University of Anbar

جامعة الانبار

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

بكالوريوس - تكنولوجيا المعلومات

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Overview .١

This catalogue is about the courses (modules) given by the program of Information Systems to gain the Bachelor of Science degree. The program delivers (42) Modules with (6000) total student workload hours and 240 total ECTS. The module delivery is based on the Bologna Process.

نظرة عامة

يتناول هذا الدليل المواد الدراسية التي يقدمها برنامج نظم المعلومات للحصول على درجة بكالوريوس العلوم. يقدم البرنامج (٤٠) مادة دراسية، على سبيل المثال، مع (٦٠٠٠) إجمالي ساعات حمل الطالب و ٢٤٠ إجمالي وحدات أوروبية. يعتمد تقديم المواد الدراسية على عملية بولونيا.

	Code	Course/Module Title	ECTS	Semester	Class (hr/w)	Lect/Lab./Prac./Tutor	SSWL (hr/sem)	USWL (hr/w)
Module 1	ISSP101	Structured programming	8.00	One	3	2	108	92
Description								
The "Structured Programming" course focuses on teaching students how to design and implement computer programs in a structured and systematic manner. This course aims to provide students with the fundamental concepts of computer programming and develop their skills in writing purposeful and								

maintainable code.
Throughout the course, you will learn the basic principles of computer programming, such as sequencing, iteration, and conditional statements. You will become familiar with program design methodologies and its structure, as well as how to analyze problems and break them down into manageable components. You will practice using appropriate tools and techniques to design and implement robust and efficient programs.
By successfully completing this course, you will gain the necessary skills to deal with programming complexities and organize code in a systematic and structured way. You will be able to build maintainable and future-proof programs, and improve the efficiency of your computer code.

Module 2	ISFI 102	Fundamental of Information Technology	6.00	One	2	2	78	72
		Description						

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 3	ISLD103	Logic Design I	6.00	One	2	4	93	57
		Description						

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 4	CCIT060	Mathematic I	6.00	One	2	1	78	72
		Description						

Study of derivatives, their methods and applications, and their relationship to real problems. Teaching training students to deal with the rules and laws of derivatives and apply them in the future in a logical and correct manner

Module 5	UOA003	English (1)	2.00	One	2	0	17	50
		Description						

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 6	ISSP201	Structured programming II	8.00	Two	3	2	108	92
	Description							

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 7	**CCIT061**	Discrete Structures	6.00	Two	2	1	78	72
	Description							

Discrete Structures is a fundamental course within the Computer Science curriculum that introduces students to mathematical concepts and structures essential for solving complex computational problems. The course provides a bridge between discrete mathematics and its applications in computer science, laying the groundwork for algorithm design, logic, and various computational paradigms.

Module 8	ISLD202	Logic Design II	6.00	Two	2	2	93	57
	Description							

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 9	**CCIT061**	Discrete Mathematics	6.00	Two	2	1	78	72
	Description							

Discrete Mathematics

for Computer Science is a continuation of the mathematical foundation established in Mathematics I, tailored specifically to meet the needs of computer science students. This course explores advanced mathematical concepts and techniques that are fundamental for understanding and solving complex problems in computer science and software engineering.

Module 10	UOA001	Arabic Language 1	2.00	Two	2	0	17	50
	Description							

The Introductory Arabic Language course in the first stage is designed to introduce students to the Arabic language and culture. It serves as a foundation for developing basic communication skills in Arabic,

		fostering cultural awareness, and preparing students for more advanced language courses or interactions within Arabic-speaking communities. This course is suitable for students who have little to no prior knowledge of the Arabic language.							
Module 11	ISOO301	Object Oriented Programming I	8.00	Three	3	2	95	105
		Description						
		The study of structured programming, entity programming and what is known as object-oriented programming, knowledge of injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between them.							
Module 12	ISDS302	Data Structures	6.00	Three	2	2	70	80
		Description						
		The Data Structures and Algorithms course is a cornerstone of the Computer Science curriculum, offering an in-depth exploration of fundamental concepts and techniques essential for solving complex computational problems efficiently. This course equips students with the knowledge and skills required to design, analyze, and implement data structures and algorithms, which are fundamental to computer science and software engineering.							
Module 13	ISCT303	Computational Theory	4.00	Three	2	0	34	66
		Description						
		The Computational Theory course is a fundamental component of the Computer Science curriculum that explores the theoretical underpinnings of computation. This course delves into abstract models of computation, formal languages, and the limits of algorithmic solvability. It provides students with the theoretical foundations necessary to analyze and understand the capabilities and limitations of computers and algorithms.							
Module 14	ISEI304	Introduction to Elecrtonic information system	3.00	Three	2	0	45	75
		Description						
		The Introduction to Electronic Information Systems course is designed to provide students with a foundational understanding of electronic information systems and their role in modern computing and information management. This course explores the principles, technologies, and applications of electronic information systems, equipping students with essential knowledge and skills for managing and processing digital information.							
Module 15	ISDA305	Design and Analysis of Information Systems	5.00	Three	2	0	45	75
		Description						
		The Design and Analysis of Information Systems course is a pivotal component of the Computer Science							

curriculum that focuses on the principles, methodologies, and best practices for designing, developing, and analyzing complex information systems. This course empowers students with the knowledge and skills necessary to create robust, efficient, and scalable information systems that meet real-world business and technology requirements.

Module 16	UOA135	Democracy and Human Rights	2.00	Three	1	0	25	25
	Description							

The Democracy and Human Rights course in the first stage is designed to provide students with a fundamental understanding of the concepts, theories, and historical development of democracy and human rights. This introductory course aims to foster critical thinking and awareness of the importance of these principles in contemporary global society.

Module 17	ISAM307	Advanced Mathematics	4.00	Three	2	1	63	37
	Description							

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 18	ISOO401	Object Oriented Programming II	8.00	Four	3	2	108	92
	Description							

The study of structured programming, entity programming and what is known as object-oriented programming, knowledge of injunctions and functions to prepare the student to know how to write a set of commands, knowing what are injunctions, how to build classes and objects, what the class has of properties and functions, how to build several classes and several objects, and how properties are inherited between them.

Module 19	ISDC205	Design and Analysis of Databases	6.00	Four	2	2	65	85
	Description							

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 20	ISDE190	Web Technologies	6.00	Four	2	2	65	85
	Description							

The Web Technologies course is designed to provide students with a comprehensive understanding of the

technologies and principles that underlie the World Wide Web. In an era where the web plays a crucial role in communication, commerce, and information dissemination, this course equips students with the knowledge and skills necessary to design, develop, and manage modern web applications.

Module 21	ISDI404	Design Internet Pages	5.00	Four	2	2	78	47

Description

The Design Internet Pages course is designed to provide students with the knowledge and skills needed to create attractive, functional, and user-friendly web pages. In today's digital age, effective web design is crucial for businesses, organizations, and individuals. This course equips students with the tools and techniques required to design visually appealing and responsive web pages that meet modern web standards.

Module 22	CCIT062	Numerical Analysis	4.00	Four	2	2	63	37

Description

Studying the numerical analysis, methods, applications and its relationship with the real problems. Teach train the students to deal with the numerical process in the future in logic and right style.

Module 23	UOA240	English (2)	2.00	Four	2	0	33	17

Description

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 24	UOA006	AlBaath Party Crimes	2.00	0	1	0	33	17

Description

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Module 24	ISDC308	Visual Programming I	8.00	Five	3	2	80	120

Description

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 25	ISDC305	Principles Of Computer Network	6.00	Five	2	2	65	85

Description

Principles of Computer Communications and Networks Detailed Syllabus for B.Tech third year First semester is covered here. This gives the details about credits, number of hours and other details along with reference books for the course. Course objectives: To understand the concept of computer communication, To learn about the networking concept, layered protocols, To understand various communications concepts, and To get the knowledge of various networking equipment.

Module 26	ISDC306	Distributed Database Management systems	6.00	Five	2	2	65	85

Description

The Distributed Database Management Systems course is a specialized offering in the field of computer science, focusing on the principles, technologies, and strategies for managing databases across distributed and interconnected environments. In today's interconnected world, where data is generated and consumed across various locations and platforms, this course equips students with the knowledge and skills required to design, deploy, and manage distributed database systems effectively.

Module 27	ISDE389	Natural Lagnauge Processing	6.00	Five	2	2	65	85

Description

The Natural Language Processing (NLP) course is designed to introduce students to the interdisciplinary field that combines computer science, artificial intelligence, and linguistics. NLP focuses on the interaction between computers and human language, enabling machines to understand, interpret, and generate human language text. This course provides students with a strong foundation in NLP techniques and applications.

Module 28	ISDE324	Compiler	6.00	Five	2	2	65	85

Description

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

Module 29	ISDC307	Project Management Systems	4.00	Five	2	0	35	65

Description

This Course Specification provides a concise summary of the main features of the course and the learning

	outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.							
Module 30	ISDE325	Artificial Intelligent I	30.00	Five	11	8	310	440
	Description							
	Artificial Intelligence I is an introductory course that explores the fundamental principles and techniques underlying the field of artificial intelligence (AI). This course provides students with a comprehensive introduction to AI concepts, algorithms, and applications, equipping them with the knowledge and skills needed to understand, design, and implement AI systems.							
Module 31	ISDE323	Visual Programming II	8.00	Six	3	2	80	120
	Description							
	This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.							
Module 32	ISDE325	Artificial Intelligent II	7.00	Six	2	2	65	110
	Description							
	Artificial Intelligence II is an advanced course that builds upon the foundational concepts introduced in Artificial Intelligence I. This course delves deeper into the theory and applications of artificial intelligence, focusing on advanced topics, cutting-edge research, and practical AI development. It provides students with the opportunity to explore and apply more complex AI algorithms and techniques.							
Module 33	ISDC323	Data Storage Engineering	5.00	Six	2	0	35	90
	Description							
	The Data Storage Engineering course is designed to provide students with an in-depth understanding of the principles, technologies, and best practices related to data storage and management in modern computing systems. In today's data-driven world, the effective storage and retrieval of data are critical for businesses and organizations. This course equips students with the knowledge and skills needed to design, implement, and optimize data storage solutions.							
Module 34	ISDC309	Software Engineering	5.00	Six	2	0	35	90
	Description							
	This Course Specification provides a concise summary of the main features of the course and the learning							

	outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.							
Module 35	ISDC327	Data Management Systems	5.00	Six	2	0	35	90
	Description							
	This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.							
Module 36	ISDC328	Decision Support Systems	5.00	Six	2	0	35	90
	Description							
	A decision support system is an interactive computer application that has complete access to information about your organization. Each student will get "hands-on" experience with the development of a decision support system/expert system. When used, it offers comparative figures between one period and the next. It projects revenue figures based on assumptions related to product sales. A DSS is smart enough to help you understand the expenses involved in and consequences resulting from different decision alternatives							
Module 37	ISDE323	Information Security I	5.00	Seven	2	0	35	90
	Description							
	This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.							
Module 38	ISDE322	Internet of Things	6.00	Seven	2	2	65	85
	Description							
	This course is to cover the concepts, structure, and functions of Multimedia Computing To give students a broad grounding in issue surrounding multimedia, including the role of and design of multimedia Systems which incorporate digital audio, graphics and video, underlying concepts and representations of sound, pictures and video, data compression and transmission, integration of media, multimedia authoring, and delivery of multimedia.							
Module 39	ISDE324	Cloud Computing	6.00	Seven	2	2	65	85
	Description							
	The Cloud Computing course is designed to provide students with a comprehensive understanding of cloud technologies, their architecture, and their applications in modern computing environments. Cloud							

		computing has revolutionized the way businesses and organizations manage and deliver IT services. This course equips students with the knowledge and skills necessary to design, deploy, and manage cloud-based solutions effectively.						
Module 40	ISDE325	Machine learning	6.00	Seven	2	2	65	85
	Description							
	This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.							
Module 41	ISDC375	Operating Systems I	5.00	Seven	2	0	35	90
	Description							
	Operating Systems I is a foundational course in computer science that provides students with a comprehensive introduction to the principles, design, and functioning of operating systems. Operating systems are the core software that manages computer hardware and facilitates application execution. This course equips students with the knowledge and skills needed to understand, design, and implement basic operating system components.							
Module 42	ISDC327	Web Application Programming	6.00	Seven	2	2	65	85
	Description							
	Programming of Web Applications Detailed Syllabus for B.Tech fourth year First semester is covered here. This gives the details about credits, number of hours and other details along with reference books for the course. The course covers construction and design of dynamic web pages. The emphasis lies on standardised HTML and CSS to create structure and appearance. The course also covers basic JavaScript to create a dynamic behaviour on web sites. Other parts that are covered are availability, responsive design and validation of web pages.							
Module 43	CSDE423	Research Methodology	2.00	Seven	2	0	35	15
	Description							
	The Research Methodology in Computer Science course is designed to provide students with the knowledge and skills necessary to conduct effective and rigorous research in the field of computer science. This course emphasizes the research process, methodologies, techniques, and ethical considerations, enabling students to plan, execute, and report on their research effectively.							
Module 44	ISDC406	Cyber-Security Principles	4.00	Eight	2	0	35	100
	Description							
	This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.							

Module 45	ISDC405	Deep Learning	5.00	Eight	2	2	65	85
	Description							
	This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.							
Module 46	ISDE333	Information Technology Governance	4.00	Eight	2	0	35	65
	Description							
	The Information Technology Governance course is designed to provide students with a comprehensive understanding of the principles, frameworks, and practices related to the governance of information technology within organizations. In today's digital age, effective IT governance is crucial for ensuring that IT resources are aligned with business goals, risks are managed, and compliance requirements are met. This course equips students with the knowledge and skills needed to establish and maintain effective IT governance practices.							
Module 47	ISDE414	E- Commerce	4.00	Eight	2	0	35	65
	Description							
	This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.							
Module 48	ISDC309	Data Warehouse and Data Minining	4.00	Eight	2	0	35	65
	Description							
	The Data Warehouse and Data Mining course is designed to provide students with a deep understanding of the concepts, technologies, and techniques related to data warehousing and data mining. In today's data-driven world, organizations rely on these disciplines to extract valuable insights from vast amounts of data. This course equips students with the knowledge and skills required to design, implement, and leverage data warehouses and data mining tools effectively.							
Module 49	ISDC422	Operating Systems II	5.00	Eight	2	2	65	85
	Description							
	Operating Systems II is an advanced course that continues to explore the principles, design, and functioning of operating systems, building upon the knowledge acquired in Operating Systems I. This course delves deeper into operating system concepts, advanced topics, and hands-on implementation, providing students with a comprehensive understanding of modern operating systems and their components.							

Module 50	ISDC407	Project	8.00	Eight	3	3	95	105
	Description							
	The Project in Computer Science course is a capstone experience designed to integrate and apply the knowledge and skills acquired throughout the computer science program. It offers students the opportunity to work on a substantial project that addresses real-world challenges or explores advanced topics in computer science. This course serves as a culmination of their academic journey, allowing them to demonstrate their expertise in planning, designing, developing, and presenting a significant computing project.							
	Laboratory	0	0.00	0	C	0	Structured SWL	0

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