



*Training Course:  
The Information and Communication  
Technologies (ICT) Skills*

*29 July - 2 August 2024  
Barcelona (Spain)  
Grupotel Gran Via 678*

## Training Course: The Information and Communication Technologies (ICT) Skills

Training Course code: IT1976 From: 29 July - 2 August 2024 Venue: Barcelona (Spain) - Grupotel Gran Via 678 Training Course Fees: 5775 € Euro

### Introduction

The Information and Communication Technologies ICT Skills Training Program is a comprehensive learning experience designed to equip participants with the essential knowledge and practical skills required to excel in the dynamic field of ICT. In today's digital age, ICT skills have become increasingly vital across various industries, and this program aims to bridge the gap between theoretical understanding and practical application. Through a combination of interactive lectures, hands-on exercises, case studies, and group discussions, participants will gain a solid foundation in ICT concepts, tools, and emerging technologies, preparing them for successful careers in this ever-evolving field.

### Target Audience

The ICT Skills Training Program is suitable for individuals who aspire to pursue a career in the field of information and communication technologies or those seeking to upgrade their existing skills. The program accommodates participants with diverse backgrounds, including recent graduates, working professionals from non-technical backgrounds, and IT professionals looking to expand their skill sets. No prior programming or technical knowledge is required, making it accessible to beginners while also providing advanced modules for those with prior experience.

### Methodologies

1. **Interactive Lectures:** Engaging lectures will be conducted to introduce and explain key ICT concepts and theories. Participants will have the opportunity to interact with the instructor and ask questions to deepen their understanding.
2. **Practical Exercises:** Hands-on exercises and projects will be assigned to reinforce learning and develop practical skills. Participants will apply their knowledge to real-world scenarios and gain confidence in utilizing ICT tools and technologies.
3. **Case Studies:** Real-world case studies will be analyzed to understand how ICT is applied in various industries. Participants will examine challenges and solutions, enhancing their problem-solving abilities and gaining insights into industry best practices.
4. **Group Discussions:** Participants will collaborate in group discussions to exchange ideas, solve problems, and share experiences. This fosters a collaborative learning environment and encourages participants to learn from each other's perspectives.
5. **Guest Speakers:** Experts from the ICT industry will be invited to share insights, trends, and career opportunities. Participants will have the chance to interact with industry professionals and gain practical knowledge from their experiences.
6. **Assessments:** Regular assessments and quizzes will be conducted to evaluate participants' progress and reinforce key concepts. This allows participants to track their learning and identify areas for improvement.

## Objectives

1. Develop a solid understanding of ICT concepts, terminologies, and industry trends.
2. Acquire practical skills in computer hardware and software troubleshooting, installation, and maintenance.
3. Gain proficiency in programming languages, including Python, Java, and JavaScript.
4. Comprehend the principles of networking and learn how to configure and manage networks.
5. Learn database management techniques, including data modeling, querying, and administration.
6. Understand the fundamentals of cybersecurity and develop skills to protect against cyber threats.
7. Explore emerging technologies, such as artificial intelligence, cloud computing, and the Internet of Things IoT.
8. Apply acquired knowledge and skills through a capstone project, showcasing the ability to solve real-world ICT challenges.

## Course Outline

### Day 1

#### Module 1: Introduction to ICT

- ICT concepts and terminologies
- ICT industry trends and career opportunities

#### Module 2: Computer Hardware and Software

- Computer components and their functions
- Operating systems installation and configuration
- Troubleshooting common hardware and software issues

#### Module 3: Programming Fundamentals

- Introduction to programming languages Python, Java, JavaScript
- Variables, data types, and control structures
- Object-oriented programming principles

### Day 2

#### Module 4: Networking Fundamentals

- Introduction to networking concepts and protocols
- Network topologies and architectures
- Network configuration and troubleshooting

#### Module 5: Database Management

- Relational database concepts
- Data modeling and normalization
- Structured Query Language SQL for database management

#### Module 6: Cybersecurity Basics

- Fundamentals of cybersecurity
- Threats and vulnerabilities
- Security best practices and risk mitigation

#### Day 3

#### Module 7: Advanced Programming Concepts

- Advanced data structures and algorithms
- Web development frameworks e.g., Django, Flask
- Version control systems e.g., Git

#### Module 8: Network Administration

- Network administration tools and techniques
- IP addressing and subnetting.
- Routing and switching concepts.

#### Module 9: Data Analytics and Visualization

- Data analysis techniques and tools e.g., Pandas, NumPy
- Data visualization libraries e.g., Matplotlib, Tableau

#### Day 4

#### Module 10: Cloud Computing and Virtualization

- Cloud computing concepts and service models IaaS, PaaS, SaaS
- Virtualization technologies e.g., VMware, VirtualBox
- Cloud deployment and management

#### Module 11: Artificial Intelligence and Machine Learning

- Introduction to AI and ML concepts
- Machine learning algorithms and models
- Practical applications of AI and ML

#### Module 12: Internet of Things IoT

- IoT fundamentals and architecture
- IoT devices and sensors
- IoT platforms and applications

#### Day 5

#### Module 13: Cybersecurity Advanced Practices

- Advanced threat detection and prevention techniques
- Security auditing and penetration testing
- Incident response and recovery

#### Module 14: Emerging Technologies

- Blockchain and cryptocurrency
- Edge computing and fog computing
- Augmented reality and virtual reality

## Registration form on the Training Course: The Information and Communication Technologies (ICT) Skills

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

### Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....  
Position: .....  
Telephone / Mobile: .....  
Personal E-Mail: .....  
Official E-Mail: .....

### Company Information

Company Name: .....  
Address: .....  
City / Country: .....

### Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....  
Position: .....  
Telephone / Mobile: .....  
Personal E-Mail: .....  
Official E-Mail: .....

### Payment Method

- Please find enclosed a cheque made payable to Global Horizon
- Please invoice me
- Please invoice my company

### Easy Ways To Register

Telephone:  
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