**First course : information technology**

***Basic concepts about information and communication technology:***

***1-1: Definition of technology:***

The origin of technology goes back to the Greek word, which consists of two syllables: Techno, meaning industrial operation, and the second logos, meaning science or method, so in one word it is the science of industrial operation.

It can be defined as “the set of new knowledge, skills and experiences that can be transferred to a production party or used in the production, marketing and distribution of goods and services, or used in generating productive organizational structures.”

***2: Definition of information:***

***\* Definition 01:*** Wiig defines it as: organized facts and data that describe a specific situation or problem.

\* ***Definition 02:*** It is data that has been processed in a specific way, starting with receiving the data from its various sources, then analyzing, classifying, and applying it until it is sent to the concerned authorities.

The term information is related to the term data, and to the term knowledge

**Data**  **information** **knowledge**

***Definition of knowledge:*** It is the important and final outcome of the use and investment of information by decision makers and users, who transform information into knowledge and continuous work that serves them and their communities.

***Information technology concept:***

***Definition 01:*** It is the term used to describe the vocabulary of equipment, equipment, computer programs and software that allow us to access, retrieve, store, organize, form and display information by means of means, and it is also a group of new information and communication technologies on which modern computing depends. All industries are now embracing big data, the Internet, robotics, and e-commerce.

***Definition 02:*** It is an abbreviation for “new information and communication technologies”. This concept includes all the components and infrastructure that represent modern computing.

4***- Information technology media:*** It includes all media that can be used to record or store information, and the technological features that allow this information to be broadcast or transmitted through various channels such as:

1. For sound
2. Textλ
3. Video.λ
4. Computersλ
5. Phonesλ
6. Tablets connected to the Internet,λ
7. Old technologies such as radio and television.λ
8. New emerging technologies such as artificial intelligence or robotics are also considered ICTλ

***IT CONTENT:*** There are generally five main components:

1-Data is the root cause of how IT systems work. These numbers and statistics are necessary to allow the system to achieve a result.

2- Hardware: Necessary, which is all the physical components that depend on it, such as processors, memory cards, sound cards, video cards, keyboards, microphones, webcam, or speakers.

Software is computer programs that provide instructions to hardware that allow it to operate in a predetermined manner to enable it. Developers usually create these programs using specific programming languages.

4- Actions are another key element. They are necessary to determine the actions that users of software applications must perform to allow the system to function well.

5- People who process raw data to obtain information, through specific software applications,

***Types of information technology:*** ICT exists in three main categories:

- Wired and wireless communications, including call centers, mobile phones, GPS, etc.

- Consumer electronics, components and equipment, televisions and DVD players

- Internet, servers, networks, tips, troubleshooting...

***The importance of information technology:***

- Save money

- Discover new opportunities.

- Improving the way we work, communicate, learn and live.

- Simplifying our daily life from phone to smart car,

- Reducing human effort.

- Increase the productivity of all industries by using fewer resources and more people

-Saving many human lives through medical advances.

***Disadvantages of information technology:***

1. The cost of purchasing, maintaining and renewing the devices
2. Excessive purchase of technology
3. The cost of configuring users on the technology
4. Instability in receiving information
5. The industry is becoming more polluting
6. Unemployment of people, such as tourism and travel agencies, and resistance to change.