

TOPICS	PARTICIPANT PROFILE	WHAT TO EXPECT	DATES	FEES IN Kshs. (VAT Exclusive)
<b>Simatic PLC Training - Part one</b> <b>Basic programming</b> <ul style="list-style-type: none"> <li>Principle of PLC operation</li> <li>The SIMATIC manager</li> <li>The SIMATIC S7 PLC family</li> <li>Simatic S7 – 300/400 hardware configuration</li> <li>S7 programme structure</li> </ul>	Electrical and Technical Personnel	Understand the Simatic Manager Be able to insert a hardware configuration into a project Be able to write simple programs using Simatic manager and perform diagnostics	July 17 <sup>th</sup> – 21 <sup>st</sup> August 14 <sup>th</sup> – 18 <sup>th</sup> September 11 <sup>th</sup> - 15 <sup>th</sup> October 9 <sup>th</sup> – 13 <sup>th</sup> November 13 <sup>th</sup> - 17 <sup>th</sup> December 4 <sup>th</sup> - 8 <sup>th</sup>	Kshs. 58,500 per person per week.
<b>Simatic PLC Training - Part two</b> <b>Complex programming – status bit dependent instructions</b> <ul style="list-style-type: none"> <li>Accumulator functions</li> <li>Indirect addressing and address register instructions</li> <li>Data management in the user program</li> <li>Analogue Value processing, Mathematical Functions</li> </ul>	Technical Engineering Personnel	Be familiar with complex data types Know the principles of analogue data processing Be able to set communication networks	July 24 <sup>th</sup> – 28 <sup>th</sup> August 21 <sup>st</sup> – 25 <sup>th</sup> September 18 <sup>th</sup> – 22 <sup>nd</sup> October 16 <sup>th</sup> – 20 <sup>th</sup> November 20 <sup>th</sup> - 24 <sup>th</sup> December 11 <sup>th</sup> - 15 <sup>th</sup>	Kshs.58,500 per person per week
<b>Part three - Communication</b> <b>Communication using – S7 300 Platform</b> <ul style="list-style-type: none"> <li>Communication with MPI</li> <li>PROFIBUS overview</li> <li>Integrated PB-DP Interface</li> <li>CP 342-5 as DP Master, CP 342-5 as DP Slave</li> <li>CPU to CPU with PROFIBUS</li> <li>CPU to ET200 using PROFIBUS</li> <li>CPU to MICROMASTER</li> <li>DP – Diagnostic Blocks</li> <li>PROFIBUS Diagnostic Bundle</li> </ul>	Technical Engineering Personnel who have undertaken PLC part one and part two	Understanding the TIA Portal programming platform. Being able to work with NetPRO. Being able to marry and integrate S7 1200 with S7 300/400 programs.	Upon Request.	Kshs.58,500 per person
<b>Drives</b> <b>Inverter principle, PWM technique and power switching devices</b> <ul style="list-style-type: none"> <li>Block diagram of AC Drive and principle of vector control</li> <li>Specifications, range and features of Micro Master MM4</li> <li>Block diagram of the product, terminal details</li> <li>Parameter structure and quick commissioning procedure</li> </ul>	Electrical and maintenance personnel	Introduction to drives Know the basic and complex operation of drives Integration of drives to PLCs and its programming Troubleshooting.	Upon Request.	Kshs.35,000 per person
<b>LOGO! 6</b> <ul style="list-style-type: none"> <li>Hardware configuration of Logo.</li> <li>Mounting and Wiring.</li> <li>Installing Logo.</li> <li>Simple LOGO! programs</li> </ul>	Electrical and maintenance personnel	Introduction to LOGO and its hardware configuration Be able to install and perform LOGO programming.	Upon Request.	Kshs.35,000 per person
<b>SCADA</b> <b>WinCC Flexible System overview</b> <ul style="list-style-type: none"> <li>creating a project</li> <li>creating screens</li> <li>configuring alarms</li> <li>creating recipes</li> <li>adding screen changes</li> </ul>	Engineers, technicians and service personnel	Introduction to WINCC Flexible System overview Be able to create a project Be able to create screens Be able to configure alarms	Upon Request.	Kshs. 35,000 per person
<b>SIMATIC PCS 7</b> <b>SIEMENS SIMATIC PCS7</b> <ul style="list-style-type: none"> <li>Components of the PCS7 ,SIMATIC Manager</li> <li>Continuous Control – CFC, Sequential Control - SFC</li> <li>Operator Station - OS (WinCC HMI), Alarming, Trending</li> <li>Structuring a PCS7 project. Plant hierarchy structure (implications of SIMATIC Batch and multi CPU systems)</li> <li>Import/Export Assistant. Engineering repeated processes or large projects.</li> <li>Design of function blocks with visualised data in WinCC using the high level structured control language (SCL). Inclusion of messaging function (Alarm_8P)</li> <li>Creating OPC links between PCS7 and external applications eg: MS Excel</li> <li>Advanced handling of PCS7 OS</li> <li>Block icons. Designing customised Block icons for Automation System (AS) blocks.</li> <li>Faceplate designer. Designing customised faceplates for Automation System (AS) blocks.</li> <li>WinCC Global scripts. Diagnostics, triggering and examples.</li> <li>Tools for Engineering Quotations, Planning and estimating with PROTIME</li> <li>Considerations of add-on packages for PCS7 eg SIMATIC Batch, Route Control</li> <li>Migration of existing version 5.x or 6.x projects to version 7.1</li> </ul>	All electrical and maintenance personnel	Create PCS 7 multi-project and configure the H/W of AS and PC stations Create PCS 7 programs using tools like CFC, SFC Bulk engineering using the Import/Export-Assistant	Upon Request.	On quotation
<b>Simatic PLC Training - S7 1200 on TIA Portal</b> <ul style="list-style-type: none"> <li>SIMATIC S7 1200 System Family Overview</li> <li>Installation and maintenance of a PLC</li> <li>SIMATIC S7-1200 software package</li> <li>Hardware configuration&amp;commissioning</li> <li>Block architecture and Program Editors</li> <li>Symbols</li> <li>Binary and Digital Operations including IEC Timers and Counters</li> </ul>	Engineering students	Understand the TIA Portal Be able to insert a hardware configuration into a project Be able to write simple programs using TIA Portal and perform diagnostics	Upon Request.	On quotation
<b>REQUESTED (TAILOR MADE COURSES)</b>				
<b>SIEMENS Siprotec Relays</b> <ul style="list-style-type: none"> <li>DIGSI 4 software for operation and fault analysis Of Siprotec relays</li> <li>Programming and setting of relays</li> <li>CFC logic functions, Display editor</li> <li>Test functions, Motor protection</li> <li>Transformers and Differential protection</li> <li>Distance protection, Overcurrent protection</li> <li>Graphical Fault Recording</li> </ul>	All electrical and maintenance personnel	Training course covers various aspects of Protection Schemes, Projects, Measuring & Recording, Communication and Programming of protection relays	Upon Request	On quotation