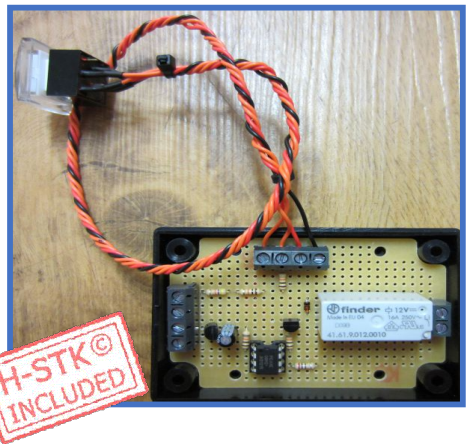
COURSE OVERVIEW IE0926(KJ1)
Honeywell Fail Safe Controller (FSC) Engineering & Maintenance

Course Title
Honeywell Fail Safe Controller (FSC) Engineering & Maintenance



Course Date/Venue
Session 1: April 06-10, 2025/Boardroom 1, Elite Byblos Hotel Al Barsha, Sheikh Zayed Road, Dubai, UAE
Session 2: September 08-12, 2025/Fujairah Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference
IE0926(KJ1)

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

Course Description

This practical and highly-interactive course includes real-life case studies and exercises where participants will be engaged in a series of interactive small groups and class workshops.

This course is designed to provide participants with a detailed and up-to-date overview of the Honeywell Fail Safe Controller (FSC) Engineering & Maintenance. It provides in-depth training on the configuration, operation, troubleshooting and maintenance of Honeywell's FSC system, a high-integrity safety system used in critical industrial applications. Participants will learn about system architecture, hardware components, input/output processing, logic development and communication interfaces. The course also covers diagnostic tools, fail-safe principles, redundancy management and best practices for system upkeep to ensure continuous and reliable safety operations in industries such as oil and gas, petrochemicals and power generation.

During this interactive course, participants will learn the FSC philosophy, configuration, structure and hardware; work with the functional logic diagram and employ programming, installing the FSC system working the FSC on-line package; diagnostics, loading applications and on-line modifications; the working with FSC and data exchange, FTE with Experion PKS, diagnostics working with FSC, safety manager module (SMM) data exchanges, TPS100 and the safety manager module (SMM) diagnostics.

Course Objectives

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

- Apply and gain an in-depth knowledge on honeywell fail safe controller (FSC) engineering and maintenance
- Discuss FSC philosophy, configuration and structure and hardware
- Work with the functional logic diagram and employ programming and installing the FSC system as well as work the FSC on-line package
- Perform diagnostics, loading applications and on-line modifications
- Work with FSC and data exchange via FTE with Experion PKS including diagnostics as well as work with FSC and safety manager module (SMM) data exchanges and TPS100
- Carryout safety manager module (SMM) diagnostics

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 honeywell fail safe controller (FSC) engineering and maintenance for instrument technicians, control systems engineers, maintenance technicians, automation engineers, field service engineers, safety systems engineers, project engineers, process control engineers, operations managers/supervisors.

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.

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: -

- 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.

- 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.

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. Hassan Ibrahim, PhD, MSc, BSc, is a **Senior Electrical & Instrumentation Engineer** with over **25 years** of extensive industrial experience. He specializes in **Pipeline Flowmetering**, **Fluid Mechanics of Pipe Flows**, **Ultrasonic Flowmeters**, **Flow Measurement Devices**, **Electrical Installations & Utilities**, **Fixed Installations**, **Equipment & Appliances**, **Inspection & Test of Fixed Installations**, **Monitoring & Recording of Data for Consumer Utilities**, **HV/MV Cable Splicing**, **Jointing** & **Termination**; **LV/MV/HV**; **Power Cabling**; Micro Electromechanical Systems (**MEMS**); **Load Calculations**; **Electrical** Engineering Design, Installation, Maintenance, Troubleshooting, Inspection & Testing; **Engineering Drawings**, **Codes & Diagrams**; Power System **Protective Relay**; Power **Generation**; **Transformers**; **Lighting System**, **Earthing** & **Grounding**; Electrical **Circuits**; **Switchgear** & **Circuit Breakers**; **CCTV**; **AutoCAD**; **DCS**, **PLC**, **SCADA, Instrumentation & Control**, **Control Valves** & Actuators; **Power Electronics**; **Metering Pumps**; **Flow Metering** & **Custody Measurement**; **Pneumatic Systems** and **Fire** & **Gas Detection Systems**. Further, he is also well-versed in **UPS** and **Battery Systems**, **Protection Gears**, **ETAP**, System Analysis & Design, Energy Saving Techniques, Rational Use of Energy, Green Houses, **Software**, **Hardware**, **Modeling**, **Simulation** & Design, **Renewable Energy Technologies**, **Solar PV** and **Thermal Solar**. Currently, he is the **Technical Professor** for various **Academic organizations** like the **Arab Academy for Science & Technology and Maritime Transport**, **ARADO**, **ACTS**, **PROJACS**, **ITCC** and **AlexPetro Technical Service**.

During his career life, Dr. Ibrahim has been actively involved in rigorous Teaching and Consulting jobs in the **USA** and **Middle East**. He has been the **Professor**, **Associate Professor**, **Teaching Assistant**, **Lecturer/Trainer**, **Consultant**, **Academic Advisor**, **Author**, **Head** of **Graduate Projects**, **Technical Consultant** and **Research** & **Teaching Assistant** of various international and academic institutions and companies. He has been the **Project Engineer** as well of **Textron Automotive Industry**, **USA** where he was responsible for the speed and position control for a virtual vehicle simulation system and testing the electronic circuits and overall system.

Dr. Ibrahim is a **Registered Professional Engineer** and a **Registered Professional Consultant Engineer** and has a **PhD** in **Systems Engineering** from the **Oakland University** (**USA**), a **Master** degree in **Electrical Power & Machines Engineering** and a **Bachelor** degree in **Power & Electrical Machines Engineering**. Further, he is a **Certified Instructor/Trainer** and a **Certified Internal Verifier/Trainer/Assessor** by the **Institute of Leadership & Management** (**ILM**). He has supervised various electrical and instrumentation graduate projects and master thesis, published numerous papers and delivered innumerable trainings, courses, workshops and seminars worldwide.

Accommodation

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

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 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Overall FSC Philosophy***
0930 – 0945	*Break*
0945 – 1100	***FSC Configuration***
1100 – 1230	***FSC Structure***
1230 – 1245	*Break*
1245 – 1420	***FSC Structure (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day One*

Day 2

0730 – 0930	***FSC Hardware***
0930 – 0945	*Break*
0945 – 1100	***FSC Hardware (cont'd)***
1100 – 1230	***Working with the Functional Logic Diagram***
1230 – 1245	*Break*
1245 – 1420	***Programming FSC System***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Two*

Day 3

0730 – 0930	***Installing FSC System***
0930 – 0945	*Break*
0945 – 1100	***Working with the FSC On-Line Package***
1100 – 1230	***Working with the FSC On-Line Package (cont'd)***
1230 – 1245	*Break*
1230 – 1420	***Diagnostics***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Three*

Day 4

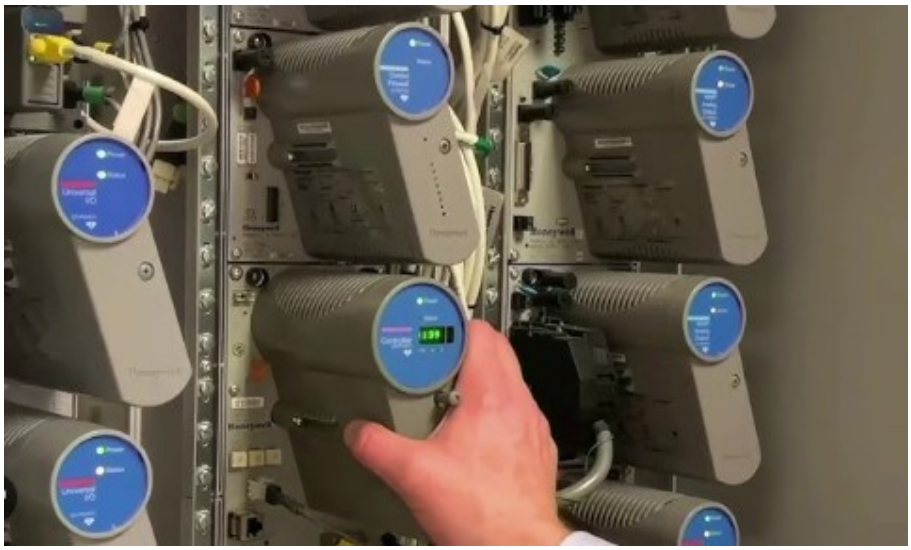
0730 – 0930	***Loading Applications***
0930 – 0945	*Break*
0945 – 1100	***Loading Applications (cont'd)***
1100 – 1230	***On-Line Modifications***
1230 – 1245	*Break*
1245 – 1420	***On-Line Modifications (cont'd)***
1420 – 1430	***Recap***
1430	*Lunch & End of Day Four*

Day 5

0730 – 0930	***Working with the FSC & Data Exchange via FTE with Experion-PKS Including Diagnostics***
0930 – 0945	*Break*
0945 – 1100	***Working with the FSC & Safety Manager Module (SMM) Data Exchanges & TPS100***
1100 – 1230	***Working with the FSC & Safety Manager Module (SMM) Data Exchanges & TPS100 (cont'd)***
1230 – 1245	*Break*
1230 – 1345	***SMM Diagnostics***
1345 – 1400	***Course Conclusion***
1400 - 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

Simulator (Hands-on Practical Sessions)

This practical and highly-interactive course includes real-life case studies and exercises:-



Course Coordinator

Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org