

# CODESYS version 3 – A hardware-independent introduction to PLC programming

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| <b>PLC381</b>  | <p>In order to master the fast-changing requirements of embedded and PC-controlled industrial applications, it is increasingly important to master and apply different programming languages. This is complicated by the huge variety of programming software available. Differences in user-interface, functionality and commands sets cause confusion and make mistakes more likely. Codesys – tried and tested, globally introduced hardware-independent software from 3S – offers a Controller Development System according to the IEC 61131-3 with all defined programming languages independent of the hardware manufacturer. This course demystifies Codesys and gives participants confidence in using it.</p>  |
| Target groups  | Maintenance staff, designers, engineers, trainers   |
| Contents       | <ul style="list-style-type: none"><li>• Design and functions of a PLC</li><li>• Overview of the standard IEC 61131-3</li><li>• Overview of automation structures and bus systems</li><li>• Functionality of the Codesys programming environment</li><li>• Use of the 6 programming languages IL, ST, LD, FBD, SFC, CFC</li><li>• Offline simulation</li><li>• Visualisation</li><li>• Configuration and commissioning Festo automation systems</li></ul>  |
| Outcomes       | <p>The participant:</p> <ul style="list-style-type: none"><li>• can use and combine IEC 61131-3 languages (Codesys version 3.2) to program an professional solution for an industrial application quickly and efficiently</li><li>• can program IEC 61131-2-compatible industrial controllers</li><li>• can describe the sequence of the MPS® Distribution Station using GRAFCET</li><li>• can program the sequence of the MPS® Distribution Station using a language or combination of languages</li><li>• can use debugging tools to simulate, test and trace</li><li>• can use Codesys features to troubleshoot</li><li>• masters the fundamentals of visualisation</li><li>• can create and use different kinds of variables (local, global)</li><li>• knows how to find help within the software</li></ul> |
| Prerequisites  | Basic electrical knowledge. We recommend taking the EL131, EL141 and PLC271 courses in advance.   |
| Duration       | 2 days  |
| Article number | 577956  |



## CODESYS