Haward Technology Middle East

COURSE OVERVIEW IE0166
Data Communications and Networking

Course Title
Data Communications & Networking

Course Date/Venue
Session 1: May 18-22, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: October 20-24, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference
IE0166

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

The course is organized into three modular parts that includes telecom, datacom and networking. The course will start at the beginning of the story, progress through key concepts in a logical order and finish at the end. Our goal is to bust the buzzwords, cut through the jargon and doubletalk to put in place a clear, structured understanding of telecom, datacom, IP and networking.

This course is designed to provide delegates with detailed and up-to-date overview of telecom, datacom & networking. It covers the fundamentals of telephony, telecom equipment, telecommunications industry, digital communications concepts, transmission systems and wireless communications.

The course will also cover datacom and networking, how data is formatted for transmission, modems, broadband modems, data services and network equipment and LANs, Protocol stacks, IP addresses, routers, private networks, bandwidth-on-demand (packet network services), IP network services (voice over IP (VoIP)) and IP VPNs.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain an in-depth knowledge on telecommunications, data communications and networking

- Discuss the fundamentals of telephony, telecom equipment, telecommunications industry, digital communications concepts, transmission systems and wireless communications

- Explain datacom and networking and how data is formatted for transmission as well as describe modems, broadband modems, data services and network equipment and LANs

- Recognize protocol stacks, IP addresses, routers, private networks, bandwidth-on-demand (packet network services), IP network services (voice over IP (VoIP)) and IP VPNs

- Review the history and fundamentals of internet

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (H-STK®). The H-STK® consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of telecom, datacom and networking for those who are in need to fill in the knowledge gaps, understand the buzzwords and jargon, popular technologies like T1 and TCP/IP, ideas behind these technologies and how it all fits together. The course is also beneficial for those who are in need of a solid knowledge base to be more effective in dealing with technology projects and technical personnel.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30%   Lectures
20%   Practical Workshops & Work Presentations
30%   Hands-on Practical Exercises & Case Studies
20%   Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Fee

US$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

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Course Certificate(s)
Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours

Certificate Accreditations
Certificates are accredited by the following international accreditation organizations: -

- **BAC** British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- **IACET** The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Accommodation
Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Dr. Abedallah Al-Oqaili, PhD, MSc, is a **Senior IT Engineer** with over **30 years** of teaching and industrial experience in the areas of **MS Excel**, **MS WinWord**, **MS PowerPoint**, **ERP SAP 6.0**, **Artificial Intelligence & Neural Network**, **Cyber Ethical Hacking**, **Windows Operating System**, **Windows Server** Administration, **Python** Programming, **MS Office 365 BI**, **Digital Strategy & Transformation**, **Data Base** Design, **Computer** Maintenance, System Analysis & Design, **SQL Programming**, Decision Support Systems & Business Intelligence, **SQL**, **PL/SQL**, **C**, **C++**, **Java**, **Computer** Applications, **Scripting Languages**, VB, VB.Net, **Simulation & Modelling**, Management Information Systems, **E-commerce**, **Oracle** HRMS, **Oracle** Forms & Reports, **Oracle PL/SQL**, Problem Solving Technique, **Oracle ERP**, **ERP** Customized Oracle Application, Organization & System Process, User Acceptance Testing (**UAT**), Core HR, Payroll, SSHR, OLM, IRec, Medical, RTA & Provident Fund, **Oracle Developer/2000**, **Oracle 7.3 & Oracle 8i System**, **Oracle & FoxPro** for Windows, **DBASE III+**, Clipper, **FoxPro 2.1**, **JDeveloper**: Building Applications with ADF, **Oracle Developer**, Oracle WebDB, **J2EE** (Java 2 Enterprise Edition), **Java** Programming, **Oracle** Payroll Fast Formula, Oracle: Internet Application I, **Oracle** 8i DBA, **Oracle** 8i Forms 1&2, **Oracle** 8i Repor**t**, **Oracle** Application Server Rel. 4.0, **Oracle** DBA, Building Web Sites on the Internet, Visual Basic 5, **Oracle7 SQL**, **Oracle** Reports V2.5, **Oracle** Forms V4.5/V5.0/V6.0/V6i, **Oracle** Server Administrations, Software Systems Analysis & Design, General Orientation Course at ATOS, **Application** Engineering (PC Based System Design & Development), Novell 3.11, Novell NetWare, Lotus 123, Excel and Word Processing. Further, he is also well-versed in Project Management, Project Analysis, Design and Development for Mail Revenue & Handling System, Leadership Training, Manager Skills, Supervisory Skills, Microsoft Project, Advanced Excel, Instructional Techniques, Oracle Mobile Development Framework and Technical Writing.

During his career life, Dr. Abedallah has gained his technical and practical expertise through a variety of challenging and key positions such as the IT **Senior Manager**, **IT Manager**, **IT Project Manager**, **IT Trainer**, **Management Information System Faculty Head**, **Computer Science College Professor**, **Computer** and **Business Networking Department Trainer**, **IT Superintendent**, **IT Software Supervisor**, **IT System Analyst** and **IT Programmer** for various international companies such as the PAAET Basic Education College, Philadelphia University, Royal Jordan Airlines and Abu Al-Haj Training Center.

Dr. Abedallah has a **PhD** in **Computer Information Systems** and a **Master's** degree in **Information System** from the **University** of **Banking** and **Financial Sciences**, **Computer Information Systems**. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership and Management** (**ILM**), a **Certified Systems Engineer & Systems Administrator** (**Security**, **Microsoft Office Specialist** and **Microsoft Certified IT Professional**) and has delivered numerous trainings, conferences and workshops worldwide.

Dr. Hesham Abdou, PhD, MSc, BSc, is a **Senior Drilling & Petroleum Engineer** with over **35 years** of integrated industrial and academic experience as a **University Professor**. His specialization widely covers in the areas of **Drilling & Completion** Technology, **Directional Drilling**, **Horizontal & Sidetracking**, **Drilling Operation** Management, **Drilling & Production** Equipment, **ERD Drilling & Stuck Pipe** Prevention, **Natural & Artificial Flow Well Completion**, **Well Testing** Procedures & Evaluation, **Well** Performance, **Coiled Tubing** Technology, **Oil Recovery Methods** Enhancement**, Well Integrity** Management, **Well Casing & Cementing**, **Acid Gas** Removal, **Heavy Oil Production** & Treatment Techniques, **Crude Oil Testing & Water Analysis**, **Crude Oil & Water** Sampling Procedures, **Equipment Handling** Procedures, **Crude & Vacuum Process** Technology, **Gas Conditioning & Processing**, **Cooling Towers** Operation & Troubleshooting, **Sucker Rod Pumping**, **ESP & Gas Lift**, **PCP & Jet Pump**, **Pigging** Operations, Electric Submersible Pumps (**ESP**), Progressive Cavity Pumps (**PCP**), **Water Flooding**, **Water Lift Pumps** Troubleshooting, **Water System Design** & Installation, **Water Networks Design** Procedures, **Water Pumping** Process, **Pipelines**, **Pumps**, **Turbines**, **Heat Exchangers**, **Separators**, **Heaters**, **Compressors**, **Storage Tanks**, **Valves** Selection, **Compressors**, **Tank & Tank Farms** Operations & Performance, **Oil & Gas Transportation**, **Oil & Gas Production** Strategies, **Artificial Lift** Methods, **Piping & Pumping** Operations, Oil & Water Source Wells Restoration, **Pump** Performance Monitoring, **Rotor Bearing** Modelling, **Hydraulic** Repairs & Cylinders, **Root Cause Analysis**, **Vibration & Condition** Monitoring, **Piping Stress** Analysis, **Amine Gas Sweetening & Sulfur Recovery**, Heat & Mass Transfer and Fluid Mechanics.

During his career life, Dr. Hesham held significant positions and dedication as the **General Manager**, **Petroleum Engineering Assistant General Manager**, **Workover Assistant General Manager**, **Workover Department Manager**, **Artificial Section Head**, **Oil & Gas Production Engineer** and **Senior Instructor/Lecturer** from various companies and universities such as the Cairo University, Helwan University, British University in Egypt, Banha University and Agiba Petroleum Company.

Dr. Hesham has a **PhD** and **Master** degree in **Mechanical Power Engineering** and a **Bachelor** degree in **Petroleum Engineering**. Further, he is a **Certified Instructor/Trainer** and a **Peer Reviewer**. Dr. Hesham is a member of Egyptian Engineering Syndicate and the Society of Petroleum Engineering. Moreover, he has published technical papers and journals and has delivered numerous trainings, workshops, courses, seminars and conferences internationally.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the course for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1

0730 – 0745	Registration & Coffee
0745 – 0800	Welcome & Introduction
0800 – 0815	**PRE-TEST**
0815 – 0930	**Fundamentals of Telephony**
0930 – 0945	Break
0945 – 1230	**Telecom Equipment**
1230 – 1245	Break
1245– 1330	**The Telecommunications Industry**
1330 – 1420	**Digital Communications Concepts**
1420 – 1430	**Recap**
1430	Lunch & End of Day One

Day 2

0730 – 0900	**Transmission Systems**
0900 – 0915	Break
0915 – 1100	**Wireless Communications**
1100 – 1230	**Introduction to Datacom & Networking**
1230 – 1245	Break
1245 – 1420	**How Data Is Formatted for Transmission**
1420 – 1430	**Recap**
1430	Lunch & End of Day Two

Day 3

0730 – 0900	**All About Modems**
0900 – 0915	Break
0915 – 1100	**Broadband Modems**
1100 – 1230	**Data Services & Network Equipment**
1230 – 1245	Break
1245 – 1420	**Understanding LANs**
1420 – 1430	**Recap**
1430	Lunch & End of Day Three

Day 4

0730 – 0900	**Understanding Protocol Stacks**
0900 – 0930	Break
0930 -1115	**IP Addressing, Routers & Private Networks**
1115 – 1230	**IP Addressing, Routers & Private Networks (cont'd)**
1230 – 1245	Break
1245 – 1420	**Bandwidth-On-Demand: Packet Network Services**
1420 – 1430	**Recap**
1430	Lunch & End of Day Four

Day5

0730 – 0930	***IP Network Services: Voice over IP (VoIP) & IP VPNs***
0930 - 0945	*Break*
0945 – 1100	***Understanding the Internet***
1100 – 1230	***Understanding the Internet (cont'd)***
1230 – 1245	*Break*
1245 – 1345	***Wrapping Up***
1345 – 1400	***Course Conclusion***
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Tools & Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using the networking tools and "Wireshark" software.
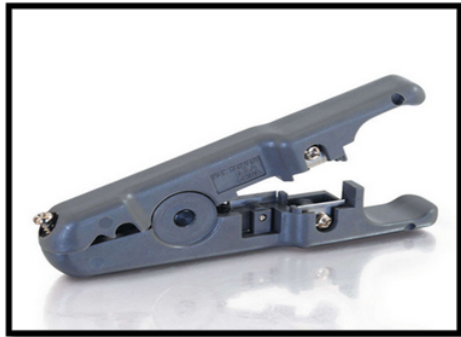
Round/flat Multi-Conductor Cutter

Pace Plate
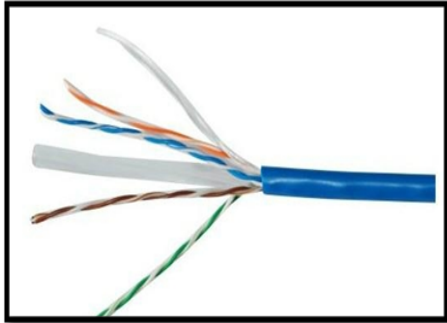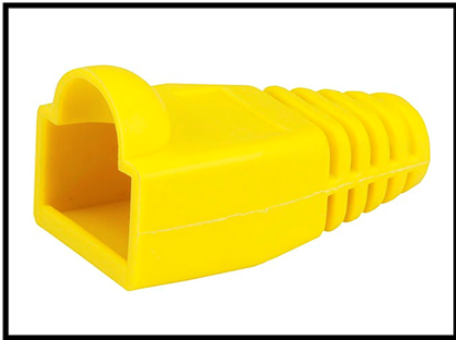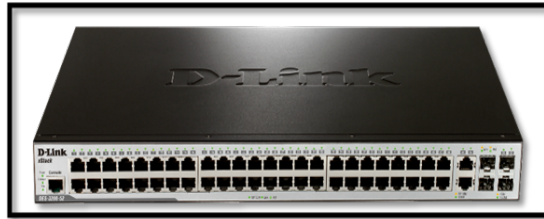

Cable Tester

Crimping Tool

Keystone Jacks/Modular

RJ45

![Haward Technology Middle East]

UTP Cable and Stripper

Switch

Rj-45 Color Coded Strain Relief Boots

Punchdown Tool

Patch Panel

Wireshark Software
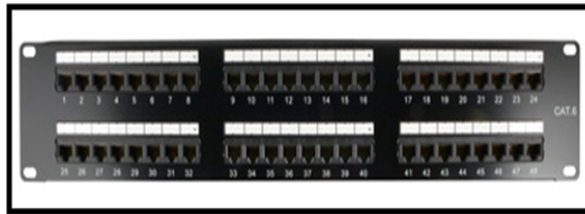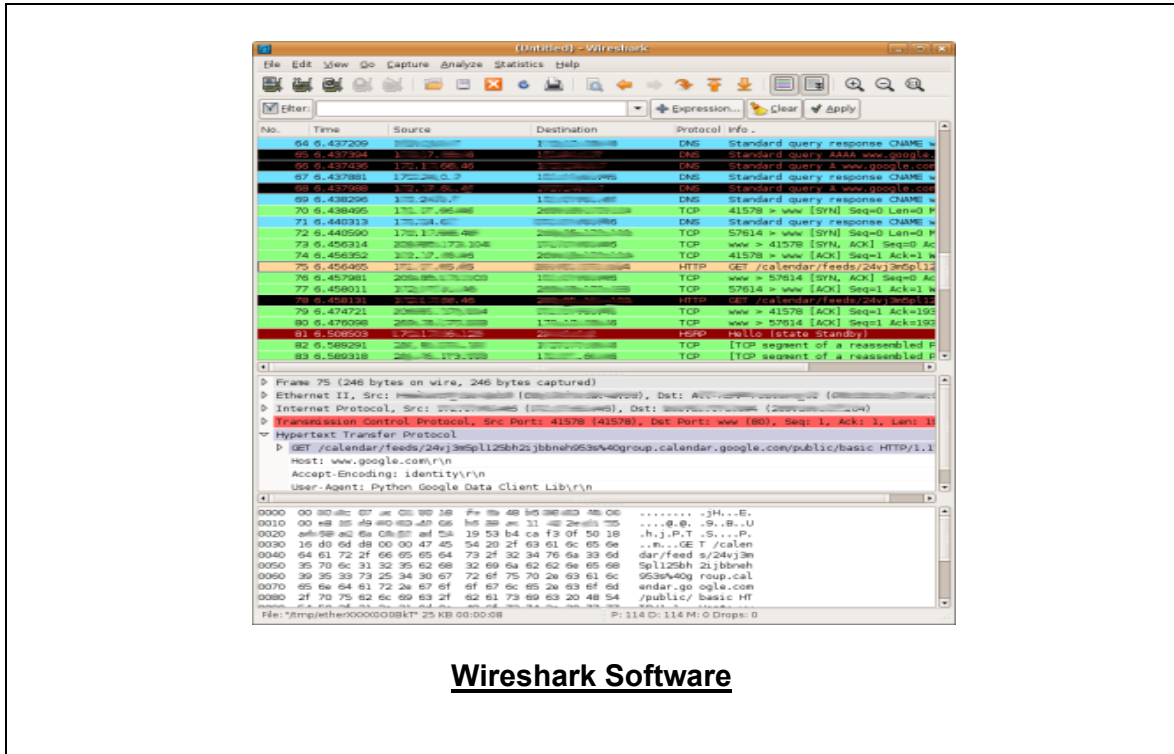
Course Coordinator
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