

PLC Based Automation of Industry Using Simulation

This course leverages PLC simulation tools to teach participants how to program and control complex manufacturing and process systems without requiring physical hardware.



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

Course Learnings



Simulation Principles in Automation

Develop an understanding of simulation concepts and how virtual models are used to replicate and analyse industrial automation systems before physical deployment.



PLC Simulation Environment Setup

Learn how to configure and use Siemens simulation tools within TIA Portal to test PLC programs and validate control logic in a virtual environment.



Virtual Commissioning and Testing

Apply simulation techniques to commission and test automation systems virtually, ensuring system behaviour is verified prior to real-world implementation.



Fault Detection and Debugging in Simulation

Develop structured debugging skills by identifying, analysing, and correcting programming and logic errors using simulation-based diagnostics.



Industrial Application of Simulation Tools

Gain practical experience using simulation to optimise system design, reduce commissioning time, and improve reliability in industrial automation projects.



APPLY

Expression of Interest

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