system command-line interfaces, application command-line interfaces.
Week 2	Comparison between CLI and GUI, shell CLI.
Week 3	Introduction to programming languages, elements of programming languages, syntax.
Week 4	Type systems, standard library.
Week 5	Specification and implementation in programming languages.
Week 6	Introduction to open-source software, common open-source licenses.
Week 7	Introduction to common open-source licenses.
Week 8	Proprietary software licensing models, software cracking and piracy.
Week 9	Introduction to data backup, data backup concepts, backup methods.
Week 10	More on backup types
Week 11	Backup media management. Backup media management.
Week 12	Introduction to encryption, the importance of encryption, basics of encryption.
Week 13	Introduction to encryption, the importance of encryption, basics of encryption.
Week 14	Types of data encryption on PC, OS built-in encryption programs.
Week 15	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus)	
weeks	**Material Covered**
Week 1	Familiarize with the Command Prompt and basic CLI commands such as dir, cd, copy, del, move.
Week 2	Practice creating, navigating, renaming, and deleting directories and files using CLI.
Week 3	Learn advanced file operations like finding files, comparing files, and using wildcards.
Week 4	Understand the concept of input and output redirection, learn to use pipes to combine commands.
Week 5	Introduction to batch files, create simple batch scripts.
Week 6	Learn to use variables in batch programming, receive input from users.
Week 7	Understand and implement if-else logic in batch programming.
Week 8	Understand and implement loop structures such as for and while loops in batch programming.
Week 9	Learn to create and use functions in batch programming.
Week 10	Understand error handling and exception management in batch programming.
Week 11	Write advanced batch scripts combining learned elements
Week 12	Learn how to automate repetitive tasks using batch scripts.
Week 13	Understand and use CLI commands for network operations such as ping, ipconfig, and netstat.
Week14	Learn to create batch scripts for network operations.
Week 15	Finalize and present a self-created project utilizing learned skills, review key learning points.

Learning and Teaching Resources		
	Text	**Available in the Library?**
Required Texts	"Computer Organization and Architecture" by William Stallings	no
Recommended Texts		
Websites	https://www.tutorialspoint.com/basics_of_computer_science/index.htm	

GRADING SCHEME				
Group	**Grade**	**Mark**	**Marks (%)**	**Definition**
Success Group (50 - 100)	**A -** Excellent	Excellent	90 - 100	Outstanding Performance
	B - Very Good	Very Good	80 - 89	Above average with some errors
	C - Good	Good	70 - 79	Sound work with notable errors
	D - Satisfactory	Fair / Average	60 - 69	Fair but with major shortcomings
	E - Sufficient	Pass / Acceptable	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	Fail (Pending)	(45-49)	More work required but credit awarded
	F – Fail	Fail	(0-44)	Considerable amount of work required

Note:

Note: Marks Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above