Modern Information Technology

Course Title: Modern Information Technology	
Description	This course provides a comprehensive introduction to Modern Information Technology and its impact on society. Students will explore the fundamentals of computer hardware and software, the binary number system, computer networks, cloud computing, and virtualization. The course also covers databases, big data, and data analytics, providing insights into how information is stored, managed, and utilized. Emerging technologies, including artificial intelligence, blockchain, and quantum computing, will be examined in depth. Additionally, students will study modern applications of IT, such as e-governance, e-commerce, e-learning, and cybersecurity, gaining an understanding of how technology shapes contemporary life and business.
Semester	Autumn 2025
Neptun code	GEIAL551-Ma
Instructor	Dr. Nasraldeen Khleel
Credit Hours	5
Attendance Requirement	Students are required to attend at least 60% of the scheduled classes to be eligible for the course signature
Examination	The examination is written, and students will receive some theoretical questions and some practical tasks from the studied material

Topics and Schedule

Lecture #	Topic
Lecture 1	Introduction to Information Technology (IT) – history and role in society.
Lecture 2	The Basic computer system: Hardware basic concepts.
Lecture 3	The Basic computer system: Software basic concepts and operating system.
Lecture 4	Computer Network.
Lecture 5	The Binary Number System.
Lecture 6	Cloud Computing and Virtualization.
Lecture 7	Databases, big data and analytics.
Lecture 8	Artificial Intelligence (AI).
Lecture 9	Machine Learning (ML).
Lecture 10	Blockchain Technology and quantum computing.
Lecture 11	Modern Applications of Information Technology: E-commerce, E-governance, and E-learning.
Lecture 12	Cybersecurity.

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