University of Information and Communication Technology
جامعة تكنولوجيا المعلومات والاتصالات

First Cycle – Bachelor's degree (B.Sc.) – Business Information Technology
بكالوريوس - تكنولوجيا معلومات الاعمال

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1. Mission & Vision Statement

The need for the BIT department has emerged as the need for government and private sector institutions to understand and manage information and keep updated of the evolution of information technology. This major is considered as one of the most important modern disciplines, which is increasingly essential by students, educational and institutions employment because there is almost no institution, whatever it's field, that doesn't have a need for this specialty.

Students in the BIT Department receive a wide range of courses that focus on preparing highly qualified graduates in information technology, computer science, database management, electronic and information management, communications, software and financial applications.

Vision Statement

To be a pioneer in the field and takes his place among the modern disciplines that meet the needs of the market.

Mission Statement

A graduate of the BIT Department has the skills that enable him to develop and manage administrative tasks in Information Technology and employ them in the management work.

2. Program Specification

Program code:	BSc-BIT	**ECTS**	240
Duration:	4 levels, 8 Semesters	**Method of Attendance:**	Full Time

Computer science and accounting are both extensive fields with a wide array of opportunities for exploration. The program places a strong emphasis on understanding the interconnectedness between these disciplines. Whether it is the application of computer technology in accounting systems or the use of accounting principles in computer-based financial analysis, the degree offers a comprehensive understanding of both domains. Students are attracted to this program for various reasons. For some, it is the breadth of knowledge and skills gained, while for others, it serves as a foundation for specializing in specific areas such as financial accounting, managerial accounting, or information systems auditing. In addition, students have the option to transfer to specialized degree programs in computer science or accounting after their initial year, enabling them to tailor their studies to their individual interests and career aspirations in these fields.

At the foundational level (Level 1), students are introduced to the fundamental concepts of computer science, providing a strong basis for progression into various specialized programs within the computer science program group. At Level 2, core topics specific to each program are covered, preparing students for advanced subject specialist modules at Levels 3 and 4 that are driven by research in the field. The university's mission is to ensure that computer science graduates appreciate the connection between research and teaching, as stated in the university and school mission statements.

From Levels 2 to 4, students have the freedom to choose over half of their module credits, with the requirement of selecting modules that reflect the diverse aspects of computer science, ranging from foundational algorithms and software development to complex systems and data analysis. This approach allows students to pursue their individual interests and cultivate a comprehensive understanding of the field. Personal tutors provide guidance in making module selections.

The research ethos is fostered from the beginning through practical sessions integrated into lecture modules or taught separately in dedicated practical modules. Research seminars and tutorials also contribute to the development of a research-oriented mindset. In Level 1, students are required to complete a compulsory field course to progress to Level 2, and optional field courses are available at Levels 2, 3, and 4. At Level 4, all students undertake an independent research project, which can involve library or data analysis work, or a field or laboratory-based project.

Academic tutorials are conducted at Levels 1 and 2, with the same tutor serving as the personal tutor to provide continuous guidance. These tutorials include workshops to teach essential skills such as information retrieval and presentation techniques, followed by assessed exercises that allow students to practice these skills in a subject-specific context.

The program also offers opportunities for international study years and industrial placements, accommodating individual needs through discussions with the appropriate tutors.

3. Program Objectives

1. Offer innovative curricula and advanced infrastructure to our students to enhance their skills and abilities to solve problems that face them in the field of IT applications.
2. Provide the market with the necessary administrative and strategic leaders which are able to improve the management and security of the IT for serving the society.
3. Graduate leaders that are able to learn and keep up with the development in the field and to be competitive worldwide.
4. To qualify students for self-learning and teamwork.
5. Prepare graduates able to face the general challenges in life by understanding ethical and social issues

4. Student Learning Outcomes

Business Information Technology explores the organization and functioning of information systems within a business context. Graduates acquire knowledge about the historical, technical, and societal aspects of Business Information Technology and apply fundamental concepts to address broader business challenges. The department offers a Bachelor of Science in Business Information Technology with concentrations in General Business Information Technology, computer programing and accounting, cost accounting and Algorithm and Complexity. Additionally, the department provides courses to students from other disciplines and supports pre-professional programs. The curriculum and experiences are designed to prepare students for entry into professional fields, advanced studies, technical careers, and teaching roles in the field of Business Information Technology.

Outcome 1: Complex Relationship Identification

Graduates will demonstrate an understanding of the structure and functionality of information systems components and their interactions within complex business environments.

Outcome 2: Oral and Written Communication

Graduates will effectively communicate the outcomes of business information technology investigations using oral and written communication skills.

Outcome 3: Laboratory and Field Studies

Graduates will proficiently conduct laboratory experiments and field studies, utilizing appropriate technological tools and observing industry standards and best practices.

Outcome 4: Business Technology Knowledge

Graduates will comprehend the development of business technology knowledge, including the historical progression of foundational theories, technologies, and the nature of business information technology.

Outcome 5: Data Analysis

Graduates will possess quantitative skills to analyze and interpret business data in a scientific and analytical manner.

Outcome 6: Critical Thinking

Graduates will employ critical-thinking and problem-solving abilities to develop research projects and papers within the field of Business Information Technology, integrating technological solutions to address business challenges.

5. Academic Staff

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6. Credits, Grading and GPA

Credits

University of Information and Communication Technology is following the Bologna Process with the European Credit Transfer System (ECTS) credit system. The total degree program number of ECTS is 240, 30 ECTS per semester. 1 ECTS is equivalent to 25 hrs student workload, including structured and unstructured workload.

Grading

Before the evaluation, the results are divided into two subgroups: pass and fail. Therefore, the results are independent of the students who failed a course. The grading system is defined as follows:

GRADING SCHEME مخطط الدرجات				
Group	**Grade**	التقدير	**Marks (%)**	**Definition**
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 – 49)	FX – Fail	راسب - قيد المعالجة	(45-49)	More work required but credit awarded
	F – Fail	راسب	(0-44)	Considerable amount of work required
Note:				
Number Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.				

Calculation of the Cumulative Grade Point Average (CGPA)

The CGPA is calculated by the summation of each module score multiplied by its ECTS, all are divided by the program total ECTS.

CGPA of a 4-year B.Sc. degree:

CGPA = [(1st ^{m}odule score x ECTS) + (2nd ^{m}odule score x ECTS) + ……] / 240

7. Curriculum/Modules

Semester 1 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	SWL	ECTS	Type	Pre-request
IBT101	Programming Fundamentals (I)	93	107	200	8	C	
IBT103	Principles of Accounting	78	72	150	6	C	
IBT105	Discrete Mathematics	48	102	150	6	C	
BIT111	Principle of Management	48	102	150	6	C	
DHR103	Human Rights and Democracy	32	18	50	2	B	
ENG102	English (I)	32	18	50	2	B	

Semester 2 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	SWL	ECTS	Type	Pre-request
IBT104	Programming Fundamentals (II)	93	107	200	8	C	IBT101
BIC123	Human Resources Management	48	102	150	6	C	
BIC122	Probability and Statistics	63	87	150	6	S	IBT105
BIC111	Computational Paradigms	48	102	150	6	S	
ARB101	Arabic Language	32	18	50	2	B	ENG102
ENG002	English (II)	32	18	50	2	B	

Semester 3 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	SWL	ECTS	Type	Pre-request
IBT202	Object Oriented Programming (I)	93	82	175	7	C	IBT104
IBT204	Web Pages Design	93	57	150	6	C	IBT101
IBT205	Computer Network	63	87	150	6	C	
BIC212	Data Structures	63	37	100	4	B	IBT104
BIC213	Marketing Management	32	68	100	4	B	
2XX	Elective	32	43	75	3	E	

Semester 4 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	SWL	ECTS	Type	Pre-request
IBT200	Database Fundamentals	63	62	125	5	C	BIC212
IBT206	Object Oriented Programming (II)	93	82	175	7	C	IBT202
IBT208	Web Application Development	93	57	150	6	C	IBT204
BIT210	Cost Accounting	62	63	125	5	C	BIT122
BIC222	Algorithm and Complexity	63	37	100	4	B	BIC212
2XX	Elective	32	43	75	3	E	

Semester 5 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	SWL	ECTS	Type	Pre-request
IBT300	Database Management Systems	63	62	125	5	C	IBT200
BIC310	Software Engineering (I)	63	37	100	4	B	IBT202
BIT322	Artificial Intelligence	78	72	150	6	C	IBT105
BIT311	Operation and Production Management	78	72	150	6	C	
BIC363	Operational Research	32	93	125	5	C	BIC122
IBT300	Database Management Systems	63	62	125	4	C	IBT200

Semester 6 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	SWL	ECTS	Type	Pre-request
IBT302	Mobile Computing	63	112	175	7	C	IBT208
IBT304	Information Security	63	112	175	7	C	
BIC320	Software Engineering (II)	63	62	125	5	B	BIC310
BIT324	Project Management	63	112	175	7	C	BIT211
3XX	Elective	63	37	100	4	E	

Semester 7 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	SWL	ECTS	Type	Pre-request
IBT402	Total Quality Management	32	93	125	5	C	BIT311
IBT406	Business Intelligence	63	87	150	6	C	BIT322
IBE404	Business Process Management	47	53	100	4	B	BIT311
BIT412	Human Computer Interaction	78	47	125	5	C	BIT218
BIT411	Project (I)	32	118	150	6	C	
4XX	Elective	63	37	100	4	E	

Semester 8 | 30 ECTS | 1 ECTS = 25 hrs

Code	Module	SSWL	USSWL	SWL	ECTS	Type	Pre-request
IBT404	Cloud Computing	78	72	150	6	C	IBT205
BIC460	Feasibility Study	62	88	150	6	B	BIC212
BIT422	Multimedia Systems and Applications	78	72	150	6	C	BIT412
BIT420	Project (II)	32	143	175	7	C	BIT411
4XX	Elective	63	62	125	5	E	

8. Contact

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First Cycle – Bachelor's Degree (B.Sc.) - Business Information Technology

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Table of Contents

1. Overview

This catalogue is about the courses (modules) given by the program of Business Information Technology to gain the Bachelor of Science degree. The program delivers (46) Modules with (6000) total student workload hours and 240 total ECTS. The module delivery is based on the Bologna Process.

نظره عامه

يتناول هذا الدليل المواد الدراسية التي يقدمها برنامج تكنولوجيا معلومات الاعمال للحصول على درجة بكالوريوس العلوم. يقدم البرنامج (٤٦) مادة دراسية، مع (٦٠٠٠) إجمالي ساعات حمل الطالب و٢٤٠ إجمالي وحدات أوروبية. يعتمد تقديم المواد الدراسية على عملية بولونيا.

2. Undergraduate Courses 2023-2024

Module 1

Code	Course/Module Title	ECTS	Semester
IBT101	Programming Fundamentals (I)	8	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	93	107
Description			
The Programming Fundamentals (I) module provides students with a solid introduction to the fundamental concepts and principles of programming. This course focuses on building a strong foundation in problem-solving skills and logical thinking, essential for computer programming. Throughout the module, students will learn the basics of a programming language and become familiar with concepts such as variables, data types, control structures (such as loops and conditionals), functions, and basic input/output operations. They will also explore key programming principles like code modularity and reusability. The module includes hands-on programming exercises and projects that allow students to apply their knowledge and develop practical programming skills. By solving real-world programming problems, students will gain confidence and proficiency in writing structured and efficient code. By the end of the course, students will have a solid understanding of programming fundamentals and be prepared to tackle more complex programming concepts in subsequent courses. This module serves as a stepping stone for students interested in pursuing further studies or careers in computer science and software development.			

Module 2

Code	Course/Module Title	ECTS	Semester
IBT103	Principles of Accounting	6	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	2	78	72

Description

The Principles of Accounting module provides students with a solid foundation in the fundamental concepts and techniques of accounting. This course introduces students to the principles and practices used in financial accounting, focusing on the preparation and interpretation of financial statements.

Throughout the module, students will learn how to analyze and record business transactions, apply accounting principles, and prepare financial statements such as balance sheets, income statements, and cash flow statements. They will gain an understanding of the basic principles of financial reporting, including the matching principle, revenue recognition, and the accrual basis of accounting. Additionally, students will explore topics such as budgeting, cost accounting, and financial analysis, enabling them to make informed financial decisions and evaluate the performance and profitability of a business.

By the end of the course, students will have acquired the necessary skills to understand and interpret financial information, making them well-equipped for various roles in the field of accounting and finance.

Module 3

Code	Course/Module Title	ECTS	Semester
IBT105	Discrete Mathematics	6	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	2+1	48	102

Description

The Discrete Mathematics module offers students a solid foundation in the fundamental concepts and techniques of discrete mathematics. This course explores various topics including logic, set theory, combinatorics, graph theory, and discrete probability.

Throughout the module, students will develop problem-solving skills and logical reasoning abilities that are essential in fields such as computer science, cryptography, and algorithm design. They will learn how to analyze and manipulate discrete structures, solve combinatorial problems, and apply mathematical principles to real-world scenarios.

The module incorporates a combination of theoretical knowledge and practical applications, encouraging students to think abstractly and approach complex problems systematically. By the end of the course, students will have a deep understanding of the core concepts in discrete mathematics and will be equipped with the skills necessary to tackle challenging problems in various domains.

Module 4

Code	Course/Module Title	ECTS	Semester
BIT111	Principle of Management	6	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	0	48	102

Description

The Principles of Management module offers students a comprehensive understanding of the foundational principles and practices of management in organizations. This course explores various aspects of management, including planning, organizing, leading, and controlling.

Throughout the module, students will learn about the essential functions and roles of managers, the dynamics of decision-making, effective communication strategies, and the importance of fostering a positive organizational culture. They will also explore key management theories and frameworks that contribute to the understanding of organizational behavior and leadership. Moreover, the module encourages students to develop critical thinking and problem-solving skills, as well as the ability to work collaboratively and lead teams. Students will analyze case studies, engage in discussions, and participate in experiential learning activities to apply management concepts to real-world scenarios.

By the end of the course, students will have gained a comprehensive understanding of the principles of management and acquired practical skills that will enable them to navigate and succeed in various organizational settings.

Module 5

Code	Course/Module Title	ECTS	Semester
ENG102	English (I)	2	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	18

Description

The English module is designed to enhance students' proficiency in the English language across all essential skills, including reading, writing, speaking, and listening. This course focuses on developing strong communication abilities, enabling students to express themselves fluently and accurately in English. Through engaging activities, interactive discussions, and comprehensive language exercises, students will expand their vocabulary, refine their grammar usage, improve their comprehension skills, and polish their writing style.

The module also encompasses the study of literature and cultural aspects of the English-speaking world, fostering a deeper understanding and appreciation of diverse literary works and societal perspectives. By the end of the course, students will have significantly strengthened their overall English language competency, equipping them for academic success and effective communication in various personal and professional contexts.

Module 6

Code	Course/Module Title	ECTS	Semester
DHR103	Human rights and Democracy	2	1
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	18
Description			
The Democracy and Human Rights module offers students a comprehensive exploration of the principles, theories, and practices related to democracy and human rights. This course delves into the fundamental concepts and examines their significance in contemporary societies. Throughout the module, students will critically analyze the historical development of democratic systems and the evolution of human rights frameworks. They will examine the complexities and challenges surrounding the protection and promotion of human rights in diverse cultural, social, and political contexts. Moreover, the module encourages students to engage in discussions and debates on key issues such as civil liberties, social justice, equality, and the role of institutions in safeguarding democratic values. Through case studies and interactive activities, students will develop a nuanced understanding of the interplay between democracy and human rights, and the ways in which these concepts impact individuals and communities globally. By the end of the course, students will be equipped with the knowledge and skills to critically assess democratic processes and advocate for the protection of human rights in their own communities and beyond.			

Module 7

Code	Course/Module Title	ECTS	Semester
IBT104	Programming Fundamentals (II)	8	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	93	107
Description			
The Programming Fundamentals (II) module builds upon the foundational concepts learned in Programming Fundamentals (I), providing students with a deeper understanding of programming principles and techniques. This course focuses on advanced programming topics and methodologies, including data structures, algorithms, and software development practices. Throughout the module, students will learn how to implement and manipulate common data structures such as arrays, linked lists, stacks, queues, trees, and graphs. They will also explore algorithm design and analysis, including sorting and searching algorithms, recursive algorithms, and dynamic programming. Moreover, the module covers software development practices such as debugging, testing, and code optimization. Students will gain experience in writing modular and maintainable code, and they will work on larger programming projects to enhance their problem-solving and software development skills. By the end of the course, students will have a deeper understanding of programming fundamentals, be proficient in implementing data structures and algorithms, and possess the skills to design and develop robust software solutions.			

Module 8

Code	Course/Module Title	ECTS	Semester
BIC111	Computational Paradigms	6	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	1	48	102
Description			
The Computational Paradigms module offers students a deep exploration of different computational models and approaches to problem-solving. This course introduces students to a variety of paradigms, including procedural, object-oriented, functional, logic, and concurrent programming. Students will gain a solid understanding of the core principles, concepts, and applications of each paradigm. Through hands-on exercises and projects, students will learn how to design and implement programs using different paradigms, enabling them to tackle a wide range of computational challenges. The module emphasizes critical thinking and the ability to select the most appropriate paradigm for a given problem. By the end of the course, students will have a comprehensive understanding of computational paradigms and the versatility to apply them effectively in solving complex problems in the field of computer science.			

Module 9

Code	Course/Module Title	ECTS	Semester
BIC122	Probability and Statistics	6	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	87
Description			
The Probability and Statistics module provides students with a solid foundation in the principles and techniques of probability and statistical analysis. This course focuses on the fundamental concepts of probability theory, including probability distributions, random variables, and probability models. Students will learn how to analyze and interpret data using descriptive and inferential statistical methods. Topics covered include hypothesis testing, confidence intervals, regression analysis, and probability distributions such as binomial, normal, and exponential. The module emphasizes practical applications through hands-on data analysis projects, enabling students to make data-driven decisions and draw meaningful conclusions. By the end of the course, students will have a strong understanding of probability and statistical principles, equipping them with the necessary skills for data analysis in various fields, including business, science, and social sciences.			

Module 10

Code	Course/Module Title	ECTS	Semester
BIC123	Human Resources Management	6	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	0	48	102

Description

The Human Resources module provides students with a comprehensive understanding of the principles and practices involved in managing human capital within organizations. This course covers various aspects of human resource management, including recruitment and selection, training and development, performance management, compensation and benefits, employee relations, and strategic HR planning.

Students will learn about the importance of aligning HR practices with organizational goals, promoting employee engagement and satisfaction, and ensuring compliance with employment laws and regulations. Through case studies, interactive discussions, and practical exercises, students will develop skills in areas such as talent acquisition, employee development, conflict resolution, and HR strategy. By the end of the course, students will be equipped with the knowledge and competencies needed to excel in HR roles and contribute to the effective management of an organization's most valuable asset - its people.

Module 11

Code	Course/Module Title	ECTS	Semester
ENG002	English (II)	2	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	18

Description

The English module is designed to enhance students' proficiency in the English language across all essential skills, including reading, writing, speaking, and listening. This course focuses on developing strong communication abilities, enabling students to express themselves fluently and accurately in English. Through engaging activities, interactive discussions, and comprehensive language exercises, students will expand their vocabulary, refine their grammar usage, improve their comprehension skills, and polish their writing style.

The module also encompasses the study of literature and cultural aspects of the English-speaking world, fostering a deeper understanding and appreciation of diverse literary works and societal perspectives. By the end of the course, students will have significantly strengthened their overall English language competency, equipping them for academic success and effective communication in various personal and professional contexts.

Module 12

Code	Course/Module Title	ECTS	Semester
ARB101	Arabic	2	2
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	18
Description			
The Arabic module is designed to enhance students' proficiency in the Arabic language across all essential skills, including reading, writing, speaking, and listening. This course focuses on developing strong communication abilities, enabling students to express themselves fluently and accurately in Arabic. Through engaging activities, interactive discussions, and comprehensive language exercises, students will expand their vocabulary, refine their grammar usage, improve their comprehension skills, and polish their writing style.			

Module 13

Code	Course/Module Title	ECTS	Semester
IBT202	Object Oriented Programming (I)	7	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	93	82
Description			
The Object-Oriented Programming (I) module introduces students to the fundamental concepts and principles of object-oriented programming. This course focuses on the building blocks of object-oriented programming, including classes, objects, inheritance, polymorphism, and encapsulation. Throughout the module, students will learn how to design and implement object-oriented solutions to programming problems. They will gain practical experience in writing code that utilizes classes and objects to represent real-world entities and their interactions. The module emphasizes the importance of modular and reusable code, code organization, and code maintenance. Students will engage in hands-on exercises and projects to reinforce their understanding of object-oriented programming concepts and develop problem-solving skills. By the end of the course, students will have a solid understanding of object-oriented programming principles and be capable of designing and implementing object-oriented programs. This module serves as a foundation for more advanced programming concepts and prepares students for further studies or careers in software development and related fields.			

Module 14

Code	Course/Module Title	ECTS	Semester
IBT208	Web Application Design	6	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	93	57
Description			
The Web Application Design and Development module provides students with the skills and knowledge necessary to design and build interactive and dynamic web applications. This course covers various aspects of web development, including front-end design, back-end development, and database integration. Throughout the module, students will learn about web development technologies such as HTML, CSS, JavaScript, and server-side scripting languages like PHP or Python. They will explore principles of user interface design, responsive web design, and accessibility. The module emphasizes the importance of understanding user needs and creating engaging user experiences. Students will gain hands-on experience in building interactive web applications using modern frameworks and tools. By the end of the course, students will have a solid understanding of web application design and development principles, be proficient in designing and implementing web-based solutions, and be prepared for careers in web development, web design, and related fields. They will have the skills to create user-friendly and visually appealing web applications that meet the needs of businesses and users.			

Module 15

Code	Course/Module Title	ECTS	Semester
IBT205	Computer Network	6	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	87
Description			
The Computer Network module offers students a comprehensive understanding of the principles and technologies that underpin computer networks. This course explores various aspects of network architecture, protocols, and services. Students will learn about different network topologies, communication models, and the layers of the TCP/IP protocol stack. Throughout the module, students will delve into topics such as network addressing, routing, switching, and network security. They will gain practical skills in configuring and managing network devices, troubleshooting network issues, and implementing network security measures. The module emphasizes the importance of efficient and secure data transmission, as well as the role of networks in supporting modern communication and information sharing. Through hands-on exercises and projects, students will apply their knowledge in designing, implementing, and securing computer networks. By the end of the course, students will have a solid understanding of computer networks, be capable of designing and managing small to medium-sized networks, and have the foundational knowledge to pursue further studies or careers in the field of networking and telecommunications.			

Module 16

Code	Course/Module Title	ECTS	Semester
BIC212	Data Structures	4	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	37
Description			
The Data Structures module provides students with a comprehensive understanding of various data structures and their applications in computer programming. This course explores the organization, storage, and manipulation of data to efficiently solve complex problems. Students will learn about fundamental data structures such as arrays, linked lists, stacks, queues, trees, and graphs. Throughout the module, students will study the theoretical concepts behind data structures and gain practical experience in implementing and manipulating them using a programming language. They will learn how to analyze the time and space complexities of different data structures and choose the most appropriate structure for a given problem. The module emphasizes the importance of selecting the right data structure to optimize program performance and memory usage. Students will also explore algorithms for searching, sorting, and manipulating data within these structures. By the end of the course, students will have a strong understanding of data structures and their applications, enabling them to design efficient algorithms and solve complex programming problems in various domains.			

Module 17

Code	Course/Module Title	ECTS	Semester
BIC213	Marketing management	4	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	68
Description			
The Marketing Management module offers students a comprehensive understanding of the principles and practices involved in effectively managing marketing activities within organizations. This course explores various aspects of marketing, including market research, consumer behavior, product development, pricing strategies, promotion, and distribution. Throughout the module, students will learn how to analyze market trends, identify target markets, and develop marketing strategies that align with organizational goals. They will gain practical skills in market segmentation, branding, advertising, and digital marketing. The module emphasizes the importance of understanding consumer needs and preferences, and how to effectively communicate and deliver value to customers. Through case studies and interactive activities, students will develop critical thinking and problem-solving skills in marketing decision-making. By the end of the course, students will have a solid understanding of marketing management principles, be equipped with the knowledge to develop and implement successful marketing strategies, and be prepared for various roles in marketing and sales within organizations.			

Module 18

Code	Course/Module Title	ECTS	Semester
2XX	Elective	3	3
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	43
Description			
Elective Subjects			

Module 19

Code	Course/Module Title	ECTS	Semester
IBT200	Database Fundamentals	5	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	62
Description			

The Database Fundamentals module provides students with a solid foundation in the principles and concepts of database management systems (DBMS). This course covers the fundamental aspects of designing, creating, and managing databases to store and retrieve data efficiently.

Throughout the module, students will learn about data modeling, entity-relationship diagrams, relational database management systems, and Structured Query Language (SQL). They will gain practical skills in designing database schemas, creating tables, defining relationships, and writing SQL queries to extract and manipulate data. The module emphasizes the importance of data integrity, security, and optimization in database management. Students will also explore topics such as database normalization, indexing, and transaction management.

By the end of the course, students will have a solid understanding of database fundamentals, be capable of designing and implementing databases, and possess the skills to efficiently manage and manipulate data within a DBMS. This module provides a strong foundation for further studies or careers in database administration, data analysis, and software development.

Module 20

Code	Course/Module Title	ECTS	Semester
IBT206	Object Oriented Programming (II)	7	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	93	82
Description			
The Object-Oriented Programming (II) module builds upon the knowledge and skills gained in Object-Oriented Programming (I), delving deeper into advanced topics and techniques of object-oriented programming. This course focuses on advanced concepts such as inheritance, polymorphism, interfaces, design patterns, and exception handling. Throughout the module, students will learn how to design and implement complex object-oriented solutions to programming challenges. They will explore advanced programming principles, such as abstraction, encapsulation, and modularity, to create robust and maintainable code. The module emphasizes the importance of software design principles and best practices in object-oriented programming. Students will engage in practical projects and exercises to develop their problem-solving abilities and enhance their understanding of advanced programming concepts. By the end of the course, students will have a solid grasp of advanced object-oriented programming principles and techniques, be capable of designing and implementing complex software systems using object-oriented methodologies, and be prepared for advanced studies or careers in software development, software engineering, and related fields.			

Module 21

Code	Course/Module Title	ECTS	Semester
IBT208	Web Application Development	6	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	3	93	57
Description			
The Web Application Design and Development module provides students with the skills and knowledge necessary to design and build interactive and dynamic web applications. This course covers various aspects of web development, including front-end design, back-end development, and database integration. Throughout the module, students will learn about web development technologies such as HTML, CSS, JavaScript, and server-side scripting languages like PHP or Python. They will explore principles of user interface design, responsive web design, and accessibility. The module emphasizes the importance of understanding user needs and creating engaging user experiences. Students will gain hands-on experience in building interactive web applications using modern frameworks and tools. By the end of the course, students will have a solid understanding of web application design and development principles, be proficient in designing and implementing web-based solutions, and be prepared for careers in web development, web design, and related fields. They will have the skills to create user-friendly and visually appealing web applications that meet the needs of businesses and users.			

Module 22

Code	Course/Module Title	ECTS	Semester
BIT210	Cost Accounting	5	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	62
Description			
The Principles of Cost Accounting module provides students with a solid foundation in the fundamental concepts and techniques of cost accounting. This course introduces students to the principles and practices used in financial accounting, focusing on the preparation and interpretation of financial statements. Throughout the module, students will learn how to analyze and record business transactions, apply accounting principles, and prepare financial statements such as balance sheets, income statements, and cash flow statements. They will gain an understanding of the basic principles of financial reporting, including the matching principle, revenue recognition, and the accrual basis of accounting. Additionally, students will explore topics such as budgeting, cost accounting, and financial analysis, enabling them to make informed financial decisions and evaluate the performance and profitability of a business. By the end of the course, students will have acquired the necessary skills to understand and interpret financial information, making them well-equipped for various roles in the field of accounting and finance.			

Module 23

Code	Course/Module Title	ECTS	Semester
BIC222	Algorithm and Complexity	4	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	37
Description			
The Algorithm and Complexity module provides students with a deep understanding of algorithm design and analysis, as well as the complexity of solving computational problems. This course covers various algorithmic techniques, including sorting, searching, graph algorithms, dynamic programming, and greedy algorithms. Throughout the module, students will learn how to analyze the efficiency and performance of algorithms, considering factors such as time complexity, space complexity, and algorithmic correctness. They will gain practical experience in implementing and evaluating algorithms through hands-on programming exercises and projects. The module emphasizes the importance of selecting the most appropriate algorithmic approach to solve specific problems efficiently. Students will also explore the notion of computational complexity, including the classification of problems as P, NP, and NP-complete. By the end of the course, students will have a solid understanding of algorithm design and analysis, be able to analyze and evaluate the efficiency of algorithms, and have the necessary skills to design and implement efficient algorithms to solve computational problems. This module provides a strong foundation for advanced studies in algorithms and prepares students for careers in software development, data analysis, and computational research.			

Module 24

Code	Course/Module Title	ECTS	Semester
2XX	Elective	3	4
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	43
Description			
Elective Subjects			

Module 25

Code	Course/Module Title	ECTS	Semester
IBT300	Database Management Systems	5	5
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	62
Description			
The Database Management Systems module provides students with a comprehensive understanding of the principles and practices of managing and administering database systems. This course covers various aspects of database management, including database design, data modeling, query optimization, and data security. Throughout the module, students will learn about different database models, such as the relational model, and gain practical skills in designing and implementing databases using industry-standard database management systems like MySQL, Oracle, or Microsoft SQL Server. The module emphasizes the importance of data integrity, performance, and security in managing databases. Students will learn about indexing, normalization, transaction management, and database security measures. By the end of the course, students will have a solid understanding of database management systems, be proficient in designing and managing databases, and possess the skills to ensure efficient and secure data storage and retrieval. This module prepares students for careers in database administration, data management, and related fields, where they can contribute to the effective management of data within organizations.			

Module 26

Code	Course/Module Title	ECTS	Semester
BIC310	Software Engineering (I)	4	5
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	37
Description			
The Software Engineering (I) module provides students with a comprehensive understanding of the principles and practices involved in software development processes. This course covers various aspects of software engineering, including requirements analysis, software design, coding, testing, and project management. Throughout the module, students will learn about the software development life cycle and different methodologies for software development, such as waterfall, agile, and iterative approaches. They will gain practical experience in requirements elicitation, creating software designs, writing high-quality code, and conducting software testing. The module emphasizes the importance of software quality, scalability, and maintainability in software development. Students will also learn about software project management techniques, including estimating project timelines, allocating resources, and managing software development teams. By the end of the course, students will have a solid understanding of software engineering principles and practices, be proficient in software development methodologies and tools, and be prepared for careers in software development, software engineering, and related fields. This module provides a strong foundation for advanced studies in software engineering and equips students with the skills to develop reliable and efficient software systems.			

Module 27

Code	Course/Module Title	ECTS	Semester
BIT322	Artificial Intelligence	6	6
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	2	78	72
Description			
The Artificial Intelligence module provides students with a comprehensive understanding of the principles and techniques used in developing intelligent systems that can simulate human intelligence. This course covers various aspects of artificial intelligence, including machine learning, natural language processing, computer vision, and expert systems. Throughout the module, students will learn about different algorithms and models used in artificial intelligence, such as neural networks, decision trees, and genetic algorithms. They will gain practical experience in developing AI applications, training machine learning models, and analyzing complex data sets. The module emphasizes the importance of problem-solving, pattern recognition, and data analysis in artificial intelligence. Students will explore the ethical considerations and societal implications of AI technologies. By the end of the course, students will have a solid understanding of artificial intelligence principles and techniques, be proficient in developing AI applications, and be prepared for careers in AI research, data science, and machine learning engineering. This module equips students with the skills to leverage the power of AI in solving real-world problems and driving innovation.			

Module 28

Code	Course/Module Title	ECTS	Semester
BIT311	Operation and Production Management	6	5
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	2	78	72
Description			
The Operation and Production Management module provides students with a comprehensive understanding of the principles and practices involved in effectively managing and optimizing operations and production processes within organizations. This course covers various aspects of operations management, including process design, capacity planning, inventory management, quality control, and supply chain management. Throughout the module, students will learn about the key concepts and techniques used to improve operational efficiency and productivity. They will gain practical skills in analyzing and optimizing processes, designing efficient supply chains, and implementing quality management systems. The module emphasizes the importance of strategic decision-making, resource allocation, and continuous improvement in operations and production management. Students will engage in case studies and hands-on exercises to develop their problem-solving and decision-making abilities. By the end of the course, students will have a solid understanding of operations and production management principles, be capable of applying analytical tools and techniques to improve operational performance, and be prepared for careers in operations management, supply chain management, and manufacturing. This module equips students with the skills to effectively manage and enhance operational processes to achieve organizational goals and customer satisfaction.			

Module 29

Code	Course/Module Title	ECTS	Semester
BIC363	Operational Research	5	5
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	93
Description			
The Operation Research module provides students with a comprehensive understanding of the principles and practices involved in effectively research operation within organizations. This course covers various aspects of operations research, including process design, capacity planning, inventory management, quality control, and supply chain management. Throughout the module, students will learn about the key concepts and techniques used to improve operational efficiency and productivity. They will gain practical skills in analyzing and optimizing processes, designing efficient supply chains, and implementing quality management systems. The module emphasizes the importance of strategic decision-making, resource allocation, and continuous improvement in operations and production management. Students will engage in case studies and hands-on exercises to develop their problem-solving and decision-making abilities. By the end of the course, students will have a solid understanding of operations research, be capable of applying analytical tools and techniques to improve operational performance, and be prepared for careers in operations management. This module equips students with the skills to effectively manage and enhance operational processes to achieve organizational goals and customer satisfaction.			

Module 30

Code	Course/Module Title	ECTS	Semester
3XX	Elective	4	5
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	37
Description			
Elective Subjects			

Module 31

Code	Course/Module Title	ECTS	Semester
IBT302	Mobile Computing	7	6
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	112
Description			
The Mobile Applications Development module provides students with the skills and knowledge required to design, develop, and deploy mobile applications for various platforms such as iOS and Android. This course covers topics such as mobile app architecture, user interface design, programming languages, and application testing. Throughout the module, students will learn about the different components of mobile app development, including user interface design principles, mobile app frameworks, and backend integration. They will gain practical experience in developing mobile apps using industry-standard development tools and technologies. The module emphasizes the importance of user experience, performance optimization, and security in mobile app development. Students will explore the challenges and best practices associated with mobile app development, including responsive design, data storage, and app monetization. By the end of the course, students will have a solid understanding of mobile application development principles and practices, be proficient in designing and developing mobile apps, and be prepared for careers in mobile app development, software engineering, and related fields. This module equips students with the skills to create innovative and user-friendly mobile applications that meet the needs of today's mobile users.			

Module 32

Code	Course/Module Title	ECTS	Semester
IBT304	Information Security	7	6
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	112
Description			
The Information Security module provides students with a comprehensive understanding of the principles and practices involved in safeguarding information and mitigating security risks within organizations. This course covers various aspects of information security, including threat analysis, risk assessment, security policies and procedures, encryption, network security, and incident response. Throughout the module, students will learn about different types of security threats, vulnerabilities, and attacks, and gain practical experience in implementing security measures to protect information assets. They will explore techniques for securing networks, securing data at rest and in transit, and managing access control. The module emphasizes the importance of confidentiality, integrity, and availability of information in ensuring the security of digital systems. Students will also learn about legal and ethical issues in information security and the importance of compliance with privacy regulations. By the end of the course, students will have a solid understanding of information security principles and practices, be proficient in implementing security measures, and be prepared for careers in cybersecurity, information assurance, and related fields. This module equips students with the skills to assess security risks, implement effective security controls, and respond to security incidents to protect valuable information assets.			

Module 33

Code	Course/Module Title	ECTS	Semester
BIC320	Software Engineering (II)	5	6
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	62
Description			
The Software Engineering (II) module builds upon the foundational knowledge gained in Software Engineering (I) and focuses on advanced concepts and techniques in software development. This course covers topics such as software architecture, software testing and quality assurance, software maintenance, and software project management. Throughout the module, students will learn about different software architecture patterns, design principles, and frameworks used in building scalable and maintainable software systems. They will gain practical experience in applying advanced testing techniques, conducting software inspections, and implementing software maintenance strategies. The module emphasizes the importance of software quality, reliability, and maintainability in software engineering. Students will explore techniques for managing software projects, including project estimation, risk management, and agile development practices. By the end of the course, students will have a solid understanding of advanced software engineering principles and practices, be proficient in applying software architecture and design patterns, and be prepared for careers in software development, software architecture, and software project management. This module equips students with the skills to tackle complex software engineering challenges and deliver high-quality software solutions that meet user requirements.			

Module 34

Code	Course/Module Title	ECTS	Semester
BIT324	Project Management	7	6
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	112
Description			
The Project Management module provides students with the knowledge and skills necessary to effectively plan, execute, and control projects in various industries and organizational settings. This course covers key project management concepts, methodologies, and tools. Throughout the module, students will learn about project initiation, scope definition, scheduling, resource allocation, risk management, and project monitoring and control. They will gain practical experience in using project management software to create project plans, track progress, and manage project resources. The module emphasizes the importance of effective communication, stakeholder management, and teamwork in project management. Students will learn how to identify and mitigate project risks, manage project budgets, and ensure project quality. By the end of the course, students will have a solid understanding of project management principles and practices, be proficient in using project management tools and techniques, and be prepared for careers in project management, consulting, and related fields. This module equips students with the skills to successfully lead and deliver projects on time, within budget, and to the satisfaction of stakeholders.			

Module 35

Code	Course/Module Title	ECTS	Semester
3XX	Elective	4	6
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	37
Description			
Elective Subjects			

Module 36

Code	Course/Module Title	ECTS	Semester
IBT402	Total Quality Management	5	7
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	93
Description			
The Total Quality Management (TQM) module focuses on the principles and techniques used to improve the quality of products and services within organizations. This course covers various aspects of TQM, including quality planning, process improvement, customer satisfaction, and quality measurement. Throughout the module, students will learn about the concepts and methodologies of TQM, such as continuous improvement, benchmarking, and employee involvement. They will gain practical experience in implementing quality management tools and techniques to identify and eliminate defects, reduce waste, and enhance overall organizational performance. The module emphasizes the importance of customer-centricity, teamwork, and data-driven decision-making in TQM. Students will explore techniques for measuring and monitoring quality, implementing quality management systems, and fostering a culture of quality within an organization. By the end of the course, students will have a solid understanding of TQM principles and practices, be proficient in applying quality management tools and techniques, and be prepared for careers in quality assurance, process improvement, and related fields. This module equips students with the skills to drive continuous improvement and deliver high-quality products and services that meet or exceed customer expectations.			

Module 37

Code	Course/Module Title	ECTS	Semester
IBT406	Business Intelligence	6	7
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	87
Description			
The Business Intelligence module provides students with a comprehensive understanding of the principles and techniques used to analyze and interpret data to drive effective business decision-making. This course covers various aspects of business intelligence, including data warehousing, data mining, data visualization, and predictive analytics. Throughout the module, students will learn about the process of collecting, organizing, and analyzing large datasets to extract valuable insights and trends. They will gain practical experience in using business intelligence tools and technologies to transform raw data into meaningful information and create interactive visualizations. The module emphasizes the importance of data-driven decision-making, data governance, and data ethics in business intelligence. Students will explore techniques for extracting and manipulating data, conducting statistical analysis, and developing predictive models. By the end of the course, students will have a solid understanding of business intelligence principles and practices, be proficient in using business intelligence tools and techniques, and be prepared for careers in business analytics, data analysis, and related fields. This module equips students with the skills to leverage data to gain a competitive advantage, make informed business decisions, and drive organizational success.			

Module 38

Code	Course/Module Title	ECTS	Semester
IBE404	Business Process Management	4	7
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	2	78	72
Description			
The Business Process Management (BPM) module focuses on the principles and techniques used to improve the process of products and services within organizations. This course covers various aspects of BPM, including quality planning, process improvement, customer satisfaction, and quality measurement. Throughout the module, students will learn about the concepts and methodologies of BPM, such as continuous improvement, benchmarking, and employee involvement. They will gain practical experience in implementing quality management tools and techniques to identify and eliminate defects, reduce waste, and enhance overall organizational performance.			

Module 39

Code	Course/Module Title	ECTS	Semester
BIT412	Human Computer Interaction	5	7
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	2	78	47
Description			
The Human-Computer Interaction (HCI) module focuses on understanding and improving the interaction between humans and computer systems. This course covers various aspects of HCI, including user-centered design, usability testing, interface design principles, and interaction design patterns. Throughout the module, students will learn about the cognitive and psychological aspects of human-computer interaction, user research methods, and iterative design processes. They will gain practical experience in designing and evaluating user interfaces, conducting usability tests, and applying user-centered design principles. The module emphasizes the importance of designing interfaces that are intuitive, efficient, and enjoyable for users. Students will explore the challenges and best practices in designing interfaces for different contexts, such as desktop applications, mobile devices, and web platforms. By the end of the course, students will have a solid understanding of HCI principles and practices, be proficient in conducting user research and designing user interfaces, and be prepared for careers in user experience design, usability testing, and interaction design. This module equips students with the skills to create user-friendly and engaging computer interfaces that enhance user satisfaction and productivity.			

Module 40

Code	Course/Module Title	ECTS	Semester
BIT411	Project (I)	6	7
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	32	118
Description			
The Project (I) module is a culmination of the knowledge and skills acquired throughout the program, where students apply their theoretical understanding to real-world projects. This module provides an opportunity for students to work on a substantial project, either individually or in teams, under the guidance of faculty members. During this module, students will engage in project planning, requirement analysis, design, implementation, and testing phases. They will apply project management principles and utilize appropriate software development methodologies to ensure project success. This hands-on experience allows students to demonstrate their technical proficiency, problem-solving abilities, and teamwork skills. The module emphasizes the development of practical skills, such as communication, time management, and adaptability. Students will gain valuable experience in addressing challenges that arise during the project lifecycle, managing project scope, and meeting project deliverables. By the end of the module, students will have gained a deeper understanding of the complexities and intricacies involved in software development projects. They will have a portfolio of completed projects that showcase their abilities and serve as valuable assets for future employment opportunities. This module serves as a bridge between academic learning and professional practice, preparing students to excel in the field of software engineering.			

Module 41

Code	Course/Module Title	ECTS	Semester
4XX	Elective	4	7
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	37
Description			
Elective Subjects			

Module 42

Code	Course/Module Title	ECTS	Semester
IBT404	Cloud Computing	6	8
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	2	78	72
Description			

The Cloud Computing module introduces students to the concepts, technologies, and practices involved in leveraging cloud-based services for managing and delivering IT resources. This course covers various aspects of cloud computing, including cloud architecture, virtualization, storage, networking, and security. Throughout the module, students will learn about different cloud service models, such as Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). They will gain practical experience in deploying and managing applications in cloud environments, utilizing cloud-based storage and computing resources, and implementing cloud security measures.

The module emphasizes the benefits of cloud computing, such as scalability, flexibility, and cost-efficiency, and the challenges associated with cloud adoption, including data privacy and compliance. Students will explore best practices for cloud deployment, monitoring, and performance optimization. By the end of the course, students will have a solid understanding of cloud computing principles and practices, be proficient in utilizing cloud-based services and technologies, and be prepared for careers in cloud architecture, cloud administration, and related fields. This module equips students with the skills to leverage cloud computing to enhance business operations, improve resource utilization, and drive innovation in the digital era.

Module 43

Code	Course/Module Title	ECTS	Semester
BIC460	Feasibility Study	6	8
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	62	88
Description			

The Feasibility Study module focuses on the process of assessing the viability and potential success of a proposed project or initiative. This course covers various aspects of conducting a feasibility study, including market analysis, financial analysis, technical assessment, and risk evaluation. Throughout the module, students will learn about different methodologies and tools used to determine the feasibility of a project. They will gain practical experience in conducting market research, analyzing financial projections, evaluating technical requirements, and identifying potential risks and challenges.
The module emphasizes the importance of thorough analysis and critical thinking in determining the feasibility of a project. Students will explore techniques for evaluating project feasibility based on various factors, such as market demand, financial viability, technical feasibility, and legal and regulatory compliance. By the end of the course, students will have a solid understanding of feasibility study principles and practices, be proficient in conducting feasibility assessments, and be prepared for roles in project management, business development, and entrepreneurship. This module equips students with the skills to make informed decisions about project viability and feasibility, ensuring that resources are allocated efficiently and projects have a higher chance of success.

Module 44

Code	Course/Module Title	ECTS	Semester
BIT422	Multimedia Systems and Applications	6	8
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
3	2	78	72
Description			
The Multimedia Systems and Applications module explores the principles and technologies involved in creating and delivering multimedia content across various platforms. This course covers various aspects of multimedia systems, including multimedia data representation, multimedia authoring, multimedia networking, and multimedia applications. Throughout the module, students will learn about different multimedia elements, such as text, images, audio, video, and animations, and gain practical experience in creating and manipulating multimedia content using industry-standard tools and software. They will also explore multimedia compression techniques, multimedia synchronization, and multimedia streaming. The module emphasizes the importance of user experience, interactivity, and media integration in multimedia systems and applications. Students will explore techniques for designing engaging multimedia interfaces, developing multimedia applications, and integrating multimedia content into web and mobile platforms. By the end of the course, students will have a solid understanding of multimedia systems and applications, be proficient in creating and delivering multimedia content, and be prepared for careers in multimedia development, digital media production, and related fields. This module equips students with the skills to harness the power of multimedia and effectively communicate information and ideas through various multimedia platforms.			

Module 45

Code	Course/Module Title	ECTS	Semester
BIT411	Project (II)	7	7
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	0	63	62
Description			
This module provides an opportunity for students to work on a substantial project, either individually or in teams, under the guidance of faculty members. During this module, students will engage in project planning, requirement analysis, design, implementation, and testing phases. They will apply project management principles and utilize appropriate software development methodologies to ensure project success. This hands-on experience allows students to demonstrate their technical proficiency, problem-solving abilities, and teamwork skills. The module emphasizes the development of practical skills, such as communication, time management, and adaptability. Students will gain valuable experience in addressing challenges that arise during the project lifecycle, managing project scope, and meeting project deliverables. By the end of the module, students will have gained a deeper understanding of the complexities and intricacies involved in software development projects.			

Module 46

Code	Course/Module Title	ECTS	Semester
4XX	Elective	4	8
Class (hr/w)	**Lect/Lab./Prac./Tutor**	**SSWL (hr/sem)**	**USWL (hr/w)**
2	2	63	62
Description			
Elective Subjects			

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Republic of Iraq - Ministry of Higher Education and Scientific Research
University of Information and Communication Technology
Bachelor's degree in Business Information Technology (First cycle)
Four years (Eight semesters) - 240 ECTS credits - 1 ECTS = 25 hr
Program Curriculum (2023 - 2024)

جمهورية العراق - وزارة التعليم العالي والبحث العلمي
جامعة تكنولوجيا المعلومات والاتصالات
بكالوريوس في تكنولوجيا معلومات الاعمال (الدورة الأولى)
أربع سنوات (ثمانية فصول دراسية) - ٢٤٠ وحدة اوربية - كل وحدة اوربية = ٢٥ ساعة
المنهاج الدراسي للعام ٢٠٢٣-٢٠٢٤

كلية معلوماتية الاعمال

Level	Semester	No.	Module Code	Module Name in English	اسم المادة الدراسية	Language	SSWL (hr/w)						Exam hr/sem	SSWL hr/sem	USSWL hr/sem	SWL hr/sem	ECTS	Module Type	Prerequisite Module(s) Code
							CL (hr/w)	Lect (hr/w)	Lab (hr/w)	Pr (hr/w)	Tut (hr/w)	Semn (hr/w)							
UGI	One	1	IBT101	Programming Fundamentals (I)	اساسيات البرمجة (1)	English	3		3				3	93	107	200	8.00	C	
		2	IBT103	Principles of Accounting	مبادئ المحاسبة	English	3		2				3	78	72	150	6.00	C	
		3	IBT105	Discrete Mathematics	الرياضيات	English	2				1		3	48	102	150	6.00	C	
		4	BIT111	Principle of Management	مبادئ الإدارة	English	3						3	48	102	150	6.00	C	
		5	DHR103	Human Rights and Democracy	حقوق الانسان	Arabic	2						2	32	18	50	2.00	B	
		6	ENG102	English (I)	اللغة الإنكليزية (1)	English	2						2	32	18	50	2.00	B	
						Total	15	0	5	0	1	0	16	331	419	750	30.00		

Level	Semester	No.	Module Code	Module Name in English	اسم المادة الدراسية	Language	SSWL (hr/w)						Exam hr/sem	SSWL hr/sem	USSWL hr/sem	SWL hr/sem	ECTS	Module Type	Prerequisite Module(s) Code
							CL (hr/w)	Lect (hr/w)	Lab (hr/w)	Pr (hr/w)	Tut (hr/w)	Semn (hr/w)							
UGI	Two	1	IBT104	Programming Fundamentals (II)	اساسيات البرمجة (2)	English	3		3				3	93	107	200	8.00	C	IBT101
		2	BIC123	Human Resources Management	إدارة الموارد البشرية	English	3						2	48	102	150	6.00	C	
		3	BIC122	Probability and Statistics	الإحصاء والاحتمالية	English	2				2		3	63	87	150	6.00	S	IBT105
		4	BIC111	Computational Paradigms	النماذج الحسابية	English	2		1				3	48	102	150	6.00	S	
		5	ARB101	Arabic	اللغة العربية	Arabic	2						2	32	18	50	2.00	B	
		6	ENG002	English (II)	اللغة الإنكليزية (2)	English	2						2	32	18	50	2.00	B	ENG111
						Total	14	0	4	0	2	0	15	316	434	750	30.00		
UGII																			

Note: The student should complete 4 weeks of Summer Internships to fullfil the requirements of the Bachelor's degree

Structured SWL (hr/w) type		
	CL	Class Lecture
	Lab	Laboratory
	Pr	Practical Training
	Tut	Tutorial
	Lect	Online lecture
	Semn	Seminar

Module type		
	B	Basic learning activities
	C	Core learning activity
	S	Suport or related learning activity
	E	Elective learning activity

SWL:	Student Workload
SSWL:	Structured SWL
USSWL:	Unstructured SWL

Note: Columns O, Q and R are progrmaed, protected and should not be edited

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Programming Fundamentals (I)			**Module Delivery**	
Module Type	C			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	IBT101				
ECTS Credits	**8**				
SWL (hr/sem)	**200**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	محمد صالح مهدي		**e-mail**	mohammed.salih@uoitc.edu.iq	
Module Leader's Acad. Title	أ.م.د.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	اثير اكرم عبدالرزاق		**e-mail**	athproof@uoitc.edu.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	93	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	107	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. To familiarize the student with the universal concepts of computer programming. 2. To present the syntax and semantics of the "Python" language as well as basic data types offered by the language. 3. To demonstrate the means useful in resolving typical implementation problems with the help of standard "Python" language libraries
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. The student will have an overview Computers and programming languages. 2. The student will learn what an algorithm is and explore problem-solving techniques. 3. The student will learn how to install python and write the first program 4. The student will learn how to deal with variables. 5. The student will learn Python operators. 6. The student will learn rest of Python operators and Errors. 7. The student will learn, Python Numbers, Type Conversion and Mathematics And Math Module 8. The student will learn Control Structure I 9. The student will learn Control Structure II 10. The student will learn Iterations I in Python 11. The student will learn Iterations II in Python 12. The student will learn Python Strings Methods
Indicative Contents المحتويات الإرشادية	1. An Overview of Computers, Programming Languages and Compiler & Interpreter 2. Algorithms and flowchart (I) 3. Algorithms and flowchart (II) 4. Python Programming Language 5. Keywords and Identifier 6. Python Casting 7. Python Arithmetic operators 8. Python Logical operators 9. Python Numbers 10. Control Structure I 11. Control Structure II 12. Iterations 13. Nested Loops 14. Abnormal Loop Termination 15. The break Statement

	16. The continue Statement 17. The infinite Loop 18. Python pass statement 19. Iteration examples 20. Python Strings 21. Python String Operations 22. Index and Slicing 23. Python String Formatting 24. Common Python String Methods a set of built-in methods that you can use on strings

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	1. E-Learning 2. Direct Learning 3. Self-Learning 4. Brainstorming 5. Cooperative Learning 6. Learning by Experimentation 7. Achievement Tests 8. Selection of Intellectual Question in Achievement tests 9. Students Performance Assessment 10. Project consist of Random groups of Students

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	An Overview of Computers, Programming Languages and Compiler & Interpreter
Week 2	Algorithms and flowchart (I)
Week 3	Algorithms and flowchart (II)

Week 4	Algorithms and flowchart (II)
Week 5	Python Programming Language
Week 6	Python Variables and Python Data types
Week 7	Python Casting and Python operators (I)
Week 8	Mid-Term Exam
Week 9	Python operators (II) and python Errors
Week 10	Python Numbers and Math Module
Week 11	Control Structure (I)
Week 12	Control Structure (II)
Week 13	Iterations (I)
Week 14	Iterations (II)
Week 15	Preparatory Week then final exam
Week 16	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	- programming languages - kinds of programming languages - why python
Week 2	- install star-uml to draw the flowchart - execute simple examples
Week 3	- using flowchart to implement the algorithms - implement examples
Week 4	- Learning how to Write first python programs

Week 5	- Using Python Casting, Arithmetic operators, Comparison operators and Assignment operators
Week 6	- Using Python Logical operators, Bitwise operators and Python Special operators - Learning and debugging Syntax Errors, Runtime Errors and Logic Errors
Week 7	- Using Python Numbers and Math Module
Week 8	- Mid1
Week 9	- Python programs for Control Structure I
Week 10	- Python programs for Control Structure II
Week 11	- Python programs for Iterations I
Week 12	- Python programs for Iterations II
Week 13	- Python programs for Strings
Week 14	- Python String method - Examples
Week 15	- Mid2
Week 16	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1- Head First Python. A Learner's Guide to the Fundamentals of Python Programming, Paul BarryPublisher: O'Reilly, Year: 2023. 2- Learning to Program in Python 2017 by P. M. Heathcote. 3- Halterman, R. L. (2011). LEARNINGTO PROGRAM WITH PYTHON.	
Recommended Texts	LEARN PYTHON PROGRAMMING - an in -depth introduction to the fundamentals of python. 3rd ed. 2021	
Websites	https://www.python.org/doc/ https://www.tutorialspoint.com/python/ www.w3schools.com/python/	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Principles of Accounting			**Module Delivery**	
Module Type	C			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	IBT103				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	ابراهيم نعيم حسن		**e-mail**	ibrahim.naeem@uoitc.edu.iq	
Module Leader's Acad. Title	م.د.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	زينب فالح حمزة		**e-mail**	zainb.stat@uoitc.edu.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	78	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	72	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	A. Providing the student with a cognitive skill about the concept, specifications and importance of concepts specialized in accounting activities, financial restrictions and procedures, knowledge of the conceptual framework of accounting and treatments for assets and liabilities, as well as the student's knowledge of how to extract business results and the financial position of companies. B. Providing the student with a cognitive skill on the importance of studying accounting concepts, as well as principles, assumptions, and foundations, as well as knowing the mechanisms for making decisions and the entities that benefit from them. C. Providing the student with skills in knowing the mechanisms of bank reconciliations and the mechanisms of treating debts, store cards, fixed assets and their disappearance.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	A. To become familiar with the concept of financial accounting B. To know how to deal with the cognitive objectives of accounting C. Study the impact of external social and economic factors on accounting information D. Study the impact of accounting information characteristics on users' decisions. E. Knowing users' need for accounting information and developing different mechanisms for that F. Expanding the student's ability to deal with the company's economic events and confront various problems
Indicative Contents المحتويات الإرشادية	Content is divided according to the following: ▪ The theoretical aspect: It presents accounting concepts, approved standards, foundations and principles, as well as the history and development of accounting. (15 hours) ▪ Then the importance of accounting and its relationship with other social, political and economic sciences is studied. ▪ The second aspect: It represents the accounting procedures and registration methods for purchases, sales, disbursements, receipts, and all other economic events, postings, balances, preparing trial balances, inventory adjustments, and reconciliations (15 hours) ▪ The third aspect: The use of electronic systems in accounting and activating the role of computerized laboratories (15 hours) ▪ Fourth aspect: Solutions to a group of specialized scientific problems and questions (10 hours)

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم	
Strategies	▪ It is done through: the method of delivering lectures, student groups, workshops, reports and studies, as well as the thinking strategy according to the student's ability, the high thinking skill strategy, the critical thinking strategy in learning, as well as brainstorming. Selection of Intellectual Question in Achievement tests ▪ Students Performance Assessment ▪ Project consist of Random groups of Students

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	History and development of accounting
Week 2	Conceptual framework of accounting
Week 3	Accounting Cycle
Week 4	Single entry
Week 5	T- account method
Week 6	Accounting equation method
Week 7	First exam
Week 8	Double entry
Week 9	Double entry
Week 10	Cash, receivables and inventory
Week 11	Cash, receivables and inventory
Week 12	Fixed assets and their depreciation
Week 13	Registration adjustments and final accounts
Week 14	Registration adjustments and final accounts
Week 15	Final Exam

Week 16	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Single entry
Week 2	T- account method
Week 3	Accounting equation method
Week 4	Double entry
Week 5	Cash, receivables and inventory
Week 6	Fixed assets and their depreciation
Week 7	Registration adjustments and final accounts

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Financial accounting: IFRS / Jerry J. Weygandt, Paul D. Kimmel, Donald E. Kieso. — 3rd edition. 2015	
Recommended Texts	Financial Accounting by David Spiceland, Wayne Thomas and Don Herrmann 2016	
Websites	https://spada.uns.ac.id/pluginfile.php/687631/mod_resource/content/3/Financial%20Accounting%20IFRS%2C%203rd%20Edition-dikompresi_compressed.pdf	

Grading Scheme مخطط الدرجات

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Discrete Mathematics			**Module Delivery**	
Module Type	C			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	IBT105				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	مصطفى فوزي محمد		**e-mail**	mustafa.stat@uoitc.edi.iq	
Module Leader's Acad. Title	م.د.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	زينب فالح حمزة		**e-mail**	zainb.stat@uoitc.edu.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	102	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	A. Demonstrate critical thinking, analytical reasoning, and problem-solving skills. B. Apply appropriate mathematical and statistical concepts and operations to interpret data and to solve problems. C. Identify a problem and analyze it in terms of its significant parts and the information needed to solve it. D. Formulate and evaluate possible solutions to problems, and select and defend the chosen solutions. E. Construct graphs and charts, interpret them, and draw appropriate conclusions.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	a- Recognize, identify, and solve problems using set theory, elementary number theory, and discrete probability. b- Recognize, identify, and apply the concepts of functions and relations and graph theory in problem solving. c- Apply proof techniques in logic. d- Recognize, identify, and apply the concepts of functions and relations and graph theory in problem solving. e- By using counting techniques the student will learn how many ways are there to choose a valid password on a computer system. f- By using Graph techniques, the student will learn what is the shortest path between two cities using a transportation system, or is there a link between two computers in a network.
Indicative Contents المحتويات الإرشادية	This course will develop advanced mathematics skills appropriate for students pursuing STEM studies such as Engineering, Science, Computer Science, and Mathematics. Topics include sets, numbers, algorithms, logic, computer arithmetic, applied modern algebra, combinations, recursion principles, graph theory, trees, discrete probability, and digraphs.

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Students are assessed on a combination of homework, quizzes/tests, group activities, discussion, projects, and a comprehensive final exam. Students are expected to complete homework assignments/projects on a weekly basis. For a typical student, each assignment will require at least 3 hours to complete.

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction in Discrete Mathematics
Week 2	Sets and Functions
Week 3	Functions and Relations
Week 4	Basic Logic
Week 5	Basic Logic (Cont.)
Week 6	Discrete Probability
Week 7	Basics of Counting
Week 8	Basics of Counting (Cont.)
Week 9	Discrete Probability
Week 10	Graphs Theory
Week 11	Trees
Week 12	Properties of Integers
Week 13	Boolean Algebra
Week 14	Finite state machines
Week 15	Preparatory week + final exam
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Discrete Mathematics and its Applications by (Kenneth H. Rosen) 7th edition	
Recommended Texts	Discrete Mathematics and its Applications by (Kenneth H. Rosen) 7th edition	
Websites		

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Principle of Management			**Module Delivery**	
Module Type	C			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	IBT111				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	شيماء رياض خليفة		**e-mail**		
Module Leader's Acad. Title	م.د.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	الاء طلال ياسين		**e-mail**	dr.alaatalal@uoitc.edu.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	102	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. to understand principles of management, theory 2. to develop problem solving skills and understanding of management theory 3. this course deals with the basic concept of principles of management 4. this is the basic subject for all principles management.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Identify principles management and their applications 2. Summer what is meant by a basic principles management 3. Learn about how administrative works in institutions 4. Characterize the appropriate work environment Learn how to apply management strategies, such as selecting and appointing employees and their performance at work
Indicative Contents المحتويات الإرشادية	Introduction to Management History of Management Impact of management activities Seven Processes of Scientific Management Planning and ORGANIZE TYPES OF ORGANIZATIONS staffing Job design and organizational structure validity Internal organizational relations An organization is a social system Leadership and motivation Connection Community operations

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Direct Learning -Brainstorming -Cooperative Learning

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Management
Week 2	History of Management
Week 3	Impact of management activates
Week 4	Seven Processes of Scientific Management
Week 5	Planning and organize
Week 6	Types of organizations
Week 7	Staffing
Week 8	Mid 1
Week 9	Job design and organizational structure
Week 10	validity
Week 11	Internal organizational relations
Week 12	An organization is a social system
Week 13	Leadership and motivation
Week 14	Connection
Week 15	Community operations
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Principles of Management - Required Texts	
Recommended Texts	Principles of management for BBA	
Websites		

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Human Rights and Democracy			**Module Delivery**	
Module Type	B			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	DHR103				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	نايري عبد الله نعيم		**e-mail**		
Module Leader's Acad. Title	م.م.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	محمد عبد العزيز		**e-mail**		
Scientific Committee Approval Date			**Version Number**	1.0	

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	١- ان الهدف من دراسة حقوق الانسان لغرض تعليم وتعزيز الطلاب بحقوقهم ووجباتهم في المجتمع الديمقراطي . ٢- ان الهدف من دراسة حقوق الانسان لغرض تمكين الطلاب لمعرفة حقوقهم والمطالبة بها ٣- ان الهدف من دراسة حقوق الانسان والديمقراطية لغرض تمكين الدولة والمؤسسات الوطنية من تنفيذ لتزاماتها في مجال حقوق الانسان وتمسك بسيادة القانون ٤- ان الهدف من دراسة الديمقراطية هو لغرض التنسيق مابين طموحات ومطالب الشعب ككل وصنع قرارات تتوافق مع مطالب الشعب الطويلة الاجل ٥- ان الهدف من دراسة الديمقراطية هو لغرض معرفة القيم والمبادئ العليا في الديمقراطية التي تشمل العدالة والمساواة والحرية وسيادة القانون وتسامح الفكري والسياسي واحترام الكرامة الانسانية ٦- ان الهدف من دراسة الديمقراطية هو لغرض الحفاظ على الوحدة الوطنية وترسيخها دون حدوث انقسامات ونزعات داخلية في النظام السياسي بالدولة
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	لكي يفهم الطالب مفهوم حقوق الانسان وأهميتها وانواعها وكيف تطور عبر المجتمعات والاديان السماوية. كي يفهم الطالب كيف تطورت فكرة حماية حقوق الأنسان وما هي الاعلانات الدولية والعالمية الخاصة بحقوق الأنسان. كي يستطيع الطالب معرفة مصادر حقوق الأنسان والشرعية الدولية لحقوق الانسان وماهي المواثيق والاتفاقيات الدولية التي صادق عليها العراق. لكي يستطيع الطالب معرفة واجباتهُ ومسؤولياته والقيود المترتبة على ممارسة حقوقه وحرياته دون الضرر بحقوق وحريات الأخرين وأحترام الذوق العام. لكي يستطيع الطالب معرفة المنظمات الدولية والاقليمية المعنية والمهتمة بالدفاع عن حقوق الأنسان . كي يستطيع الطالب معرفة ما هي الاليات التي أعتمدها ميثان الأمم المتحدة لضمان تعزيز حقوق الانسان وحرياته الاساسية وماهي الهيئات التي أنبثقت من ذلك الميثاق . لكي يستطيع الطالب معرفة مفهوم الديمقراطية وأنواعها وأشكالها وكيف تطورت عبر العصور والتاريخ لكي يستطيع الطالب معرفة ما هي الخصائص والسمات التي يتمتع بها النظام الديمقراطية ومعرفة ما هي مزايا الديمقراطية ومكوناتها الرئيسية. لكي يستطيع الطالب معرفة ما هو الدستور وما هي المواد الدستورية التي اختصت بحقوق الأنسان وحددت وواجباته ومسؤولياته وعلاقته مع أفراد المجتمع وكيفية ادارة الدولة بطريقة ديمقراطية. لكي يستطيع معرفة ماهي الانتخابات وماهي انواعها كيف تطور مفهومها عبر التاريخ وكيف يمارس دوره كناخب او مرشح وكيف يشارك في القرار وحكم بلاده. لكي يستطيع معرفة مفهوم الحكم الرشيد وماهي معايير وعناصر الحكم الرشيد وماهي منظومة الحكم الرشيد . لكي يستطيع الطالب معرفة الديمقراطية المعاصرة ومعرفة معايير الحكم الجيد وكيفية توظيف تلك المعايير لتقيم اداء الممارسة الديمقراطية لكي يستطع الطالب معرفة العلاقة ما بين الاوبئة والديمقراطية وكيف استطاعت الدول الديمقراطية والمنظمات الدولية معالجة في وضع قرارات تمنع من انتشار فايروس كورونا ٢٠١٩ لكي يستطيع الطالب معرفة العلاقة ما بين حقوق الانسان والديمقراطية وما هو الفرق فيما بينهما وكيف ترتبط مسالة الديمقراطية بحقوق الانسان بشكل واضح وغير قابل للفصل وذلك لكونهما مفهومان متكافئين وداعمين لاحدهما للأخر
Indicative Contents المحتويات الإرشادية	التعريف بحقوق الانسان تطور فكرة حقوق الانسان في العصر الحديث المجتمع الدولي وشرعية الدولية لحقوق الانسان واجبات الانسان ومسؤولياته والقيود المترتبة على ممارسة حقوق الأنسان . المنظمات والهيئات الدولية المعنية بالدفاع عن حقوق الأنسان . آليات الامم المتحدة لحقوق الأنسان

	الديمقراطية سمات النظام الديمقراطي الدستور والديمقراطية الانتخابات الحكم الرشيد الديمقراطية المعاصرة العلاقة بين الديمقراطية والاوبئة والتقدم التكنولوجي العلاقة بين الديمقراطية وحقوق الانسان

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

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	التعريف بحقوق الانسان
Week 2	تطور فكرة حقوق الانسان في العصر الحديث
Week 3	المجتمع الدولي وشرعية الدولية لحقوق الانسان
Week 4	. واجبات الانسان ومسؤولياته والقيود المترتبة على ممارسة حقوق الأنسان
Week 5	منظمات والهيئات الدولية المعنية بالدفاع عن حقوق الأنسان
Week 6	آليات الامم المتحدة لحقوق الأنسان
Week 7	الديمقراطية

Week 8	امتحان
Week 9	سمات النظام الديمقراطي
Week 10	الدستور والديمقراطية
Week 11	الانتخابات
Week 12	الحكم الرشيد
Week 13	الديمقراطية المعاصرة
Week 14	العلاقة بين الديمقراطية والاوبئة والتقدم التكنولوجي
Week 15	العلاقة بين الديمقراطية وحقوق الانسان
Week 16	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	حقوق الإنسان ,تطورها,مضامينها,حمايتها . د. رياض عزيز هادي حقوق الإنسان . د حافظ علوان حمادي الديمقراطية حاضرا ومستقبلا . احمد موسى حسن بكار	
Recommended Texts	حقوق الإنسان بين الأمس واليوم . د. خيري عبدالله داود حقوق الإنسان . د.حميد حنون خالد الديمقراطية الغربية . د. حامد ربيع مفاهيم الديمقراطية في الفكر السياسي الحديث . د. علي الدين هلال	
Websites		

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	English (I)			**Module Delivery**	
Module Type	B			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	ENG102				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	سماح احمد جميل		**e-mail**	samah.ag312@gmail.com	
Module Leader's Acad. Title	أ.م.د.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	هيثم صباح حسن		**e-mail**	haitham@uoitc.edu.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1-Understanding the target language's meaning and structure, in addition to being proficient in its pronunciation. 2-Developing basic linguistic competencies that enable dealing with introductory level vocabulary. 3-Developing understanding and ability to use conversational language in daily life. 4. Understand and use the English language as a means of communicating and learning in their specializations. 5. Graduating cadres with a high degree of education, qualifications and excellence. 6. Use colloquial English in their daily lives. 7. Start and continue short, simple conversations. 8. Write a sentence that is sound and has correct structure and meaning. 9. Understanding the reading material, creating a link between its various components.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- To be able to understand the material and use integrated education 2 Knowledge and understanding of study topics. 3 Having clarity in the cognitive aspect to reach a high degree of awareness of science In Rasin. 4 The student acquires practical skills that qualify him to perform the applied aspect of computer sciences Life. 5- The student acquires personal skills at the level of the method required to be accomplished. 6- The student acquires the intellectual cognitive skills required to be achieved. 7- The student acquires the practical skills required to be accomplished. 8- Participates in discussion and dialogue using the words “English vocabulary” in Arabic. Academic year.
Indicative Contents المحتويات الإرشادية	Vocabulary, Everyday English Listening, Questions, Adjectives English, don’t forget Jobs, Questions and Negatives, Possessives, Vocabulary, has/ have, Listening Sports / food/ drink, Things I like, Present simple The Time, Present Simple- he/ she/ it Do/ does/ am/ is/ are Question (Why? Because) Present Continuous Tense

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	Traditional teaching methods (lecture, discussion, viewing) and others, as well as on the use of integrated education and modern teaching methods (brainstorming, extracurricular skills Tar Academy (modern educational technology). The self-education and e-learning program using the OSA technology Multiple media via the Internet

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Unit 1/ Introduction Hello, 2.1 Vocabulary, Everyday English
Week 2	Unit 2 /Your World Countries, 2.2 Listening, Questions, Adjectives
Week 3	Reading, Listening, Everyday 2.3 English, Don't forget
Week 4	Unit 3/ All about you 2 4 Jobs, Questions and Negatives, Negatives and Questions, Listening Questions, Listening
Week 5	Exam
Week 6	Unit 4 / Family and Friends 2. 5 Possessives, Vocabulary, has/ have, Listening
Week 7	Mid-term Exam
Week 8	Reading, Pronunciation, 2. 6 Everyday English
Week 9	Unit 5 / The way I Live, 2. 8 Sports / food/ drink, Things I like, Present simple
Week 10	Listening, Vocabulary, Everyday 2 9 English, Dont forget
Week 11	Exam
Week 12	Unit 6 / Every Day 2 10 The Time, Present Simple- he/ she/ it Do/ does/ am/ is/ are
Week 13	Unit 7 / My Favorites 2 12 Question (Why? Because)
Week 14	Present Continuous Tense
Week 15	Week 15 Present Perfect Tense
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	New Headway Plus_ Beginner - student's book + workbook by John and Liz Soar	
Recommended Texts		
Websites	https://learnenglish.britishcouncil.org/english-grammar-reference/present-simple https://www.englishpage.com/verbpage/presentcontinuous.html https://www.ef.com/wwen/english-resources/english-grammar/present-perfect//	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Programming Fundamentals (II)			**Module Delivery**	
Module Type	C			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	IBT104				
ECTS Credits	**8**				
SWL (hr/sem)	**200**				
Module Level	1		**Semester of Delivery**	1	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	محمد صالح مهدي		**e-mail**	mohammed.salih@uoitc.edu.iq	
Module Leader's Acad. Title	أ.م.د.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	اثير اكرم عبدالرزاق		**e-mail**	athproof@uoitc.edu.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	IBT101	**Semester**	1
Co-requisites module	None	**Semester**	

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	93	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	107	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	200		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	I. This Course aims to create insight and new learning in the area of programming fundamenta ls by designing, programming, and debugging Python applications to solve non-trivial problems. II. To demonstrate the fundamentals of writing Python scripts and discover how to work with function, lists, tuple, etc. III. To discuss the means useful in resolving typical implementation problems with the help of standard “Python” language libraries. IV. to facilitate code reuse, Use Python to read and write file and make their code robust by handling errors.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	to learn and use Standard Mathematical Functions, Built in Functions to learn and use Creating a Function, calling a Function, Parameter Passing and Function Examples An ability to Learn the and Building Lists, basic lists Methods and lists Examples to understand the Multidimensional Lists and Examples An ability to Learn and Building Tuples, basic Tuples Methods and Tuples Examples An ability to Learn and Building Sets and basic Sets Methods and Sets Examples An ability to Learn and Building Dictionaries and basic Dictionaries Methods and Dictionaries Examples to understand the Create function recursion, lambda function An ability for Reading from a File, to understand the Reading an Entire File, File Paths, Reading Line by Line and Making a List of Lines from a File An ability for Writing to File, Writing Multiple Lines and Appending to a File An ability to Learn and Building lambda, filter and map, to understand the Date & Time, RegEx Functions with examples
Indicative Contents المحتويات الإرشادية	Standard Mathematical Functions, Built in Functions Creating a Function, calling a Function, Parameter Passing and Function Examples Building Lists , basic lists Methods and lists Examples Multidimensional Lists and Examples Tuples, basic Tuples Methods and Tuples Examples Sets and basic Sets Methods and Sets Examples Dictionaries and basic Dictionaries Methods and Dictionaries Examples Reading an Entire File, File, Writing Multiple Lines and Appending to a File lambda, filter and map, Date & Time, RegEx Functions with examples

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	-E-Learning -Direct Learning -Self-Learning -Brainstorming

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Overview loop
Week 2	Nested loop
Week 3	Functions and Recursive Function
Week 4	Python Collections (string)
Week 5	Python Collections (List)
Week 6	Python Collections (multidimensional List)
Week 7	Python Collections(Tuples)
Week 8	Mid-Term Exam
Week 9	Python Collections (Sets)
Week 10	Python Collections (Dictionaries)
Week 11	Python Directory and Files Management
Week 12	File handling
Week 13	lambda , filter and map function and Python Variable Scope
Week 14	Python Built-in Module Variable Length Arguments in Python Trend Projects Based on Python
Week 15	Preparatory Week then final exam
Week 16	

Delivery Plan (Weekly Lab. Syllabus) المنهاج الاسبوعي للمختبر	
	Material Covered
Week 1	Functions and Recursive Function
Week 2	Python Collections (string)
Week 3	Python Collections (List)
Week 4	Python Collections (multidimensional List)
Week 5	Python Collections (Sets)
Week 6	Python Collections (Tuples)
Week 7	Python Collections (Dictionaries)
Week 8	quiz
Week 9	Python Directory and Files Management
Week 10	file handling
Week 11	lambda , filter and map function and Python Variable Scope
Week 12	Python Built-in Module
Week 13	Variable Length Arguments in Python
Week 14	Trend Projects Based on Python
Week 15	quiz
Week 16	

Learning and Teaching Resources
مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	1- Head First Python. A Learner's Guide to the Fundamentals of Python 1-Programming, Paul BarryPublisher: O'Reilly, 2023 2- Learning to Program in Python 2017 by P. M. Heathcote 3- Halterman, R. L. (2011). LEARNINGTO PROGRAM WITH PYTHON.	
Recommended Texts	LEARN PYTHON PROGRAMMING - an in -depth introduction to the fundamentals of python. 3rd ed. 2021	
Websites	https://www.python.org/ https://www.python.org/doc/ https://www.tutorialspoint.com/python/ www.w3schools.com/python/	

Grading Scheme مخطط الدرجات

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Human Resources Management			**Module Delivery**	
Module Type	C			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	BIC123				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	الاء طلال ياسين		**e-mail**	dr.alaatalal@uoitc.edu.iq	
Module Leader's Acad. Title	أ.م.د.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	بسام طالب صبري		**e-mail**	bassam.ali@uoitc.edu.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	102	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1- To familiarize the student with the concepts of human resource management 2- To present the importance and process of acquiring, training, appraising, and compensating employees, and of attending to their labor relations, health and safety, and fairness concerns. 3-To discuss Personnel Aspects of a Manager's Job
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. The student will has an introduction to HRM , what it is what the mean of organization and manager. 2. The student will learn HRM trends and approaches. 3. The student will learn The H. R. Function, role, goals, planning , IS and job analysis 4. The student will learn about Performance Appraisal 5. The student will learn job evaluation 6. The student will learn train and development 7. The student will learn, succession planning 8. The student will learn, health and safety . 9. The student will learn Control Structure II 10. The student will learn stress management.
Indicative Contents المحتويات الإرشادية	- What Is Human Resource Management - Organization, manager - Management Process - Personnel Aspects of a Manager's Job - Personnel Mistakes - Human Resource Managers' Duties - Human Resource Specialties - New Approaches to Organizing HR - Trends in the Nature of Work - High-Performance Work Systems - Managing Ethics - On-the-Job Training Methods - On Specific Job , Experience Coaching , Job Rotation - Special Projects Multiple Management - Special Courses and Lectures - Conferences - Case Studies - Brainstorming - Simulation

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	-E-Learning -Direct Learning -Self-Learning -Brainstorming -Cooperative Learning --Achievement Tests

	-Selection of Intellectual Question in Achievement tests -Students Performance Assessment

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction To Human Resource Management
Week 2	Human Resource Management trends and Approaches
Week 3	The H. R. Function, role, goals, planning , IS and job analysis .
Week 4	Performance Appraisal
Week 5	Job evaluation
Week 6	Training and development
Week 7	Succession planning
Week 8	Mid-Term Exam
Week 9	Employee health and safety
Week 10	Workplace negotiation processes
Week 11	Strategic reward management
Week 12	Work design challenges in a global environment
Week 13	Talent attraction and selection
Week 14	Talent retention and development Evaluating SHRM : Towards the future
Week 15	Preparatory Week and final exam
Week 16	

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Title: Human Resource Management: Strategy and Practice / Alan Nankervis,Marian Baird, Jane Coffey and John Shields (author). Edition: 10th edition,ISBN: 9780170421843 (paperback), 2020	
Recommended Texts	Title: Human resource management at work: the definitive guide / Mick Marchington, Adrian Wilkinson, Rory Donnelly, Anastastia Kynighou. Description: London, United Kingdom; New York, NY:	
Websites		

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Probability and Statistics			**Module Delivery**	
Module Type	S			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☒ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	BIC122				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	زينب فالح حمزة		**e-mail**	zainb.stat@uoitc.edu.iq	
Module Leader's Acad. Title	أ.م.د.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	ابراهيم نعيم حسن		**e-mail**	ibrahim.naeem@uoitc.edu.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

Relation with other Modules العلاقة مع المواد الدراسية الأخرى			
Prerequisite module	IBT105	**Semester**	1
Co-requisites module	None	**Semester**	

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	63	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	87	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1. Learning student the concepts and elements of probability theory and statistics. 2. The probability is very necessary for making decisions and testing hypothesis about different parameters of populations . 3. Provide students with a framework that will help them choose the appropriate descriptive methods in various data analysis situations. 4. Relate the probability of an event to the likelihood of this event occurring. 5. Compare and contrast distributions (of quantitative data) from two or more groups, and produce a brief summary, interpreting your findings in context
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Apply probability rules in order to find the likelihood of an event . 2. An ability to apply knowledge of computing and mathematics appropriate to the program's student outcomes and to the discipline 3. The student will learn how to use probability trees as a tool for finding probabilities. 4. The student will learn how to determine whether two events are independent or not.. 5. The student will learn distinguish between discrete and continuous random variables. 6. Students will be familiar with The basic tools required to develop and understand Probability ideas and problems 7. Students will be familiar with Describe the concepts of populations, samples and sampling distributions 8. Students will be familiar with Conditional probability. 9. Students will be familiar with Some examples of how the probabilistic framework is relevant for economics and finance 10. Students will be familiar with describe the role of correlation and simple regression in analyzing the relationship between two variables, and be able to apply these tools and discuss empirical results. 11. Students will be able to model simple experiments using probability theory .
Indicative Contents المحتويات الإرشادية	- Overview of main topics in Statistics Axioms of Probability - Random variable and Probability Function Sample space Events Properties of Probability - Counting Method Examples - Probability Theory - Combination & Permutation - Types of Data - Data Description Descriptive Statistics Exploratory Data Analysis - Probability distributions Bernoulli distribution Binomial distribution Poisson distribution - Continuous Probability distributions Uniform distribution Exponential distribution Normal distribution

	- Estimation the method of moments the method of maximum likelihood estimation - Measures of central tendency Mean Mode Median Variance standard deviation - Conditional Probability Independent Events

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	-E-Learning -Direct Learning -Self-Learning -Brainstorming -Cooperative Learning -Learning by Experimentation -Achievement Tests -Selection of Intellectual Question in Achievement tests -Students Performance Assessment - Project consist of Random groups of Students

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Overview of main topics in Statistics &Axioms of Probability
Week 2	Random variable and Probability Function (Sample space , Events)
Week 3	Probability Theory
Week 4	Conditional Probability , Independent Events
Week 5	Combination & Permutation
Week 6	Types of Data (Data Description , Descriptive Statistics , Exploratory Data Analysis)

Week 7	Probability distributions(Bernoulli distribution , Binomial distribution)
Week 8	Mid-Term Exam
Week 9	Binomial distribution ,Poisson distribution , Examples
Week 10	Continuous Probability distributions - Continuous Uniform Distribution - Examples
Week 11	Exponential distribution , Normal distribution
Week 12	Estimation
Week 13	The method of moments
Week 14	Measures of central tendency (Mean Mode Median Variance ,standard deviation,)
Week 15	Preparatory Week then final exam
Week 16	

Learning and Teaching Resources

مصادر التعلم والتدريس

	Text	Available in the Library?
Required Texts	Julian Gilbey , Probability & Statistics, University Printing House, Cambridge CB2 8BS, United Kingdom, 2018	
Recommended Texts	Michael J. Evans and Jersey S. Rosenthal, Probability and Statistics , The Science of Uncertainty , Second Edition ,University of Toronto , 2015	
Websites	https://www.khanacademy.org/math/statistics-probability/probability-library	

Grading Scheme مخطط الدرجات

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	Computational Paradigms			**Module Delivery**	
Module Type	S			☒ **Theory** ☐ **Lecture** ☒ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	BIC111				
ECTS Credits	**6**				
SWL (hr/sem)	**150**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	حسنين مجيد حسن		**e-mail**	hassanain.al@uoitc.edu.iq	
Module Leader's Acad. Title	م.د.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	مصطفى فوزي محمد		**e-mail**	mustafa.stat@uoitc.edi.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	48	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	102	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	150		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents

أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية

Module Objectives أهداف المادة الدراسية	This course introduces students to the fundamental concepts and applications of various computational paradigms, equipping them with the knowledge and skills to select and use appropriate paradigms for different problem-solving scenarios. It covers essential paradigms like imperative, functional, logic, object-oriented, and parallel programming.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1. Explain the key characteristics and underlying principles of different computational paradigms. 2. Compare and contrast the suitability of different paradigms for various problem types. 3. Design and implement algorithms using the appropriate paradigm for a given problem. 4. Analyze the computational complexity and efficiency of algorithms based on their paradigms. 5. Stay informed about emerging paradigms and their potential impact on computing.
Indicative Contents المحتويات الإرشادية	**Introduction to Computational Paradigms** · Overview of computational paradigms · Importance and relevance of understanding different paradigms · Historical perspective on the development of computational models **Imperative Paradigm** · Introduction to imperative programming · Basics of procedural and object-oriented programming · Control structures, data types, and algorithms in imperative languages **Functional Paradigm** · Introduction to functional programming · Pure functions, immutability, and higher-order functions · Functional programming languages and their features **Logic-Based Paradigm** · Introduction to logic programming · Predicate logic and Prolog syntax · Resolution and backtracking in logic programming **Probabilistic Paradigm** · Introduction to probabilistic programming · Bayesian networks and probabilistic graphical models Inference techniques in probabilistic programming languages **Comparison and Contrast of Paradigms** · Analyzing problem-solving approaches using different paradigms · Strengths and weaknesses of each paradigm Case studies and examples illustrating paradigm selection for specific problems **Hybrid and Emerging Paradigms** · Hybrid approaches combining multiple paradigms · Emerging computational models (e.g., quantum computing, neuromorphic computing) Applications and implications of hybrid and emerging paradigms **Advanced Topics** · Parallel and distributed computing paradigms · Concurrent programming and synchronization techniques · Meta-programming and reflective paradigms **Project Work and Presentations** · Students work on projects applying computational paradigms to real-world

Learning and Teaching Strategies

استراتيجيات التعلم والتعليم	
Strategies	-E-Learning -Direct Learning -Self-Learning -Brainstorming -Cooperative Learning -Learning by Experimentation -Achievement Tests -Selection of Intellectual Question in Achievement tests -Students Performance Assessment - Project consist of Random groups of Students

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Introduction to Computational Paradigms
Week 2	Imperative Paradigm
Week 3	Functional Paradigm
Week 4	Logic-Based Paradigm
Week 5	Probabilistic Paradigm
Week 6	Comparison and Contrast of Paradigms
Week 7	Hybrid and Emerging Paradigms
Week 8	Mid-Term Exam
Week 9	Emerging computational models
Week 10	Advanced Topics
Week 11	Parallel and distributed computing paradigms
Week 12	Concurrent programming and synchronization techniques
Week 13	Meta-programming and reflective paradigms
Week 14	Project Work and Presentations

Week 15	Preparatory Week then final exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	Computational Intelligence An Introduction, Andries P. Engelbrecht University of Pretoria, John Wiley & Sons, Ltd, 2002.	
Recommended Texts	Computational Intelligence Paradigms Theory and Applications, S. sumathi surekha p., CRC Press, Boca Raton London New York, 2010.	
Websites	https://mathworld.wolfram.com/MulticomputationalParadigm.html	

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

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

MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية			
Module Title	Arabic	**Module Delivery**	
Module Type	B	☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	ARB101		
ECTS Credits	**2**		
SWL (hr/sem)	**50**		
Module Level	1	**Semester of Delivery**	2
Administering Department	Type Dept. Code	**College**	College of Business Informatics
Module Leader	حسن علي فرحان	**e-mail**	
Module Leader's Acad. Title	أ.م.د.	**Module Leader's Qualification**	
Module Tutor	N/A	**e-mail**	N/A
Peer Reviewer Name	بسام طالب صبري	**e-mail**	bassam.ali@uoitc.edu.iq
Scientific Committee Approval Date		**Version Number**	1.0

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
	Assignments	2	10% (10)	2 and 12	LO #3, #4 and #6, #7
	Projects / Lab.	1	10% (10)	Continuous	All
	Report	1	10% (10)	13	LO #5, #8 and #10
Summative assessment	**Midterm Exam**	2hr	10% (10)	7	LO #1 - #7
	Final Exam	3hr	50% (50)	16	All
Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1- تنمية ثورة الطلبة اللغوية 2- تمكين الطلبة من الكلام بلغة عربية صحيحة 3-تنمية ميول الطلبة في الادب الرفيع 4-اتقان تلاوة القرأن الكريم 5-تنمية التذوق الادبي عند الطلبة 6- تدريب الطلبة على جودة القاء النصوص الادبية
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- معرفة بعض موضوعات اللغة العربية وفهمها وتطبيقها 2- استخدام اللغة العربية استخداما سليما خاليا من اللبس والخطأ 3- معرفة الطلبة بالاخطاء اللغوية والابتعاد عنها كتابة ونطقا 4- معرفة الطلبة الاساليب اللغوية والبلاغية في القراءن الكريم 5- الاطلاع على الادب العربي القديم والحديث
Indicative Contents المحتويات الإرشادية	1- تدريب الطلبة على حسن الاداء وجودة الالقاء وتمثيل المعنى 2- مساعدة الطلبة على استخدام علامات الترقيم في كتاباتهم بصورة صحيحة 3- تمكين الطلبة من مهارات التحليل والاستنباط وتربي فيهم الملاحضات الدقيقة والموازنة بين الاساليب والتراكيب المتشابهة والمختلفة 4- تعليم الطلبة ما يناسبهم من القرأن الكريم تعليما يدفعهم الى الاعتزاز به 5- تهذيب ميول الطلبة وتربية شخصيتهم لما تنصة النصوص من معاني 6- تنمية ميول الطلبة الى قراءة النصوص ومطالعة الفنون الادبية وتذوقها

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	- طريقة المحاضرة الطورة - طريقة المناقشة - طريقة التحليل - الاختبارات التحريرية - الاختبارات الشفوية - الاختبارات اليومية - الاختبارات الشهرية

Delivery Plan (Weekly Syllabus) المنهاج الاسبوعي النظري	
	Material Covered
Week 1	معرفة المبتدأ والخبر وتطبيقة
Week 2	معرفة كان واخواتها وتطبيقها
Week 3	معرفة ان واخواتها وتطبيقها
Week 4	معرفة الفاعل ونائبه وتطبيقه
Week 5	معرفة العدد وتطبيقة
Week 6	اتقان علامات الترقيم وتطبيقها
Week 7	اتقان كتابة الهمزة
Week 8	امتحان ال Mid-term
Week 9	اتقان كتابة الضاد والظاء
Week 10	معرفة سورة يوسف
Week 11	معرفة سورة الكهف
Week 12	معرفة نموذج من الشعر القديم وفهمه وحفظة
Week 13	معرفة نموذج من الشعر الحديث وفهمه وحفظة
Week 14	معرفة نموذج من النثر الادبي والاقتداء به
Week 15	الاستعداد للامتحان النهائي

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	1- اللغة العربية المهارات الاساسية / احمد حسين جار الله 2- اللغة العربية لغير اقسام الاختصاص / عبد القادر حسن	
Recommended Texts	1- القرأن الكريم 2-جامع الدروس العربية 3- الموجز في الادب العربي وتاريخة 4- المرجع في الاملاء	
Websites		

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

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MODULE DESCRIPTION FORM

نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية					
Module Title	English (II)			**Module Delivery**	
Module Type	B			☒ **Theory** ☐ **Lecture** ☐ **Lab** ☐ **Tutorial** ☐ **Practical** ☐ **Seminar**	
Module Code	ENG002				
ECTS Credits	**2**				
SWL (hr/sem)	**50**				
Module Level	1		**Semester of Delivery**	2	
Administering Department	Type Dept. Code		**College**	College of Business Informatics	
Module Leader	سماح احمد جميل		**e-mail**	samah.ag312@gmail.com	
Module Leader's Acad. Title	م.م.		**Module Leader's Qualification**		
Module Tutor	N/A		**e-mail**	N/A	
Peer Reviewer Name	هيثم صباح حسن		**e-mail**	haitham@uoitc.edu.iq	
Scientific Committee Approval Date			**Version Number**	1.0	

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

Student Workload (SWL) الحمل الدراسي للطالب محسوب لـ ١٥ اسبوعا			
Structured SWL (h/sem) الحمل الدراسي المنتظم للطالب خلال الفصل	32	**Structured SWL (h/w)** الحمل الدراسي المنتظم للطالب أسبوعيا	
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطالب خلال الفصل	18	**Unstructured SWL (h/w)** الحمل الدراسي غير المنتظم للطالب أسبوعيا	
Total SWL (h/sem) الحمل الدراسي الكلي للطالب خلال الفصل	50		

Module Evaluation تقييم المادة الدراسية					
		Time/Number	**Weight (Marks)**	**Week Due**	**Relevant Learning Outcome**
Formative assessment	**Quizzes**	2	10% (10)	5 and 10	LO #1, #2 and #10, #11
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Total assessment			100% (100 Marks)		

Module Aims, Learning Outcomes and Indicative Contents أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية	
Module Objectives أهداف المادة الدراسية	1-Understanding the target language's meaning and structure, in addition to being proficient in its pronunciation. 2-Developing basic linguistic competencies that enable dealing with introductory level vocabulary. 3-Developing understanding and ability to use conversational language in daily life. 4. Understand and use the English language as a means of communicating and learning in their specializations. 5. Graduating cadres with a high degree of education, qualifications and excellence. 6. Use colloquial English in their daily lives. 7. Start and continue short, simple conversations. 8. Write a sentence that is sound and has correct structure and meaning. 9. Understanding the reading material, creating a link between its various components.
Module Learning Outcomes مخرجات التعلم للمادة الدراسية	1- To be able to understand the material and use integrated education 2- Knowledge and understanding of study topics. 3- Having clarity in the cognitive aspect to reach a high degree of awareness of science In Rasin. 4- The student acquires practical skills that qualify him to perform the applied aspect of computer sciences Life. 5- The student acquires personal skills at the level of the method required to be accomplished. 6- The student acquires the intellectual cognitive skills required to be achieved. 7- The student acquires the practical skills required to be accomplished. 8- Participates in discussion and dialogue using the words “English vocabulary” in Arabic. Academic year.
Indicative Contents المحتويات الإرشادية	

Learning and Teaching Strategies استراتيجيات التعلم والتعليم	
Strategies	https://learnenglish.britishcouncil.org/english-grammar-reference/present-simple https://www.englishpage.com/verbpage/presentcontinuous.html https://www.ef.com/wwen/english-resources/english-grammar/present-perfect//

Delivery Plan (Weekly Syllabus)

المنهاج الاسبوعي النظري	
	Material Covered
Week 1	Unit 1/ Question words/ parts of speech/ Types of tenses/ Social Expression
Week 2	Unit 2 / present simple tense/ present continuous tense / Present Simple vs Present Continuous/ Have got and Have- Collocation
Week 3	Unit3/ Past simple / Past continuous/ Time expressions in English/ A suffix/ make negative/ Irregular verbs .
Week 4	Unit 4/ Countable nouns & Uncountable nouns/ Article in English/ Quantifiers
Week 5	Unit 5 / verb patterns /-Future intention/-like doing & Would like to do
Week 6	Unit6 / Comparative and superlative adjectives/ Synonyms and antonyms/Dirction
Week 7	Mid-term Exam
Week 8	Unit 7 / Present perfect and past simple/ For and since/ past participles/adverbs
Week 9	Unit8 / should-must/Compound nouns/jobs
Week 10	Unit9/Time and conational clause / what if
Week 11	Unit 10 / Verb patterns/ Infinitives / Exclamations
Week 12	Unit 11 / passives/ verbs and past participles/verbs and nouns that go together
Week 13	Unit12 / Second conational/might / phrasal verbs / social excretions
Week 14	Unit13/ present perfect Continues/ present perfect simple versus continues/ word formation Adverbs
Week 15	Preparation to the final exam

Learning and Teaching Resources مصادر التعلم والتدريس		
	Text	**Available in the Library?**
Required Texts	New Headway Plus_ Pre- Intermediate Headway Plus - student's book + workbook by John and Liz Soar	
Recommended Texts	https://www.ef.com/wwen/english-resources/english-grammar/present-perfect//	
Websites	https://learnenglish.britishcouncil.org/english-grammar-reference/present-simple https://www.englishpage.com/verbpage/presentcontinuous.html	

Grading Scheme مخطط الدرجات				
Group	**Grade**	**التقدير**	**Marks %**	**Definition**
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