Ministry of Higher Education and Scientific Research

Scientific Supervision and Evaluation Authority

Quality Assurance and Academic Accreditation Department

Academic Program Description Form for Colleges and Institutes

University: Al-Qadisiyah

Faculty/Institute: College of Computer Science and Information Technology

Scientific Department: Department of Computer Information Systems

File Filled Date : 1-4-2026

Head of Department: Prof. Dr. Ali Mohsin Aljuboori

File Filled Date: 5-5-2026

Signature



Assistant Dean for Scientific Affairs: Assistant Prof. Dr. Atheer Hadi Issa

File updated : 5-5-2026

Signature

Checked by:

Quality Assurance and University Performance Division

Name of Director of Quality Assurance and University Performance Division: Assist lec. Safa Jaber Abbas

File updated : 5-5-2026

Signature:

Endorsement of the Dean

Assistant Prof. Dr. Mustafa Jawad Radif



Academic program description

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the programme description.

1.	**Educational Institution**	**Qadisiyah University/ Faculty of Computer Science and Information Technology**
2.	**University Department/ Center**	**Department of Computer Information Systems**
3.	**Academic Program Name or PROFESSIONAL**	**Bachelor of Computer Science and Information Technology**
4.	**Final Certificate Name Accredited**	**Bachelor of Computer Science and Information Technology/Department of Computer Information Systems**
5.	**Study System: Annual / Courses / Other**	**The first and second stages are Bologna system and the third and fourth stages are quarterly system.**
6.	**Accreditation Program**	
7.	**External influences**	**Practical application in scientific laboratories.**
		Scientific research related to the department's specialization.
		The World Wide Web (Internet).
		Normal and digital libraries.
8.	**Date this description was prepared**	
9.	**Goals**	
	• **Preparing a distinguished graduate in the field of information technology and computers in general and information systems in particular capable of competing in the labor market.**	
	• **Actively contribute to the provision of studies and research and explore all that is new in the field of computer information systems.**	
	• **Serving the public and private sectors and society in general by providing the necessary consultations, technical assistance and training of human cadres capable of working in the fields of the information technology sector.**	
	• **Provide the necessary and modern foundations for students (theoretical and applied) in the field of computer information systems.**	
	• **Empowering students by introducing them to the tools and skills necessary to provide an effective service to the IT industry and the needs of society after graduation.**	
	• **Ensuring that faculty members are able to a high level of professionalism by providing professional development opportunities.**	
	• **Seeking to raise the scientific level of teachers and students alike by keeping pace with the development in the field of information technology in general and computer information systems in particular.**	
	• **Encouraging innovative ideas and projects by faculty members and students of the department.**	

10.	**Course Outcomes and Teaching, Learning and Evaluation Methods**	
	A- Cognitive objectives:	
	1.	**Knowledge: Enabling the student to know the basic components of the computer system, and various modern technologies such as the Internet, search engines and the Internet of things.**
	2.	**Comprehension: Enabling the student to translate the theoretical ideas of the courses into things that are applicable to the computer using the appropriate programming languages, or to benefit from these ideas in practical or daily life.**
	3.	**Application: Enabling the student to benefit from the scientific concepts he studied and transforming them on the ground, whether in practical or daily life.**
	4.	**Analysis: Enabling the student to analyze the problems they may face and plan in order to find optimal solutions.**
	5.	**Installation: Enabling the student to design and develop various software systems and applications in addition to creating projects.**
	6.	**Evaluation: Enabling the student to benefit from the courses in evaluating and evaluating the available software and information technologies.**
	b)	**Course Skills Objectives:**
	1.	**Providing the student with multiple skills in the field of specialization and in the field of business in general by observing and simulating the various theoretical concepts that he studied in the courses of study.**
	2.	**Developing the student's ability to explore new things in the field of specialization by experimenting and benefiting from various theoretical and practical concepts.**
	3.	**Enabling the student to master various programming languages and information technologies well.**
	4.	**Developing the intellectual and creative energies of students through their implementation of various duties and increasing their ability to develop and innovate software solutions to various problems that they may face in the future.**
	Teaching and learning methods	
	1.	**Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.**
	2.	**Using the computer in the implementation of programs.**
	3.	**Guide students to some websites to benefit from them.**
	4.	**Assigning the student to implement a set of programs in practical laboratories.**
	5.	**Assigning the student to prepare brief reports on some topics and carry out homework.**
	6.	**Seminars to address the problems faced by the student in the course.**
	Evaluation methods	
	1.	**Day to day duties**
	2.	**Implementing the practical aspect in laboratories.**
	3.	**Daily, monthly and final tests.**
	c)	**Emotional and value goals**
	1.	**Reception: Drawing students' attention to the department and increasing their desire to join it by introducing the importance of the department in modern technology and its role in practical life.**
	2.	**Response: The student's admiration of the department and his desire to learn the department's courses and bring out the students' creative ideas through belief in the importance of the department.**

	3.	Evaluation: The student's acceptance of the department and his preference over the rest of the departments and the firm belief in the preference of the department over the rest of the IT departments.
	4.	Normalization and organization: The student's compliance with the instructions of the department, developing his relationship with his colleagues, raising the spirit of cooperation, in addition to understanding the ethics of the work environment and high professionalism.
	Teaching and learning methods	
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Enabling the student to link the theoretical and practical aspects.
	4.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
	Evaluation methods	
	1.	Evaluating the completion of household chores and additional tasks (optional) given during lectures.
	2.	Adopting class discussions.
	3.	Objective tests and variation in the questions asked, such as true and false questions, multiple choice questions, matching items and completion questions.
	4.	Tests related to computer science and information systems such as using algorithms and drawing diagrams to solve a specific problem.
	5.	Apply theoretical issues by developing practical projects and software.
	d)	General and transferable skills (other skills related to employability and personal development.)
	1.	Developing the student's ability to learn ways and methods of personal development after the course.
	2.	Developing the student 's ability to deal with the means of technology and the Internet.
	3.	Developing the student's skill to learn software and developing various types of software systems.
	4.	Developing the student's ability to manage time.
	5.	Developing the student's ability to work in a team.
	6.	Develop the student 's ability to dialogue and discuss.

11.	Program Structure:

Academic Level	Curriculum Name	Course Title	Credit Hours	
			Theory'	BLOCK
Third Phase First Semester 18 Units	Software Engineering	Software Engineering	2	-
	Databases	Distributed Database	2	-
	Database Management System	Data Base Management System	2	2
	Principles of Translators	Principles of Compilers	3	-
	scientific research	|||UNTRANSLATED_CONTENT_START|||Research Methodology|||UNTRANSLATED_CONTENT_END|||	2	-
	Search and retrieve information	Information Retrieval and Web Search	2	2
	Basics of Image Processing	Fundamental of Image Processing	2	2
Third Phase Second Semester 17 units.	IT Department	Project Management	3	-
	Database Sites Programming	Database Driven Website programming	2	2
	Artificial intelligence	Artificial Intelligence	3	-
	Information Security	Information Security	2	-
	Decision Support Systems	Decision Support System	2	-
	Communication Skills	Communication Skills in Business	2	-
	Modeling & Simulation	Computer Modeling and Simulation	2	-
Fourth Stage First Semester 17 units.	Fundamentals of Operating Systems	Fundamentals of Operating System	3	-
	computer networks	Fundamentals of Computer Networks	3	-
	Data Warehouses	Noon warehouse	2	2
	Cloud Computing	Cloud Computing	2	-
	Information Systems	Essentials of Business Information Systems	3	-
	mobile apps	Mobile Programming	2	2
	Renewable Energy		1	-
Fourth Stage Second Semester 16 UNITS	computer networks	Computer Networks	3	-
	Data mining	mining	2	2
	Graduation Project	Graduation project	-	4
	Internet of Things	Internet Of Things	2	-
	Geographic information systems	Geographic Information Systems	3	-
	Operating Systems	Operating system	3	-

12.	Personal Development Planning
	• Holding workshops in each semester. • Involvement and establishment of training courses for teachers and students. • Holding panel discussions. • Urging students to develop multiple and varied programs. • Keenness to keep abreast of scientific development and the use of modern scientific sources. • Adding all that is new and useful for the student to acquire new skills and keep pace with the development of programming languages and work on modern languages andversions commensurate with the importance of the course. • Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%
13.	Admission Criteria (Setting regulations for admission to the college or institute)
	• Central admission specified by the Ministry of Higher Education and Scientific Research. • Salem should be one of the permanent disabilities that hinder work in the field of computers.
14.	The most important sources of information about the program
	• Sources taken from Iraqi universities and international universities

Curriculum skills chart																						
Required learning outcomes of the program																						
Year / Semester	Curriculum Name	Essential or optional?	Program Skill Objectives						Cognitive objectives			Emotional and Value Objectives					Transferred general and qualifying skills (other skills related to employability and personal development)					
			A1	A2	A3	A4	A5	A6	B1	B2	B3	B4.	A1	A2	A3	A4	D1	D2	D3	4D.	D5	D6
Third Phase First Semester	Software Engineering	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		✓	✓			✓		✓
	Databases	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Database Management System	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Principles of Translators	Basic	✓	✓	✓	✓			✓	✓				✓		✓	✓	✓		✓		✓
	scientific research	Optional		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓	✓		✓		✓

Curriculum skills chart																						
Required learning outcomes of the program																						
Year / Semester	Curriculum Name	Essential or optional?	Program Skill Objectives						Cognitive objectives				Emotional and Value Objectives				Transferred general and qualifying skills (other skills related to employability and personal development)					
			A1	A2	A3	A4	A5	A6	B1	B2	B3	B4.	A1	A2	A3	A4	D1	D2	D3	4D.	D5	D6
	Search and retrieve information	Optional	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Basics of Image Processing	Optional	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		✓
Third Phase Second semester	IT Department	Basic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Database Sites Programming	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Artificial intelligence	Basic	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	Information Security	Basic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓	✓	✓	✓	✓	✓	✓
	Decision Support Systems	Optional	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓		✓
	Communication Skills	Basic		✓	✓	✓			✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
	Modeling & Simulation	Optional	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓			✓	✓	✓	✓		✓
Fourth Stage First Semester	Fundamentals of Operating Systems	Basic	✓	✓	✓	✓	✓		✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
	computer networks	Basic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Data Warehouses	Basic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Cloud Computing	Basic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Information Systems	Basic		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	mobile apps	Basic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Renewable Energy																					

Curriculum skills chart																						
Required learning outcomes of the program																						
Year / Semester	Curriculum Name	Essential or optional?	Program Skill Objectives						Cognitive objectives				Emotional and Value Objectives				Transferred general and qualifying skills (other skills related to employability and personal development)					
			A1	A2	A3	A4	A5	A6	B1	B2	B3	B4.	A1	A2	A3	A4	D1	D2	D3	4D.	D5	D6
Fourth Stage Second semester	computer networks	Basic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Data mining	Basic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Graduation Project	Basic																				
	Internet of Things	Optional	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Geographic information systems	Basic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Operating Systems	Basic	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Third Phase

1. Software Engineering.
2. Databases
3. Database Management systems
4. Principles of Translators.
5. A scientific research approach.
6. Searching the web and retrieving information.
7. 3D Image Processing
8. Information Technology Department
9. Database Sites Programming.
10. Artificial intelligence
11. Information security.
12. Decision Support Systems
13. Communication skills in business.
14. Computer modeling and simulation.

Course Description Template

Course Description: Software Engineering

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Software Engineering
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Third Stage
6.	Number of study hours (total)	30 hour
7.	Date this description was prepared	
8.	Course objectives	
	• Provide students with a comprehensive introduction to software engineering.	
	• Provide students with the types of activities necessary to produce the system.	
	• Studying the important stages of software development.	
	• Build a high-quality software system.	
	• system life cycle,	
	• Acquire knowledge at each stage of building the system.	
	• Understand the application of software engineering principles to the project.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1. Demonstrate the basic concepts of software engineering principles and learn about a range of tools.	
	2. Acquire skills in building the system and addressing problems.	
	3. Studying techniques for extracting system requirements.	
	4. Studying the stages of building the system, the cost and the time required.	
	b) Course Skills Objectives:	
	1. Ability to build systems accurately using software engineering principles.	
	2. Ability to think about addressing the problem according to quality standards.	
	3. Writing scientific reports.	
	4. Use advanced building models to obtain efficient software.	
	Teaching and learning methods	
	1. Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.	
	2. Guide students to some websites to benefit from them.	

	3.	Assigning the student to prepare brief reports on some topics and carry out homework.
	4.	Holding research seminars through which some problems are explained and analyzed and the mechanism for finding solutions to them.
Evaluation methods		
	1.	Conducting theoretical tests in the classroom (daily, monthly, and final).
	2.	Asking questions and verbal inquiries to students to indicate the extent of their response.
	3.	Organizing students in groups and assigning them to complete the requirements for building a specific system and evaluating the percentage of their completion of those works.
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Dora the student to work on the performance of duties and deliver them on time.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
	5.	Logical thinking in studying aspects of the problem and finding appropriate solutions to it.
	6.	Develop the student 's ability to dialogue and discuss.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.
	2.	Discussion and active participation in the classroom.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START||| المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
First	**3**	Fundamental of Software Engineering	Basic Concepts: Software product, Software crisis, software Engineering	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General questions and discussion**
Second	**3**	Fundamental of Software Engineering	software process, software process model, methodologies, methods, tools, artifacts	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General questions and daily discussion or exam**
The Third	**3**	Software process	Software Process (I): process models, iterative process	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General questions and discussion**
Fourth	**3**	Software process	Software Process (II): software process activities (specification, design and implementation, validation/verification, Evolution Software Requirement Engineering	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Daily Exam**
Fifth	**3**	1. Software requirements, 2.	Functional Functional requirements, requirements System requirement, Project Requirement Document	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General questions and daily discussion or exam**
Sixth	**3**	1. Software requirements, 2. elicitation	Software Requirement Engineering Software requirement, elicitation and analysis, basics on Use case	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General questions and discussion**
Seventh	**3**	System Model	System Models (I):Context models, Behavioural Models ; System Models (II): Data Models, Objects Models	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions**
Eighth	**3**	Uniform Modelling Language	Architectural Design: system structuring, control models,	**theoretical, theoretic,abstract, notional,**	**Group Duties**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
			modular decomposition; Object Oriented Design, UML notation; User interface design: user interface design principles, user interaction	**perspective, paper, academic**	
Ninth	**3**	Risk Analysis.	Risk analysis concept and principles	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions**
Tenth Floor	**3**	Risk Analysis.	Risk analysis concept and principles	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Monthly Exam**
Eleventh	**3**	Senior Software Engineer Assurance Unit	QUALITY ASSURANCE AND QUALITY CONTROL	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions**
Twelfth	**3**	Senior Software Engineer Assurance Unit	QUALITY ASSURANCE AND QUALITY CONTROL	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Daily Discussion and Examination**
Thirteenth	**3**	Senior Software Engineer Assurance Unit	QUALITY ASSURANCE AND QUALITY CONTROL	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions**
Fourteenth	**3**	Software Testing	Software Testing ,Verification and Validation: planning, software Inspections	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Group Duties**
Fifteenth	**3**	Software Testing	defect testing, Integration testing	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**

11.	Infrastructure		
	1.	**Required textbooks**	• Software Engineering, Roger S.Pressman,2014.

			• Introduction to Software Engineering, Ian Sommerrivle,2007.
	2.	**Key References (Sources)**	•
	a)	**Recommended books and references (scientific journals, reports, ...)**	
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	**Course Development Plan**
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description : Distributed Database

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Databases
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Third Stage
6.	Number of study hours (total)	30 hour
7.	Date this description was prepared	
8.	Course objectives	
	• Understand the principles of databases and their design methods.	
	• Understand what database management systems are.	
	• Knowing the reasons that led to the emergence of distributed databases.	
	• Find out what architectures are available and used to build distributed database systems.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Introducing the principles and basics of distributed databases, their systems and types.
	2.	Apply distributed database concepts.
	3.	Recognize the importance of distributed database systems.
	4.	Identify the difference between database systems and distributed database systems.
	5.	Ability to describe distributed database systems.
	b) Course Skills Objectives:	
	1.	Ability to deliver a lecture related to distributed database systems.
	2.	Ability to design a distributed database system.
	3.	Ability to learn and train on various traditional and distributed database systems.
	4.	Ability to manage dialogues and discussions related to database systems and distributed databases.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Using the computer in the implementation of programs.
	3.	Guide students to some websites to benefit from them.

	4.	Assigning the student to implement a set of programs in practical laboratories.
	5.	Assigning the student to prepare brief reports on some topics and carry out homework.
	6.	Seminars to address the problems faced by the student in the course.
Evaluation methods		
	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out practical assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	The skill of managing data, knowledge and information technology.
	2.	Developing the student's ability to learn ways and methods of personal development after the course.
	3.	Develop the student 's ability to dialogue and discuss.
	4.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	2	Introduction to Database Systems and How to Manage	Introduction to DB, The function of DBMS,	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
		Database Systems and the Benefits and Disadvantages of Database	DBA's responsibilities, DB facilities, DB limitations, Advantage of DB.		
Second	**2**	**Introduction to Database Systems and How to Manage Database Systems and the Benefits and Disadvantages of Database**	Introduction to DB, The function of DBMS, DBA's responsibilities, DB facilities, DB limitations, Advantage of DB.	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions and Discussion or Eni Exam**
The Third	**2**	**Introduction to Database Systems and How to Manage Database Systems and the Benefits and Disadvantages of Database**	Introduction to DB, The function of DBMS, DBA's responsibilities, DB facilities, DB limitations, Advantage of DB.	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL**
Fourth	**2**	**Understand and learn the architecture of the database and understand the three levels of Al-Fa 'ada and the relationship between them**	Artecheture of DB	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion/Annie Exam**
Fifth	**2**	**Understand and learn the architecture of the database and understand**	Artecheture of DB	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion/Annie Exam**

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
		the three levels of Al-Fa 'ada and the relationship between them			
Sixth	2	It includes understanding the basic concepts of distributed databases and their applications and the benefits and disadvantages of distributed systems, their architecture and characteristics.	Overview of DDB.	theoretical, theoretic,abstract, notional, perspective, paper, academic	Discussion
Seventh	2	It includes understanding the basic concepts of distributed databases and their applications and the benefits and disadvantages of distributed systems, their architecture and characteristics.	Overview of DDB.	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Eighth	2	Includes an explanation of the ISO-OSI architecture and an explanation ofthe types of networks, the	نزاهة	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
		characteristics of each one, and the protocols used.			
Ninth	2	Includes an explanation of the ISO-OSI architecture and an explanation ofthe types of networks, the characteristics of each one, and the protocols used.	نزاهة	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Tenth Floor	2	Understand the steps and how to design the distributed database and what methods are used in the design process.	Distribuited Database Design	theoretical, theoretic,abstract, notional, perspective, paper, academic	Monthly Exam
Eleventh	2	Understand the steps and how to design the distributed database and what methods are used in the design process.	Distribuited Database Design	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Twelfth	2	Understand the steps and how to design the distributed database and what methods are used in	Distribuited Database Design	theoretical, theoretic,abstract, notional, perspective, paper, academic	Discussion

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
		the design process.			
Thirteenth	**2**	**Simultaneous control of distributed database systems and explaining the types of failures that occur in distributed databases and the possibility of fault detection and repair**	Concurency Control	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Annie Exam**
Fourteenth	**2**	**This chapter shows the possibility of detecting the malfunction and repairing it in the distributed systems and the return of the system to work again**	Database recovery	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Group Duties**
Fifteenth	**2**	**This chapter shows the possibility of detecting the malfunction and repairing it in the distributed systems and the return of the system to work again**	Database recovery	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**

11.	Infrastructure		
	1.	**Required textbooks**	• Database system concept, 5\E, Abraham silberschatz and Merry F. Koth, 2006

	2.	**Key References (Sources)**	• Stefano Geri and Giuseppe Pelagatti (1984), Distributed Data Bases Principles and Systems, Mc-Graw Hill.
	a)	**Recommended books and references (scientific journals, reports, ...)**	• Distributed database, stelane ceri, 2002.
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	**Course Development Plan**
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description: Databases Management System

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Database management specialist
4.	Available attendance forms	Attendance (Theoretical + Practical)
5.	Semester/year	First Semester/Third Stage
6.	Number of study hours (total)	60 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• Enabling the student to analyze and build a database	
	• Enable student to use my sql	
	• Developing the student's skills by building applied projects in sql	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Enabling the student to know the basics of database management.
	2.	Enabling the student to know and understand how to deal with different types of construction and management methods.
	3.	Enabling the student to know how to design the database.
	4.	Introducing the student to the basics of building a program in a specific programming language that is considered a model for the rest of the programming languages.
	5.	Enabling the student to know how to evaluate the quality and validity of the designed systems.
	6.	Make the student acquire practical skills in applying the methods used in database systems.
	b) Course Skills Objectives:	
	1.	Provide the student with the necessary skill to design a database system using database design languages.
	2.	Ability to learn and train on various database systems.
	3.	Ability to manage dialogues and discussions related to database systems.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Using the computer in the implementation of programs.
	3.	Guide students to some websites to benefit from them.

	4.	Assigning the student to implement a set of programs in practical laboratories.
	5.	Assigning the student to prepare brief reports on some topics and carry out homework.
Evaluation methods		
	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out practical assignments.
	3.	Believing in the necessity of taking the course, and insisting on understanding the vocabulary of the course.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Teaching the student theoretically the basic topics of the branch by linking the theoretical and practical aspects.
	4.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المهارات المنقولة والتأهيلية العامة (المهارات الأخرى الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Teaching the student ways and methods of personal development after the course.
	2.	Developing the student's ability to understand how to build the idea of any software application based on the basics of database management.
	3.	Learn different programming skills using different types of design and programming methods.
	4.	Preparing the student to face the practical reality and how to employ what he has learned.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	4	Introduction to Systems Management	Introduction To Management System	Theory / Practicals	General Discussion / Questions

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
Second	**4**	**Introduction to Systems Management**	Introduction To Management System	**Theory / Practicals**	**General Discussion / Questions**
The Third	**4**	**System properties**	Properties of System	**Theory / Practicals**	**General Discussion / Questions**
Fourth	**4**	**System properties**	Properties of System	**Theory / Practicals**	**General Discussion / Questions**
Fifth	**4**	**Introduction to Computer Software Information System**	Information System Computer Software	**Theory / Practicals**	**General Discussion / Questions**
Sixth	**4**	**Introduction to Computer Software Information System**	Information System Computer Software	**Theory / Practicals**	**General Discussion / Questions**
Seventh	**4**	**Database**	Database Languages	**Theory / Practicals**	**General Discussion / Questions**
Eighth	**4**	**Database**	Database Languages	**Theory / Practicals**	**General Discussion / Questions**
Ninth	**4**	**Database**	Database Languages	**Theory / Practicals**	**General Discussion / Questions**
Tenth Floor	**4**	**Database**	Database Languages	**Theory / Practicals**	**General Discussion / Questions**
Eleventh	**4**	**Database types**	Types of Database System	**Theory / Practicals**	**General Discussion / Questions**
Twelfth	**4**	**Database types**	Types of Database System	**Theory / Practicals**	**General Discussion / Questions**
Thirteenth	**4**	**DATABASE MANAGEMENT SYSTEM II**	Life Cycle Of Database Management System	**Theory / Practicals**	**General Discussion / Questions**
Fourteenth	**4**	**DATABASE MANAGEMENT SYSTEM II**	Life Cycle Of Database Management System	**Theory / Practicals**	**General Discussion / Questions**
Fifteenth	**4**	**Comprehensive Examination**	**Comprehensive Examination**	**Comprehensive Examination**	**Comprehensive Examination**

11.	Infrastructure

	1.	Required textbooks	• Stefano Geri and Giuseppe Pelagatti,"Distributed Data Base Principles and system ", Mc-Graw Hill.2010. • David Benyon , " Information and Data Modeling", 2nd edition, McGraw-Hill.
	2.	Key References (Sources)	
	a)	Recommended books and references (scientific journals, reports, ...)	
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course

Course Description Template

Course Description: Principles of Compilers

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Principles of Translators
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Third Stage
6.	Number of study hours (total)	45 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The course aims to introduce the student to the levels of programming languages.	
	• This course aims to enable the student to understand the stages that each program passes through in any programming language from the moment the implementation button is pressed until the results appear on the implementation screen.	
	• Learn about the six phases of this course and the algorithms used in each phase.	
	• Identify errors that can be committed by the programmer.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Recognize the difference between interpreters and translators.
	2.	Identify the stages of translators for each programming language.
	3.	Know and understand the basics of independently working the contexts of each stage.
	4.	Knowing and understanding the diversity of the data entered and on which there is a diversity in the ways it is represented.
	5.	Know and understand how to handle and validate any input value.
	6.	Understanding the types of graphic structures used and harnessing them to ensure the validity of any linguistic representation.
	b) Course Skills Objectives:	
	1.	Providing the student with the ability to build, develop or modify the translator for a specific language.
	2.	Giving the student experience in discovering the error and not falling into it.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.

	4.	Seminars to address the problems faced by the student in the course.
Evaluation methods		
	1.	Day to day duties
	2.	Daily, monthly and final tests.
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out practical assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.
	2.	Discussion and active participation in the classroom.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	3	Introduction to translators, interpreters and carriers and the difference between them	General concepts:	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Second	3	How to build a table of variables and store information about them .	General concepts:	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions and Discussion or Eni Exam

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
The Third	3	A brief explanation of the translator's six phases.	Translator Phases	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL
Fourth	3	ANALYSING VOCABULARY	The first phase of the translator	theoretical, theoretic,abstract, notional, perspective, paper, academic	Annie Exam
Fifth	3	Definition of regular expressions	Regular expressions	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion or exam
Sixth	3	Difference between token ,pattern, lexmes	Terminology used with translator phases	theoretical, theoretic,abstract, notional, perspective, paper, academic	Discussion
Seventh	3	Paper I - Prose		theoretical, theoretic,abstract, notional, perspective, paper, academic	Monthly Exam
Eighth	3	Explanation of the mechanism of action of the grammatical analysis phase	The second phase in the translator	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Ninth	3	Clarify a summary of the most important algorithms used in the grammatical phase	Algorithms used in the grammatical phase	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Tenth Floor	3	Explain in detail how the algorithm works with examples	first and follow algorithm	theoretical, theoretic,abstract, notional, perspective, paper, academic	Assignments
Eleventh	3	Bottom-up analysis: Identifying one of the bottom-up analysis algorithms that works by examining the	Top-down parsing algorithms	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
		entered phrase from right to left. ll			
Twelfth	3	Explain how to deal with free rules of context and build their own transport scheme	Free Rules for Context and Transport Scheme	theoretical, theoretic,abstract, notional, perspective, paper, academic	Discussion
Thirteenth	3	Grammatical analysis and code generation phase	The third and fourth phases of the translator	theoretical, theoretic,abstract, notional, perspective, paper, academic	Annie Exam
Fourteenth	3	Ensure the optimization of the code and generate the final program in the language of God.	The fifth and sixth stages of the translator	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Fifteenth	3	Second Month Exam		theoretical, theoretic,abstract, notional, perspective, paper, academic	Monthly Exam

11.	Infrastructure		
	1.	Required textbooks	• Basics of compiler Design Torben Egidius Mogensen(2002). • Compilers : principles, techniques, and tools Alfred V. A Jeffrey D. Ullman(1998).
	2.	Key References (Sources)	
	a)	Recommended books and references (scientific journals, reports, ...)	
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course

Course Description Template

Course Description: Research Methodology

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Scientific Research Methodology
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Third Stage
6.	Number of study hours (total)	30 hour
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The course aims to introduce the student to the basics of correct scientific research.	
	• Increasing the student's ability to research and investigate.	
	• Enabling the student to write a scientific research.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Providing the student with the necessary knowledge to write scientific research.
	2.	Introducing the student to the basics of writing scientific research.
	3.	Introduce the student to the research steps.
	4.	Providing the student with knowledge of scientific research methodologies.
	5.	Introducing the student to the basic steps of scientific research.
	b) Course Skills Objectives:	
	1.	Providing the student with the skill of investigation, analysis and inference.
	2.	Providing the student with the skill of writing scientific research.
	3.	Providing the student with the skill of teamwork to complete scientific research projects.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.
	4.	Seminars to address the problems faced by the student in the course.
	Evaluation methods	
	1.	Day to day duties
	2.	Daily, monthly and final tests.

c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out practical assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.
	2.	Discussion and active participation in the classroom.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing the student's ability to conduct scientific research and write sober scientific research.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	2	Academic research	Science, its objectives , scientific knowledge	theoretical	General Discussion / Questions
Second	2	General Concepts of the Scientific Method	Objectives, Assumptions, Scientific Hypothesis, Scientific Method, Elements of Scientific Research	theoretical	General Discussion / Questions
The Third	2	General Concepts of the Scientific Method	Objectives, Assumptions, Scientific Hypothesis, Scientific Method, Elements of Scientific Research	theoretical	General Discussion / Questions

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
Fourth	2	Research problem:	Sources, Relevance, Objectives, Research Plan, Actions	theoretical	General Discussion / Questions
Fifth	2	Research problem:	Sources, Relevance, Objectives, Research Plan, Actions	theoretical	General Discussion / Questions
Sixth	2	Use of references	Library, classification, scientific documentation	theoretical	General Discussion / Questions
Seventh	2	Academic Research	Observation, Interview, Questionnaire, Testing	theoretical	General Discussion / Questions
Eighth	2	SAMPLE	Selection, Species , Sample Size	theoretical	General Discussion / Questions
Ninth	2	Research Methodology	Historical Research Methodology: Importance, Importance, Collection of Sources	theoretical	General Discussion / Questions
Tenth Floor	2	Research Methodology	Systems Analysis Approach: Types Steps	theoretical	General Discussion / Questions
Eleventh	2	Research Methodology	Descriptive Research Methodology: Importance Species	theoretical	General Discussion / Questions
Twelfth	2	Research Methodology	Methodology of Experimental Research: Importance, Experimental Control	theoretical	General Discussion / Questions
Thirteenth	2	The Formalities of Research Writing, 2005	Title, Writing Style, Research Components	theoretical	General Discussion / Questions
Fourteenth	2	The Formalities of Research Writing, 2005	Title, Writing Style, Research Components	theoretical	General Discussion / Questions
Fifteenth	2	Scientific research institutions in Iraq	Scientific research institutions in Iraq	theoretical	General Discussion / Questions

11.	Infrastructure		
	1.	Required textbooks	• Methods and Methods of Scientific Research, Dr. Wajih Mahjoub, Baghdad, 1993. • Methodological patterns and their applications, d. Anwar Hussein Abdul Rahman, Dr. Adnan Haqqi, 2007. • Conceptual and Theoretical Foundations, Dr. Anwar Hussein Abdul Rahman, Dr. Adnan Haqqi, 2008.
	2.	Key References (Sources)	
	a)	Recommended books and references (scientific journals, reports, ...)	
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course

Course Description Template

Course Description : Information Retrieval and Web Search

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Web Search & Retrieval
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Third Stage
6.	Number of study hours (total)	60 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The course aims to teach the student the basics of information retrieval.	
	• The course aims to introduce the student to the basics of primary treatment.	
	• Giving the student an overview of the components of the information retrieval system.	
	• The course aims to introduce the student to the mechanism of work of search engines.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Introducing the student to the basics of web search and information retrieval.
	2.	Provide the student with the necessary knowledge to design a simple information retrieval system.
	3.	Learn some information retrieval algorithms.
	b) Course Skills Objectives:	
	1.	Providing the student with the skill of designing research programs and retrieving information.
	2.	Providing the student with the skill of teamwork to complete scientific research projects.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms.
	2.	Discussion by asking questions and opening the door for dialogue and interaction with students.
	3.	Assigning the student to prepare a simple retrieval system.
	4.	Assigning the student to prepare brief reports for some topics.
	5.	Assigning students to prepare specific retrieval systems projects.
	6.	Assigning students to conduct optional lectures on topics related to information retrieval.
	Evaluation methods	

	1.	Day to day duties
	2.	Daily, monthly and final tests.
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out practical assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.
	2.	Discussion and active participation in the classroom.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المهارات المنقولة والتأهيلية العامة (المهارات الأخرى الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing the student's ability to conduct scientific research and write sober scientific research.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	4		Introduction to C+ + Information Retrieval	Theory / Practicals	General Discussion / Questions
Second	4		Introduction to C+ + Information Retrieval	Theory / Practicals	General Discussion / Questions

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
The Third	**4**		Preprocessing	**Theory / Practicals**	**General Discussion / Questions**
Fourth	**4**		Preprocessing	**Theory / Practicals**	**General Discussion / Questions**
Fifth	**4**		write program functions to implement information retrieval system.	**Theory / Practicals**	**General Discussion / Questions**
Sixth	**4**		write program functions to implement information retrieval system.	**Theory / Practicals**	**General Discussion / Questions**
Seventh	**4**		Information Retrieval Algorithms	**Theory / Practicals**	**General Discussion / Questions**
Eighth	**4**		Information Retrieval Algorithms	**Theory / Practicals**	**General Discussion / Questions**
Ninth	**4**		Information Retrieval Algorithms	**Theory / Practicals**	**General Discussion / Questions**
Tenth Floor	**4**		|||UNTRANSLATED_CONTENT_START|||DNA Databases|||UNTRANSLATED_CONTENT_END|||	**Theory / Practicals**	**General Discussion / Questions**
Eleventh	**4**		|||UNTRANSLATED_CONTENT_START|||DNA Databases|||UNTRANSLATED_CONTENT_END|||	**Theory / Practicals**	**General Discussion / Questions**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
Twelfth	**4**		Genomic Information Retrieval	**Theory / Practicals**	**General Discussion / Questions**
Thirteenth	**4**		Genomic Information Retrieval	**Theory / Practicals**	**General Discussion / Questions**
Fourteenth	**4**		Genomic Information Retrieval	**Theory / Practicals**	**General Discussion / Questions**
Fifteenth	**4**	**Full review**		**Theory / Practicals**	**General Discussion / Questions**

11.	Infrastructure		
	1.	**Required textbooks**	• An Introduction to Information Retrieval, Christopher D. Manning Prabhakar Raghavan Hinrich Schütze
	2.	**Key References (Sources)**	
	a)	**Recommended books and references (scientific journals, reports, ...)**	
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description: Fundamental of Image Processing

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	3D Image Processing
4.	Available attendance forms	Attendance (Theoretical + Practical)
5.	Semester/year	First Semester/Third Stage
6.	Number of study hours (total)	60 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• Familiarize yourself with the basic principles in digital image processing.	
	• Knowledge of color schemes used in digital images.	
	• Knowledge of ways to generate digital images.	
	• Identifying the various processes that take place on digital images, such as enlarging digital images, improving digital images, converting digital images, as well as knowing ways to improve digital images.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Introducing the student to digital images and the digital image processing system and its basic components.
	2.	Introducing the student to the field of using digital images.
	3.	Provide the student with knowledge of the composition of the image and how to represent it and store it in the computer.
	4.	Provide the student with the color schemes used in the pictures and how to convert from colored pictures to gray.
	5.	Introduce the student to ways to enlarge the image.
	6.	Provide the student with the knowledge of image improvement.
	b) Course Skills Objectives:	
	1.	Familiarity with designing, writing and developing programs related to image processing.
	2.	Familiarity with designing, writing and developing algorithms related to image processors.
	3.	Enabling the student to solve problems related to image processing programs.
	4.	Enabling the student to work within a group to solve problems related to image processing programs.
	Teaching and learning methods	

	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Using the computer in the implementation of programs.
	3.	Guide students to some websites to benefit from them.
	4.	Assigning the student to implement a set of programs in practical laboratories.
	5.	Assigning the student to prepare brief reports on some topics and carry out homework.
	Evaluation methods	
	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
	c)	Emotional and value goals
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out practical assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
	Teaching and learning methods	
	1.	Give group activities importance by assigning grades to group activities
	2.	Enabling the student to link the theoretical and practical aspects.
	Evaluation methods	
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
	d)	|||UNTRANSLATED_CONTENT_START|||المهارات المنقولة والتأهيلية العامة (المهارات الأخرى في التوظيف بقابلية المتعلقة والتطور الشخصي.) |||UNTRANSLATED_CONTENT_END|||
	1.	Self-education and communication skills.
	2.	Time and data management skill.
	3.	The skill of managing and motivating individuals.
	4.	The skill of working in a group.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	4	Knowing what is meant by digital images and what is digital image processing	Introduction to Image Processing	Theory / Practicals	General Discussion / Questions
Second	4	Knowledge of the basics of digital image processing	Digital Image Fundamental	Theory / Practicals	Discussion /General

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
		and what processes can be applied to digital images			**Questions/Real-Time Exam**
The Third	**4**	**Knowledge of the digital image processing system and its components and the main steps in the throw image processing system**	Digital Image Fundamental	**Theory / Practicals**	**General Discussion / Questions**
Fourth	**4**	**Representation of the image and how to store it in the calculator, Sampling and Quantization**	Digital Image Representation	**Theory / Practicals**	**General Discussion / Questions**
Fifth	**4**	**Knowledge of color schemes used in digital images**	Color Models	**Theory / Practicals**	**General Discussion / Questions**
Sixth	**4**	**digital photos**	Color Image Types	**Theory / Practicals**	**General Discussion / Questions**
Seventh	**4**	**Know the basic relationships between pixels, contiguity, connection, path, region and boundaries of the object**	Basic Retionships between Pixels	**Theory / Practicals**	**General Discussion / Questions**
Eighth	**4**	**Know the basic relationships between pixels, contiguity, connection, path, region and boundaries of the object**	Basic Retionships between Pixels	**Theory / Practicals**	**General Discussion / Questions**
Ninth	**4**	**Know how to zoom in**	Image Zooming	**Theory / Practicals**	**General Discussion / Questions**
Tenth Floor	**4**	**Know how to zoom in**	Image Zooming	**Theory / Practicals**	**General Discussion / Questions**
Eleventh	**4**	**Identifying the improvement of digital images and the methods used**	Image Enhancement	**Theory / Practicals**	**General Discussion / Questions**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
Twelfth	**4**	**Identifying the improvement of digital images and the methods used**	Image Enhancement	**Theory / Practicals**	**General Discussion / Questions**
Thirteenth	**4**	**Digital Image Shredder Methods**	Image Segmentation	**Theory / Practicals**	**General Discussion / Questions**
Fourteenth	**4**	**Digital Image Shredder Methods**	Image Segmentation	**Theory / Practicals**	**General Discussion / Questions**
Fifteenth	**4**	**Comprehensive Examination**	**Comprehensive Examination**	**Comprehensive Examination**	**exam**

11.	Infrastructure		
	1.	**Required textbooks**	• Rafael C. Gonzalez & Richard E. Wood, "Digital Image Processing", 2/E, Prentice-Hall 2001
	2.	**Key References (Sources)**	• Scott E. Umbangh, "Computer Vision and Image Processing", Prentice-Hall 1998 • Nick Efford, "Digital Image Processing, a Practical Approach Using Java", Pearson Eduction 2000
	a)	**Recommended books and references (scientific journals, reports, ...)**	• John R. Jensen, "Introductiory Digital Image", 3/E, Prentice-Hall, 2005
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description : IT Project Management

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Head Of Information Technology Department
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	Second Semester/Third Stage
6.	Number of study hours (total)	45 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• Providing students with the basics of project management in general.	
	• Providing students with the types of activities necessary to produce projects.	
	• Studying the important stages in building the project.	
	• Build a high-quality software system.	
	• Acquire knowledge at every stage of construction.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Knowledge and understanding
	2.	Demonstrate the basic concepts of IT project management and familiarize yourself with the set of tools required.
	3.	Gain skills in building the project and addressing problems.
	4.	Studying techniques for extracting system requirements.
	5.	Studying the stages of building the system, the cost and the time required.
	b) Course Skills Objectives:	
	1.	Ability to build and manage projects.
	2.	Ability to think about addressing the problem according to quality standards.
	3.	Reporting
	4.	Use advanced building models to obtain efficient software.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.

	4.	Holding research seminars through which some problems are explained and analyzed and the mechanism for finding solutions to them.
Evaluation methods		
	1.	Conducting theoretical tests in the classroom (daily, monthly, and final).
	2.	Asking questions and verbal inquiries to students to indicate the extent of their response.
	3.	Organizing students in groups and assigning them to complete the requirements for building a specific system and evaluating the percentage of their completion of those works.
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	The student's ability to work to perform duties and deliver them on time.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
	5.	Logical thinking in studying aspects of the problem and finding appropriate solutions to it.
	6.	Develop the student's ability to dialogue and discuss.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities.
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Active participation in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline specified in the submission of assignments and research required of the student to submit.
	3.	Quarterly and final tests express commitment and knowledge and skill attainment.
d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student's ability to deal with the means of technology.
	2.	Developing the student's ability to collect requirements and analyze the problem, which facilitates finding appropriate solutions to the problem and the ease of managing, monitoring and following up the stages of work.
	3.	Developing the student's ability to deal with the Internet.
	4.	Developing the student's ability to learn ways and methods of personal development after the course.
	5.	Develop the student's ability to dialogue and discuss.
	6.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
First	**3**	Introduction to Software Engineering	Failure to use software engineering methods, Frequently asked questions about software engineering	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Second	**3**	Introduction to Software Engineering	The Attributes of Good Software, Software Products	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
The Third	**3**	Software process	The software process, Software process descriptions, Software Process Models: The Waterfall Model	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fourth	**3**	Software process	Prototype Development, Component-Based Development, The Draw of Waterfall Model	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fifth	**3**	Introduction to Project Management	What is Management, Project Management, Software Project Management, What is a (Project, Temporary, Unique)	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Sixth	**3**	Introduction to Project Management	The Triangle-Triple constraints of Project Management, Double Triangle constraint, Project Management Framework	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Seventh	**3**	risk management.	Risk Identification, Risk Analysis	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Eighth	**3**	risk management.	Risk Planning, Risk Monitoring, Risk Factors	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Ninth	**3**	Project Planning & Scheduling	Project Management Process, Elements of	**theoretical, theoretic,abstract,**	**General Discussion**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
			Project Management, Work Breakdown Structure (WBS), WBS Decomposition	**notional, perspective, paper, academic**	**/ Questions**
Tenth Floor	**3**	Project Planning & Scheduling	Project Scheduling, Gantt Chart, Examples of Gantt Chart	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Eleventh	**3**	Project Planning & Scheduling	Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), The Network Diagram, Time Estimates & Computing Algorithm, Critical Path Procedure	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Twelfth	**3**	Project Planning & Scheduling	Determining the Project Schedule, Probabilistic Time Estimates, Probability of Project Completion	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Thirteenth	**3**	Software Quality Management	What is Quality Management?, Software quality management, What is quality?	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fourteenth	**3**	Software Quality Management	Software Quality Attributes, Quality Assurance and Standards, Importance of Standards	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fifteenth	**3**	Introduction to Software Engineering	Failure to use software engineering methods, Frequently asked questions about software engineering	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**

11.	Infrastructure		
	1.	**Required textbooks**	• Loudon & Loudon, Project Management, 2007.
	2.	**Key References (Sources)**	•

	a)	Recommended books and references (scientific journals, reports, ...)	•
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course. • Adding all that is new and useful for the student to acquire new skills and use modern sources to develop their abilities. • Diversity in choosing ideas to build projects within the required specifications.

Course Description Template

Course Description : Database Driven Website programming

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Database Sites Programming
4.	Available attendance forms	Attendance (Theoretical + Practical)
5.	Semester/year	Second Semester/Third Stage
6.	Number of study hours (total)	60 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• This course aims to provide the student with an overview of database-based website programming.	
	• Enables the student to interact with theClient-Server environment.	
	• The student is able to design web pages developed through an integrated set of programming languages.	
	• The student can design web pages that deal with relational databases stored online.	
	• Enables the student to build effective databases for web applications.	
	• Enables the student to build and update databases online.	
	• Enables the student to view the contents of databases through the web.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Enabling the student to know the types and basics of programming databases online and online.
	2.	Enabling the student to know the languages necessary for programming various types of online databases.
	3.	Enabling the student to know the basic functions provided by the various programming languages of the pop.
	4.	Enabling the student with the basicsof Client-Server and the appropriate protocols.
	5.	Enabling the student to build databases that work effectively online.
	6.	Build simple websites where databases can be connected, read, updated, and deleted.
	b) Course Skills Objectives:	
	1.	Provide the student with the skill of logical analysis to structure databases.
	2.	Providing the student with special programming skills for programming databases on the Internet.

	3.	Providing the student with skills in updating programs, detecting and identifying software errors and how to address them.
Teaching and learning methods		
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Using the computer in the implementation of programs.
	3.	Guide students to some websites to benefit from them.
	4.	Assigning the student to implement a set of programs in practical laboratories.
	5.	Assigning the student to prepare brief reports on some topics and carry out homework.
	6.	Seminars to address the problems faced by the student in the course.
	7.	Dividing students into subgroups to build database programming sites in various programming languages.
Evaluation methods		
	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out practical assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities.
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Enabling the student to link the theoretical and practical aspects.
	4.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START||| المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.

	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.
	6.	Developing the student's ability to conduct scientific research.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	4	General knowledge of online database programming languages and protocols	Introduction to the basics of online database programming.	Theory / Practicals	General questions and discussion
Second	4	General concepts of databases and their structure through Client-Server	البيانات قواعد Client-Server and MySQL	Theory / Practicals	General Questions and Discussion or Eni Exam
The Third	4	Know the types of languages necessary for database programming and the differences between them	Web Programming Languages and Database Handling	Theory / Practicals	GENERAL
Fourth	4	Client-Server Environment Configuration	Local Server Installation (XAMPP) with Database Extensions	Theory / Practicals	Annie Exam
Fifth	4	Ways to Create a Database	Building MySQL database programmatically and through (phpmyadmin)	Theory / Practicals	General questions and discussion or exam
Sixth	4	Selecting the appropriate type and encryption to save the data	Data types in MySQL	Theory / Practicals	General questions and discussion
Seventh	4	Creating a web page for data entry	HTML tools for input and data transmission methods	Theory / Practicals	GENERAL QUESTIONS
Eighth	4	Connecting to Server...	Use PHP to connect to the database	Theory / Practicals	Group Duties
Ninth	4	Methods of auditing data before sending it	Using Java Script to Audit Sent Data	Theory / Practicals	GENERAL QUESTIONS
Tenth Floor	4	Passing data between web pages	Use PHP & HTML to read sent data variables	Theory / Practicals	Monthly Exam
Eleventh	4	Structured Query Language	Using SQL to process data	Theory / Practicals	GENERAL QUESTIONS
Twelfth	4	Save to DB	Using PHP and SQL-input to send data	Theory / Practicals	Anne's Discussion

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
					and Examination
Thirteenth	**4**	**Select, update and display data on webpages**	**(HTML) & (SQL: Select-update-delete)**	**Theory / Practicals**	**GENERAL QUESTIONS**
Fourteenth	**4**	**Handling Information**	**Using matrices in reading and updating data**	**Theory / Practicals**	**Group Duties**
Fifteenth	**4**	**Data security**	**Sensitive Data Encryption Methods**	**Theory / Practicals**	**Discussion**

11.	Infrastructure		
	1.	**Required textbooks**	• Puntambekar, A.A., 2020. Internet Programming. Technical Publications. • Grove, R.F., 2009. Web Based Application Development. Jones & Bartlett Publishers. • Elmasri, R. and Navathe, S.B., 2011. Database systems (Vol. 9). Boston, MA: Pearson. • Williams, H.E. and Lane, D., 2004. Web Database Applications with PHP and MySQL: Building Effective Database-Driven Web Sites. " O'Reilly Media, Inc.".
	2.	**Key References (Sources)**	•
	a)	**Recommended books and references (scientific journals, reports, ...)**	•
	b-	**Electronic references, websites ,.....**	**Sober scientific sites** • https://www.w3schools.com **Software:** XMAPP

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course, and at a rate not exceeding 10%.** • **Keeping abreast of the development in various ways and methods of the course.** • **Adding all that is new and useful for the student to acquire new skills and keep pace with the development of programming languages and work on modern languages andversions commensurate with the importance of the course.**

Course Description Template

Course Description: Artificial Intelligence

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Artificial intelligence
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	Second Semester/Third Stage
6.	Number of study hours (total)	45 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• This course aims to introduce students to the field of artificial intelligence and its relationship to computer science in a logical and practical way	
	• Introducing the student to the application of artificial intelligence.	
	• Explain and clarify the challenges we face when building smart systems.	
	• Gives models and examples of smart systems and what are the basic technologies used in these systems.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Learn about the concept of intelligence, how to distinguish and evaluate intelligent behavior, and what is artificial intelligence.
	2.	Learn about the history of artificial intelligence and what other fields of knowledge are associated with it.
	3.	Identify the concept of the knowledge base, its importance, types, ways of building it and representing it.
	4.	Learn about the state space problem solving domain.
	5.	Identify the search strategies and the characteristic of each method and when they are used.
	b)	Course Skills Objectives:
	1.	Provide the student with the skill of choosing the appropriate method to represent the knowledge of a particular application and according to the size of this knowledge (information), its nature, components and the way of linking between them.
	2.	Developing the skills of the student in choosing the best way to represent the state space graph according to certain criteria related to the nature of the issue or problem to be solved .
	3.	Providing the student with the skill of choosing the best way to search according to certain criteria.

	Teaching and learning methods	
	1.	**Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.**
	2.	**Guide students to some websites to benefit from them.**
	3.	**Assigning the student to implement a set of programs in practical laboratories.**
	4.	**Assigning the student to prepare brief reports on some topics and carry out homework.**
	Evaluation methods	
	1.	**Day to day duties**
	2.	**Daily, monthly and final tests.**
	c)	**Emotional and value goals**
	1.	**Promoting learning about the student by offering a set of solutions to the same problem and discussing them separately and determining the appropriate solution method for the problem at hand while identifying the flaws of the rest of the methods.**
	2.	**Encouraging students to choose the right one by offering solutions that contain errors and identifying these errors after discussion and addressing them.**
	3.	**Enhancing the potential of students by asking exceptional oral questions that need exceptional answers, as they have a specific weight in terms of evaluation and grades, which creates a strong incentive for student participation, competition and competition to solve them.**
	Teaching and learning methods	
	1.	**Give group activities importance by assigning grades to group activities.**
	2.	**Managing the lecture in a form that makes the student feel the importance of time.**
	3.	**Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.**
	Evaluation methods	
	1.	**Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.**
	2.	**Discussion and active participation in the classroom.**
	d)	**|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||**
	1.	**Self-education and communication skills.**
	2.	**Time and data management skill.**
	3.	**The skill of managing and motivating individuals.**
	4.	**The skill of working in a group.**

10.	**Course Structure**				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
First	**3**	**Definition of Artificial Intelligence and its application areas**	Introduction of AI	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General questions and discussion**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
Second	**3**	**Review of Knowledge Representation Methods**	Acknowledge representation	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions and Discussion or Eni Exam**
The Third	**3**	**Demonstrate the method of logical representation of knowledge**	Logical representation	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL**
Fourth	**3**	**Using Prosiger to ensure the accuracy of the solution**	Resolution proof procedure	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Annie Exam**
Fifth	**3**	**Illustrate examples for each type of knowledge representation**	Examples of Acknowledgement representation	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General questions and discussion or exam**
Sixth	**3**	**Identify the problem-solving domain**	State space	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**
Seventh	**3**	**Review problem-solving algorithms and clarify blind search algorithms (depth first, bridth first search)**	Search algorithm	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL**
Eighth	**3**	**Explain inherited search algorithms in detail with examples (hill climbing , best first search)**	Heuristic search	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Group Duties**
Ninth	**3**	**Monthly Exam**		**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Monthly Exam**
Tenth Floor	**3**	**Explanation of the search algorithm with examples**	A_ search algorithm	**theoretical, theoretic,abstract, notional,**	**Assignments**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
				perspective, paper, academic	
Eleventh	**3**	**Explain the algorithm with its own examples and characteristics**	A*_algorithm	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL QUESTIONS**
Twelfth	**3**	**Definition, Applications and Components of Expert Systems**	Expert system	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**
Thirteenth	**3**	**Demonstrate methods of acquiring knowledge using (data driven , goal driven)**	Acknowledge acquisition	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Annie Exam**
Fourteenth	**3**	**Definition, components, importance and types of neural networks**	Introduction of neural network	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Group Duties**
Fifteenth	**3**	**Demonstrate how to design a neural network**	Design of neural network	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Absolution**

11.	Infrastructure		
	1.	**Required textbooks**	• Elin Rich, "Artificial Intelligence", 1991
	2.	**Key References (Sources)**	• George F. Luger, "Artificial Intelligence Structures and Strategies for Complex Problem Solving", Pearson Eduction Asia (Singapore), 6/E, 2009
	a)	**Recommended books and references (scientific journals, reports, ...)**	• Amit Konar, "Artificial Intelligence and Soft Computing, Behavior and Cognitive Modeling of the Human Brain", CRC Press, 2000
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description : Information Security

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Information Security
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	Second Semester/Third Stage
6.	Number of study hours (total)	30 hour
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The course aims to teach the student the basic concepts in BiNat.	
	• Teaching the student to structure security from an attack and security mechanisms and services.	
	• The course aims to teach the student the basics of coding and the types of methods used in coding.	
	• Introducing the student to some advanced concepts in the field of information security.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1. Provide the student with knowledge in designing a data security structure.	
	2. Identify the most important encryption algorithms.	
	3. Identify vulnerabilities in algorithms.	
	4. Ability to develop algorithms.	
	b) Course Skills Objectives:	
	1. Providing the student with the ability to design a security system.	
	2. Providing the student with the skill of working within a team and understanding the special duties and completing them within a specified period.	
	3. Provide the student with the ability to read encryption algorithms and find gaps.	
	Teaching and learning methods	
	1. Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.	
	2. Guide students to some websites to benefit from them.	
	3. Assigning the student to implement a set of programs in practical laboratories.	
	4. Assigning the student to prepare brief reports on some topics and carry out homework.	
	Evaluation methods	

	1.	Day to day duties
	2.	Daily, monthly and final tests.
c)	Emotional and value goals	
	1.	Understand the ethics of the work environment and high professionalism.
	2.	Raising the spirit of cooperation and working as a member of a team.
	3.	Bringing out the creative ideas of some students by raising the spirit of competition.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities.
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.
	2.	Discussion and active participation in the classroom.
d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||	
	1.	Assigning the student to develop security systems that serve the needs of the labor market.
	2.	Understand the ethics of the work environment and high professionalism.
	3.	Develop the skill of communicating with potential and actual users and understanding their needs.
	4.	Instill a spirit of collaboration and work as a member of the website development team.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	2	Fundamentals of Information Security	Introduction to Information Security	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Second	2	Fundamentals of Information Security	Introduction to Information Security	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
The Third	2	Learn about data encryption methods	Cryptography	theoretical, theoretic,abstract, notional, perspective,	General Discussion / Questions

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
				paper, academic	
Fourth	**2**	**Learn about data encryption methods**	Cryptography	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fifth	**2**	**Learn about data encryption methods**	Cryptography	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Sixth	**2**	**Learn about data encryption methods**	Cryptography	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Seventh	**2**	**Block Encryption**	Block Cipher and des	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Eighth	**2**	**Block Encryption**	Block Cipher and des	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Ninth	**2**	**Stream Cipher**	Stream Cipher	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Tenth Floor	**2**	**Stream Cipher**	Stream Cipher	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Eleventh	**2**	**Stream Cipher**	Stream Cipher	**theoretical, theoretic,abstract, notional,**	**General Discussion /**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
				perspective, paper, academic	**Questions**
Twelfth	**2**	**|||UNTRANSLATED_CONTENT_START|||خوارزمية AES|||UNTRANSLATED_CONTENT_END|||**	AES Algorithm	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Thirteenth	**2**	**|||UNTRANSLATED_CONTENT_START|||خوارزمية AES|||UNTRANSLATED_CONTENT_END|||**	AES Algorithm	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fourteenth	**2**	**Declared Key Algorithms**	Public Key Encryption and RSA	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fifteenth	**2**	**Declared Key Algorithms**	Public Key Encryption and RSA	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**

11.	Infrastructure		
	1.	**Required textbooks**	• William Stallings, Cryptography and Network Security. Principles and Practice, fifth edition, Principle Hall, USA, 2011.
	2.	**Key References (Sources)**	•
	a)	**Recommended books and references (scientific journals, reports, ...)**	•
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description: Decision Support System

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Decision Support Systems
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	Second Semester/Second Stage
6.	Number of study hours (total)	30 hour
7.	Date this description was prepared	1 April
8.	Course objectives	
	• Inform the student about the importance of information technology in institutions.	
	• The impact of information technology on the speed and accuracy of decision-making.	
	• How to handle forms rather than real information.	
	• How to make a decision in a changing environment between ascertaining the influential elements and uncertainty or with a known or expected probability.	
	• Use decision tables and decision trees to get the final decision.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Theoretical knowledge about the nature of the work of large institutions and the complexity and complexity of the influencing factors.
	2.	How to turn big data into models to deal with it.
	3.	How to convert descriptive problems into spreadsheets that facilitate the work of decision makers.
	4.	How to take advantage of Business Intelligent software in making decisions.
	5.	Converting big data for organizations into simple and clear formulas such as drawings and diagrams.
	b) Course Skills Objectives:	
	1.	Using statistical and probability theories in evaluating decisions
	2.	Take advantage of the spreadsheet approach to summarize big data
	3.	Using software to support decision-makers
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Seminars to address the problems faced by the student in the course.
	Evaluation methods	

	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out practical assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Enhancing the student's ability to make decisions.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to analyze data after collecting it from the beneficiary.
	2.	Develop the student's ability to design mathematical models to increase understanding of the problem for alternatives.
	3.	Using statistical methods to choose the best alternatives.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	2		Decision-Making and Computerized Support	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Second	2		Decision-Making Systems, Modeling, and Support	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions and Discussion or Eni Exam
The Third	2		Decision-Making Systems, Modeling, and Support	theoretical, theoretic,abstract, notional,	GENERAL

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
				perspective, paper, academic	
Fourth	**2**		Modeling and Analysis	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Annie Exam**
Fifth	**2**		Modeling and Analysis	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General questions and discussion or exam**
Ninth	**2**		Modeling and Analysis	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**
Tenth Floor	**2**		Decision Tree and Tables and Analytic Hierarchy Process (AHP) AHP	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL QUESTIONS**
Eleventh	**2**		Decision Tree and Tables and Analytic Hierarchy Process (AHP) AHP	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Group Duties**
Twelfth	**2**		Decision Tree and Tables and Analytic Hierarchy Process (AHP) AHP	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL QUESTIONS**
Thirteenth	**2**		Business Intelligence	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Monthly Exam**
Fourteenth	**2**		Business Intelligence	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL QUESTIONS**
Fifteenth	**2**		Business Intelligence	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**

11.	Infrastructure		
	1.	Required textbooks	• E. Turban, R. Sharda, D. Delen, "Decision Support and Intelligence Systems", Prentice Hall; 7th edition, 2005
	2.	Key References (Sources)	• V.L. Sauter, Decision Support Systems For Business Intelligence, New York: John Wiley & Sons, 2010. • George M. Marakas. Decision Support Systems in theTwenty-first Century. Prentice Hall.
	a)	Recommended books and references (scientific journals, reports, ...)	
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description: Communication Skills in Business

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Business Communication Skills
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	Second Semester/Third Stage
6.	Number of study hours (total)	30 hour
7.	Date this description was prepared	1 April
8.	Course objectives	
	• Developing the capabilities of students in terms of their ability to communicate with the community and benefit from this ability in the labor market and achieve the maximum possible benefit in this field.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1. Identify requirements for effective communication.	
	2. Mastering the basics and skills of communication.	
	3. The transfer of ideas, information , feelings and experiences.	
	b) Course Skills Objectives:	
	1. Interpersonal Skill	
	2. Gaining the student the skill of time management, meetings and negotiation.	
	3. Developing the student's skill in good reading, listening, speaking and presentation .	
	Teaching and learning methods	
	1. Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.	
	2. Guide students to some websites to benefit from them.	
	Evaluation methods	
	1. Day to day duties	
	2. Daily, monthly and final tests.	
	c) Emotional and value goals	
	1. Encourage the student to manage dealing with the latter.	
	2. Developing the student's ability to dialogue and communicate with others.	
	Teaching and learning methods	

	1.	Give group activities importance by assigning grades to group activities.
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
	Evaluation methods	
	1.	Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.
	2.	Discussion and active participation in the classroom.
	d)	|||UNTRANSLATED_CONTENT_START|||المهارات الأخرى (المهارات المنقولة والتأهيلية العامة الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Self-education and communication skills.
	2.	Time and data management skill.
	3.	The skill of managing and motivating individuals.
	4.	The skill of working in a group.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	2		Introduction	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions/Discussion
Second	2		Process of Communication	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions/Discussion
The Third	2		Barrier to communication	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions/Discussion
Fourth	2		Non verbal comm.	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions/Discussion
Fifth	2		Verbal	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions/Discussion
Sixth	2		Listening skills	theoretical, theoretic,abstract, notional,	General Questions/Discussion

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
				perspective, paper, academic	
Seventh	**2**		Reading skills	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion**
Eighth	**2**		Writing skills	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion**
Ninth	**2**		Writing skills	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion**
Tenth Floor	**2**		Presentation skills	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion**
Eleventh	**2**		Presentation skills	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion**
Twelfth	**2**		Letters skills	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion**
Thirteenth	**2**		Letters skills	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion**
Fourteenth	**2**		communication applications at work environment	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion**
Fifteenth	**2**		communication applications at work environment	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Questions/Discussion**

11.	Infrastructure		
	1.	Required textbooks	•
	2.	Key References (Sources)	•
	a)	Recommended books and references (scientific journals, reports, ...)	•
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course

|||UNTRANSLATED_CONTENT_START||| **Course Description Template**|||UNTRANSLATED_CONTENT_END|||

Course Description: Computer Modeling and Simulation

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	**Educational Institution**	**Qadisiyah University/ Faculty of Computer Science and Information Technology**
2.	**University Department/ Center**	**Department of Computer Information Systems**
3.	**Course Name**	**Computer Modeling and Simulation**
4.	**Available attendance forms**	**Attendance (theoretical)**
5.	**Semester/year**	**Second Semester/Third Stage**
6.	**Number of study hours (total)**	**30 hour**
7.	**Date this description was prepared**	**1 April**
8.	**Course objectives**	
	• **Defining basic concepts in simulation and systems modeling.**	
	• **Comparison of types of simulation models, their methods and methods of use.**	
	• **Remember the steps and stages of building models and simulations.**	
	• **Expanding the student's awareness in this field to motivate him to build simulation systems in multiple areas needed by society.**	
	• **Introducing the student to the theory of queues.**	
9.	**Course Outcomes and Teaching, Learning and Evaluation Methods**	
	a) المعرفية الأهداف	
	1.	**Learn the basics of modeling and simulation.**
	2.	**The development of the student and his analytical and deductive abilities, correction and self-education.**
	3.	**Identify the most important statistical distributions mathematically to build a sound mathematical basis.**
	4.	**Applying queue theory in digital systems.**
	5.	**Benefit from the curriculum of the project course by building smart systems.**
	b) Course Skills Objectives:	
	1.	**Provide the student with the skill of designing good digital systems.**
	2.	**Gaining the student the skill of simulating computer systems.**
	3.	**Giving the student the skill of transforming the problems that he may face in the field of work into solvable mathematical models.**
	4.	**Developing the student's skill in thinking, analysis, problem solving and criticism.**
	Teaching and learning methods	

	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to implement a set of programs in practical laboratories.
	4.	Assigning the student to prepare brief reports on some topics and carry out homework.
	Evaluation methods	
	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
	c)	Emotional and value goals
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Enhancing the student's capabilities in logical thinking through computer modeling and simulation.
	3.	Developing intellectual and creative energies by enhancing the ability of research, investigation, analysis and deduction.
	4.	Encouraging students and raising the spirit of competition among them.
	Teaching and learning methods	
	1.	Give group activities importance by assigning grades to group activities.
	2.	Manage the lecture in a way that makes the student feel the importance of time.
	Evaluation methods	
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
	d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Works well with others
	2.	Ability to self-learn
	3.	Developing the ability to put forward ideas and discuss them.
	4.	Developing the ability to address problems in logical and structured ways.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	2	Introducing the principles of mathematical modeling	MATHEMATICAL MODELING	theoretical , theoretic,abstract, notional, perspectiv	General Discussion / Questions

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
				e, paper, academic	
Second	2	The basic idea of mathematical modeling	The basic idea of mathematical modeling	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
The Third	2	The basic idea of mathematical modeling	The basic idea of mathematical modeling	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Fourth	2	Modeling for real-world matters	Modeling for real-world matters	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Fifth	2	Modeling for real-world matters	Modeling for real-world matters	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Sixth	2	Modeling with data	Modeling with data	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Seventh	2	Modeling with data	Modeling with data	theoretical, theoretic,abstract,	General Discussion /

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
				notional, perspective, paper, academic	Questions
Eighth	2	|||UNTRANSLATED_CONTENT_START|||النمذجة التجريبية|||UNTRANSLATED_CONTENT_END|||	|||UNTRANSLATED_CONTENT_START|||النمذجة التجريبية|||UNTRANSLATED_CONTENT_END|||	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Ninth	2	|||UNTRANSLATED_CONTENT_START|||النمذجة التجريبية|||UNTRANSLATED_CONTENT_END|||	|||UNTRANSLATED_CONTENT_START|||النمذجة التجريبية|||UNTRANSLATED_CONTENT_END|||	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Tenth Floor	2	Proportional Modeling	Proportional Modeling	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Eleventh	2	Proportional Modeling	Proportional Modeling	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Twelfth	2	Simulation Modeling	Simulation Modeling	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Thirteenth	2	Simulation Modeling	Simulation Modeling	theoretical,	General

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
				theoretic,abstract, notional, perspective, paper, academic	**Discussion / Questions**
Fourteenth	**2**	**Dynamic and behavioural modeling**	**Dynamic and behavioural modeling**	**theoretical , theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fifteenth	**2**	**Dynamic and behavioural modeling**	**Dynamic and behavioural modeling**	**theoretical , theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**

11.	Infrastructure		
	1.	**Required textbooks**	• Simulation: Principles and Methods By Wayne • Computer Performance Evaluation Modeling, Techniques and Tools, Raymond Marie, Brigitte Plateau, St. Malo, June 3-6, 1997.
	2.	**Key References (Sources)**	• Probability, Statistics, and Stochastic Processes by Peter Olofsson & Mikael Andersson, 2011.
	a)	**Recommended books and references (scientific journals, reports, ...)**	
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Fourth Stage

1. Systems operational.
2. computer networks
3. Data warehouse
4. Cloud computing.
5. Business Information Systems.
6. mobile apps
7. computer networks
8. Data mining
9. Internet of things.
10. Geographic information systems
11. Operating Systems

|||UNTRANSLATED_CONTENT_START||| **Course Description Template**|||UNTRANSLATED_CONTENT_END|||

Course Description: Fundamentals of Operating System

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Fundamentals of Operating Systems
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Fourth Stage
6.	Number of study hours (total)	45 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• Identify the operating system and its importance and advantages and the benefit of the continuous development of these systems	
	• and learn about the functions of the operating system.	
	• Identify the operating system architecture.	
	• Identify operations management and scheduling methods.	
	• Identify important functions in the operating system.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1. Enabling the student to know the basics of operating systems work.	
	2. Enabling the student to know and understand the functions of operating systems.	
	3. Enabling the student to know the basic functions provided by these systems.	
	b) Course Skills Objectives:	
	1. Gaining the student the skills of dealing with operating systems.	
	2. Acquire knowledge of process scheduling algorithms in the processor.	
	3. Provide the student with knowledge of the structure of various operating systems.	
	Teaching and learning methods	
	1. Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.	
	2. Guide students to some websites to benefit from them.	
	3. Assigning the student to prepare brief reports on some topics and carry out homework.	
	4. Seminars to address the problems faced by the student in the course.	
	Evaluation methods	

	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المهارات المنقولة والتأهيلية العامة (المهارات الأخرى الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	3	Introduction to computers and operating systems, their structures and characteristics	Introduction to Computer and O.S. Structure	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Second	3	Introduction to computers and operating systems, their structures and characteristics	Introduction to Computer and O.S. Structure	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions and Discussion or Eni Exam

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
The Third	**3**	**Introduction to computers and operating systems, their structures and characteristics**	Introduction to Computer and O.S. Structure	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL**
Fourth	**3**	**Introduction to computers and operating systems, their structures and characteristics**	Introduction to Computer and O.S. Structure	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Annie Exam**
Fifth	**3**	**Learn how Process Management works, how to manage it, how to start it, and the conditions for stopping it**	Process Management	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General questions and discussion or exam**
Sixth	**3**	**Learn how Process Management works, how to manage it, how to start it, and the conditions for stopping it**	Process Management	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**
Seventh	**3**	**Introduction to Threads, their types and their synchronization with each other**	Threads	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL QUESTIONS**
Eighth	**3**	**Introduction to Threads, their types and their synchronization with each other**	Threads	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Group Duties**
Ninth	**3**	**Learn how the algorithms for scheduling the CPU work and what are the differences between each of them**	CPU Scheduling	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL QUESTIONS**
Tenth Floor	**3**	**Learn how the algorithms for scheduling the CPU work and what are the differences between each of them**	CPU Scheduling	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
Eleventh	**3**	**Introduction to the synchronization of processes within the CPU and how to manage them**	Process Synchronization	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL QUESTIONS**
Twelfth	**3**	**Introduction to the synchronization of processes within the CPU and how to manage them**	Process Synchronization	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion/ Questions**
Thirteenth	**3**	**Learn the causes of Deadlocks, how to prevent them, and how to restore the system after they occur**	Deadlocks	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**
Fourteenth	**3**	**Learn the causes of Deadlocks, how to prevent them, and how to restore the system after they occur**	Deadlocks	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Group Duties**
Fifteenth	**3**	**Monthly Exam**	**-**	**exam**	**exam**

11.	Infrastructure		
	1.	**Required textbooks**	• Operating systems concepts by Abraham Silberschatz, Peter Baer Galvin and Greg Gagne. • Operating Systems: Internals and Design Principles by William Stallings
	2.	**Key References (Sources)**	
	a)	**Recommended books and references (scientific journals, reports, ...)**	
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description: Fundamentals of Computer Networks

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	computer networks
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Fourth Stage
6.	Number of study hours (total)	45 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• This course aims to provide students with an overview of the concepts and fundamentals of data communications and computer networks.	
	• The course aims to introduce the student to the network layers.	
	• The course aims to introduce the various types of wired and wireless networks and their protocols.	
	• The course aims to introduce the student to the concepts and techniques of networks.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Enabling the student to know the basics of computer networks.
	2.	Enabling the student to know the basics and requirements of building a computer network.
	3.	Enabling the student to know the basic functions provided by computer networks.
	4.	Provide the student with concepts on distributor programming.
	5.	Building wired and wireless networks.
	b) Course Skills Objectives:	
	1.	Providing the student with the skills related to building and developing networks and how to maintain them.
	2.	Developing the student's skill in thinking, analysis, problem solving and criticism.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.
	4.	Seminars to address the problems faced by the student in the course.

	Evaluation methods	
	1.	**Day to day duties**
	2.	**Daily, monthly and final tests.**
	3.	**Participation in the classroom.**
	4.	**Rain check?**
	c)	**Emotional and value goals**
	1.	**Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.**
	2.	**Enhancing the student's capabilities in logical thinking.**
	3.	**Developing intellectual and creative energies by enhancing the ability of research, investigation, analysis and deduction.**
	4.	**Encouraging students and raising the spirit of competition among them.**
	Teaching and learning methods	
	1.	**Give group activities importance by assigning grades to group activities.**
	2.	**Manage the lecture in a way that makes the student feel the importance of time.**
	Evaluation methods	
	1.	**Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.**
	2.	**Commitment to the deadline set in the submission of assignments and research.**
	3.	**Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.**
	d)	**|||UNTRANSLATED_CONTENT_START||| المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||**
	1.	**Developing the student 's ability to deal with the means of technology.**
	2.	**Developing the student 's ability to deal with the Internet.**
	3.	**Developing the student's ability to learn ways and methods of personal development after the course.**
	4.	**Develop the student 's ability to dialogue and discuss.**
	5.	**Developing a spirit of creativity, perseverance and searching for new in his field of work.**

10.	**Course Structure**				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
First	**3**	**General concepts of data communications,**	**Introduction to Data Communication Components, Data Representation, Data Flow**	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion /Questions**
Second	**3**	**General concepts of distributed processing, network standards**	**Distributed Processing, Network Standards**	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion /Questions**

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
The Third	3	Introduction to Physical Composition Physical structure (sender , receiver , carrier , hierarchy)	Physical Structure Physical structure (sender , receiver , carrier , hierarchy)	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion /Questions
Fourth	3	c. Physical layer Guided & Directed Media: RF , Microwave Ovens, Infrared Twisted Dual Cable, Coaxial Cable Fiber Optic Cable	c. Physical layer Guided & Directed Media: RF , Microwave Ovens, Infrared Twisted Dual Cable, Coaxial Cable Fiber Optic Cable	theoretical, theoretic,abstract, notional, perspective, paper, academic	Annie Exam
Fifth	3	Types of networks (LAN , man , WAN , van).	Types of networks (LAN , man , WAN , van)	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion /Questions
Sixth	3	Network topology (bus , star , ring , mesh , ...)	Network topology (bus , star , ring , mesh , ...)	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion /Questions
Seventh	3	Network forms - Network layers (TCP / TC model, 4 layers) - Network layers (OSI model, 7 layers)	Network forms - Network layers (TCP / TC model, 4 layers) - Network layers (OSI model, 7 layers)	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion /Questions
Eighth	3	Network Layers: Protocols: (ARP, FTP, Telnet, DNS)	Network Layers: Protocols: (ARP, FTP, Telnet, DNS)	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Ninth	3	Network Layers: Protocols: UDP , NFS , RPC ,	Network Layers: Protocols: UDP , NFS , RPC ,	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion /Questions
Tenth Floor	3	Network layers: Protocols: SMTP , TFTP , HTTP , WAIS	Network layers: Protocols: SMTP , TFTP , HTTP , WAIS	theoretical, theoretic,abstract, notional, perspective, paper, academic	Monthly Exam
Eleventh	3	IPv4 Addresses , IP6 Addresses - Types of addresses in an IP4 network	IPv4 Addresses , IP6 Addresses - Types of addresses in an IP4 network	theoretical, theoretic,abstract, notional,	General Discussion /Questions

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
				perspective, paper, academic	
Twelfth	3	Network devices (routers , switches , bridges , hub , repeater)	Network devices (routers , switches , bridges , hub , repeater)	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion /Questions
Thirteenth	3	- Multiplexing (FDM, TDM, WDM) - Error detection and correction	- Multiplexing (FDM, TDM, WDM) - Error detection and correction	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion /Questions
Fourteenth	3	- Logical addressing (address space, IPv4 addressing , IPv6 addressing) - Dynamic addressing, routable and non-routable	- Logical addressing (address space, IPv4 addressing , IPv6 addressing) - Dynamic addressing, routable and non-routable	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Fifteenth	3	transport	transport	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion /Questions

11.	Infrastructure		
	1.	Required textbooks	• "Computer Networks", Behrouz A. Forouzan, 7rd. • "Data Communications, Computer Networks and OSI", 4th Edition, A. Tannenbaum, Prentice-Hall, 2010.th • " Computer Communications and Networks", J. R. Freer, USL Press, 2008.
	2.	Key References (Sources)	
	a)	Recommended books and references (scientific journals, reports, ...)	
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course

Course Description Template

Course Description : Data Warehouse

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Data warehouse
4.	Available attendance forms	Attendance (Theoretical + Practical)
5.	Semester/year	First Semester/Fourth Stage
6.	Number of study hours (total)	60 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The course aims to introduce the student to data repositories and the correct ways to deal with big data.	
	• Enabling the student to know the components of data repositories.	
	• The student defined the architecture of data warehouses.	
	• Introducing the student to the direct analytical processing of data.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	The course aims to provide the student with the necessary knowledge to manage and analyze a huge amount of data.
	2.	The course aims to introduce the student to the components of data warehouses.
	3.	The course aims to enable the student to process real-time data.
	4.	The course aims to introduce the student to the structure of data warehouses.
	b) Course Skills Objectives:	
	1.	Provide the student with the necessary skills to deal with database repositories.
	2.	Providing the student with the skill of managing large amounts of data.
	3.	Providing the student with the skill of dealing with direct data.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.
	4.	Seminars to address the problems faced by the student in the course.
	Evaluation methods	
	1.	Day to day duties

	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)		|||UNTRANSLATED_CONTENT_START|||الأخرى المهارات) المنقولة والتأهيلية العامة المهارات .الشخصي والتطور التوظيف بقابلية المتعلقة) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	4	Introduction to Data Warehouse	Introduction to data warehousing	Theory / Practicals	General questions and discussion
Second	4	Decision Support Systems	Decision Support Systems	Theory / Practicals	General Questions and Discussion or Eni Exam
The Third	4	Data Warehouses	Modeling a Data Warehouse	Theory / Practicals	GENERAL

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
Fourth	**4**	**Data Warehouses**	Granularity in the Data Warehouse	**Theory / Practicals**	**Annie Exam**
Fifth	**4**	**Data Warehouses**	Data Life-Cycle	**Theory / Practicals**	**General questions and discussion or exam**
Sixth	**4**	**Data warehouse**	Building a Data Warehouse	**Theory / Practicals**	**Discussion**
Seventh	**4**	**Data Warehouses**	Data Warehousing Components	**Theory / Practicals**	**GENERAL QUESTIONS**
Eighth	**4**	**Data Warehouses**	Data Warehousing Components	**Theory / Practicals**	**Group Duties**
Ninth	**4**	**Data Warehouses**	Data Warehousing Architecture	**Theory / Practicals**	**GENERAL QUESTIONS**
Tenth Floor	**4**	**Data Warehouses**	Data Warehousing Architecture	**Theory / Practicals**	**Discussion**
Eleventh	**4**	**Direct analytical processing**	On Line Analytical Processing (OLAP)	**Theory / Practicals**	**GENERAL QUESTIONS**
Twelfth	**4**	**Direct analytical processing**	On Line Analytical Processing (OLAP)	**Theory / Practicals**	**General Discussion/ Questions**
Thirteenth	**4**	**Direct analytic treatment classifications**	Categorization of OLAP Tools	**Theory / Practicals**	**Discussion**
Fourteenth	**4**	**Direct analytic treatment classifications**	Categorization of OLAP Tools	**Theory / Practicals**	**Group Duties**
Fifteenth	**4**	**Relationship to Statistics and Databases**	Relation to Statistics, Databases	**Theory / Practicals**	**exam**

11.	Infrastructure		
	1.	**Required textbooks**	• Han, Jiawei, Jian Pei, and Micheline Kamber. Data mining: concepts and techniques. Elsevier.
	2.	**Key References (Sources)**	• Ponniah, Paulraj. Data warehousing fundamentals for IT professionals. John Wiley & Sons, 2011. • Kimball, Ralph, and Joe Caserta. The Data WarehouseÂ ETL Toolkit: Practical Techniques for Extracting, Cleaning, Conforming, and Delivering Data. John Wiley & Sons, 2011.
	a)	**Recommended books and references (scientific journals, reports, ...)**	• Kimball, Ralph, and Margy Ross. The data warehouse toolkit: the complete guide to dimensional modeling. John Wiley & Sons, 2011.
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course

Course Description Template

Course Description : Cloud Computing

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Cloud Computing
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Fourth Stage
6.	Number of study hours (total)	30 hour
7.	Date this description was prepared	1 April
8.	Course objectives	
	• This course aims to provide students with an overview of the concepts and fundamentals of cloud computing. Topics to be covered include: General Concepts Cloud Computing Models, Cloud Computing Fundamentals, Cloud Computing Architecture and Management, Cloud Deployment Models, Cloud Computing Technological Drivers, Cloud Service Models, Virtualization, Cloud Computing Programming Models, Cloud Software Development, Cloud Computing Networks, Cloud Service Providers, Cloud Open Source Support, Cloud Computing Security, Advanced Concepts in Cloud Computing.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1. Enabling the student to know the basics of cloud computing.	
	2. Enabling the student to know the architecture of cloud computing.	
	3. Enabling the student to know the basic functions provided by cloud computing.	
	4. Enabling the student to know virtualization.	
	b) Course Skills Objectives:	
	1. Teaching the student the skill of building a computer network and how to maintain it.	
	2. Give the student the skill of converting a cloud computing simulation by means of a Cisco Packet Tracer network simulator.	
	3. Providing the student with virtualization skills.	
	Teaching and learning methods	
	1. Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.	
	2. Guide students to some websites to benefit from them.	
	3. Assigning the student to prepare brief reports on some topics and carry out homework.	

	4.	Seminars to address the problems faced by the student in the course.
	5.	Guide students to some websites to benefit from them.
	Evaluation methods	
	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
	c)	Emotional and value goals
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Enhancing the student's capabilities in logical thinking.
	3.	Developing intellectual and creative energies by enhancing the ability of research, investigation, analysis and deduction.
	4.	Encouraging students and raising the spirit of competition among them.
	Teaching and learning methods	
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Enabling the student to link the theoretical and practical aspects.
	4.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
	Evaluation methods	
	1.	Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.
	2.	Discussion and active participation in the classroom.
	d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	2	General Concepts Cloud Computing Models	Introduction to Cloud Computing Models	theoretical, theoretic,abstract , notional, perspective, paper, academic	General Discussion / Questions

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
Second	2	Cloud Computing	Cloud Computing	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions/Discussion/Annie Exam
The Third	2	Cloud Architecture and Management	Cloud Architecture and Management	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions/Discussion
Fourth	2	Cloud Deployment Templates	Cloud Deployment Templates	theoretical, theoretic,abstract, notional, perspective, paper, academic	Annie Exam
Fifth	2	Technological Drivers of Cloud Computing	Technological Drivers of Cloud Computing	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions/Discussion/Annie Exam
Sixth	2	Cloud Service Models	Cloud Service Models	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions/Discussion
Seventh	2	Virtual Simulation	Virtual Simulation	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Eighth	2	Programming Models for Cloud Computing	Programming Models for Cloud Computing	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Ninth	2	Software Development in the Cloud	Software Development in the Cloud	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Tenth Floor	2	Networks for Cloud Computing	Networks for Cloud Computing	theoretical, theoretic,abstract, notional, perspective, paper, academic	Monthly Exam
Eleventh	2	Cloud providers	Cloud providers	theoretical, theoretic,abstract	GENERAL QUESTIONS

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
				, notional, perspective, paper, academic	
Twelfth	2	Open source support for the cloud	Open source support for the cloud	theoretical, theoretic,abstract , notional, perspective, paper, academic	Eni Discussion/Examination
Thirteenth	2	Security in Computing	Security in Computing	theoretical, theoretic,abstract , notional, perspective, paper, academic	GENERAL QUESTIONS
Fourteenth	2	Advanced concepts in cloud computing.	Advanced concepts in cloud computing.	theoretical, theoretic,abstract , notional, perspective, paper, academic	Group Duties
Fifteenth	2	Advanced concepts in cloud computing.	Advanced concepts in cloud computing.	theoretical, theoretic,abstract , notional, perspective, paper, academic	Discussion

11.	Infrastructure		
	1.	Required textbooks	• "Essentials of Cloud Computing", K Chandrasekaran, 2014 • "Cloud Computing For Dummies", Judith S. Hurwitz , Robin Bloor , Marcia Kaufman ,Fern Halper, 2009
	2.	Key References (Sources)	
	a)	Recommended books and references (scientific journals, reports, ...)	
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course

Course Description Template

Course Description: Business Information Systems (Information Systems Business)

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Cloud Computing
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Fourth Stage
6.	Number of study hours (total)	45 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The course aims to introduce the student to the concept of management information systems and their types.	
	• Introducing the student to the strategic role of business information systems in business establishments and their role in making administrative decisions.	
	• Demonstrate the process of developing management information systems.	
	• Studying business ethics, information security and basic concepts of electronic organizations and e-commerce.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1. Introducing the student to management information systems technology.	
	2. Introducing the student to the stages of development of management information systems.	
	3. Introducing the student to business ethics and information security.	
	b) Course Skills Objectives:	
	1. Providing the student with the skill of dealing with management information systems.	
	2. Providing the student with the skill of dealing with electronic business.	
	3. Providing the student with e-commerce skills.	
	Teaching and learning methods	
	1. Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.	
	2. Guide students to some websites to benefit from them.	
	3. Assigning the student to prepare brief reports on some topics and carry out homework.	
	4. Seminars to address the problems faced by the student in the course.	
	Evaluation methods	

	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Understand the ethics of the work environment and high professionalism.
	2.	Raising the spirit of cooperation and working as a member of a team.
	3.	Developing the intellectual and creative energies of students by raising the spirit of competition.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Enabling the student to link the theoretical and practical aspects.
	4.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.
	2.	Discussion and active participation in the classroom.
	3.	Objective tests and variation in the questions asked such as questions, multiple choice questions, brief explanatory questions based on student comprehension and questions based on student understanding of the practical material.
d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Assigning the student to develop sites that serve the needs of the labor market.
	2.	Understand the ethics of the work environment and high professionalism.
	3.	Develop the skill of communicating with potential and actual users and understanding their needs.
	4.	Instill a spirit of collaboration and work as a member of the website development team.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	3	Knowledge Management	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Second	3	Knowledge Management	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
The Third	3	Concepts of Modern Management	-	theoretical, theoretic,abstract,	General questions

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
				notional, perspective, paper, academic	and discussion
Fourth	3	Information Systems and Electronic Business	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Fifth	3	Information Systems and Electronic Business	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Sixth	3	Information Systems and E-Commerce Framework	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Seventh	3	Information Systems and E-Commerce Framework	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Eighth	3	Business Ethics	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Ninth	3	Business Ethics	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Tenth Floor	3	Information Systems Security – Information System Security and Confidentiality	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Eleventh	3	Information Systems Security – Information System Security and Confidentiality	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Twelfth	3	Information Systems Security – Information System Security and Confidentiality	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
Thirteenth	3	Basic dimensions of information systems and their relationship with modern organizations	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Fourteenth	3	Types of Management Information Systems	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Fifteenth	3	Types of Management Information Systems	-	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion

11.	Infrastructure		
	1.	Required textbooks	• Business information systems – Elizabeth hard castle. •
	2.	Key References (Sources)	• Management Information Systems, Prof. Saad Ghaleb Yassin .
	a)	Recommended books and references (scientific journals, reports, ...)	
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course

Course Description Template

Course Description: Mobile Programming

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	mobile apps
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	First Semester/Fourth Stage
6.	Number of study hours (total)	60 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The course aims to introduce the student to the importance of studying and using various mobile applications.	
	• The course aims to introduce the student to the basics of the work of mobile devices and the limited work on them.	
	• Understand the principles of designing apps for different mobile devices.	
	• The course aims to introduce the student tohow to preserve the device's resources such as battery and memory.	
	• Testing the application and evaluating it from the user's point of view.	
	• Understand how the team works and instill a sense of community.	
	• Providing students with the skills necessary to produce applications that benefit society	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Acquiring the ability and skill to produce products that serve the community.
	2.	Deepening the skill of programming with the Android Studio system for mobile devices.
	3.	Design clear and easy interfaces that are usable on limited-size displays.
	4.	How to use device resources such as GPS and camera.
	5.	Understand the architecture of the Android system and how it works .
	6.	Test the app on the actual device.
	b) Course Skills Objectives:	
	1.	Acquiring the skill of developing software for mobile devices.
	2.	Instilling the spirit of the group and working within the team .
	3.	The skill of searching through web pages to find solutions to some of the questions asked.

	4.	Finding alternatives to design user-friendly interfaces that suit the limitations of these devices.
Teaching and learning methods		
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.
	4.	Seminars to address the problems faced by the student in the course.
Evaluation methods		
	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Students gain positive attitudes in building applications that serve the community.
	3.	Cultivating a spirit of participation and cooperation among students.
	4.	The student senses the importance of studying mobile applications and their role in modern technology.
	5.	Respecting time by completing the given task at a specified time.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Enabling the student to link the theoretical and practical aspects.
	4.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Commitment to attend the classroom and finish the assigned work (duties and reports) within specific times.
	2.	Discussion and active participation in the classroom.
	3.	Academic Activities
d)	|||UNTRANSLATED_CONTENT_START||| المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Enhancing the ability of students to work within the team and instilling a spirit of cooperation.
	2.	Developing the ability of students to produce applications that serve the labor market.
	3.	Urging students to work within a specific time limit.
	4.	Ability to self-learn through research, discussion, finding solutions and writing them down.

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
First	**4**	**Introduction to Mobile Devices**	Introduction	**Theory / Practicals**	**General Discussion / Questions**
Second	**4**	**Introduction to Mobile Devices**	Introduction	**Theory / Practicals**	**General Discussion / Questions**
The Third	**4**	**Understanding Android Architecture**	Android Framework	**Theory / Practicals**	**General Discussion / Questions**
Fourth	**4**	**Understanding Android Architecture**	Android Framework	**Theory / Practicals**	**General Discussion / Questions**
Fifth	**4**	**Programming and implementation of the first one-screen application**	Activity	**Theory / Practicals**	**General Discussion / Questions**
Sixth	**4**	**Programming and implementation of the first one-screen application**	Activity	**Theory / Practicals**	**General Discussion / Questions**
Seventh	**4**	**Programming and implementation of the first one-screen application**	Activity	**Theory / Practicals**	**General Discussion / Questions**
Eighth	**4**	**Include more than one screen in the app**	Intent	**Theory / Practicals**	**General Discussion / Questions**
Ninth	**4**	**Include more than one screen in the app**	Intent	**Theory / Practicals**	**General Discussion /**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
					Questions
Tenth Floor	**4**	**Advantages of Using Databases**	SQLite	**Theory / Practicals**	**General Discussion / Questions**
Eleventh	**4**	**Advantages of Using Databases**	SQLite	**Theory / Practicals**	**General Discussion / Questions**
Twelfth	**4**	**Understand design principles for small screen**	Mobile Design	**Theory / Practicals**	**General Discussion / Questions**
Thirteenth	**4**	**Understand design principles for small screen**	Mobile Design	**Theory / Practicals**	**General Discussion / Questions**
Fourteenth	**4**	**Using and programming the camera and embedding multimedia**	|||UNTRANSLATED_CONTENT_START||| Multimedia|||UNTRANSLATED_CONTENT_END|||	**Theory / Practicals**	**General Discussion / Questions**
Fifteenth	**4**	**Using and programming the camera and embedding multimedia**	|||UNTRANSLATED_CONTENT_START||| Multimedia|||UNTRANSLATED_CONTENT_END|||	**Theory / Practicals**	**General Discussion / Questions**

11.	Infrastructure		
	1.	**Required textbooks**	• Valentino Lee, Heather Schneider, and Robbie Schell, Mobile Applications: Architecture, Design, and Development, Prentice Hall, 2004. 2- Brian Fling, Mobile Design and Development, O'Reilly Media, 2009. • Maximiliano Firtman, Programming the Mobile Web, O'Reilly Media, 2010. • Christian Crumlish and Erin Malone, Designing Social Interfaces, O'Reilly Media, 2009.
	2.	**Key References (Sources)**	•

	a)	**Recommended books and references (scientific journals, reports, ...)**	
	b-	**Electronic references, websites ,.....**	• https://developer.android.com/guide

12.	**Course Development Plan**
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description : Computer Networks

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	computer networks
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	Second Semester/Fourth Stage
6.	Number of study hours (total)	45 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The course aims to increase the student's knowledge of computer networks (their advantages and disadvantages).	
	• Learn more about the network components.	
	• To know the classification of the network.	
	• Advantages and Disadvantages of Network Topology.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Enabling the student to know the basics of computer networks and the reference model of networks.
	2.	Enabling the student to know the basics and requirements of building a computer network.
	3.	Enabling the student to know the basic functions provided by computer networks.
	4.	Provide the student with concepts on distributor programming.
	5.	Building wired and wireless networks.
	b) Course Skills Objectives:	
	1.	Teaching the student the skill of building a computer network and how to maintain it.
	2.	The student acquired the skill of transforming a computer network simulator by means of a Cisco Packet Tracer network simulator.
	3.	Providing the student with skills in maintaining computer networks.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to implement a set of programs in practical laboratories.

	4.	Assigning the student to prepare brief reports on some topics and carry out homework.
Evaluation methods		
	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out practical assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	3	Introduction to Computer Networks, Advantages and Disadvantages of Computer Networks	Introduction to Computer Networks, Advantages and Disadvantages of Computer Networks	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
Second	3	Network Components: NIC, Repeater hub, Bridge, Router, BRouter, gateway, Data Flow	Network Components: NIC, Repeater hub, Bridge, Router, BRouter, gateway, Data Flow	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions and Discussion or Eni Exam
The Third	3	Network classification, LAN , man and WAN	Network classification, LAN , man and WAN	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL
Fourth	3	Network topology: network , star , bus, loop , advantages and disadvantages of each topology.	Network topology: network , star , bus, loop , advantages and disadvantages of each topology.	theoretical, theoretic,abstract, notional, perspective, paper, academic	Annie Exam
Fifth	3	Transport Modes: Magnetic Media, Twisted Pair , Baseband Coaxial Cables, Broadband and Fiber Optic Coaxial Cables, Cables	Transport Modes: Magnetic Media, Twisted Pair , Baseband Coaxial Cables, Broadband and Fiber Optic Coaxial Cables, Cables	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion or exam
Sixth	3	Microwave , infrared and millimeter wave transmission, light wave transmission and wireless LAN media	Microwave , infrared and millimeter wave transmission, light wave transmission and wireless LAN media	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Seventh	3	Types of networks (LAN: size , transmission technology, ...) , WAN and man.	Types of networks (LAN: size , transmission technology, ...) , WAN and man.	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Eighth	3	REFERENCE MODEL	REFERENCE MODEL	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Ninth	3	Relationship of services to protocols	Relationship of services to protocols	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Tenth Floor	3	c. Physical layer	c. Physical layer	theoretical, theoretic,abstract,	Monthly Exam

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
				notional, perspective, paper, academic	
Eleventh	3	c. Data link layer	c. Data link layer	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Twelfth	3	a. Network layer	Network Layer Devices	theoretical, theoretic,abstract, notional, perspective, paper, academic	Anne's Discussion and Examination
Thirteenth	3	Transfer layer	Transfer layer	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Fourteenth	3	session layer, presentation layer, application layer	الجلسة طبقة	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Fifteenth	3	Data Transfer in OSI Model, TCP / IP Reference Model	Data Transfer in OSI Model, TCP / IP Reference Model	theoretical, theoretic,abstract, notional, perspective, paper, academic	Discussion

11.	Infrastructure		
	1.	Required textbooks	• Simulation: Principles and Methods By Wayne • Computer Performance Evaluation Modeling, Techniques and Tools, Raymond Marie, Brigitte Plateau, St. Malo, June 3-6, 1997.
	2.	Key References (Sources)	• Probability, Statistics, and Stochastic Processes by Peter Olofsson & Mikael Andersson, 2011.
	a)	Recommended books and references (scientific journals, reports, ...)	
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%

- **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description : Data Mining

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Data mining
4.	Available attendance forms	Attendance (Theoretical + Practical)
5.	Semester/year	Second Semester/Fourth Stage
6.	Number of study hours (total)	60 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The course aims to introduce the student to data mining and the techniques used to extract the required information quickly and efficiently, in addition to introducing the student to modern techniques used in the field of data classification and forecasting. The course also aims to provide the student with basic knowledge in transforming and reducing the volume of data, which is reflected positively at the student's scientific level, especially in future stages of education.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	The course aims to provide the student with the necessary knowledge to manage, analyze and mine a huge amount of data.
	2.	The course aims to introduce the student to some techniques related to data mining.
	3.	Introducing the student to the methods of data classification and its role in data mining.
	4.	Introduce the student to some advanced concepts in data mining.
	b) Course Skills Objectives:	
	1.	Provide the student with the necessary skills to deal with a large amount of data and retrieve the required information.
	2.	Provide the student with data classification skills.
	3.	Providing the student with the skills of analysis and conclusion.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.
	4.	Seminars to address the problems faced by the student in the course.

	Evaluation methods	
	1.	**Day to day duties**
	2.	**Daily, monthly and final tests.**
	3.	**Participation in the classroom.**
	4.	**Rain check?**
	c)	**Emotional and value goals**
	1.	**Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.**
	2.	**Promote collaboration among students by carrying out assignments.**
	3.	**Developing the intellectual and creative energies of students through the implementation of various duties.**
	4.	**Encouraging students and raising the spirit of competition among them.**
	Teaching and learning methods	
	1.	**Give group activities importance by assigning grades to group activities**
	2.	**Managing the lecture in a form that makes the student feel the importance of time.**
	3.	**Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.**
	Evaluation methods	
	1.	**Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.**
	2.	**Commitment to the deadline set in the submission of assignments and research.**
	3.	**Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.**
	d)	**|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||**
	1.	**Developing the student 's ability to deal with the means of technology.**
	2.	**Developing the student 's ability to deal with the Internet.**
	3.	**Developing the student's ability to learn ways and methods of personal development after the course.**
	4.	**Develop the student 's ability to dialogue and discuss.**
	5.	**Developing a spirit of creativity, perseverance and searching for new in his field of work.**

10.	**Course Structure**				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
First	**4**	**Introduction to Data Mining**	Data Mining : Data Mining Functionalities , Data Mining Process,	**Theory / Practicals**	**General questions and discussion**
Second	**4**	**Key topics in data mining include the structure of data mining systems, types of data mining systems**	Architecture of a Typical Data Mining Systems , Classification of Data Mining Systems,	**Theory / Practicals**	**General Questions and Discussion or Eni Exam**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
The Third	**4**	**Some Data Mining Techniques**	Data Mining Techniques, Data Preprocessing, Data Cleaning, Data Integration, Data Transformation and Data Reduction	**Theory / Practicals**	**GENERAL**
Fourth	**4**	**Some Data Mining Techniques**	Data Mining Techniques, Data Preprocessing, Data Cleaning, Data Integration, Data Transformation and Data Reduction	**Theory / Practicals**	**Annie Exam**
Fifth	**4**	**Data dissemination and summarization**	Data Generalization and Summarization Based Characterization	**Theory / Practicals**	**General questions and discussion or exam**
Sixth	**4**	**Large Database Mining, Classification and Forecasting**	Mining Association Rules In Large Databases , Classification and Prediction	**Theory / Practicals**	**Discussion**
Seventh	**4**	**Large Database Mining, Classification and Forecasting**	Mining Association Rules In Large Databases , Classification and Prediction	**Theory / Practicals**	**GENERAL QUESTIONS**
Eighth	**4**	**Classification methods**	Classification By Decision Tree Induction, Bayesian Classification , Prediction , Clusters Analysis , Types of Data In Cluster Analysis , Categorization of Major Clustering Methods , Partitioning Methods , Hierarchical Methods ,	**Theory / Practicals**	**Group Duties**
Ninth	**4**	**Classification methods**	Classification By Decision Tree Induction, Bayesian Classification , Prediction , Clusters Analysis , Types of Data In Cluster Analysis ,	**Theory / Practicals**	**GENERAL QUESTIONS**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
			Categorization of Major Clustering Methods , Partitioning Methods , Hierarchical Methods ,		
Tenth Floor	**4**	**Classification methods**	Classification By Decision Tree Induction, Bayesian Classification , Prediction , Clusters Analysis , Types of Data In Cluster Analysis , Categorization of Major Clustering Methods , Partitioning Methods , Hierarchical Methods ,	**Theory / Practicals**	**Discussion**
Eleventh	**4**	**Classification methods**	Classification By Decision Tree Induction, Bayesian Classification , Prediction , Clusters Analysis , Types of Data In Cluster Analysis , Categorization of Major Clustering Methods , Partitioning Methods , Hierarchical Methods ,	**Theory / Practicals**	**GENERAL QUESTIONS**
Twelfth	**4**	**Classification methods**	Classification By Decision Tree Induction, Bayesian Classification , Prediction , Clusters Analysis , Types of Data In Cluster Analysis , Categorization of Major Clustering Methods , Partitioning Methods , Hierarchical Methods ,	**Theory / Practicals**	**General Discussion/ Questions**
Thirteenth	**4**	**Advanced concepts in data mining**	Applications of Data Mining , Social Impacts of Data Mining , Mining www , Mining Text Database , Mining Spatial Databases.	**Theory / Practicals**	**Discussion**
Fourteenth	**4**	**Advanced concepts in data mining**	Applications of Data Mining , Social Impacts of Data Mining , Mining www , Mining Text	**Theory / Practicals**	**Group Duties**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
			Database , Mining Spatial Databases.		
Fifteenth	**4**	**Advanced concepts in data mining**	Applications of Data Mining , Social Impacts of Data Mining , Mining www , Mining Text Database , Mining Spatial Databases.	**Theory / Practicals**	**exam**

11.	Infrastructure		
	1.	**Required textbooks**	• Han, Jiawei, Jian Pei, and Micheline Kamber. Data mining: concepts and techniques. Elsevier.
	2.	**Key References (Sources)**	• Ponniah, Paulraj. Data warehousing fundamentals for IT professionals. John Wiley & Sons, 2011. • Kimball, Ralph, and Joe Caserta. The Data WarehouseÂ ETL Toolkit: Practical Techniques for Extracting, Cleaning, Conforming, and Delivering Data. John Wiley & Sons, 2011.
	a)	**Recommended books and references (scientific journals, reports, ...)**	• Kimball, Ralph, and Margy Ross. The data warehouse toolkit: the complete guide to dimensional modeling. John Wiley & Sons, 2011.
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description: Internet of Things

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Data mining
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	Second Semester/Fourth Stage
6.	Number of study hours (total)	30 hour
7.	Date this description was prepared	1 April
8.	Course objectives	
	• The Internet of Things (IoT) is the next computing revolution. Billions of internet-connected data pumps are already radically changing the way we live and work. This course provides a deep understanding of IoT technologies. Students will learn IoT hardware programming (Arduino and Raspberry Pi) , sensing and operation technologies, IoT Zigbee protocols, 5G , NFC , MQTT , etc.) , network connectivity design and security enforcement, IoT data science, and cloud-based IoT platforms such as AWS IoT. Students will be guided through lab assignments designed to give them real-world hands-on experience, deploying a distributed Wi-Fi monitoring service, a cloud-based IoT service platform that serves tens of thousands of heartbeat sensors, and more. Students will emerge from the classroom with a cutting-edge education in this rapidly emerging technology sector, confidently executing the tasks they will typically encounter in industrial environments.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Enabling the student to learn about IoT technologies
	2.	Enabling the student to learn the programming of IoT devices.
	3.	Enabling the student to know the protocols of the Internet of Things.
	4.	Provide the student with concepts on cloud-based IoT platforms such as AWS IoT.
	5.	Building IoT-based networks.
	b) Course Skills Objectives:	
	1.	Provide the student with the ability to understand the architecture of the Internet of Things and the connected world.
	2.	Provide the student with the possibility of discovering and using various devices and sensor technologies to build IoT applications.
	3.	Provide students with the skills to build IoT applications in real time to create a smart world.

	4.	Provide the student with the ability to understand the cloud services available and the communications API for the development of smart cities.
Teaching and learning methods		
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.
	4.	Seminars to address the problems faced by the student in the course.
Evaluation methods		
	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Promote collaboration among students by carrying out assignments.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المهارات المنقولة والتأهيلية العامة (المهارات الأخرى بقابلية المتعلقة والتطور التوظيف الشخصي.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	2	IoT Definition and Characteristics	IoT Definition and Characteristics	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Second	2	Physical IoT Design	Physical IoT Design	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Questions and Discussion or Eni Exam
The Third	2	Logical IoT Design	Logical IoT Design	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL
Fourth	2	IoT Architecture and Protocols	IoT Architecture and Protocols	theoretical, theoretic,abstract, notional, perspective, paper, academic	Annie Exam
Fifth	2	Different IoT platforms	Different IoT platforms	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion or exam
Sixth	2	Real-life IoT examples	Real-Time IoT Examples	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Seventh	2	IoT Challenges	IoT Challenges	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Eighth	2	IoT and M2M	IoT and M2M	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Ninth	2	IoT Reference Model	IoT Reference Model	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Tenth Floor	2	Big Data and the Internet of Things	Big Data and the Internet of Things	theoretical, theoretic,abstract, notional,	Monthly Exam

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
				perspective, paper, academic	
Eleventh	2	Sensors with Arduino	Sensors with Arduino	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Twelfth	2	Sensors with Raspberry Pi	Sensors with Raspberry Pi	theoretical, theoretic,abstract, notional, perspective, paper, academic	Anne's Discussion and Examination
Thirteenth	2	CLOUD PLATFORMS	CLOUD PLATFORMS	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Fourteenth	2	Smart Cities:	Smart Cities:	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Fifteenth	2	The environment is smart	The environment is smart	theoretical, theoretic,abstract, notional, perspective, paper, academic	Discussion

11.	Infrastructure		
	1.	Required textbooks	• Adrian McEwen, Hakim Cassimally, ―Designing the Internet of Things, John Wiley and Sons 2014. • Francis daCosta, "Rethinking the Internet of Things: A Scalable Approach to Connecting Everything," A press Publications, 1st Edition 2013.
	2.	Key References (Sources)	•
	a)	Recommended books and references (scientific journals, reports, ...)	•
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10% • Keeping abreast of the development in various ways and methods of the course

Course Description Template

Course Description: Geographic Information Systems

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Geographic information systems
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	Second Semester/Fourth Stage
6.	Number of study hours (total)	45 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• Learn the concept of GIS and other concepts used.	
	• Applications used with GIS and how they are represented.	
	• Learn how to collect and analyze spatial data.	
	• Designing databases and linking them (adding them) with GIS systems.	
	• Learn statistical analysis of spatial data type.	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Introducing the concept of geographic information systems.
	2.	Realizing the importance of geographic information systems in practical life.
	3.	Distinguish between types of GIS.
	4.	concepts of GIS
	5.	Trying to reach new concepts in GIS.
	b) Course Skills Objectives:	
	1.	Providing the student with the skills of using GIS programs.
	2.	Provide the student with the skill of analyzing geographical images and the ability to benefit from them in an optimal way.
	3.	Opening new horizons for scientific research for the post-course stage.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.
	Evaluation methods	

	1.	Day to day duties
	2.	Daily, monthly and final tests.
	3.	Participation in the classroom.
	4.	Rain check?
c)	Emotional and value goals	
	1.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	2.	Enhancing the student's learning spirit by discovering what is new and in various sciences.
	3.	Developing the intellectual and creative energies of students through the implementation of various duties.
	4.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||المنقولة والتأهيلية العامة المهارات (الأخرى المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	3	concepts of GIS	Introduction to GIS	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions
Second	3	Applications and how they are represented	Science Geography, and applications Representative application areas and their foundations	theoretical, theoretic,abstract, notional, perspective, paper, academic	General Discussion / Questions

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
The Third	**3**	**Applications and how they are represented**	Science Geography, and applications Representative application areas and their foundations	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fourth	**3**	**Spatial data, its characteristics and structure**	Spatial Data properties and structure	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fifth	**3**	**Spatial data, its characteristics and structure**	Spatial Data properties and structure	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Sixth	**3**	**Spatial data, its characteristics and structure**	Spatial Data properties and structure	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Seventh	**3**	**Spatial and Environmental Data Management**	Spatial Data Management, Geodatabase basics	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Eighth	**3**	**Spatial and Environmental Data Management**	Spatial Data Management, Geodatabase basics	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Ninth	**3**	**Spatial Data Analysis Module**	Vector Based Spatial Analysis	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Tenth Floor	**3**	**Spatial Data Analysis Module**	Vector Based Spatial Analysis	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Eleventh	**3**	**Statistical methods for spatial data and geographical data**	Spatial Statistics andGeo-Statistics	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Twelfth	**3**	**Statistical methods for spatial data and geographical data**	Spatial Statistics andGeo-Statistics	**theoretical, theoretic,abstract, notional,**	**General Discussion**

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
				perspective, paper, academic	**/ Questions**
Thirteenth	**3**	**Statistical methods for spatial data and geographical data**	Spatial Statistics andGeo-Statistics	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fourteenth	**3**	**Data Cleansing**	Data Collection and Quality	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**
Fifteenth	**3**	**Data Cleansing**	Data Collection and Quality	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**General Discussion / Questions**

11.	Infrastructure		
	1.	**Required textbooks**	• Geographic Information Systems and Science. • Geospatial Analysis: A Comprehensive Guide to Principles, Techniques and Software Tools.
	2.	**Key References (Sources)**	•
	a)	**Recommended books and references (scientific journals, reports, ...)**	
	b-	**Electronic references, websites ,.....**	**Sober scientific sites**

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**

Course Description Template

Course Description: Operating System

This course description provides a concise summary of the main features of the course and the learning outcomes expected of the student, demonstrating whether the student has made the most of the learning opportunities available. It must be linked to the iption of the program.

1.	Educational Institution	Qadisiyah University/ Faculty of Computer Science and Information Technology
2.	University Department/ Center	Department of Computer Information Systems
3.	Course Name	Operating Systems
4.	Available attendance forms	Attendance (theoretical)
5.	Semester/year	Second Semester/Fourth Stage
6.	Number of study hours (total)	45 hours
7.	Date this description was prepared	1 April
8.	Course objectives	
	• Learn how to manage memory in operating systems.	
	• Learn how to manage files in the operating system.	
	• |||UNTRANSLATED_CONTENT_START|||تعريف الطالب على الأنظمة الموزعة.|||UNTRANSLATED_CONTENT_END|||	
9.	Course Outcomes and Teaching, Learning and Evaluation Methods	
	a) المعرفية الأهداف	
	1.	Provide the student with knowledge of various processes in operating systems.
	2.	Provide the student with knowledge related to memory management and virtual memory.
	3.	Introducing the student to the security available in the operating system.
	4.	Provide the student with basic knowledge of file management.
	b) Course Skills Objectives:	
	1.	Provide the student with the skills of optimal handling with various operating systems.
	2.	Developing the student's file management skills and how to deal with them in different operating systems.
	3.	Gain student skills to deal with various risks faced by the operating system.
	Teaching and learning methods	
	1.	Delivering scientific lectures in classrooms and using the (Data show) for the purpose of stating the main ideas of the topic.
	2.	Guide students to some websites to benefit from them.
	3.	Assigning the student to prepare brief reports on some topics and carry out homework.
	Evaluation methods	
	5.	Day to day duties

	6.	Daily, monthly and final tests.
	7.	Participation in the classroom.
	8.	Rain check?
c)	Emotional and value goals	
	5.	Encouraging students to benefit from the course by believing in the importance of the course in the educational process and in the field of specialization in general.
	6.	Promote collaboration among students by carrying out assignments.
	7.	Developing the intellectual and creative energies of students through the implementation of various duties.
	8.	Encouraging students and raising the spirit of competition among them.
Teaching and learning methods		
	1.	Give group activities importance by assigning grades to group activities
	2.	Managing the lecture in a form that makes the student feel the importance of time.
	3.	Encouraging the student to present creative works in the specialization that keep pace with quality standards in community service.
Evaluation methods		
	1.	Theparticipation of the actor in the classroom is a guide to student commitment and responsibility.
	2.	Commitment to the deadline set in the submission of assignments and research.
	3.	Real-time , quarterly and final tests are considered for cognitive and skill commitment and achievement.
d)	|||UNTRANSLATED_CONTENT_START|||الأخرى المهارات) المنقولة والتأهيلية العامة المهارات الشخصي والتطور التوظيف بقابلية المتعلقة.) |||UNTRANSLATED_CONTENT_END|||
	1.	Developing the student 's ability to deal with the means of technology.
	2.	Developing the student 's ability to deal with the Internet.
	3.	Developing the student's ability to learn ways and methods of personal development after the course.
	4.	Develop the student 's ability to dialogue and discuss.
	5.	Developing a spirit of creativity, perseverance and searching for new in his field of work.

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
First	3	Introduction to memory management and what are the different types of memory and the characteristics of each type	Memory Management	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Second	3	Introduction to memory management and what are the	Memory Management	theoretical, theoretic,abstract, notional,	General Questions and

10.	Course Structure				
Week	Hours	Intended Learning Outcomes	Module / Course Name or	teaching method	Valuation Method
		different types of memory and the characteristics of each type		perspective, paper, academic	Discussion or Eni Exam
The Third	3	Introduction to memory management and what are the different types of memory and the characteristics of each type	Memory Management	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL
Fourth	3	An introduction to virtual memory and what is the difference between it and real memory and what are the reasons for using it and what are its characteristics	Virtual memory	theoretical, theoretic,abstract, notional, perspective, paper, academic	Annie Exam
Fifth	3	An introduction to virtual memory and what is the difference between it and real memory and what are the reasons for using it and what are its characteristics	Virtual memory	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion or exam
Sixth	3	An introduction to how the system deals with file grief and management	File-System Interface	theoretical, theoretic,abstract, notional, perspective, paper, academic	General questions and discussion
Seventh	3	An introduction to how the system deals with file grief and management	File-System Interface	theoretical, theoretic,abstract, notional, perspective, paper, academic	GENERAL QUESTIONS
Eighth	3	An introduction to how the system deals with file grief and management	File-System Interface	theoretical, theoretic,abstract, notional, perspective, paper, academic	Group Duties
Ninth	3	An introduction to the available input and output systems,	I/O Systems	theoretical, theoretic,abstract, notional,	GENERAL QUESTIONS

10.	Course Structure				
Week	**Hours**	**Intended Learning Outcomes**	**Module / Course Name or**	**teaching method**	**Valuation Method**
		the characteristics of each type of system, what is the difference between input and output systems, and how each system works		**perspective, paper, academic**	
Tenth Floor	**3**	**An introduction to the available input and output systems, the characteristics of each type of system, what is the difference between input and output systems, and how each system works**	I/O Systems	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Monthly Exam**
Eleventh	**3**	**Introduction to the concept of distributed systems and their applications in daily life**	Distributed Systems	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL QUESTIONS**
Twelfth	**3**	**Introduction to the concept of distributed systems and their applications in daily life**	Distributed Systems	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Anne's Discussion and Examination**
Thirteenth	**3**	**Learn how to protect the operating system from external threats, whether viruses or hackers**	Protection & Security	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**GENERAL QUESTIONS**
Fourteenth	**3**	**Learn how to protect the operating system from external threats, whether viruses or hackers**	Protection & Security	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Group Duties**
Fifteenth	**3**	**Learn how to protect the operating system from external threats, whether viruses or hackers**	Protection & Security	**theoretical, theoretic,abstract, notional, perspective, paper, academic**	**Discussion**

11.	Infrastructure		
	1.	Required textbooks	• Operating systems concepts by Abraham Silberschatz, Peter Baer Galvin and Greg Gagne. • Operating Systems: Internals and Design Principles by William Stallings
	2.	Key References (Sources)	
	a)	Recommended books and references (scientific journals, reports, ...)	
	b-	Electronic references, websites ,.....	Sober scientific sites

12.	Course Development Plan
	• **Adding or deleting vocabulary for curricula within the scientific development taking place in each course and at a rate not exceeding 10%** • **Keeping abreast of the development in various ways and methods of the course**