

PLC Based Automation and Human Machine Interfaces

This course outlines the fundamentals of PLC and Human Machine Interfaces (HMI).



For more information and to apply, visit
www.celtec.ie/hmi

Course Learnings



HMI Design Principles

Develop the knowledge and practical skills to design intuitive, user-centred Human Machine Interfaces (HMIs) that enhance operator interaction, usability, and process visibility in industrial automation systems.



HMI Development with Siemens TIA Portal

Configure and program Siemens HMI devices using TIA Portal, including screen creation, navigation, alarms, trends, recipes, and PLC communications to support effective machine control.



System Integration and Commissioning

Integrate HMI applications with Siemens PLCs, commission operator interfaces, and verify reliable communication between control systems and visualisation platforms.



Diagnostics, Alarms, and Troubleshooting

Implement alarm management, fault diagnostics, and monitoring tools that enable operators to identify issues quickly and improve system reliability and maintenance efficiency.



Industrial Visualisation and Best Practice

Apply industry best practices to develop professional HMI applications that improve operational efficiency, safety, and the overall user experience in automated manufacturing environments.



APPLY

24 September 2026

8 October 2026

AT A GLANCE



DURATION

2 Classroom Days



LOCATION

CELTEC, Celbridge, Co. Kildare, W23 HCK2



DELIVERY

Classroom Based



SUITABILITY

Those in employment in the Kildare and Wicklow regions



TECHNOLOGY

This course uses Siemens TIA 1500 PLC's



COST

This course is partially funded under the Skills To Advance initiative for eligible applicants



COURSE REQUIREMENT

Experience in related industrial sectors would be beneficial for the learner.



CERTIFICATION

Certificate of Completion