MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Object Oriented Programming**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	CSITCIS201				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	2		**Semester of Delivery**	3	
Administering Department	CIS		**College**	CSIT	
Module Leader	Raidah S. Khudeyer		**e-mail**	raidah.khudayer@uobasrah.edu.iq	
Module Leader's Acad. Title	Asst. Prof		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	01/06/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CSIT0106 Computer Programming II	**Semester**	2
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes7 and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Introduce the concepts of object-oriented programming in a higher-level programming language, such Java 2. Analyze a problem statement to design a model of objects necessary to create software architecture. 3. Gain skills in designing, and programming software for reuse of code. 4. Establish development methods in object-oriented programming to qualify students for teaching the language in other settings. 5.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Identify what mean of object-oriented programming and structural programming. 2. Learn the basic of java programming language: structure, data type, input and output statement. 3. Identify on control statements and define arrays and how to access to elements 4. Identify on how to write method and call it in java. 5. Understand and practical mastery of object-oriented concepts such as classes, objects. 6. Identify on access modifies 7. Identify on data abstraction, methods overriding, method overloading. 8. Understand inheritance concept, types and how implements of it. 9. Understanding polymorphism concept, types. 10. Identify on abstract class and interface.
Indicative Contents المحتويات الإرشادية	• Introduction to OOP • java basics • Classes, objects • constructors Strings • Inheritance concept • this and supper • overloading and overriding • Access modifiers • Polymorphism concept • Abstraction concepts • Encapsulation concept • Abstract class and interface

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The main strategy that will be adopted in this module through a series of lectures the theoretical underpinnings of meaning of object oriented programming language (such as java) and it concepts. This will be achieved through of theoretical lectures in classes and projects in lab, there many assessment that increase the activities and understanding of students: 1. There are a number of quizzes that assess the student's competency in end of each topic. 2. There is a midterm class test. 3. There are take-home mini-projects by a team of 2 students. 4. There are end-of-semester exam test.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	62	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	113	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	4 and 8	LO #2- #5
	Assignments	2	10% (10)	6 and 10	LO #7, #9
	Projects / Lab.	1	20% (20)	14	LO #2- #14
	Report	-	-	-	-
Summative assessment	Midterm Exam	2hr	10% (10)	8	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction: What is Object-oriented programming (OOP), what is the structure of object-oriented programming? What are the main concepts of OOP? What are the benefits of OOP? Program template for Java programs, identifier, basic data types, variables and constant.
Week 2	Class Declaration Object Creation Constructors, overloading Constructor
Week 3	Exercises in Classes
Week 4	variable types, this keyword and method overloading and type Promotion(casting)
Week 5	Inheritance, definition, types, super keyword

Week 6	Exercises in Inheritance
Week 7	Method Overriding and access modifiers
Week 8	Mid-term Exam
Week 9	Encapsulation concept
Week 10	Polymorphism , definition, types
Week 11	Exercises in polymorphism and Encapsulation
Week 12	Abstraction: abstract class
Week 13	Exercises in abstraction
Week 14	interface concept, implement and extends with interface
Week 15	Exercises in interface
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: java and NetBeans
Week 2	Lab 2: training in Arrays
Week 3	Lab 3: training with overloading method
Week 4	Lab 4: classes and object
Week 5	**1st Quiz**
Week 6	Lab 5: training in classes and constractor
Week 7	Lab 6: training with access modifier
Week 8	Lab7: training in inheritance
Week 9	Lab 8: training with super keyword

Week 10	Lab 9: training with overridden method
Week 11	**2nd Quiz**
Week 12	Lab 10: training with abstract class
Week 13	Lab 11: training with interface
Week 14	Lab 12: training in all OOP Concepts

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	A. A. Puntambekar. (2020). Object oriented programming,	No
Recommended Texts	[1] C. Thomas Wu (2010). An Introduction to Object-Oriented Programming with Java. Fifth Edition. McGraw-Hill. [2] Herbert Schildt (2007). Java: The Complete Reference. Seventh Edition. McGraw-Hill.	No
Websites	https://www.google.iq/books/edition/Object_Oriented_Programming/WKUbEAAAQBAJ?hl=en&gbpv=1&dq=object+oriented+programming+java&printsec=frontcover	

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.

Module Information
معلومات المادة الدراسية

Module Title	**Marketing**	**Module Delivery**	
Module Type	Core	☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	CSITCIS202		
ECTS Credits	5		
SWL (hr/sem)	125		
Module Level	2	**Semester of Delivery**	3
Administering Department	CIS	**College**	CSIT
Module Leader	Reem qasim	**e-mail**	reemqasim182@gmail.com
Module Leader's Acad. Title	Lecturer	**Module Leader's Qualification**	
Module Tutor	Name (if available)	**e-mail**	E-mail
Peer Reviewer Name	Name	**e-mail**	E-mail
Scientific Committee Approval Date	01/06/2023	**Version Number**	

Relation with other Modules
العلاقة مع المواد الدراسية الأخرى

Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents
أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	- Understanding modern marketing and its tools - Understand the basic principles, theories and concepts of marketing. - Understanding of marketing and the marketing mix. - Understanding the nature of consumer behavior and the factors that contribute to its formation and influence it. - Learn how to enter the world of existing markets with projects or provide new services to consumers. - Learn to apply principles and tools.

	- Learn and understand individual marketing and marketing as a career can work in practice.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	- Understand the concept and process of marketing - The ability to build and develop a marketing strategy for a product or service - Explain the characteristics of consumer behavior - The ability to segment and target the market and successfully market a new product - Deep understanding of the marketing mix from the point of view of the seller 4Ps and from the point of view of the buyer 4Cs - The importance of the brand and the value of the brand of the product and service and how to develop it
Indicative Contents المحتويات الإرشادية	1- Marketing Defined 2- Understanding the Marketplace and Customer Needs 3- Designing a Customer-Driven Marketing Strategy 4- Marketing Management Orientations 5- The Changing Nature of Customer Relationship 6- Capturing Value from Customers 7- The Changing Marketing Landscape
	1- Company-Wide Strategic Planning: Defining Marketing's Role 2- Defining a Market-Oriented Mission 3- Planning Marketing: Partnering to Build Customer Relationships 4- Marketing Strategy and the Marketing Mix 5- Developing an Integrated Marketing Mix 6- Managing the Marketing Effort
	1-The Micro environment 2-The Macro environment 3-Responding to the Marketing Environment
	1-Model of Consumer Behavior 2- Characteristics Affecting Consumer Behavior 3-Types of Buying Decision Behavior 4-The Buyer Decision Process
	1-Market Segmentation 2-Market Targeting 3- Differentiation and Positioning
	1-What Is a Product? 2- Levels of Product 3- Product and Service Decisions 4-Product Line Decisions 5-Product Mix Decisions
	1- Services Marketing 2- The Nature and Characteristics of a Service 3- Marketing Strategies for Service Firms 4- Branding Strategy: Building Strong Brands 5- Managing Brands
	1- New-Product Development Strategy

	2-The New-Product Development Process 3-Managing New-Product Development 4- Product Life-Cycle Strategies 5- Additional Product and Service Considerations
	1-What Is a Price? 2- Major Pricing Strategies 3- Other Internal and External Considerations Affecting Price Decisions
	1- Supply Chains and the Value Delivery Network 2- The Nature and Importance of Marketing Channels 3- Channel Behavior and Organization 4- Channel Design Decisions
	1- The Promotion Mix 2- Integrated Marketing Communications 3-Steps in Developing Effective Marketing Communication 4-Socially Responsible Marketing Communication
	1- Advertising 2- Setting Advertising Objectives 3- Developing Advertising Strategy 4- Public Relations
	1- Personal Selling 2- Managing the Sales Force 3- The Personal Selling Process
	1- The New Direct Marketing Model 2- Growth and Benefits of Direct Marketing 3- Customer Databases and Direct Marketing 4- Forms of Direct Marketing
	1- Competitor Analysis 2- Competitive Strategies 3- Balancing Customer and Competitor Orientations

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The strategy that will be adopted in presenting a subject will be in a positive manner and will be delivered through stories, realistic proverbs, and sequential events, with the aim of helping students in Breaking away from stereotypical and traditional thinking and progressing towards presenting creative ideas that are characterized by realistic imagination that is appropriate to an environment Local business, following the example of the experiences that took place in developed countries.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	93	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**125**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	20% (20)	4 and 12	
	Assignments	2	10% (10)	6 and 9	
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	12	
Summative assessment	**Midterm Exam**	2hr	10% (10)	8	
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي	
	Material Covered
Week 1	What Is Marketing
Week 2	Marketing Strategy

Week 3	Analyzing the Marketing Environment
Week 4	Consumer Markets and Consumer Buyer Behavior
Week 5	Customer-Driven Marketing Strategy: Creating Value for Target Customers Products, and Brands
Week 6	Products, and Brands
Week 7	Services, and Brands
Week 8	New Product Development
Week 9	Pricing
Week 10	Marketing Channels
Week 11	Communicating
Week 12	Advertising and Public Relations
Week 13	Personal Selling and Sales Promotion
Week 14	Direct and Online Marketing:
Week 15	Creating Competitive Advantage

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Philip Kotler & Gary Armstrong (2020). Principles of Marketing. 20th ed., Prentice Hall.	No
Recommended Texts	Jeff Tanner, Principles of Marketing, Baylor University Mary Raymond, Clemson University, 2010.	No
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	**A –** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D – Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Database Principles**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	CSITCIS203				
ECTS Credits	7				
SWL (hr/sem)	175				
Module Level		2	**Semester of Delivery**		3
Administering Department		CIS	**College**	CSIT	
Module Leader	Asaad A. Alhijaj		**e-mail**	asaad.abdulhassan@uobasrah.edu.iq	
Module Leader's Acad. Title		Asst. Prof	**Module Leader's Qualification**		Ms.c.
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name		Name	**e-mail**	E-mail	
Scientific Committee Approval Date		1/06/2023	**Version Number**		1.0

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CSITCIS101 Programming I, CSITCIS105 IS Principles	**Semester**	1
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Database and database users, 2. Database concepts and architecture, 3. Data modeling with ER model, 4. Relational model, language and systems, 5. Relational data model, 6. Constraints (integrity), 7. Relational algebra, 8. SQL, 9. Database design, theory and methodology, 10. Functional dependencies and normalization, 11. Relational database design algorithm, 12. Practice of database design and tuning, 13. Object-oriented and extended relational database technology, 14. Concepts for object-oriented database, standard languages, and design, extended relational databases.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Describe database concepts and architecture including query processing and optimization, concurrency controls and database recovery. 2. Identify database requirements and constraints to solve a business problem. 3. Design logical and mathematical models to organize data within a database. 4. Develop databases and execute queries using SQL. 5. Analyze functional dependencies and apply normalization rules to minimize redundancy. 6. Develop skills to work in a group project to produce quality deliverables. 7. Develop skills to structure themselves to work in a cohesive manner.
Indicative Contents المحتويات الإرشادية	• Introduction to Databases • Conceptual Database Design • Entity Relationship Diagram • Enhanced ER (EER) Model Concepts (ERD) • Relational Data Model and Relational Database Constraints • Relational Algebra • Normalization • Structured Query Language (SQL) • Advanced SQL • File Structure and Indexes • Database Performance Issues

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The module is delivered through a series of lectures. The lecture sessions discuss and explain to students the theoretical underpinnings of how Databases are designed and implemented. Assessment is divided into Five elements. First, there are a number of quizzes that assess the student's competency in specific topics on a weekly basis. There is a midterm class test. There are then two take-home assignments. Mini-Projects developed by a team of 3 to 5 students. Finally, an end-of-semester exam tests the learner's understanding of the theoretical material.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	62	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	113	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	4 and 12	LO #1- #4 and #8- #10
	Assignments	2	10% (10)	6 and 12	LO #6, and #8, #9
	Projects / Lab.	1	10% (10)	14	LO #2- #12
	Report	-	-	-	-
Summative assessment	Midterm Exam	2hr	10% (10)	9	LO #1 - #8
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction to Databases
Week 2	Conceptual Database Design
Week 3	Entity Relationship Diagram (ERD)
Week 4	Enhanced ER (EER) Model Concepts
Week 5	Relational Data Model and Relational Database Constraints
Week 6	Relational Algebra**-- 1st Assignment**
Week 7	Structured Query Language (SQL)
Week 8	Advanced SQL
Week 9	**Midterm Exam**

Week 10	Normalization
Week 11	File Structure and Indexes
Week 12	Database Performance Issues -
Week 13	**2nd Assignment**
Week 14	**Mini-project evaluation**
Week 15	Review and Exam Preparation: a review of key topics and concepts, exam practice, and preparation
Week 16	**Final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab1: Introduction to MS-Access
Week 2	Lab2: Tables Design 1
Week 3	Lab3:Tables Design 2
Week 4	Lab4:Forms
Week 5	**1st Quiz**
Week 6	Lab5:Queries1
Week 7	Lab6:Queries2
Week 8	Lab7:Reports
Week 9	**2nd Quiz**
Week 10	Lab8:Switchboard and user interface
Week 11	Lab9: Macro's and VBA
Week 12	Mini-Project Projects Evaluation

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	[1] Kroenke, David, and David J. Auer. *Database concepts*. Prentice Hall, 2013. [2] Silberschatz, Abraham, Henry F. Korth, and S. Sudarshan. *Database system concepts*. 4th edition. Hightstown: McGraw-Hill, 2002 **ISBN 0-07-255481-9**. [3] Elmasri, Ramez., Fundamentals of database systems / Ramez Elmasri, Shamkant B. Navathe.—6th ed.,p. cm. ISBN-13: 978-0-136-08620-8	No
Recommended Texts	Bagui, S. & Earp, R (2004). ***Learning SQL A Step-by-Step Guide Using Access®***. Addison-Wesley Publishing. ISBN: 0-32-111904-5.	No
Websites	http://mailman.cs.yale.edu/mailman/listinfo/db-book-list	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	**A** – Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D – Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX** – Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
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condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Web Programming 1**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**CSITCIS204**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	2		**Semester of Delivery**	3	
Administering Department	CIS		**College**	CSIT	
Module Leader	Name		**e-mail**	Email	
Module Leader's Acad. Title			**Module Leader's Qualification**		
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	12/06/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module		**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	This course help the students to understand the fundamentals of web, web server, web programming languages (HTML, CSS), and how to build a simple web page. The course focuses on the basics of the building web pages and how to design a simple website using CMS. This course will focus on the fundamentals of implementing front-end of a website and what are the basic elements in establishing a website interface. The student will be able to: 1. Understand the basic elements of the web site design process. 2. Understand the web, web servers, tools that used in implementing a website. 3. How to build a webpage and how to control the appearance of it. 4. Understand the factors that affect the website design. 5. Get more knowledge of the basic structure of the webpage and how the search engine index the pages. 6. Understand users' common characteristics that affect the website design.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. The ability to design the structure of the website. 2. Work in a team and dividing the tasks among the team members. 3. The ability to build the structure of the website semantically. 4. The ability to manipulate the appearance and control the style of the page. 5. The ability to manipulate the form entries using JavaScript. 6. Working with CMS to prepare a fast managed website.
Indicative Contents المحتويات الإرشادية	Introduction to Website Design and Technologies In this section, a brief introduction about the technologies in the field of web, websites, and protocols utilized to access websites. [2 hrs] Website Design Process and Technologies This section lists the steps of designing websites through content strategy, development, information architecture and multimedia selection. The technologies utilized in design process will be listed and explained. [4 hrs] XML, XHTML, HTML, CSS, and JavaScript Many sections will list the languages utilized in building the front-end of the website. [10 hrs]

	Planning Your website and asking the right questions In this section the tools utilized In planning the basic structure of the website will be listed as a step of planning. It is important to ask the right questions and assign the right role to each team member of the front-end development team in order to complete the project. [4 hrs] User Centered Design The main emphasized when designing a website should be user. The different categories of the users will be listed besides the general characteristics of the users. [2 hrs] Site Structure In this section, the site structure will be explained to find the effective way to build the structure. The factors affecting the site visibility will be explained besides the factors affecting the local search and search engine optimization. [4 hrs]

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The main strategy that will be adopted in delivering this module is to encourage students' participation in the exercises, while at the same time refining and expanding their critical thinking skills. This will be achieved through group project, classes, reports ,feedback, discussions, assignments, project, and interactive tutorials and by considering types of simple experiments, and exercises involving some sampling activities that are interesting to the students.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	62	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	113	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	6
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	4	10% (10)	2, 5, 8, and 12	LO#1-5
	Assignments	2	10% (10)	2 and 12	LO #1-6
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #3-5
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #5
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Website Design and Technologies
Week 2	Website Design Process Steps
Week 3	Website Design Process Technologies
Week 4	Semantic Markup and HTML 5.
Week 5	HTML Files Paths.
Week 6	CSS Rules and Calling Methods, and Order.
Week 7	**First Exam**
Week 8	Planning Your Website tools and Technologies.
Week 9	Planning Your Website- Asking the right questions.
Week 10	User Centered-Design.
Week 11	Introduction to Site Structure.
Week 12	Site Structure- SEO and Search Engine.
Week 13	Java Script and DOM Scripting.
Week 14	XML and XHTML.
Week 15	**Second Exam.**
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered in (HTML, CSS, JavaScript) (Bootstrap recommended)
Documentation	https://www.w3schools.com/html/default.asp https://www.w3schools.com/css/default.asp https://www.w3schools.com/js/default.asp **https://www.w3schools.com/bootstrap/**
Week 1	Introduction to HTML, HTML Elements, Attributes.
Week 2	HTML Text Formatting Elements, Paragraphs, Headings, Images.
Week 3	HTML Tables, Lists, File Paths, Layouts.
Week 4	HTML Form Elements, Media.
Week 5	Introduction to CSS, Selectors, Method of Calling.
Week 6	CSS Colors, Backgrounds, Borders, Margin, Paddings.
Week 7	CSS Display, Position, Overflow, Float.
Week 8	First Exam.
Week 9	CSS Nav Bar, Dropdown, Form.
Week 10	Introduction to JavaScript, Output, Statement.
Week 11	JavaScript Syntax, Variables, Operators, LET.
Week 12	JavaScript Arithmetic, Assignment, Data types.
Week 13	JavaScript Functions, Objects.
Week 14	JavaScript If, Loop, Switch.
Week 15	Second Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	1. Learning Web Design _ A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics-O'Reilly Media (2018). 2. Learning Web Design 4th Edition. 3. Web Style Guide, 4th Edition Foundations of User Experience Design.	Yes
Recommended Texts	Web Design the Complete reference.	YES
Websites	https://www.coursera.org/learn/introduction-to-web-development-with-html-css-javacript	

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Information Retrieval**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	CSITCIS205				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	2		**Semester of Delivery**	3	
Administering Department	CIS		**College**	CSIT	
Module Leader	Dr.Aliea S.Sabir		**e-mail**	aliea.sabir@uobasrah.edu.iq	
Module Leader's Acad. Title	Assist Professor		**Module Leader's Qualification**	Ph.D	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	01/06/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	**1-** Overview of the basic concept of information retrieval system **2-** Discuss How to do efficient (fast, compact) text indexing. **3-** Discuss the most important Retrieval models: Boolean, vector-space, probabilistic, and machine-learning models. **4-** Take brief details about the Evaluation and IR interface issues **5-** Discuss the Document clustering and classification.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	**1-** To learn the basic concept of information retrieval systems, the differences between Unstructured (text) vs. structured (database) data in the mid-nineties and today, and take a deep detail of the classic search model. **2-** To learn how to construct an index and What strategies can we use with limited main memory. **3-** To learn compression (in general), use compression for inverted indexes, and discuss DICTIONARY COMPRESSION and POSTINGS COMPRESSION in detail. **4-** To learn what is Wild-card queries, and Query processing. **5-** To learn the Ranked retrieval model, Scoring documents, Term frequency, Collection statistics, Weighting schemes, and Vector space scoring **6-** To learn the most important Evaluation metrics used in information retrieval. **7-** To learn the path from IR to text classification.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. • Introduction - Basic Assumptions of Information Retrieval - The classic search model - Term-document incidence matrices - Incidence vectors - Inverted index • Index construction - Sort-based index construction - Scaling index construction - Blocked sort-based Indexing • Compression - Why compression for inverted indexes

- DICTIONARY COMPRESSION
- POSTINGS COMPRESSION

- Wild-card queries
  - Query processing
  - B-trees handle *'s at the end of a query term
  - Permuterm index
  - Permuterm query processing
  - Bigram (k-gram) indexes
  - Processing wild-cards
  - Processing wild-card queries

- Ranked retrieval model
  - Problem with Boolean search
  - Ranked retrieval models
  - Scoring as the basis of ranked retrieval
  - Jaccard coefficient
  - Binary term-document incidence matrix
  - Bag of Words model
  - Term frequency tf
  - Log-frequency weighting
  - Rare terms are more informative
  - Collection vs. Document Frequency
  - Idf weight

- Evaluating an IR system
  - Unranked retrieval evaluation
  - Precision and Recall

- Text Classification
  - Standing queries
  - Spam filtering
  - Categorization/Classification
  - Classification Methods
    1- Manual classification
    1- Hand-coded rule-based classifiers
    2- Supervised learning

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The module is delivered through a series of lectures. The lecture sessions discuss and explain to students the theoretical underpinnings of how software systems are analyzed and designed. Assessment is divided into four elements. First, many quizzes assess the student's competency in specific topics weekly. And there are several practical assessments to execute the important algorithm there is a midterm class test. There is then two a take-home assignment. Finally, there is an end-of-semester exam that tests the learners' understanding of the theoretical material.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	93	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**125**		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)		
	Assignments	2	10% (10)		
	Projects / Lab.	-	-		
	Report	1	10% (10)		
Summative assessment	Midterm Exam	2hr	20% (10)		
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Basic Assumptions of Information Retrieval, The classic search model, Term-document incidence matrices, Incidence vector, Inverted index
Week 2	Sort-based index construction, Scaling index construction, Blocked sort-based Indexing
Week 3	Why compression for inverted indexes, DICTIONARY COMPRESSION
Week 4	POSTINGS COMPRESSION
Week 5	**Wild-card queries,** Query processing**,** B-trees handle *'s at the end of a query term, Permuterm index Permuterm query processing
Week 6	Bigram (k-gram) indexes, Processing wild cards, Processing wild-card queries
Week 7	**Midterm exam**

Week 8	**Ranked retrieval model,** Problem with Boolean search**,** Ranked retrieval models**,** Scoring as the basis of ranked retrieval**,** Jaccard coefficient
Week 9	Binary term-document incidence matrix, Bag of Words model, Term frequency tf, Log-frequency weighting, Rare terms are more informative, Collection vs. Document Frequency
Week 10	Idf weight, Effect of idf on ranking, tf-idf weighting, Score for a document given a query, Documents as vectors, Queries as vectors,
Week 11	Formalizing vector space proximity, Why distance is a bad idea, Use angle instead of distance, From angles to cosines, Length normalization
Week 12	Length normalization, cosine(query, document), Cosine for length-normalized vectors, Cosine similarity, Computing cosine scores, and Weighting may differ in queries vs documents
Week 13	**Evaluating an IR system,** Unranked retrieval evaluation**,** Precision, and Recall
Week 14	**Text Classification,** Standing queries Spam filtering**,** Categorization/Classification
Week 15	Classification Methods**, 1-** Manual classification**,2 -**Hand-coded rule-based classifiers **, 3-** Supervised learning
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	*Introduction to Information Retrieval*, by C. Manning, P. Raghavan, and H. Schütze (Cambridge University Press, 2008).	yes
Recommended Texts	*Modern Information Retrieval*, by R. Baeza-Yates and B. Ribeiro-Neto.	no
Websites	CS 276: Information Retrieval and Web Search (stanford.edu)	

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A –** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D – Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**System Analysis & Design**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	CSITCIS206				
ECTS Credits	**4**				
SWL (hr/sem)	**100**				
Module Level	2		**Semester of Delivery**	4	
Administering Department	CIS		**College**	CSIT	
Module Leader	Zainab H. Majeed		**e-mail**	zainab.meejeed@uobasrah.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ms.c.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	01/06/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CSITCIS205	**Semester**	3
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	After successfully completing this course, students will have gained comprehensive theoretical knowledge as well as practical skills related to the system development process of information systems. students who successfully complete the course should be able to: • gather data to analyse and specify the requirements of a system. • design system components and environments. • build general and detailed models that assist programmers in implementing a system. • design a database for storing data and a user interface for data input and output, as well as controls to protect the system and its data
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Understand the fundamental concepts and terms of system analysis and system design 2. Describe different lifecycle models and explain the various stages in systems development. 3. Discuss various approaches to systems analysis and design and explain their strengths and weaknesses. 4. Discover and understand the details of the problem or the need and define the main criteria to obtain approval to proceed 5. understand how to plan and monitor the project by using scheduling techniques (Break down structure and Gantt chart) 6. introducing to system analysis process, discover Systems Analysis Tools & Techniques 7. Explain information gathering techniques (interview, questionnaire) 8. Define two types of requirements (functional and non-functional) 9. Model system functionality using UML activity, usecase and sequence diagrams 10. Model an overall system using UML class diagrams. 11. understand the design of the various new system components such as deployment environment, the application architecture and software, and the database. 12. discuss the principles of user interface design and explain the main factors influencing usability of software systems
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. <u>Overview</u> What is system analysis What is system design The role of system analyst in software development

	System development approaches Phases of system development life cycle (SDLC) Predictive approach Waterfall model as an example of predictive System development approaches Adaptive approach Spiral model Incremental model Walking skeleton model Software development lifecycle- phases-1 Identify the problem Quantify project approval factors. Perform risk and feasibility analysis. Review with the client and obtain approval Software development lifecycle: phases-2: planning Schedule the work using breakdown structure Schedule the work using Gantt chart Evaluate work processes. Monitor progress and make corrections Software development lifecycle- phases-3: analysis Gather detailed information using interview and questionnaire Define requirements (functional and non-functional) Prioritize requirements Develop user-interface dialogs (story board and prototype) Evaluate requirements with users Software development lifecycle: phases-3: analysis • Purpose and notation of activity diagrams • Use cases, Actors, Use case diagram • Mapping a UML class model, associations, inheritance • UML interaction diagrams: Messages, Elements of a Sequence Diagram Software development lifecycle: phases-4: Design • Design the environment. • Design application architecture and software. • Design user interfaces. • Design system interfaces. • Design the database. • Design system controls and security Software development lifecycle: phases-4: Design • Describe usability issues. • Main rules of user interface design

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The module is delivered through a series of lectures. The lecture sessions discuss and explain to students the theoretical underpinnings of how software systems are analyzed and designed. Assessment is divided into four elements. First there are a number of quizzes that assess the student's competency in specific topics on a weekly basis. there is a midterm class test. There is then two a take home assignment. Finally, there is an end of semester exam that tests the learners understanding of the theoretical material.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	68	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	4
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**100**		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	4 and 12	LO #1- #4 and #8- #10
	Assignments	2	10% (10)	6 and 9	LO #6, and #8, #9
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	12	LO #2- #12
Summative assessment	Midterm Exam	2hr	10% (10)	8	LO #1 - #8
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Overview- definition of several terms such as: system analysis, system design and the role of system analyst in software development
Week 2	System Development Approaches: predictive approach
Week 3	System Development Approaches: adaptive (agile) approach
Week 4	Software development lifecycle (SDLC): all six/seven phases
Week 5	Software development lifecycle (SDLC): phase1: identify the problem
Week 6	Software development lifecycle (SDLC): phase2: project planning
Week 7	Software development lifecycle (SDLC): phase3: Analysis activities
Week 8	Systems Analysis Activities: system requirements gathering and defining

Week 9	Systems Analysis Activities: UML Modeling (Activity diagram)
Week 10	Systems Analysis Activities: UML Modeling (use case diagram)
Week 11	Systems Analysis Activities: UML Modeling (class diagram)
Week 12	Systems Analysis Activities: UML Modeling (Sequence diagram)
Week 13	Systems Design Activities: Essentials of Systems Design
Week 14	Systems Design Activities: User Interface Design
Week 15	Review and Exam Preparation: review of key topics and concepts, exam practice and preparation
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	J. W. Satzinger, R. B. Jackson and S. D. Burd. *Systems Analysis and Design in a Changing World*, 7th ed. Boston, USA: Thomson Course Technology, 2015. (ISBN- 10: 1305117204 ISBN-13: 978-1305117204)	No
Recommended Texts	Unhelkar, B. Software Engineering with UML, 2017. Boca Raton: Taylor & Francis, ISBN: 9781351235181.	No
Websites	https://www.udemy.com/course/system-analysis-design-k/	

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A –** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D – Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.

Module Information معلومات المادة الدراسية					
Module Title	**Business statistics**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	CSITCIS207				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	2		**Semester of Delivery**	4	
Administering Department	CIS		**College**	CSIT	
Module Leader	Hadeel Ismail Mustafa		**e-mail**	hadeelismu@gmail.com	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	M.Sc	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	15/06/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	None	**Semester**	
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	- Learn the basics of applied statistics - Learn the basics of tabulating data - Learn the basics of methods for describing data, analyzing it statistically, and eliciting decisions - The ability to criticize websites and discover design errors with graphical and functional interfaces - Learn the basics of some basics of mathematical statistics

	- Learn the basics of the statistical programmer spss
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1 - The student learns the basic principles of descriptive statistics 2 - The student learns to deal with data 3 - The student learns to choose the appropriate statistical measures for any statistical study 4 - The student learns to use statistical software
Indicative Contents المحتويات الإرشادية	Introduction - Meaning and definition of statistics - Types of data and data sources - Types statistics - Scope of statistics - Importance of statistics in business - Limitations of statistics Central tendency - Arithmetic mean - Median - Mode Central tendency - Relationships of mean, median and mode - The beast measure of central tendency Central tendency - Geometric mean - Harmonic Dispersion - Meaning and definition of dispersion - Significance and properties Of measuring Variation - Measures of dispersion - Mean deviation - Standard deviation Dispersion - Skewness: meaning of definition - Test of skewness - Measures skewness Dispersion - Momerats - Kurtosis Random variable - Principles of probability theory - Definition of Random variable - Types of Random variable - Function of Random variable Random variable - Moment generating function - Joint distribution and distribution and marginal distribution Distribution

	- Discrete Distributions - Binomial distribution - Bernoulli distribution Poisson distribution Distribution - Continuous distribution - Uniform distribution - Gamma distribution normal distribution Simple Linear Regression - Simple Linear Regression Model - Regression Model and Regression Equation - Correlation Coefficient

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Providing distinguished educational and research services that keep pace with local and international quality standards in the fields of computer and informatics, allowing for the preparation of a distinguished, competitive graduate, in addition to the completion of high-end projects and reports, and the active participation in community service.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	62	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	88	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**150**		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	20% (20)	4 and 12	
	Assignments	2	10% (10)	6 and 9	
	Projects / Lab.	-	-	-	-
	Report	1	10% (10)	12	
Summative assessment	Midterm Exam	2hr	10% (10)	8	
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction
Week 2	Central tendency
Week 3	Central tendency
Week 4	Central tendency
Week 5	Dispersion
Week 6	Dispersion
Week 7	Exam
Week 8	Dispersion
Week 9	Random variable
Week 10	Random variable

Week 11	Distribution
Week 12	Distribution
Week 13	Simple Linear Regression
Week 14	Exam
Week 15	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	An introductory lecture on SPSS
Week 2	Methods of entering data into the program according to their types
Week 3	Central tendency
Week 4	Dispersion
Week 5	Data analysis (parametric and nonparametric tests)
Week 6	Simple Linear Regression Model
Week 7	Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	‘’Statistics for business and economics 12e’’ By Daviad R. Anderson , Dennis J. SWEENEY, Thomas A.Williaws. 2014	YES(E-copy)
Recommended Texts	‘’ Introduction to Real World Statistics With Step-by-Step SPSS Instructions’’ by Edward T. Vieira, Jr.2017	YES(E-copy)
Websites		

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A –** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D – Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Data Structures**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	CSITCIS208				
ECTS Credits	7				
SWL (hr/sem)	175				
Module Level	2		**Semester of Delivery**	4	
Administering Department	CIS		**College**	CSIT	
Module Leader	Raidah S. Khudeyer		**e-mail**	raidah.khudayer@uobasrah.edu.iq	
Module Leader's Acad. Title	Asst. Prof		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	01/06/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CSITCIS106 Computer Programming II CSITCIS201 Object Oriented Programming	**Semester**	2 Level 1 3 Level 1
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. To know what meaning of data structures in computer science and it classification. 2. To understand how each data structure store in memory. 3. To understand how access to each data structure that store in memory. 4. To perform basic operation on each data structure. 5. To implemented each data structure by using any programming language.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. It provides what mean of data type and data structures. 2. Identify classification of data structures and the main operation of them. 3. Identify on arrays and discuss the features, main operations, how access to each element and how implementation in java. 4. Identify on how representation strings and how create string object in java. 5. Identify on linked lists and discuss the features, main operations, types and how implementation in java. 6. Identify on stacks and discuss the features, main operations, applications, how implementation in java using arrays and linked lists. 7. Discuss how conversation and evaluation the expression using stack. 8. Learn how write implantation recursion function by using stack. 9. Identify on queues and discuss the features, main operations, applications, how implementation in java using arrays and linked lists.
Indicative Contents المحتويات الإرشادية	• Introduction to Data Structures • Classification of Data Structures • Arrays • Strings • Linked lists • Stacks • Application of Stack • Recursion • Queues

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The main strategy that will be adopted in this module through a series of lectures the theoretical underpinnings of how the data organization in memory and how implemented by using one of programming languages such as java or Python. This will be achieved through instead of theoretical lectures in classes and projects in lab, there many assessment that increase the activities and understanding of students: 1. There are a number of quizzes that assess the student's competency in end of each topic. 2. There is a midterm class test. 3. There are take-home mini-projects by a team of 2 students. 4. There are end-of-semester exam test.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	62	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	113	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	7
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**175**		

Module Evaluation

تقييم المادة الدراسية

		Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	2	10% (10)	4 and 8	LO #3- #5 and #7
	Assignments	2	10% (10)	6 and 10	LO #8, #9
	Projects / Lab.	1	20% (20)	14	LO #3- #9
	Report	-	-	-	-
Summative assessment	Midterm Exam	2hr	10% (10)	7	LO #1 - #6
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري

	Material Covered
Week 1	Introduction - Types of Data types, type of data structures
Week 2	Arrays DS: definition, features, logic, physical structure, access equations of one dimensional array.
Week 3	Arrays DS: logic, physical structure, access equations of two dimensional arrays.
Week 4	Arrays DS: logic, physical structure, access equation of three and multi-dimensional arrays and triangle arrays.
Week 5	Strings DS: definition, basic representations in memory, create String object
Week 6	Linked Lists DS: definition, advantage and disadvantage of arrays and linked lists, basic operations of linked lists, types of linked lists.
Week 7	Mid-term Exam
Week 8	Implementation of linked lists

Week 9	Stack DS: definition, features, implementation using linked lists and Arrays
Week 10	Stack DS: Application-recursion
Week 11	Stack DS: Application- Expression Conversion
Week 12	Stack DS: Application- evaluating expressions
Week 13	Queue DS: definition, features, implementation using linked lists
Week 14	Queue DS: definition, features, implementation using Arrays
Week 15	Queue DS: types of queues
Week 16	Preparatory week before the final Exam

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Lab 1: Arrays classes in java package
Week 2	Lab 2: tasks in Arrays
Week 3	Lab 3: Strings methods in java package
Week 4	Lab 4: tasks in Strings
Week 5	**1st Quiz**
Week 6	Lab 5: Linked Lists class in java package
Week 7	Lab 6: tasks in linked lists (single and circular linked lists)
Week 8	Lab7: tasks in linked lists (double and Circular Double Linked Lists)
Week 9	Lab 8: Stack class in java package
Week 10	Lab 9: Stack to evaluate expression
Week 11	**2nd Quiz**
Week 12	Lab 10: Stack class in java package
Week 13	Lab 11: implement queue using arrays
Week 14	Lab 12: implement queue using linked lists

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1. Data Structures and Algorithms in Java by Michael T. Goodrich, 2022 2. A Textbook of Data Structures and Algorithms by G. A. Vijayalakshmi Pai, 2022	No
Recommended Texts	Hands-On Data Structures and Algorithms with Python by Dr. Basant Agarwal, 2022	No
Websites		

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Web ProgrammingII**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	**CSITCIS209**				
ECTS Credits	**7**				
SWL (hr/sem)	**175**				
Module Level	2		**Semester of Delivery**	4	
Administering Department	CSITCIS0209		**College**	CSIT	
Module Leader	Dr. Nahla A. Flayh		**e-mail**	Nahla.flayh@uobasrah.edu.iq	
Module Leader's Acad. Title	Lecturer		**Module Leader's Qualification**	Ph.D.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	15/06/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CSITCIS204	**Semester**	3
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Understanding PHP Basics: Learn the fundamentals of PHP programming language, including syntax, variables, data types, operators, control structures, and functions. 2. Web Development Concepts: Gain an understanding of web development concepts such as client-server architecture, HTTP protocol, request/response cycle, and the role of PHP in web development. 3. Working with HTML and CSS: Learn how to integrate PHP code within HTML and CSS to create dynamic web pages. Understand how to generate HTML content using PHP and manipulate CSS styles based on dynamic conditions. 4. Handling Form Data: Explore techniques for handling form submissions using PHP. Learn how to retrieve form data, validate and sanitize input, and perform server-side form processing. 5. Working with Databases: Understand the basics of database management systems and how to interact with databases using PHP. Learn how to establish database connections, execute SQL queries, and handle result sets. 6. Session and Cookies Management: Explore techniques for managing user sessions and cookies using PHP. Learn how to create, store, and retrieve session data, as well as how to implement user authentication and authorization. 7. File Handling: Gain knowledge on file handling operations in PHP, such as reading from and writing to files, uploading files, and manipulating file metadata. 8. Working with APIs: Understand the concepts of Application Programming Interfaces (APIs) and learn how to interact with external APIs using PHP. Explore techniques for consuming and integrating data from popular APIs.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	When completing a web programming module focused on PHP, the student can gain the following learning outcomes: 1. Basic PHP Knowledge: Demonstrate a solid understanding of PHP syntax, variables, data types, operators, control structures, and functions. 2. Dynamic Web Page Creation: Develop the ability to integrate PHP code with HTML and CSS to create dynamic web pages that can generate and manipulate content based on user input or database interactions. 3. Form Handling: Successfully handle form submissions using PHP by retrieving form data, validating and sanitizing input, and performing server-side form processing. 4. Database Interaction: Exhibit competence in establishing connections with databases, executing SQL queries, handling result sets, and implementing basic database operations such as inserting, updating, and deleting data.

	5. Session and Cookies Management: Implement session and cookies management techniques in PHP to maintain user sessions, store user data, and implement basic user authentication and authorization functionalities. 6. File Handling: Acquire skills in reading from and writing to files, uploading files, and manipulating file metadata using PHP. 7. API Integration: Demonstrate the ability to consume data from external APIs, understand API documentation, and effectively integrate API functionality into PHP-based web applications.
Indicative Contents المحتويات الإرشادية	• Introduction to PHP: a. PHP syntax and basic language constructs b. Variables, data types, and operators c. Control structures (conditionals, loops) d. Functions and procedural programming • Web Development Basics: a. Client-server architecture and HTTP protocol b. Request/response cycle c. Introduction to HTML and CSS d. Integrating PHP with HTML and CSS • Form Handling and Validation: a. Creating HTML forms b. Handling form submissions with PHP c. Validating and sanitizing user input d. Displaying form errors and feedback • Database Interaction with PHP: a. Introduction to relational databases (e.g., MySQL) b. Establishing database connections in PHP c. Executing SQL queries with PHP d. Handling result sets and retrieving data • Session Management and Authentication: a. Understanding sessions and cookies b. Managing user sessions in PHP c. Implementing user authentication and authorization d. Securing sensitive data and preventing session hijacking

	• File Handling and Uploading: a. Reading from and writing to files with PHP b. Handling file uploads and validating file types c. Manipulating file metadata (e.g., resizing images) d. File system operations and directory handling • Working with APIs a) Introduction to APIs and their usage in web development b) Making API requests with PHP c) Parsing and manipulating API responses (JSON, XML) d) Integrating data from popular APIs (e.g., Google Maps, Twitter)

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Employing these strategies can create a comprehensive and engaging learning experience in a web programming module, such as lectures, interactive discussions, hands-on lab sessions, case studies, assignments, projects, guest lectures, online resources, assessments, group projects, and continuous support.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (hr/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	62	**Structured SWL (hr/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	4
Unstructured SWL (hr/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	113	**Unstructured SWL (hr/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	7
Total SWL (hr/sem) الحمل الدراسي الكلي للطالب خلال الفصل	175		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	#1, #2 and #3
	Assignments	2	10% (10)	2 and 12	#3, #4 and #6
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	#5, #6
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	#1 - #4
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to PHP • PHP syntax and basic language constructs • Variables, data types, and operators
Week 2	Introduction to PHP • Control structures (conditionals, loops) • Functions and procedural programming
Week 3	Web Development Basics: • Client-server architecture and HTTP protocol • Request/response cycle
Week 4	Web Development Basics: • Introduction to HTML and CSS • Integrating PHP with HTML and CSS
Week 5	Form Handling and Validation: • Creating HTML forms • Handling form submissions with PHP
Week 6	Form Handling and Validation: • Validating and sanitizing user input • Displaying form errors and feedback
Week 7	Database Interaction with PHP: • Introduction to relational databases (e.g., MySQL) • Establishing database connections in PHP
Week 8	Database Interaction with PHP: • Executing SQL queries with PHP • Handling result sets and retrieving data
Week 9	Session Management and Authentication: • Understanding sessions and cookies • Managing user sessions in PHP

Week 10	Session Management and Authentication: • Implementing user authentication and authorization • Securing sensitive data and preventing session hijacking
Week 11	File Handling and Uploading: Reading from and writing to files with PHP Handling file uploads and validating file types
Week 12	File Handling and Uploading: Manipulating file metadata (e.g., resizing images) File system operations and directory handling
Week 13	Working with APIs • Introduction to APIs and their usage in web development • Making API requests with PHP
Week 14	Working with APIs • Parsing and manipulating API responses (JSON, XML) • Integrating data from popular APIs (e.g., Google Maps, Twitter)
Week 15	Project Presentations and Wrap-up • Group project presentations • Discussion and reflection on the course
Week 16	**Preparatory week before the final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	• Setting up the development environment (XAMPP, WAMP, etc.)
Week 2	• Writing basic PHP scripts, Variable declaration and manipulation
Week 3	• Applying predefined functions (string & math)
Week 4	• Creating a simple HTML webpage, Embedding PHP code within HTM , Displaying dynamic content with PHP
Week 5	• Creating a form with HTML, Processing form data with PHP
Week 6	• Implementing form validation and error handling
Week 7	• Setting up a local database server (MySQL, MariaDB, etc.), Establishing a database connection in PHP
Week 8	• Executing SQL queries and retrieving data
Week 9	• Implementing user registration and login functionality, Managing user sessions using PHP
Week 10	• Implementing basic authentication and access control
Week 11	• Uploading files with PHP, Validating and storing uploaded file.
Week 12	• Displaying uploaded files on a webpage
Week 13	• Making API requests using PHP, Parsing and processing API responses (JSON, XML),integrating external API data into a web application
Week14	• Project Discussion
Week15	• Final Exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Textbook: 1. PHP and MySQL Web Development" by Luke Welling and Laura Thomson, addison-Wesley Professional, 2016	Yes (E-copy)

	2. "Modern PHP: New Features and Good Practices" by Josh Lockhart, 2015	
Recommended Texts	PHP for the Web: Visual Quick Start Guide" by Larry Ullman:	Yes (E-copy)
Websites	W3Schools PHP Tutorial: (www.w3schools.com/php)	

Grading Scheme

مخطط الدرجات

Group	Grade	التقدير	Marks %	Definition
Success Group (50 - 100)	**A -** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C – Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	**Decision Support systems**			**Module Delivery**	
Module Type	**Core**			☒ **Theory** ☒ **Lecture** ☐ **Lab** ☐ **Tutorial** ☒ **Practical** ☐ **Seminar**	
Module Code	**CSITCIS210**				
ECTS Credits	**5**				
SWL (hr/sem)	**125**				
Module Level	2		**Semester of Delivery**	4	
Administering Department	CIS		**College**	CSIT	
Module Leader	Dr.Aliea S.Sabir		**e-mail**	aliea.sabir@uobasrah.edu.iq	
Module Leader's Acad. Title	Assist. Professor		**Module Leader's Qualification**	PH.D.	
Module Tutor	Name (if available)		**e-mail**	E-mail	
Peer Reviewer Name	Name		**e-mail**	E-mail	
Scientific Committee Approval Date	01/06/2023		**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	CSITCIS201	**Semester**	1
Co-requisites module	None	**Semester**	

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	• Understand the conceptual foundations of decision-making • Understand the systems approach • Understand the phases of decision-making: intelligence, design, choice, and implementation • Differentiate between the concepts of making a choice and establishing a principle of choice • Recognize how decision style, cognition (reasoning), management style, personality, and other factors influence decision-making • Understand how computer technologies can assist managers in their work • Learn the basic concepts of decision-making • Learn the basic concepts of decision support systems • Recognize the different types of decision support systems used in practice • Understand how the World Wide Web/Internet has affected decision support systems • What is Management Information Systems (MIS) • Understand the different model classes • Explain what optimization, simulation, and heuristics are, and when and how to use them • Describe how to structure a linear programming model • Describe the key issues of model management
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	• This course provides the required skills and knowledge of the various decision-making models so that decisions can be based on logical and mathematical foundations under different circumstances, such as in cases of uncertainty, lack of information, or certainty. • This course studies the design of computerized systems to support individual or organizational decisions. • Moreover, the course aims at understanding the need for computerized support of managerial decision-making and what was an early framework for managerial decision-making.
Indicative Contents المحتويات الإرشادية	Indicative content includes the following. **DECISION-MAKING** • DECISION-MAKING AND PROBLEM-SOLVING • DECISION-MAKING DISCIPLINES • THE STRUCTURE OF DSS SYSTEMss • CLOSED AND OPEN SYSTEMS

- SYSTEM EFFECTIVENESS AND EFFICIENCY
- INFORMATION SYSTEMS AND MODELS
  - 1ICONIC (SCALE) MODELS
  - ANALOG MODEL
  - MATHEMATICAL (QUANTITATIVE) MODELS
  - SIMULATION MODELS
- THE BENEFITS OF MODELS
- PHASES OF THE DECISION-MAKING PROCESS
  - THE INTELLIGENCE PHASE
  - DESIGN PHASE
  - CHOICE PHASE
  - IMPLEMENTATION PHASE
- PROGRAMMED VERSUS NONPROGRAMMED PROBLEMS

Management Support Systems

- Managerial Decision-making And Information Systems
- Managers And Computer Support
- Computerized Decision Support And The Supporting Technologies
- Framework For Decision Support
- Computer Support For Structured Decisions
- E-concept Of Decision Support Systems
- Group Support Systems
- Enterprise Information Systems (EIS)
- Knowledge Management Systems
- Expert Systems
- Artificial Neural Networks
- Hybrid Support Systems
- Emerging Technologies And Technology Trends

Management Information Systems

- Introduction (MIS)
  - Characteristics of MIS
  - Characteristics of Computerized MIS
  - Nature and Scope of MIS
- Enterprise Resource Planning (ERP)
  - Why of ERP
  - Scope of ERP
  - Advantages of ERP
  - Disadvantage of ERP
- Customer Relationship Management (CRM)
  - Why CRM?
  - Advantages of CRM
  - Disadvantages of CRM

Decision theory

- IDENTIFICATION OF THE PROBLEM AND ENVIRONMENTAL ANALYSIS
  - VARIABLE IDENTIFICATION
  - FORECASTING

	- MODEL CATEGORIES - MODEL MANAGEMENT - KNOWLEDGE-BASED MODELING - CURRENT TRENDS • STATIC AND DYNAMIC MODELS • DECISION-MAKING UNDER CERTAINTY (DMUC) • DECISION-MAKING UNDER RISK (DMUR) • DECISION-MAKING UNDER UNCERTAINTY

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	The module is delivered through a series of lectures. The lecture sessions discuss and explain to students the theoretical underpinnings of how software systems are analyzed and designed. Assessment is divided into four elements. First, many quizzes assess the student's competency in specific topics every week. there is a midterm class test. There is then two take-home assignment. Finally, there is an end-of-semester exam that tests the learners' understanding of the theoretical material.

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ أسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	93	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	5
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	**125**		

Module Evaluation

تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	20% (20)		
	Assignments	2	10% (10)		
	Projects / Lab.	-	-		
	Report	1	10% (10)		
Summative assessment	**Midterm Exam**	2hr	10% (10)		
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	**DECISION-MAKING,** DECISION-MAKING AND PROBLEM-SOLVING**,** DECISION-MAKING DISCIPLINES**,** THE STRUCTURE OF THE DSS SYSTEM**,** CLOSED AND OPEN SYSTEMS
Week 2	SYSTEM EFFECTIVENESS AND EFFICIENCY, INFORMATION SYSTEMS AND MODELS, 1ICONIC (SCALE) MODELS, ANALOG MODEL, MATHEMATICAL (QUANTITATIVE) MODELS SIMULATION MODELS, PROGRAMMED VERSUS NONPROGRAMMED PROBLEMS
Week 3	**Management Support Systems,** Managerial Decision-making And Information Systems Managers And Computer Support**,** Computerized Decision Support, And The Supporting Technologies Framework For Decision Support
Week 4	Computer Support For Structured Decisions, E-concept Of Decision Support Systems, Group Support Systems, Enterprise Information Systems (EIS)
Week 5	Knowledge Management Systems, Expert Systems, Artificial Neural Networks, Hybrid Support Systems, Emerging Technologies, And Technology Trends
Week 6	**Management Information Systems**, Introduction (MIS), Characteristics of MIS, Characteristics of Computerized MIS, Nature, and Scope of MIS

Week 7	**Midterm exam**
Week 8	Enterprise Resource Planning (ERP), Why of ERP, Scope of ERP, Advantages of ERP, Disadvantage of ERP
Week 9	Customer Relationship Management (CRM), Why CRM? , Advantages of CRM Disadvantages of CRM
Week 10	**Decision theory** IDENTIFICATION OF THE PROBLEM AND ENVIRONMENTAL ANALYSIS, VARIABLE IDENTIFICATION, FORECASTING, MODEL CATEGORIES
Week 11	MODEL MANAGEMENT, KNOWLEDGE-BASED MODELING, CURRENT TRENDS, STATIC AND DYNAMIC MODELS
Week 12	DECISION-MAKING UNDER CERTAINTY (DMUC)
Week 13	DECISION-MAKING UNDER RISK (DMUR)
Week 14	DECISION-MAKING UNDER UNCERTAINTY
Week 15	DECISION-MAKING UNDER UNCERTAINTY
Week 16	**The preparatory week before the Final Exam**

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	
Week 2	
Week 3	
Week 4	
Week 5	
Week 6	
Week 7	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Efraim Turban, Ramesh Sharda, Dursun Delen, "Decision Support and Intelligence Systems", Prentice Hall; 7th edition, 2005.	yes
Recommended Texts	V.L. Sauter, Decision Support Systems For Business Intelligence, New York: John Wiley & Sons, 2010.	No
Websites	Free Online Course: Decision Support Systems from YouTube | Class Central	

Grading Scheme مخطط الدرجات				
Group	**Grade**	التقدير	**Marks %**	**Definition**
Success Group (50 - 100)	**A –** Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 – 89	Above average with some errors
	C – Good	جيد	70 – 79	Sound work with notable errors
	D – Satisfactory	متوسط	60 – 69	Fair but with major shortcomings
	E – Sufficient	مقبول	50 – 59	Work meets minimum criteria
Fail Group (0 – 49)	**FX –** Fail	راسب (قيد المعالجة)	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required

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.