

AMATROL



W54000-XX00XEN-E1 - Industry 4.0: Course 1 - Introduction to Mechatronics

**Elearning**

































**Online    PDF**

1 Introduction to Advanced Manufacturing		X
2 Technology and Advanced Manufacturing		X
3 Industrial Internet of Things		X
4 Safety Responsibilities		X
5 Machine Safety		X
6 Practicing Safety in the Workplace		X
7 Emergency and Accident Response		X
8 Hazardous Materials Standards		X
9 Hazardous Material Handling and Storage		X
10 Fire and Electrical Safety		X
11 Work Area Safety		X
12 Types of PPE		X
13 Equipment Safety		X
14 Material Handling Safety		X
15 Hand Tools 1		X
16 Dimensional Measurement	<a href="#">Skill PDF</a>	X
17 Measurement Conversion		X
18 Introduction to Print Reading		X
19 Multiview Drawings		X
20 Blueprint Dimensions and Notes		X
21 Tolerancing		X
22 Manufacturing Drawings and Scales		X
23 Caliper Measurement	<a href="#">Skill PDF</a>	X
24 Micrometer Measurement	<a href="#">Skill PDF</a>	X
25 Mechanical Power		X
26 Introduction to Fluid Power		X
27 Pneumatic Power	<a href="#">Skill PDF</a>	X
28 Basic Cylinder Circuits	<a href="#">Skill PDF</a>	X
29 Basic Electrical Circuits	<a href="#">Skill PDF</a>	X
30 Electrical Voltage and Current Measurement	<a href="#">Skill PDF</a>	X
31 Electrical Resistance Measurement	<a href="#">Skill PDF</a>	X
32 Power in Electrical Circuits	<a href="#">Skill PDF</a>	X
33 Control Logic Circuits	<a href="#">Skill PDF</a>	X
34 Electrical Control Diagrams	<a href="#">Skill PDF</a>	X
35 Relay Control Circuits	<a href="#">Skill PDF</a>	X
36 Basic Robot Operation	<a href="#">Skill PDF</a>	X
37 Basic Robot Programming	<a href="#">Skill PDF</a>	X
38 Introduction to Electronic Sensors	<a href="#">Skill PDF</a>	X




W54025-XX00XEN-E1 - Industry 4.0: Course 2 - Introduction to Industrial Control Systems


















1 Manufacturing Metrics		X
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 2	Advanced Manufacturing Organization		X
 3	Manufacturing Materials		X
 4	Principles of Manufacturing Processes		X
 5	Basic Mechanical Elements		X
 6	Power Efficiency		X
 7	Mechanical Power Transmission		X
 8	Gear Drives		X
 9	Belt Drives		X
 10	Chain Drives	<a href="#">Skill PDF</a>	X
 11	Hydraulic Power	<a href="#">Skill PDF</a>	X
 12	Basic Hydraulic Cylinder Circuits	<a href="#">Skill PDF</a>	X
 13	Fluid Power Speed Control	<a href="#">Skill PDF</a>	X
 14	Fluid Force and Friction	<a href="#">Skill PDF</a>	X
 15	Basic Material Handling	<a href="#">Skill PDF</a>	X
 16	Flexible Manufacturing Cells	<a href="#">Skill PDF</a>	X
 17	Automation Sequence Circuits	<a href="#">Skill PDF</a>	X
 18	Electronic Sensors 2	<a href="#">Skill PDF</a>	X
 19	Programmable Controller Operation	<a href="#">Skill PDF</a>	X
 20	PLC Ethernet Communication	<a href="#">Skill PDF</a>	X
 21	Basic PLC Program Instructions		X
 22	PLC Project Development	<a href="#">Skill PDF</a>	X
 23	PLC Motor Control	<a href="#">Skill PDF</a>	X
 24	Introduction to Ethernet Networks	<a href="#">Skill PDF</a>	X
 25	HMI Ethernet Operation	<a href="#">Skill PDF</a>	X
 26	PLC Timer Instructions	<a href="#">Skill PDF</a>	X
 27	PLC Event Sequencing 1	<a href="#">Skill PDF</a>	X
 28	Introduction to CNC Machining		X
 29	CNC Workspace		X
 30	CNC Programming and Operation		X
 31	CNC Programming with Circular Interpolation		X
 32	PLC Event Sequencing 2		X
 33	Pick-and-Place Feeding Station	<a href="#">Skill PDF</a>	X



 W54050-XX00XEN-E1 - Industry 4.0: Course 4 - Introduction to Industrial Internet of Things

 1	Industrial Internet of Things Applications		X
 2	CompactLogix PLC Operation	<a href="#">Skill PDF</a>	X
 3	CompactLogix PLC Project Elements	<a href="#">Skill PDF</a>	X
 4	CompactLogix PLC Project Development	<a href="#">Skill PDF</a>	X
 5	Lean Production Concepts		X
 6	Lean Production Metrics		X
 7	Cloud-Based Data Acquisition	<a href="#">Skill PDF</a>	X
 8	Basic VFD Operation	<a href="#">Skill PDF</a>	X
 9	Basic VFD Control	<a href="#">Skill PDF</a>	X
 10	Barcode System Operation	<a href="#">Skill PDF</a>	X
 11	Barcode System Programming	<a href="#">Skill PDF</a>	X


	12 Stepper Motor Indexing Systems	<a href="#">Skill PDF</a>	X
	13 Multi-Station Mechatronic Communications	<a href="#">Skill PDF</a>	X
	14 Network Performance and Managed Ethernet Switch Operation	<a href="#">Skill PDF</a>	X
	15 Fundamentals of Network Security	<a href="#">Skill PDF</a>	X
	16 RFID Operation	<a href="#">Skill PDF</a>	X
	17 RFID Programming	<a href="#">Skill PDF</a>	X
	18 Smart Photoelectric Sensors	<a href="#">Skill PDF</a>	X
	19 Smart Pressure Sensors	<a href="#">Skill PDF</a>	X
	20 PLC Counter Instructions	<a href="#">Skill PDF</a>	X
	21 Database Concepts	<a href="#">Skill PDF</a>	X
	22 Production Statistics	<a href="#">Skill PDF</a>	X
	23 System Optimization	<a href="#">Skill PDF</a>	X
	24 Conveyor Parts Distribution	<a href="#">Skill PDF</a>	X
	25 Automatic Storage and Retrieval Systems	<a href="#">Skill PDF</a>	X
	26 Component Troubleshooting: PLC Diagnostic Indicators	<a href="#">Skill PDF</a>	X
	27 Component Troubleshooting: PLC Inputs, Outputs, and Devices	<a href="#">Skill PDF</a>	X
	28 Systems Troubleshooting	<a href="#">Skill PDF</a>	X











 W33764-AA00XEN-E1 - Smart Factory Network Security Learning System – AB CompactLogix L16 (87-NS1AB53A)

	1 Fundamentals of Network Security	<a href="#">Skill PDF</a>	X
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 W11130-BX00XEN-E1 - Pegasus Robotics Simulation (88-RSS1)


	1 Basic Robot Operation	<a href="#">Skill PDF</a>	X
	2 Basic Robot Programming	<a href="#">Skill PDF</a>	X
	3 Interfacing and Material Handling	<a href="#">Skill PDF</a>	X
	4 Application Development (Simulation)	<a href="#">Skill PDF</a>	X
	5 Flexible Manufacturing Cells (Simulation)	<a href="#">Skill PDF</a>	X
	6 Quality Control (Simulation)	<a href="#">Skill PDF</a>	X
	7 Production Control (Simulation)	<a href="#">Skill PDF</a>	X






 W11801-DC00UEN-E1 - Robotics and Computer Programming (94-RCP1)




























	1 Basic Robot Operation	<a href="#">Skill PDF</a>	X
	2 Basic Robot Programming	<a href="#">Skill PDF</a>	X
	3 Interfacing and Material Handling	<a href="#">Skill PDF</a>	X
	4 Application Development	<a href="#">Skill PDF</a>	X
	5 Flexible Manufacturing Cells	<a href="#">Skill PDF</a>	X
	6 Quality Control	<a href="#">Skill PDF</a>	X
	7 Production Control	<a href="#">Skill PDF</a>	X

	W13716-AB00UEN-E1 - Robotics 1 (880-RA2-1-B)		
	1 Basic Robot Operation	<a href="#">Skill PDF</a>	X
	2 Basic Robot Programming	<a href="#">Skill PDF</a>	X
	W24950-AA00UEN-E1 - Mechatronics CNC Mill (87-MS8M60)		
	1 Introduction to CNC Programming	<a href="#">Skill PDF</a>	X
	2 Basic CNC Mill Programming	<a href="#">Skill PDF</a>	X
	3 Circular Interpolation	<a href="#">Skill PDF</a>	X
	4 Robot Workstation	<a href="#">Skill PDF</a>	X
	W24952-AA00UEN-E1 - Machine Vision Inspection Systems (87-VS1S7300)		
	1 Introduction to Machine Vision	<a href="#">Skill PDF</a>	X
	W24953-BB00UEN-E1 - Machine Vision Inspection Systems (87-VS1AB53A)		
	1 Machine Vision Basics	<a href="#">Skill PDF</a>	X
	2 Vision System Operation	<a href="#">Skill PDF</a>	X
	3 Machine Vision Software	<a href="#">Skill PDF</a>	X
	W25000-BC00UEN-E1 - Mechatronics-Allen-Bradley CompactLogix L16/Studio 5000 (870-AB53A)		
	1 Automation Operations	<a href="#">Skill PDF</a>	X
	2 Basic Component Adjustments	<a href="#">Skill PDF</a>	X
	3 Pick-and-Place Feeding	<a href="#">Skill PDF</a>	X
	4 Gauging	<a href="#">Skill PDF</a>	X
	5 Indexing	<a href="#">Skill PDF</a>	X
	6 Sorting and Queuing	<a href="#">Skill PDF</a>	X
	7 Servo Robotic Assembly	<a href="#">Skill PDF</a>	X
	8 Torquing	<a href="#">Skill PDF</a>	X
	9 Parts Storage	<a href="#">Skill PDF</a>	X
	10 Electro-Hydraulic Testing	<a href="#">Skill PDF</a>	X
	11 Multiple Station Control	<a href="#">Skill PDF</a>	X
	W25002-CA00UEN-E1 - Mechatronics Troubleshooting System - AB CompactLogix L16 (87-FTSAB53A)		
	1 Introduction to Mechatronics Troubleshooting	<a href="#">Skill PDF</a>	X
	2 Mechatronics I/O Troubleshooting	<a href="#">Skill PDF</a>	X
	3 Mechatronics Component Troubleshooting	<a href="#">Skill PDF</a>	X
	4 Mechatronics Systems Troubleshooting	<a href="#">Skill PDF</a>	X
	W25007-AA00XEN-E1 - Mechatronics RF Identification System (AB CompactLogix L16) (87-RF1AB53A)		
	1 Mechatronics RF Identification	<a href="#">Skill PDF</a>	X








































	W25018-AC00UEN-E1 - Mechatronics AB Micrologix (870-MPC-AB1200)		
	1 Automation Operations	<a href="#">Skill PDF</a>	X
	2 Basic Component Adjustments	<a href="#">Skill PDF</a>	X
	3 Pick-and-Place Feeding	<a href="#">Skill PDF</a>	X
	4 Gauging	<a href="#">Skill PDF</a>	X
	5 Indexing	<a href="#">Skill PDF</a>	X
	6 Sorting and Queuing	<a href="#">Skill PDF</a>	X
	7 Servo Robotic Assembly	<a href="#">Skill PDF</a>	X
	8 Torquing	<a href="#">Skill PDF</a>	X
	9 Parts Storage	<a href="#">Skill PDF</a>	X
	10 Electro-Hydraulic Testing	<a href="#">Skill PDF</a>	X
	11 Multiple Station Control	<a href="#">Skill PDF</a>	X
	W25019-AA00UEN-E1 - Mechatronics Barcode Identification (AB CompactLogix L32) (87-BR1AB53)		
	1 Mechatronics Barcode Product Identification (AB CompactLogix)	<a href="#">Skill PDF</a>	X
	W25029-AA00XEN-E1 - Mechatronics RF Identification System (AB CompactLogix L32) (87-RF1AB53)		
	1 Mechatronics RF Identification	<a href="#">Skill PDF</a>	X
	W25030-AA00XEN-E1 - Mechatronics RF Identification System (Siemens 300 Series) (87-RF1S7300)		
	1 Mechatronics RFID Product Registration (Siemens S7-300 Series)	<a href="#">Skill PDF</a>	X
	W25050-AA00UEN-E1 - Tabletop Mechatronics (870-PTAB82)		
	1 Automation Operations	<a href="#">Skill PDF</a>	X
	2 Programmable Logic Controller Operation	<a href="#">Skill PDF</a>	X
	3 Basic PLC Programming	<a href="#">Skill PDF</a>	X
	4 PLC Motor Control	<a href="#">Skill PDF</a>	X
	5 PLC Timer and Counter Instructions	<a href="#">Skill PDF</a>	X
	6 Pick-and-Place Feeding	<a href="#">Skill PDF</a>	X
	7 PLC Event Sequencing	<a href="#">Skill PDF</a>	X
	8 Indexing	<a href="#">Skill PDF</a>	X
	9 Sorting and Parts Storage	<a href="#">Skill PDF</a>	X
	W25052-AA00XEN-E1 - Mechatronics HMI Siemens S7-1500 (87-HMIS715)		
	1 Basic HMI Panel Operation	<a href="#">Skill PDF</a>	X
	W25061-AA00UEN-E1 - Mechatronics Barcode Identification (Siemens S7-300 Series) (87-BR1S7300)		








































	 1 Mechatronics Barcode Product Registration (Siemens S7-300 Series)	<a href="#">Skill PDF</a>	X
	W25062-BA00UEN-E1 - Mechatronics Barcode Identification (AB CompactLogix L16) (87-BR1AB53A)		
	 1 Mechatronics Barcode Product Identification	<a href="#">Skill PDF</a>	X
	W25086-AA00UEN-E1 - Table-Top Mechatronics Servo Robot System (87-TMS4)		
	 1 Servo Robot Material Handling	<a href="#">Skill PDF</a>	X
	W25155-AA00UEN-E1 - Tabletop Smart Factory RFID/Sensors (87-TMS5AB1)		
	 1 RFID Operation	<a href="#">Skill PDF</a>	X
	 2 RFID Programming	<a href="#">Skill PDF</a>	X
	 3 Smart Pressure Sensors	<a href="#">Skill PDF</a>	X
	 4 Smart Photoelectric Sensors	<a href="#">Skill PDF</a>	X
	W33572-AA00XEN-E1 - Mechatronics Barcode Product Identification (AB micro800)87-TBR1AB)		
	 1 Barcode System Operation	<a href="#">Skill PDF</a>	X
	 2 Barcode System Programming	<a href="#">Skill PDF</a>	X
	W33574-AA00UEN-E1 - Tabletop Smart Factory Ethernet - AB Micro820 (87-TENAB82)		
	 1 Introduction to Ethernet Networks	<a href="#">Skill PDF</a>	X
	 2 Network Performance and Managed Ethernet Switch Operation	<a href="#">Skill PDF</a>	X
	W33575-AA00XEN-E1 - Tabletop Smart Factory Manufacturing Execution System - AB (87-MEAB53A)		
	 1 Lean Production Metrics		X
	 2 Manufacturing Execution Systems	<a href="#">Skill PDF</a>	X
	W33736-AA00XEN-E1 - Smart Factory Barcode System - Siemens S7-1500 (87-BR2S715)		
	 1 Barcode System Operation	<a href="#">Skill PDF</a>	X
	 2 Barcode System Programming	<a href="#">Skill PDF</a>	X
	W33737-AA00XEN-E1 - Mechatronics RFID S7-1500 (87-RF1S715)		
	 1 RFID Operation	<a href="#">Skill PDF</a>	X
	 2 RFID Programming	<a href="#">Skill PDF</a>	X
	W33738-AA00UEN-E1 - Smart Factory Vision Inspection System - Siemens S7-1500 (87-VS1S715)		
	 1 Machine Vision Basics	<a href="#">Skill PDF</a>	X
	 2 Vision System Operation	<a href="#">Skill PDF</a>	X
	 3 Machine Vision Software	<a href="#">Skill PDF</a>	X






























	W33744-AX00XEN-E1 - Smart Factory Visual Communication System - Siemens S7-1500 (87-VCS715)		
	 1 Cloud-Based Data Acquisition	<a href="#">Skill PDF</a>	X
	W33745-AB00UEN-E1 - Mechatronics System (Siemens S7-1500) (870-PS715)		
	 1 Automation Operations	<a href="#">Skill PDF</a>	X
	 2 Basic Component Adjustments	<a href="#">Skill PDF</a>	X
	 3 Pick-and-Place Feeding	<a href="#">Skill PDF</a>	X
	 4 Gauging	<a href="#">Skill PDF</a>	X
	 5 Indexing	<a href="#">Skill PDF</a>	X
	 6 Sorting and Queuing	<a href="#">Skill PDF</a>	X
	 7 Servo Robotic Assembly	<a href="#">Skill PDF</a>	X
	 8 Torquing	<a href="#">Skill PDF</a>	X
	 9 Parts Storage	<a href="#">Skill PDF</a>	X
	 10 Electro-Hydraulic Testing	<a href="#">Skill PDF</a>	X
	 11 Multiple Station Control	<a href="#">Skill PDF</a>	X
	W33746-AA00UEN-E1 - Mechatronics - Siemens S7-1500 / Siemens STEP 7 Professional (87-IOSS715)		
	 1 Programmable Controller Operation	<a href="#">Skill PDF</a>	X
	 2 Basic PLC Programming	<a href="#">Skill PDF</a>	X
	 3 PLC Motor Control	<a href="#">Skill PDF</a>	X
	 4 PLC Event Sequencing		X
	 5 PLC Timer Instructions	<a href="#">Skill PDF</a>	X
	 6 PLC Counter Instructions	<a href="#">Skill PDF</a>	X
	W33747-AA00XEN-E1 - Smart Factory Sensor System - Siemens S7-1500, Pneumatics/ Vacuum (87-SN1S715)		
	 1 Smart Vacuum Sensors	<a href="#">Skill PDF</a>	X
	W33748-AA00XEN-E1 - Smart Factory Sensor System - Siemens S7-1500, Ultrasonic (87-SN2S715)		
	 1 Smart Ultrasonic Sensors	<a href="#">Skill PDF</a>	X
	W33749-AA00XEN-E1 - Smart Factory Sensor System - Siemens S7-1500, Photoeye (87-SN3715)		
	 1 Smart Photoelectric Sensors	<a href="#">Skill PDF</a>	X
	W33750-AA00XEN-E1 - Smart Factory Device Learning System - Siemens S7-1500, Stack Light (87-SN4715)		
	 1 Smart Stack Light	<a href="#">Skill PDF</a>	X
	W33751-AA00XEN-E1 - Smart Factory Sensor System - Siemens S7-1500, Electrical Current (87-SN6715)		
	 1 Smart Electrical Current Sensors	<a href="#">Skill PDF</a>	X
	W33752-AA00XEN-E1 - Smart Factory Sensor System - Siemens S7-1500, Analog Position (87-SN7S715)		





































	 1 Smart Analog Position Sensors	<a href="#">Skill PDF</a>	X
	W33753-AA00XEN-E1 - Smart Factory Sensor System - Siemens S7-1500, Analog Pressure (87-SN9S715)		
	 1 Smart Pressure Sensors	<a href="#">Skill PDF</a>	X
	W33755-AX00XEN-E1 - Tabletop Smart Factory Visual Communications - Allen-Bradley (87-TVCAB)		
	 1 Cloud-Based Data Acquisition	<a href="#">Skill PDF</a>	X
	W33759-AA00XEN-E1 - Smart Factory Barcode System - Allen-Bradley L16 (87-BR2AB53A)		
	 1 Barcode System Operation	<a href="#">Skill PDF</a>	X
	 2 Barcode System Programming	<a href="#">Skill PDF</a>	X
	W33760-AA00XEN-E1 - Mechatronics RFID AB L16 (87-RF1AB53B)		
	 1 RFID Operation	<a href="#">Skill PDF</a>	X
	 2 RFID Programming	<a href="#">Skill PDF</a>	X
	W33763-AA00UEN-E1 - Smart Factory Ethernet - AB CompactLogix L16		
	 1 Basic Industrial Ethernet Operation	<a href="#">Skill PDF</a>	X
	 2 Network Performance and Managed Switch Operation	<a href="#">Skill PDF</a>	X
	 3 Basic EtherNet/IP Operation	<a href="#">Skill PDF</a>	X
	W33766-AA00XEN-E1 - Smart Factory Manufacturing Execution System - AB CompactLogix L16 (87-MEAB53A)		
	 1 Lean Production Metrics		X
	 2 Manufacturing Execution Systems	<a href="#">Skill PDF</a>	X
	W33767-AX00XEN-E1 - Smart Factory Visual Communications - Allen-Bradley (87-VCAB53A)		
	 1 Cloud-Based Data Acquisition	<a href="#">Skill PDF</a>	X
	W33768-AA00XEN-E1 - Smart Factory Sensor System - Allen-Bradley L16, Pneumatics/ Vacuum (87-SN1AB53A)		
	 1 Smart Vacuum Sensors	<a href="#">Skill PDF</a>	X
	W33769-AA00XEN-E1 - Smart Factory Sensor System - Allen-Bradley L16, Ultrasonic (87-SN2AB53A)		
	 1 Smart Ultrasonic Sensors	<a href="#">Skill PDF</a>	X
	W33770-AA00XEN-E1 - Smart Factory Sensor System - Allen-Bradley L16, Photoeye (87-SN3AB53A)		
	 1 Smart Photoelectric Sensors	<a href="#">Skill PDF</a>	X
	W33771-AA00XEN-E1 - Smart Factory Device Learning System - Allen-Bradley L16, Stack Light (87-SN4AB53A)		






	 1 Smart Stack Light	<a href="#">Skill PDF</a>	X
	W33772-AA00XEN-E1 - Smart Factory Sensor System – Allen-Bradley L16, Electrical Current (87-SN6AB53A)		
	 1 Smart Electrical Current Sensors	<a href="#">Skill PDF</a>	X
	W33773-AA00XEN-E1 - Smart Factory Sensor System - Allen-Bradley L16, Analog Position (87-SN7AB53A)		
	 1 Smart Analog Position Sensors	<a href="#">Skill PDF</a>	X
	W33774-AA00XEN-E1 - Smart Factory Sensor System - Allen-Bradley L16, Analog Pressure (87-SN9AB53A)		
	 1 Smart Pressure Sensors	<a href="#">Skill PDF</a>	X
	W72001-AB00UEN-E1 - Mechatronics (870-PS731*)		
	 1 Automation Operations	<a href="#">Skill PDF</a>	X
	 2 Basic Component Adjustments	<a href="#">Skill PDF</a>	X
	 3 Pick-and-Place Feeding	<a href="#">Skill PDF</a>	X
	 4 Gauging	<a href="#">Skill PDF</a>	X
	 5 Indexing	<a href="#">Skill PDF</a>	X
	 6 Sorting and Queuing	<a href="#">Skill PDF</a>	X
	 7 Servo Robotic Assembly	<a href="#">Skill PDF</a>	X
	 8 Torquing	<a href="#">Skill PDF</a>	X
	 9 Parts Storage	<a href="#">Skill PDF</a>	X
	 10 Electro-Hydraulic Testing	<a href="#">Skill PDF</a>	X
	 11 Multiple Station Control	<a href="#">Skill PDF</a>	X
	W72007-AC00UEN-E1 - Mechatronics AB CompactLogix L32 (870-MPC-AB5300)		
	 1 Automation Operations	<a href="#">Skill PDF</a>	X
	 2 Basic Component Adjustments	<a href="#">Skill PDF</a>	X
	 3 Pick-and-Place Feeding	<a href="#">Skill PDF</a>	X
	 4 Gauging	<a href="#">Skill PDF</a>	X
	 5 Indexing	<a href="#">Skill PDF</a>	X
	 6 Sorting and Queuing	<a href="#">Skill PDF</a>	X
	 7 Servo Robotic Assembly	<a href="#">Skill PDF</a>	X
	 8 Torquing	<a href="#">Skill PDF</a>	X
	 9 Parts Storage	<a href="#">Skill PDF</a>	X
	 10 Electro-Hydraulic Testing	<a href="#">Skill PDF</a>	X
	 11 Multiple Station Control	<a href="#">Skill PDF</a>	X
	WXAU201-XX00XEN-E2 - Principles of Robotics		
	 1 Basic Robot Operation		X
	 2 Basic Robot Programming		X
	 3 Interfacing and Material Handling		X
	 4 Application Development		X
	 5 Flexible Manufacturing Cells		X
	 6 Quality Control		X
	 7 Production Control		X

	WXAU202-XX00XEN-E2 - Principles of Factory Automation		
	1 Control Logic Circuits		X
	2 Electrical Control Diagrams		X
	3 Relay Control Circuits		X
	4 Automation Sequence Circuits		X
	WXAU203-XX00XEN-E2 - Principles of Robotics		
	1 Basic Robot Operation		X
	2 Basic Robot Programming		X
	3 Interfacing and Material Handling		X
	4 Application Development		X
	5 Flexible Manufacturing Cells		X
	6 Quality Control		X
	7 Production Control		X
	WB764-DA00XEN-E1 - Computer Control 2 (Micro820)		
	1 Application Development	<a href="#">Skill PDF</a>	X
	2 PLC Timer Instructions	<a href="#">Skill PDF</a>	X
	3 PLC Counter Instructions	<a href="#">Skill PDF</a>	X
	Electronics		
	E17422-XF00UEN-E1 - DC Electronic Drives {Amatrol eBook} (85-MT102)		
	1 INTRODUCTION TO DC MOTION CONTROL	<a href="#">Skill PDF</a>	
			
	V40087-AA00UEN-E1 - Mastering Programmable Controllers (A-B CompactLogix L16) (990-PABCL1F)		
	1 Programmable Controller Operation	<a href="#">Skill PDF</a>	X
	2 PLC Ethernet Communication	<a href="#">Skill PDF</a>	X
	3 Basic PLC Program Instructions		X
	4 PLC Project Elements	<a href="#">Skill PDF</a>	X
	5 PLC Motor Control 1	<a href="#">Skill PDF</a>	X
	6 PLC Timer Instructions	<a href="#">Skill PDF</a>	X
	7 PLC Event Sequencing 1	<a href="#">Skill PDF</a>	X
	8 PLC Event Sequencing 2	<a href="#">Skill PDF</a>	X
	9 PLC Counter Instructions	<a href="#">Skill PDF</a>	X
	10 HMI Ethernet Operation	<a href="#">Skill PDF</a>	X
	11 Component Troubleshooting	<a href="#">Skill PDF</a>	X
	12 Systems Troubleshooting	<a href="#">Skill PDF</a>	X
	W11128-AA00UEN-E1 - Power and Control Electronics (990-ELE1)		
	1 Oscilloscopes	<a href="#">Skill PDF</a>	X
	2 Linear Power Supplies	<a href="#">Skill PDF</a>	X
	3 Power Supply Filtration and Regulation	<a href="#">Skill PDF</a>	X


	 4 Solid State Relays	<a href="#">Skill PDF</a>	X
	 5 Discrete Sensing Devices	<a href="#">Skill PDF</a>	X
	 6 Thermal Sensing Devices	<a href="#">Skill PDF</a>	X
	 7 Amplifiers and Op-Amps	<a href="#">Skill PDF</a>	X
	 8 Analog Sensing Devices	<a href="#">Skill PDF</a>	X
	 9 Solid State Switching	<a href="#">Skill PDF</a>	X
	 10 Solid State Speed and Power Control	<a href="#">Skill PDF</a>	X
	W11135-XA00UEN-E1 - AC Motor Drives (990-DRV1)		
	 1 Introduction to AC Variable Frequency Drives	<a href="#">Skill PDF</a>	X
	 2 AC Variable Frequency Drives - Speed and Torque Control	<a href="#">Skill PDF</a>	X
	 3 AC Variable Frequency Drives - Accel./Decel. and Braking	<a href="#">Skill PDF</a>	X
	W11153-AA00UEN-E1 - AC Motor Drive Troubleshooting (990-DRV1F)		
	 1 AC Variable Frequency Drives - Fault Diagnostics and Troubleshooting	<a href="#">Skill PDF</a>	X
	W16727-XB00UEN-E1 - Electrical Control Systems (90-EC1A)		
	 1 Control Logic	<a href="#">Skill PDF</a>	X
	 2 Sequencing Control	<a href="#">Skill PDF</a>	X
	 3 Timers and Advanced Systems	<a href="#">Skill PDF</a>	X
	W17411-CH00JEN-E1 - Variable Frequency AC Drive (85-MT5C)		
	 1 Introduction to Variable Frequency AC Drives	<a href="#">Skill PDF</a>	X
	 2 Variable Frequency AC Drives - Speed and Torque Control	<a href="#">Skill PDF</a>	X
	 3 Variable Frequency AC Drives - Accel./Decel. and Braking	<a href="#">Skill PDF</a>	X
	 4 Variable Frequency AC Drives - Fault Diagnostics and Troubleshooting	<a href="#">Skill PDF</a>	X
	W17420-CF00JEN-E2 - AC Electronic Drives (85-MT101)		
	 1 Introduction to AC Drives	<a href="#">Skill PDF</a>	X
	 2 Configuring A-B PowerFlex 70 Drives	<a href="#">Skill PDF</a>	X
	 3 A-B PowerFlex 70 Control Parameters	<a href="#">Skill PDF</a>	X
	 4 Communications and Diagnostics for A-B PowerFlex 70 Drives	<a href="#">Skill PDF</a>	X
	 5 Troubleshooting A-B PowerFlex 70 Drives	<a href="#">Skill PDF</a>	X
	 6 Configuring and Troubleshooting the A-B PowerFlex 40 Drive	<a href="#">Skill PDF</a>	X





		7 Configuring and Troubleshooting Servo Drives	<a href="#">Skill PDF</a>	X
		W17426-AA00AEN-E1 - PLC Motor Control AB Micro820 (85-MT5AB8)		
		1 Programmable Logic Controller Operation	<a href="#">Skill PDF</a>	X
		2 Basic PLC Programming	<a href="#">Skill PDF</a>	X
		3 PLC Motor Control	<a href="#">Skill PDF</a>	X
		4 PLC Timer and Counter Instructions	<a href="#">Skill PDF</a>	X
		W17726-AA00UEN-E1 - PLC Motor Control AB Micro 810 (85-MT5AB8)		
		1 Programmable Logic Controller Operation	<a href="#">Skill PDF</a>	X
		2 Basic PLC Programming	<a href="#">Skill PDF</a>	X
		3 PLC Motor Control	<a href="#">Skill PDF</a>	X
		4 PLC Timer and Counter Instructions	<a href="#">Skill PDF</a>	X
		W40085-AA00UEN-E1 - Portable PLC Learning System - AB CompactLogix L16 (990-PAB53A)		
		1 Introduction to Programmable Controllers	<a href="#">Skill PDF</a>	X
		2 Basic PanelView Plus Terminal Operation	<a href="#">Skill PDF</a>	X
		3 PLC Program Operations	<a href="#">Skill PDF</a>	X
		4 PLC Programming	<a href="#">Skill PDF</a>	X
		5 PLC Motor Control	<a href="#">Skill PDF</a>	X
		6 PLC Timer and Counter Instructions	<a href="#">Skill PDF</a>	X
		7 Event Sequencing	<a href="#">Skill PDF</a>	X
		8 Program Control Instructions	<a href="#">Skill PDF</a>	X
		9 Math and Data Move Instructions	<a href="#">Skill PDF</a>	X
		10 PanelView Plus Application Editing	<a href="#">Skill PDF</a>	X
		11 PanelView Plus Application Editing 2	<a href="#">Skill PDF</a>	X
		12 Analog Inputs	<a href="#">Skill PDF</a>	X
		13 Analog Outputs	<a href="#">Skill PDF</a>	X
		14 Variable Output Applications	<a href="#">Skill PDF</a>	X
		W40086-AA00UEN-E1 - Portable PLC with Troubleshooting - AB CompactLogix L16 (990-PAB53AF)		
		1 Introduction to PLC Troubleshooting	<a href="#">Skill PDF</a>	X
		2 PLC Systems Troubleshooting	<a href="#">Skill PDF</a>	X
		3 Analog Input/Output Troubleshooting	<a href="#">Skill PDF</a>	X
		4 Analog Application Troubleshooting	<a href="#">Skill PDF</a>	X
		W40660-FE00UEN-E1 - PLC Troubleshooting -AB ControlLogix (890-AB5500)		
		1 Introduction to Programmable Controllers	<a href="#">Skill PDF</a>	X
		2 Basic PLC Programming	<a href="#">Skill PDF</a>	X
		3 PLC Motor Control	<a href="#">Skill PDF</a>	X
		4 Discrete I/O Interfacing	<a href="#">Skill PDF</a>	X

 5 PLC Timer Instructions	<a href="#">Skill PDF</a>	X
 6 PLC Counter Instructions	<a href="#">Skill PDF</a>	X
 7 Introduction to PLC Troubleshooting	<a href="#">Skill PDF</a>	X
 8 PLC Systems Troubleshooting	<a href="#">Skill PDF</a>	X
 9 Event Sequencing	<a href="#">Skill PDF</a>	X
 10 Application Development	<a href="#">Skill PDF</a>	X
 11 Program Control Instructions	<a href="#">Skill PDF</a>	X
 12 Math and Data Move Instructions	<a href="#">Skill PDF</a>	X

 WB490-DF00AEN-E1 - PLC Troubleshooting -AB SLC500 (890-AB503)







 1 Introduction to Programmable Controllers	<a href="#">Skill PDF</a>	X
 2 Basic PLC Programming	<a href="#">Skill PDF</a>	X
 3 PLC Motor Control	<a href="#">Skill PDF</a>	X
 4 Discrete I/O Interfacing	<a href="#">Skill PDF</a>	X
 5 Introduction to PLC Troubleshooting	<a href="#">Skill PDF</a>	X
 6 PLC Systems Troubleshooting	<a href="#">Skill PDF</a>	X
 7 Event Sequencing	<a href="#">Skill PDF</a>	X
 8 Application Development	<a href="#">Skill PDF</a>	X
 9 PLC Timer Instructions	<a href="#">Skill PDF</a>	X
 10 PLC Counter Instructions	<a href="#">Skill PDF</a>	X
 11 Program Control Instructions	<a href="#">Skill PDF</a>	X
 12 Math and Data Move Instructions	<a href="#">Skill PDF</a>	X

 WB763-EB00UEN-E1 - Computer Control 1 (A-B Micro820) (90-CT1/96-CT1)





 1 Programmable Logic Controller Operation	<a href="#">Skill PDF</a>	X
 2 Basic PLC Programming	<a href="#">Skill PDF</a>	X
 3 PLC Motor Control	<a href="#">Skill PDF</a>	X
 4 Event Sequencing	<a href="#">Skill PDF</a>	X




































 Electrical
































 VB227-BD00UEN-E1 - AC/DC Electrical Systems (T7017A)




































 1 Basic Electrical Circuits	<a href="#">Skill PDF</a>	X
 2 Electrical Measurements	<a href="#">Skill PDF</a>	X
 3 Circuit Analysis	<a href="#">Skill PDF</a>	X
 4 Inductance and Capacitance	<a href="#">Skill PDF</a>	X
 5 Combination Circuits	<a href="#">Skill PDF</a>	X
 6 Transformers	<a href="#">Skill PDF</a>	X

 V17401-CL00JEN-E2 - Electric Motor Control (85-MT5)




































 1 Introduction to Electric Motor Control	<a href="#">Skill PDF</a>	X
 2 Manual Motor Control and Overload Protection	<a href="#">Skill PDF</a>	X
 3 Control Transformers	<a href="#">Skill PDF</a>	X
 4 Control Ladder Logic	<a href="#">Skill PDF</a>	X





































	 5 Control Relays and Motor Starters	<a href="#">Skill PDF</a>	X
	 6 Introduction to Troubleshooting	<a href="#">Skill PDF</a>	X
	 7 Systems Troubleshooting	<a href="#">Skill PDF</a>	X
	 8 Reversing Motor Control	<a href="#">Skill PDF</a>	X
	 9 Automatic Input Devices 1	<a href="#">Skill PDF</a>	X
	 10 Basic Timer Control: On-Delay and Off-Delay	<a href="#">Skill PDF</a>	X
	VB703-XB00UEN-E1 - Electrical Control 1 (96-ECS1)		
	 1 Control Logic	<a href="#">Skill PDF</a>	X
	 2 Sequencing Control	<a href="#">Skill PDF</a>	X
	 3 Timers and Advanced Systems	<a href="#">Skill PDF</a>	X
	W11129-AA00UEN-E1 - Portable Electric Relay Control Troubleshooting (990-EC1F)		
	 1 Introduction to Troubleshooting	<a href="#">Skill PDF</a>	X
	W11132-AA00UEN-E1 - Electric Relay Control (990-EC1)		
	 1 Control Logic	<a href="#">Skill PDF</a>	X
	 2 Sequencing Control	<a href="#">Skill PDF</a>	X
	 3 Timers and Advanced Systems	<a href="#">Skill PDF</a>	X
	W11133-AA00UEN-E1 - AC/DC Electrical Systems (990-ACDC1)		
	 1 Basic Electrical Circuits	<a href="#">Skill PDF</a>	X
	 2 Electrical Measurements	<a href="#">Skill PDF</a>	X
	 3 Circuit Analysis	<a href="#">Skill PDF</a>	X
	 4 Inductance and Capacitance	<a href="#">Skill PDF</a>	X
	 5 Combination Circuits	<a href="#">Skill PDF</a>	X
	 6 Transformers	<a href="#">Skill PDF</a>	X
	W11134-XB00UEN-E1 - Electric Motor Control (990-MC1)		
	 1 Introduction to Electric Motor Control	<a href="#">Skill PDF</a>	X
	 2 Manual Motor Control and Overload Protection	<a href="#">Skill PDF</a>	X
	 3 Control Transformers	<a href="#">Skill PDF</a>	X
	 4 Control Ladder Logic	<a href="#">Skill PDF</a>	X
	 5 Control Relays and Motor Starters	<a href="#">Skill PDF</a>	X
	 6 Reversing Motor Control	<a href="#">Skill PDF</a>	X
	 7 Automatic Input Devices 1	<a href="#">Skill PDF</a>	X
	 8 Basic Timer Control	<a href="#">Skill PDF</a>	X
	W11152-AB00UEN-E1 - Electric Motor Control Troubleshooting (990-MC1F)		
	 1 Introduction to Troubleshooting	<a href="#">Skill PDF</a>	X
	 2 Systems Troubleshooting	<a href="#">Skill PDF</a>	X






































	W12204-XA00AEN-E1 - Electrical Fabrication 1 (950-ELF1/96-ELF1)		
	1 Introduction to Electrical Wiring	<a href="#">Skill PDF</a>	X
	2 Residential Wiring System Components	<a href="#">Skill PDF</a>	X
	3 Service Connection and Circuit Protection	<a href="#">Skill PDF</a>	X
	W17402-CJ00JEN-E1 - Motor Braking (85-MT5A)		
	1 Braking Methods	<a href="#">Skill PDF</a>	X
	W17403-CJ00JEN-E1 - Reduced Voltage Starting (85-MT5B)		
	1 Reduced Voltage Starting Circuits	<a href="#">Skill PDF</a>	X
	2 Power Generation and Distribution	<a href="#">Skill PDF</a>	X
	W17404-CJ00JEN-E1 - Electronic Sensors (85-MT5D)		
	1 Electronic Sensors (85-MT5-D)	<a href="#">Skill PDF</a>	X
	W17405-XJ00JEN-E1 - Electronic Counter (85-MT5E)		
	1 Timers and Counters	<a href="#">Skill PDF</a>	X
	W17412-CJ00JEN-E1 - SCR Speed Control (85-MT5F)		
	1 SCR Motor Control	<a href="#">Skill PDF</a>	X
	W17448-XB00JEN-E1 - Electric Wiring System (850-MT6B)		
	1 Introduction to Electrical Control Wiring	<a href="#">Skill PDF</a>	X
	2 Wiring Electrical Panels	<a href="#">Skill PDF</a>	X
	3 Pneumatic Control Circuit Wiring	<a href="#">Skill PDF</a>	X
	W17461-AA00JEN-E1 - PLC/VFD Wiring System (85-MT6BA)		
	1 PLC and VFD Electrical Control Wiring	<a href="#">Skill PDF</a>	X
	W17463-XA00UEN-E1 - Industrial Soldering (85-MT6BB)		
	1 Industrial Soldering	<a href="#">Skill PDF</a>	X
	W17469-AA00UEN-E1 - Ethernet and Analog Wiring (85-MT6BC)		
	1 HMI, Ethernet, and Analog Wiring	<a href="#">Skill PDF</a>	X
	W17471-XB00JEN-E1 - Electrical Power Distribution (85-MT7-B)		
	1 Introduction to Raceways	<a href="#">Skill PDF</a>	X
	2 Basic Conduit Bending	<a href="#">Skill PDF</a>	X
	3 Advanced Raceways	<a href="#">Skill PDF</a>	X
	4 Conductors, Disconnects, and Overcurrent Protection	<a href="#">Skill PDF</a>	X
	5 Conduit Sizing and Wire Pulling Techniques	<a href="#">Skill PDF</a>	X




































	W17913-AA00JEN-E1 - Electric Motor Control (85-MT5HSL)		
	 1 Latching Stop Pushbutton	<a href="#">Skill PDF</a>	X
	W45129-XA00JEN-E1 - Motor Troubleshooting System (85-MT2E)		
	 1 Troubleshooting DC Motors	<a href="#">Skill PDF</a>	X
	 2 Troubleshooting AC Motors	<a href="#">Skill PDF</a>	X
	WB862-XG00JEN-E1 - Rotating Electric Machines (85-MT2)		
	 1 DC Series Motors	<a href="#">Skill PDF</a>	X
	 2 DC Shunt and Compound Motors	<a href="#">Skill PDF</a>	X
	 3 Motor Speed and Torque	<a href="#">Skill PDF</a>	X
	 4 Motor Performance	<a href="#">Skill PDF</a>	X
	 5 Split-Phase AC Motors	<a href="#">Skill PDF</a>	X
	 6 Capacitor-Start AC Motors	<a href="#">Skill PDF</a>	X
	 7 Permanent-Capacitor and Two-Capacitor Motors	<a href="#">Skill PDF</a>	X
	 8 Three-Phase AC Induction Motors	<a href="#">Skill PDF</a>	X
	WB876-XF00JEN-E1 - DC Generators (85-MT2B)		
	 1 DC Generators	<a href="#">Skill PDF</a>	X
	WB877-XF00JEN-E1 - Wound Rotor Motor (85-MT2D)		
	 1 Wound-Rotor Machines	<a href="#">Skill PDF</a>	X
	WB878-XG00JEN-E1 - Rotating Electrical Machines (85-MT2C)		
	 1 Alternators	<a href="#">Skill PDF</a>	X
	 2 Alternator Synchronization Methods	<a href="#">Skill PDF</a>	X
	 3 Synchronous Motors	<a href="#">Skill PDF</a>	X
	 Fluid Power		
	EB544-XD00UEN-E1 - Hydraulic Troubleshooting {Amatrol eBook} (950-HT1)		
			
	VB780-AA00AEN-E1 - Basic Pneumatics (96-PNE1/85-BP)		
	 1 Pneumatic Power Systems	<a href="#">Skill PDF</a>	X
	 2 Basic Pneumatic Circuits	<a href="#">Skill PDF</a>	X
	 3 Principles of Pneumatic Pressure and Flow	<a href="#">Skill PDF</a>	X
	 4 Pneumatic Speed Control Circuits	<a href="#">Skill PDF</a>	
	VB831-XC00UEN-E1 - Basic Hydraulics (85-BH)		
	 1 Hydraulic Power Systems	<a href="#">Skill PDF</a>	X
	 2 Basic Hydraulic Circuits	<a href="#">Skill PDF</a>	X
	 3 Principles of Hydraulic Pressure and Flow	<a href="#">Skill PDF</a>	X




































	 4 Hydraulic Speed Control	<a href="#">Skill PDF</a>	X
	 5 Pressure Control Circuits	<a href="#">Skill PDF</a>	X
	W11139-XA00XEN-E1 - Portable Pneumatics (990-PN1)		
	 1 Pneumatic Power Systems	<a href="#">Skill PDF</a>	X
	 2 Basic Pneumatic Circuits	<a href="#">Skill PDF</a>	X
	 3 Principles of Pneumatic Pressure and Flow	<a href="#">Skill PDF</a>	X
	 4 Pneumatic Speed Control Circuits	<a href="#">Skill PDF</a>	X
	 5 Pneumatic DCV Applications	<a href="#">Skill PDF</a>	X
	 6 Air Logic	<a href="#">Skill PDF</a>	X
	 7 Pneumatic Maintenance	<a href="#">Skill PDF</a>	X
	W11142-XA00UEN-E1 - Electronic Sensors (990-SN1)		
	 1 Introduction to Electronic Sensors	<a href="#">Skill PDF</a>	X
	 2 Electronic Sensor Applications	<a href="#">Skill PDF</a>	X
	W19126-AA00AEN-E1 - Basic Hydraulics Troubleshooting (950-HTB1)		
	 1 Hydraulic Pump Troubleshooting	<a href="#">Skill PDF</a>	X
	 2 Troubleshooting Hydraulic Actuators and DCVs	<a href="#">Skill PDF</a>	X
	 3 Troubleshooting Hydraulic Valves	<a href="#">Skill PDF</a>	X
	 4 Troubleshooting Hydraulic Systems	<a href="#">Skill PDF</a>	X
	W19141-AA00UEN-E2 - Basic Pneumatics Troubleshooting (990-PTB1)		
	 1 Introduction to Pneumatic Troubleshooting	<a href="#">Skill PDF</a>	X
	 2 Air Preparation Troubleshooting	<a href="#">Skill PDF</a>	X
	 3 Troubleshooting Actuators and Valves	<a href="#">Skill PDF</a>	X
	 4 Troubleshooting Vacuum Systems	<a href="#">Skill PDF</a>	X
	 5 Troubleshooting Pneumatic Systems	<a href="#">Skill PDF</a>	X
	W19144-XA00UEN-E1 - Portable Basic Hydraulics (990-BH1)		
	 1 Hydraulic Power Systems	<a href="#">Skill PDF</a>	X
	 2 Basic Hydraulic Circuits	<a href="#">Skill PDF</a>	X
	 3 Principles of Hydraulic Pressure and Flow	<a href="#">Skill PDF</a>	X
	 4 Hydraulic Speed Control	<a href="#">Skill PDF</a>	X
	 5 Pressure Control Circuits	<a href="#">Skill PDF</a>	X
	W19290-XA00UEN-E1 - Hydraulic Maintenance (950-HM1)		
	 1 Hydraulic Filter Maintenance	<a href="#">Skill PDF</a>	X
	 2 Hydraulic Fluid Maintenance	<a href="#">Skill PDF</a>	X
	 3 Fittings and Seals	<a href="#">Skill PDF</a>	X
	 4 Hose and Clamping Devices	<a href="#">Skill PDF</a>	X


































	 5 Tubing and Component Installation	<a href="#">Skill PDF</a>	X
	WB832-XA00XEN-E1 - Intermediate Hydraulics (85-IH)		
	 1 Hydraulic DCV Applications	<a href="#">Skill PDF</a>	X
	 2 Hydraulic Cylinder Applications	<a href="#">Skill PDF</a>	X
	 3 Hydraulic Relief Valve Operation	<a href="#">Skill PDF</a>	X
	 4 Hydraulic Check Valve Applications	<a href="#">Skill PDF</a>	X
	 5 Accumulator Applications	<a href="#">Skill PDF</a>	X
	WB835-BA00XEN-E2 - Intermediate Pneumatics (85-IP)		
	 1 Pneumatic DCV Applications	<a href="#">Skill PDF</a>	X
	 2 Air Logic	<a href="#">Skill PDF</a>	X
	 3 Pneumatic Maintenance	<a href="#">Skill PDF</a>	X
	WB837-XC00UEN-E1 - Electronic Sensors (85-SN1)		
	 1 Introduction to Electronic Sensors	<a href="#">Skill PDF</a>	X
	 2 Electronic Sensor Applications	<a href="#">Skill PDF</a>	X
	WB838-XA00XEN-E1 - Advanced Pneumatics (85-AP)		
	 1 Moving Loads Pneumatically	<a href="#">Skill PDF</a>	X
	 2 Vacuum Systems	<a href="#">Skill PDF</a>	X
	 3 Air Compressors	<a href="#">Skill PDF</a>	X
	WB839-XA00XEN-E1 - Advanced Hydraulics (85-AH)		
	 1 Hydraulic Motor Applications	<a href="#">Skill PDF</a>	X
	 2 Hydraulic Pump and Motor Performance	<a href="#">Skill PDF</a>	X
	 3 Fluids and Conditioning	<a href="#">Skill PDF</a>	X
	WB861-XB00XEN-E1 - Electro-Fluid Power Systems (85-EF, 85-EH, 85-EP)		
	 1 Introduction to Electrical Control Systems	<a href="#">Skill PDF</a>	X
	 2 Basic Control Devices	<a href="#">Skill PDF</a>	X
	 3 Power Devices	<a href="#">Skill PDF</a>	X
	 4 Control Relays	<a href="#">Skill PDF</a>	X
	 5 Sequencing Control	<a href="#">Skill PDF</a>	X
	 6 Timer Control	<a href="#">Skill PDF</a>	X
	 7 Pressure Control Applications	<a href="#">Skill PDF</a>	X
	 8 Circuit Applications	<a href="#">Skill PDF</a>	X
	WB894-XA00XEN-E1 - Pneumatic Fitting Construction (94-PFC-1)		
	 1 Pneumatic System Construction	<a href="#">Skill PDF</a>	X
	WXPT303-XX00XEN-E2 - Principles of Hydraulics		
	 1 Introduction to Hydraulic Systems		X
	 Green Technology		

	W20011-XX00XEN-E1 - Wind Concepts (950-WC1)		
	 1 Introduction to Wind Power Systems		X
	 2 Wind Turbine Production		X
	 3 Wind Turbine Siting		X
	W20013-BA00AEN-E1 - Turbine Electric Hub Troubleshooting (950-TEH1)		
	 1 Hub Operation	<a href="#">Skill PDF</a>	X
	 2 Pitch Control System	<a href="#">Skill PDF</a>	X
	 3 Battery Power	<a href="#">Skill PDF</a>	X
	 4 Emergency Power System	<a href="#">Skill PDF</a>	X
	 5 Hub Troubleshooting	<a href="#">Skill PDF</a>	X
	W20014-BC00JEN-E1 - Turbine Generator Control Troubleshooting (950-TGC1)		
	 1 Power Generation	<a href="#">Skill PDF</a>	X
	 2 System Communications and Control Software	<a href="#">Skill PDF</a>	X
	 3 System Operation	<a href="#">Skill PDF</a>	X
	 4 Generator System Troubleshooting	<a href="#">Skill PDF</a>	X
	 5 Wind Turbine PDP Troubleshooting	<a href="#">Skill PDF</a>	X
	W20015-BA00JEN-E1 - Turbine Nacelle Troubleshooting (950-TNC1)		
	 1 Turbine Control System	<a href="#">Skill PDF</a>	X
	 2 Hydraulic Power	<a href="#">Skill PDF</a>	X
	 3 Brakes and Lubrication	<a href="#">Skill PDF</a>	X
	 4 Yaw System	<a href="#">Skill PDF</a>	X
	 5 Monitoring and Communications	<a href="#">Skill PDF</a>	X
	 6 Nacelle Troubleshooting	<a href="#">Skill PDF</a>	X
	W20016-XA00XEN-E1 - Solar Concepts (950-SC1)		
	 1 Introduction to Photovoltaic Systems		X
	 2 Introduction to Solar Thermal Systems		X
	 3 Solar Radiation Fundamentals	<a href="#">Skill PDF</a>	X
	 4 Sun Path Characteristics	<a href="#">Skill PDF</a>	X
	 5 Solar Panel Orientation	<a href="#">Skill PDF</a>	X
	W20017-XA00XEN-E1 - Solar Site Analysis (95-SA1)		
	 1 Site Planning	<a href="#">Skill PDF</a>	X
	W20027-XB00AEN-E1 - Alternative Energy (850-AEC)		
	 1 PV Module Operation	<a href="#">Skill PDF</a>	X
	 2 PV Module Performance		X
	 3 Photovoltaic Arrays	<a href="#">Skill PDF</a>	X
	 4 Solar Batteries	<a href="#">Skill PDF</a>	X
	 5 Solar Battery Charging	<a href="#">Skill PDF</a>	X

	 6 Solar PV Systems	<a href="#">Skill PDF</a>	X
	 7 Small Wind Turbine Generators	<a href="#">Skill PDF</a>	X
	 8 Wind Turbine Batteries	<a href="#">Skill PDF</a>	X
	 9 DC Wind Turbine Systems	<a href="#">Skill PDF</a>	X
	 10 AC Wind Turbine Systems	<a href="#">Skill PDF</a>	X
	W20101-XB00AEN-E1 - Solar Thermal Troubleshooting - Open-Loop (950-STOL1)		
	 1 Solar Collectors	<a href="#">Skill PDF</a>	X
	 2 Solar Thermal Components	<a href="#">Skill PDF</a>	X
	 3 PV-Powered System	<a href="#">Skill PDF</a>	X
	 4 Draindown Systems	<a href="#">Skill PDF</a>	X
			
	W20102-XC00AEN-E1 - Solar Thermal Troubleshooting Closed-Loop (950-STCL1)		
	W20103-XB00AEN-E1 - Solar Thermal Installation (950-STF1)		
	 1 Copper Tubing Assembly	<a href="#">Skill PDF</a>	X
	 2 Tubing Installation	<a href="#">Skill PDF</a>	X
	 3 Plastic Pipe Assembly	<a href="#">Skill PDF</a>	X
	 4 Installation	<a href="#">Skill PDF</a>	X
	W20104-BB00JEN-E1 - Solar PV Troubleshooting (950-SPT1)		
	 1 PV Module Operation	<a href="#">Skill PDF</a>	X
	 2 PV Module Performance		X
	 3 Photovoltaic Arrays	<a href="#">Skill PDF</a>	X
	 4 Solar Batteries	<a href="#">Skill PDF</a>	X
	 5 DC Solar PV Systems	<a href="#">Skill PDF</a>	X
	 6 AC Solar PV Systems	<a href="#">Skill PDF</a>	X
	 7 Troubleshooting	<a href="#">Skill PDF</a>	X
	W20105-AC00JEN-E1 - Solar Photovoltaic Installation (950-SPF1)		
	 1 Wire Selection and Sizing		X
	 2 Ground and Lightning Protection	<a href="#">Skill PDF</a>	X
	 3 PV Installation	<a href="#">Skill PDF</a>	X
	 4 Startup and Commissioning	<a href="#">Skill PDF</a>	X
	W20317-XC00JEN-E1 - Solar Grid-Tie (85-GT1)		
	 1 Grid-Tie Systems Description	<a href="#">Skill PDF</a>	X
	 2 Grid-Tie Systems Operation	<a href="#">Skill PDF</a>	X
	W20329-AB00AEN-E1 - Data Acquisition (85-ADA1)		
	 1 Data Acquisition Learning System - Solar/Wind	<a href="#">Skill PDF</a>	X
	 Lean Manufacturing		


































	WXLM100-XX00XEN-E2 - Lean Overview and Workplace Organization		
	 1 Maintenance Organization		X
	WXLM101-XX00XEN-E2 - Introduction to Lean		
	 1 Introduction to Lean Manufacturing		X
	WXLM102-XX00XEN-E3 - 5S		
	 1 5S Workplace Organization		X
	WXLM103-XX00XEN-E1 - Total Productive Maintenance		
	 1 Total Productive Maintenance (TPM)		X
	WXLM203-XX00XEN-E3 - Lean Theory		
	 1 Lean Production		X
	WXLM104-XX00XEN-E1 - Poka-Yoke		
	 1 Poka-Yoke Mistake Proofing		X
	WXLM204-XX00XEN-E1 - Lean Process Flow		
	 1 Introduction to Lean Processes		X
	WXLM205-XX00XEN-E1 - Visual Workplace		
	 1 Visual Workplace		X
	WXLM206-XX00XEN-E1 - Standardized Work		
	 1 Standardized Work		X
	WXLM307-XX00XEN-E1 - Kaizen		
	 1 Kaizen		X
	WXLM308-XX00XEN-E1 - Value Stream Mapping		
	 1 Value Stream Mapping		X
	WXLM409-XX00XEN-E2 - Set-Up Reduction		
	 1 Setup Reduction		X
	WXLM510-XX00XEN-E1 - Six Sigma		
	 1 Lean Six Sigma Principles		X
	 2 Project Management & Customer Determination		X
	 3 Team Development and Management		X
	 4 Measurement		X
	 5 Analysis		X
	 6 Improvement and Control		X
	Machining		












	VB701-XA00XEN-E1 - Machine Tools 1 (96-MP1)		
	1 Band Saw Operation	<a href="#">Skill PDF</a>	X
	2 Introduction to the Drill Press	<a href="#">Skill PDF</a>	X
	3 Drill Press Operations	<a href="#">Skill PDF</a>	X
	W12243-XX00XEN-E2 - Machine Tools 3 (96-MP3)		
	1 Introduction to the Manual Lathe	<a href="#">Skill PDF</a>	X
	2 Turning Operations	<a href="#">Skill PDF</a>	X
	3 Lathe Operations	<a href="#">Skill PDF</a>	X
	W19002-XX00XEN-E2 - Manual Machine Tools (95-MP-1)		
	1 Band Saw Operation	<a href="#">Skill PDF</a>	X
	2 Introduction to the Drill Press	<a href="#">Skill PDF</a>	X
	3 Drill Press Operations	<a href="#">Skill PDF</a>	X
	4 Introduction to Manufacturing Hand Tools	<a href="#">Skill PDF</a>	X
	5 Introduction to the Manual Milling Machine	<a href="#">Skill PDF</a>	X
	6 Milling Processes	<a href="#">Skill PDF</a>	X
	7 Introduction to the Manual Lathe	<a href="#">Skill PDF</a>	X
	8 Turning Operations	<a href="#">Skill PDF</a>	X
	9 Lathe Operations	<a href="#">Skill PDF</a>	X
	WB702-XX00XEN-E2 - Machine Tools 2 (96-MP2)		
	1 Introduction to Manufacturing Hand Tools	<a href="#">Skill PDF</a>	X
	2 Introduction to the Manual Milling Machine	<a href="#">Skill PDF</a>	X
	3 Milling Processes	<a href="#">Skill PDF</a>	X
	WB705D-DB00UEN-E2 - CNC Machine Tools 1 (96-CNC1D)		
	1 Introduction to CNC Mill Programming	<a href="#">Skill PDF</a>	X
	2 Basic CNC Mill Programming	<a href="#">Skill PDF</a>	X
	3 Circular Interpolation	<a href="#">Skill PDF</a>	X
	WB706D-DB00UEN-E2 - CNC Machine Tools 2 (96-CNC2D)		
	1 Speeds and Feeds	<a href="#">Skill PDF</a>	X
	2 CNC Mill Canned Cycles	<a href="#">Skill PDF</a>	X
	3 CNC Mill Cutter Compensation	<a href="#">Skill PDF</a>	X
	WB709D-AB00UEN-E1 - CNC Machine Tools 3 (Denford Microturn) (96-CNC3D)		
	1 Introduction to CNC Lathe Programming	<a href="#">Skill PDF</a>	X
	2 Lathe Circular Interpolation	<a href="#">Skill PDF</a>	X
	WXCN101-XX00XEN-E2 - Principles of CNC		
	1 Principles of CNC		X

	WXCN102-XX00XEN-E2 - CNC Control	
	 1 Introduction to CNC Machining	X
	 2 CNC Mill Operation	X
	 3 CNC Program Operation	X
	 4 CNC Turning Operation	X
	WXPE101-XX00XEN-E2 - Principles of Turning	
	 1 Introduction to Lathes	X
	WXPE102-XX00XEN-E3 - Principles of Machining Centers	
	 1 Introduction to CNC Machining	X
	 2 CNC Workspace	X
	 3 CNC Programming and Operation	X
	 4 CNC Turning Center Operations	X
	 5 CNC Machining Center Operations	X
	 6 CNC Programming with Circular Interpolation	X
	WXPE203-XX00XEN-E2 - Principles of Grinding	
	 1 Principles of Grinding	X
	WXPT201-XX00XEN-E2 - Principles of Workholding	
	 1 Principles of Workholding	X
	 2 Vises and Fixtures	X
	WXPT202-XX00XEN-E2 - Principles of Coolants and Oils	
	 1 Cutting Fluids	X
	WXPT404-XX00XEN-E2 - Principles of Gear Manufacturing	
	 1 Introduction to Gear Generation	X
	 2 Gear Inspection	X
	WXTL101-XX00XEN-E2 - Principles of Tooling	
	 1 Introduction to Cutting Tools	X
	WXTL202-XX00XEN-E2 - Tooling for Turning	
	 1 Turning Tools	X
	WXTL203-XX00XEN-E2 - Tooling for Machining Centers	
	 1 Machining Center Tools	X
	WXTL204-XX00XEN-E2 - Tooling for Grinding	
	 1 Grinding Wheels	X
	WXTL307-XX00XEN-E2 - Tooling for Tapping	





































<ul style="list-style-type: none"> <li>— <b>A</b>1 Introduction to Tapping Tools</li> <li>— Manufacturing Processes</li> </ul>	<ul style="list-style-type: none"> <li>X</li> </ul>
<ul style="list-style-type: none"> <li>— V19028-XA00UEN-E2 - Product Finishing (950-PFS)</li> </ul>	
<ul style="list-style-type: none"> <li><b>A</b>1 Product Finish Inspection</li> <li><b>A</b>2 Sanding and Scuffing</li> <li><b>A</b>3 Washing and Pretreatment</li> <li><b>A</b>4 Masking and De-Masking</li> <li><b>A</b>5 Spray Processes</li> <li><b>A</b>6 Spray Liquid</li> <li><b>A</b>7 Spray Powder</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>
<ul style="list-style-type: none"> <li>— V19030-XA00XEN-E1 - Production Assembly (950-PAS1)</li> </ul>	
<ul style="list-style-type: none"> <li><b>A</b>1 Torque Basics</li> <li><b>A</b>2 Torque Tools</li> <li><b>A</b>3 O-Ring Seals</li> <li><b>A</b>4 Lip Seals</li> <li><b>A</b>5 Hydraulic Fittings</li> <li><b>A</b>6 Hose and Coupling Assembly</li> <li><b>A</b>7 Hose Installation</li> <li><b>A</b>8 Tubing Installation</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>
<ul style="list-style-type: none"> <li>— V19036-XA00XEN-E1 - Split Flange Coupling Assembly (95-PAS2)</li> </ul>	
<ul style="list-style-type: none"> <li><b>A</b>1 Split Flange Couplings</li> </ul>	<ul style="list-style-type: none"> <li>X</li> </ul>
<ul style="list-style-type: none"> <li>— V19042-XA00XEN-E1 - Electric Torque Wrench Assembly (95-PAS3)</li> </ul>	
<ul style="list-style-type: none"> <li><b>A</b>1 Electric Direct Drive Torque Tools</li> </ul>	<ul style="list-style-type: none"> <li>X</li> </ul>
<ul style="list-style-type: none"> <li>— W12207-XX00XEN-E1 - Print Reading 1 (950-PR1)</li> </ul>	
<ul style="list-style-type: none"> <li><b>A</b>1 Introduction to Print Reading</li> <li><b>A</b>2 Print Dimensioning</li> <li><b>A</b>3 Assembly Drawings and Fasteners</li> <li><b>A</b>4 Introduction to Geometric Dimensioning and Tolerancing</li> </ul>	<ul style="list-style-type: none"> <li>X</li> <li>X</li> <li>X</li> <li>X</li> </ul>
<ul style="list-style-type: none"> <li>— W12213-XA00AEN-E1 - Welding Technology 1 (950-WT1)</li> </ul>	
<ul style="list-style-type: none"> <li><b>A</b>1 Welding Preparation</li> <li><b>A</b>2 Basic Welding</li> <li><b>A</b>3 Welded Joints</li> <li><b>A</b>4 Welding Analysis</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Skill PDF</a> X</li> <li><a href="#">Skill PDF</a> X</li> <li><a href="#">Skill PDF</a> X</li> <li><a href="#">Skill PDF</a> X</li> </ul>
<ul style="list-style-type: none"> <li>— W12273-NX00XEN-E1 - Computer-Aided Design 1 (96-CAD1B) SolidWorks 2019</li> </ul>	
<ul style="list-style-type: none"> <li><b>A</b>1 Introduction to Solid Modeling</li> <li><b>A</b>2 Solid Model Creation</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">Skill PDF</a> X</li> <li><a href="#">Skill PDF</a> X</li> </ul>








































	 3 Extruded Features	<a href="#">Skill PDF</a>	X
	 4 Solid Model Fillets and Chamfers	<a href="#">Skill PDF</a>	X
	 5 Solid Model Revolved Features	<a href="#">Skill PDF</a>	X
	 6 Production Drawings	<a href="#">Skill PDF</a>	X
	W12274-NX00XEN-E1 - Computer Aided Design 2 (96-CAD2B) SolidWorks 2019		
	 1 Introduction to 3D Assemblies	<a href="#">Skill PDF</a>	X
	 2 Standard Mates and Component Manipulation	<a href="#">Skill PDF</a>	X
	 3 SmartMates and Mate Editing	<a href="#">Skill PDF</a>	X
	 4 Advanced Mates	<a href="#">Skill PDF</a>	X
	 5 Exploded Assemblies	<a href="#">Skill PDF</a>	X
	 6 Exploded View Drawings and Animation	<a href="#">Skill PDF</a>	X
	 7 Assembly Motion	<a href="#">Skill PDF</a>	X
	W19006-XB00XEN-E1 - Wiring Harness Assembly (950-WHS1)		
	 1 Wiring Harness Installation		X
	W19007-XX00XEN-E1 - Contamination (950-CNS1)		
	 1 Contamination Control Concepts		X
	 2 Contamination Prevention		X
	W19008-XX00XEN-E1 - Fasteners (950-FNS1)		
	 1 Fasteners		X
	 2 Non-Threaded Fasteners and Locking Devices		X
	W19009-XX00XEN-E1 - Gaskets (950-GSS1)		
	 1 Gaskets		X
	W19048-XA00XEN-E1 - Stall Bar Assembly (95-PAS4)		
	 1 Stall Bars		X
	W19054-XA00XEN-E1 - Instrumented DC-Electric Torque Wrench Assembly (95-PAS5)		
	 1 Instrumented Impulse Torque Tools		X
	WB723-LA00XEN-E1 - Computer-Aided Manufacturing 1 (96-CAM1)		
	 1 Introduction to CAM-Mill	<a href="#">Skill PDF</a>	X
	 2 Contour CAM Toolpath	<a href="#">Skill PDF</a>	X
	 3 CAM Parameters	<a href="#">Skill PDF</a>	X
	 4 Making Parts with CAD/CAM	<a href="#">Skill PDF</a>	X
	WXBP101-XX00XEN-E2 - Blueprint Reading		
	 1 Blueprint Reading		X









































	WXBP102-XX00XEN-E2 - AWS Welding Symbols on Blueprints			
	 1 Welding Symbols			X
	WXBP203-XX00XEN-E2 - General Dimensioning and Tolerances			
	 1 General Dimensioning and Tolerancing			X
	WXBP204-XX00XEN-E2 - Geometric Dimensioning and Tolerancing			
	 1 Geometric Dimensioning and Tolerancing			X
	 2 Location Tolerances			X
	 3 Orientation Tolerances			X
	 4 Form Tolerances			X
	Materials			
	W11304-AB00XEN-E1 - Plastic Mold Design (94-DFM3)			
	 1 Basic Injection Mold Design	<a href="#">Skill PDF</a>		X
	 2 Advanced Injection Mold Design	<a href="#">Skill PDF</a>		X
	 3 Plastics: Part Design and Material Selection	<a href="#">Skill PDF</a>		X
	 4 Basic Blow Molding Design	<a href="#">Skill PDF</a>		X
	W11306-XC00XEN-E3 - Manufacturing Processes 3 (94-MP3)			
	 1 Introduction to Injection Molding Operations	<a href="#">Skill PDF</a>		X
	 2 Injection Molding Operations	<a href="#">Skill PDF</a>		X
	 3 Plastics: Chemistry and Properties	<a href="#">Skill PDF</a>		X
	 4 Introduction to Blow Molding Operations	<a href="#">Skill PDF</a>		X
	 5 Introduction to Extrusion Operations	<a href="#">Skill PDF</a>		X
	W11600-DC00UEN-E1 - Structural Engineering 1 (94-DOS1)			
	 1 Introduction to Civil Engineering	<a href="#">Skill PDF</a>		X
	 2 Statics and Data Acquisition	<a href="#">Skill PDF</a>		X
	 3 Moments and Bending Stress	<a href="#">Skill PDF</a>		X
	 4 Bridge Design and Construction	<a href="#">Skill PDF</a>		X
	 5 Truss Bridge Design and Analysis	<a href="#">Skill PDF</a>		X
	W11601-CB00UEN-E1 - Structural Engineering 2 (94-DOS2)			
	 1 Beam Deflection and Column Buckling	<a href="#">Skill PDF</a>		X
	 2 Introduction to Concrete	<a href="#">Skill PDF</a>		X
	 3 Building Design and Construction	<a href="#">Skill PDF</a>		X
	W11602-AA00XEN-E3 - Surveying (94-DOS-3)			
	 1 Surveying Fundamentals	<a href="#">Skill PDF</a>		X
	 2 Surveying Applications	<a href="#">Skill PDF</a>		X

































	 3 Mapping	<a href="#">Skill PDF</a>	X
	 4 Global Positioning Systems (GPS)	<a href="#">Skill PDF</a>	X
	W11803-DD00UEN-E1 - Materials Engineering 1 (94-MT1)		
	 1 Material Quality Control	<a href="#">Skill PDF</a>	X
	 2 Tensile Strength Analysis	<a href="#">Skill PDF</a>	X
	 3 Data Acquisition Systems	<a href="#">Skill PDF</a>	X
	 4 Materials Design	<a href="#">Skill PDF</a>	X
	 5 Compression Testing and Analysis	<a href="#">Skill PDF</a>	X
	 6 Shear and Hardness Testing and Analysis	<a href="#">Skill PDF</a>	X
	 7 Design Evaluation	<a href="#">Skill PDF</a>	X
	WXML201-XX00XEN-E2 - Principles of Materials - Ferrous Metals		
	 1 Properties of Ferrous Metals and Steel Production		X
	WXML202-XX00XEN-E2 - Principles of Materials - Non-Ferrous Metals		
	 1 Principles of Non-Ferrous Metals		X
	 2 Copper, Aluminum and Their Alloys		X
	WXML203-XX00XEN-E1 - Principles of Heat Treating		
	 1 Principles of Heat Treatment		X
	WXML204-XX00XEN-E1 - Principles of Plastics		
	 1 Principles Of Plastics		X
	WXML205-XX00XEN-E1 - Principles of Composites		
	 1 Principles of Composites		X
	WXML206-XX00XEN-E1 - Principles of Ceramics		
	 1 Principles of Ceramics		X
	 Mechanical		
	E18135-XC00UEN-E1 - Vibration Analysis {Amatrol eBook} (95-ME5AI)		
			
	VB728-XB00AEN-E2 - Mechanical Systems 1 (96-MEC1)		
	 1 Introduction to Levers	<a href="#">Skill PDF</a>	X
	 2 Linkages, Cams, and Turnbuckles	<a href="#">Skill PDF</a>	X
	 3 Pulley Systems and Gear Drives	<a href="#">Skill PDF</a>	X
	W12245-XA00UEN-E1 - Mechanical Fabrication 2 (96-MPF2)		
	 1 Pliers and Locking Devices	<a href="#">Skill PDF</a>	X
	 2 Mallets and Non-Threaded Fasteners	<a href="#">Skill PDF</a>	X
	 3 Torque Wrench	<a href="#">Skill PDF</a>	X

	 4 Portable Power Tools	<a href="#">Skill PDF</a>	X
	W18689-XB00UEN-E1 - Rigging Systems 1 (950-RGB1)		
	 1 Introduction to Rigging	<a href="#">Skill PDF</a>	X
	 2 Hoists	<a href="#">Skill PDF</a>	X
	 3 Slings and Hitches	<a href="#">Skill PDF</a>	X
	 4 Wire Rope	<a href="#">Skill PDF</a>	X
	 5 Chain Slings	<a href="#">Skill PDF</a>	X
	W18690-XB00XEN-E1 - Rigging Systems 2 (95-RGB2)		
	 1 Synthetic Slings	<a href="#">Skill PDF</a>	X
	 2 Equipment Movement	<a href="#">Skill PDF</a>	X
	 3 Industrial Cranes	<a href="#">Skill PDF</a>	X
	W19004-XA00UEN-E1 - Mechanical Fabrication 1 (950-MPF1)		
	 1 Threaded Fasteners	<a href="#">Skill PDF</a>	X
	 2 Wrenches	<a href="#">Skill PDF</a>	X
	 3 Pneumatic System Fabrication	<a href="#">Skill PDF</a>	X
	 4 Screwdrivers	<a href="#">Skill PDF</a>	X
	 5 Pliers and Locking Devices	<a href="#">Skill PDF</a>	X
	 6 Mallets and Non-Threaded Fasteners	<a href="#">Skill PDF</a>	X
	 7 Torque Wrench	<a href="#">Skill PDF</a>	X
	 8 Portable Power Tools	<a href="#">Skill PDF</a>	X
	W19146-XA00UEN-E1 - Mechanical Drives 1 (970-ME1)		
	 1 Introduction to Mechanical Drive Systems	<a href="#">Skill PDF</a>	X
	 2 Key Fasteners	<a href="#">Skill PDF</a>	X
	 3 Power Transmission Systems	<a href="#">Skill PDF</a>	X
	 4 Introduction to V-Belt Drives	<a href="#">Skill PDF</a>	X
	 5 Introduction to Chain Drives	<a href="#">Skill PDF</a>	X
	 6 Spur Gear Drives	<a href="#">Skill PDF</a>	X
	 7 Multiple Shaft Drives	<a href="#">Skill PDF</a>	X
	W19148-XB00UEN-E1 - Mechanical Drives 1 (990-ME1M)		
	 1 Introduction to Mechanical Drive Systems	<a href="#">Skill PDF</a>	X
	 2 Key Fasteners	<a href="#">Skill PDF</a>	X
	 3 Power Transmission Systems	<a href="#">Skill PDF</a>	X
	 4 Introduction to V-Belt Drives	<a href="#">Skill PDF</a>	X
	 5 Introduction to Chain Drives	<a href="#">Skill PDF</a>	X
	 6 Spur Gear Drives	<a href="#">Skill PDF</a>	X
	 7 Multiple Shaft Drives	<a href="#">Skill PDF</a>	X



































	W19150-XA00XEN-E1 - Portable Mechanical Drives 2 (99-ME2M)		
	 1 Heavy Duty V-Belt Drives	<a href="#">Skill PDF</a>	X
	 2 V-Belt Selection and Maintenance	<a href="#">Skill PDF</a>	X
	 3 Synchronous Belt Drives	<a href="#">Skill PDF</a>	X
	 4 Lubrication Concepts	<a href="#">Skill PDF</a>	X
	 5 Precision Shaft Alignment	<a href="#">Skill PDF</a>	X
	 6 Couplings	<a href="#">Skill PDF</a>	X
	 7 Heavy-Duty Chain Drives	<a href="#">Skill PDF</a>	X
	W19152-XA00UEN-E1 - Mechanical Drives 2 (97-ME2)		
	 1 Heavy Duty V-Belt Drives	<a href="#">Skill PDF</a>	X
	 2 V-Belt Selection and Maintenance	<a href="#">Skill PDF</a>	X
	 3 Synchronous Belt Drives	<a href="#">Skill PDF</a>	X
	 4 Lubrication Concepts	<a href="#">Skill PDF</a>	X
	 5 Precision Shaft Alignment	<a href="#">Skill PDF</a>	X
	 6 Couplings	<a href="#">Skill PDF</a>	X
	 7 Heavy-Duty Chain Drives	<a href="#">Skill PDF</a>	X
	W19153-XA00UEN-E1 - Mechanical Drives 3 (97-ME3)		
	 1 Plain Bearings	<a href="#">Skill PDF</a>	X
	 2 Ball Bearings	<a href="#">Skill PDF</a>	X
	 3 Roller Bearings	<a href="#">Skill PDF</a>	X
	 4 Antifriction Bearing Selection and Maintenance	<a href="#">Skill PDF</a>	X
	 5 Gaskets and Seals	<a href="#">Skill PDF</a>	X
	 6 Advanced Gear Drives	<a href="#">Skill PDF</a>	X
	 7 Gear Drive Selection and Maintenance	<a href="#">Skill PDF</a>	X
	W19166-XA00UEN-E1 - Laser Shaft Alignment (97-ME2A)		
	 1 Introduction to Laser Shaft Alignment	<a href="#">Skill PDF</a>	X
	 2 Laser Shaft Alignment Operation	<a href="#">Skill PDF</a>	X
	W19275-XA00UEN-E1 - Portable Laser Shaft Alignment (99-ME2AM)		
	 1 Introduction to Laser Shaft Alignment	<a href="#">Skill PDF</a>	X
	 2 Laser Shaft Alignment Operation	<a href="#">Skill PDF</a>	X
	WB729-XC00AEN-E1 - Mechanical Systems 2 (96-MEC2)		
	 1 Introduction to Mechanical Drive Systems	<a href="#">Skill PDF</a>	X
	 2 Key Fasteners	<a href="#">Skill PDF</a>	X
	 3 Power Transmission Systems	<a href="#">Skill PDF</a>	X
	 4 Introduction to V-Belt Drives	<a href="#">Skill PDF</a>	X
	 5 Introduction to Chain Drives	<a href="#">Skill PDF</a>	X
	Process Control		
































	W33255-XE00UEN-E1 - Process Control Systems: Ultrasonic Level Measurement and Control (T5552 w/ T5552-L1)			
	 1 Ultrasonic Level Measurement and Control	<a href="#">Skill PDF</a>		X
	W33256-XE00UEN-E1 - Process Control Systems: Differential Pressure Flow Measurement and Control (T5552 w/ T5552-F1)			
	 1 Differential Pressure Flow Measurement and Control	<a href="#">Skill PDF</a>		X
	W33305-CA00UEN-E1 - Process Visualization Control 1 (T5552-S1)			
	 1 Introduction to Process Visualization	<a href="#">Skill PDF</a>		X
	 2 Application Editing 1	<a href="#">Skill PDF</a>		X
	 3 Application Editing 2	<a href="#">Skill PDF</a>		X
	W33308-AA00UEN-E1 - Pressure Process Control Systems (T5555)			
	 1 Introduction to Process Control	<a href="#">Skill PDF</a>		X
	 2 Instrument Tags	<a href="#">Skill PDF</a>		X
	 3 Piping and Instrumentation Diagrams	<a href="#">Skill PDF</a>		X
	 4 Final Control Elements	<a href="#">Skill PDF</a>		X
	 5 Pressure Measurement	<a href="#">Skill PDF</a>		X
	 6 Loop Control Devices	<a href="#">Skill PDF</a>		X
	 7 Pressure Control Systems	<a href="#">Skill PDF</a>		X
	 8 Methods of Automatic Control	<a href="#">Skill PDF</a>		X
	 9 Control Loop Performance	<a href="#">Skill PDF</a>		X
	W33331-AA00UEN-E1 - Foundation Fieldbus Process Control 1 (T5552-FF1)			
	 1 H1 Foundation Fieldbus	<a href="#">Skill PDF</a>		X
	W33332-AA00UEN-E1 - Foundation Fieldbus Process Control 1 (T5552-FF1A)			
	 1 H1 Foundation Fieldbus	<a href="#">Skill PDF</a>		X
	W33334-BA00XEN-E1 - HART Process Control 1 (T5552-H1)			
	 1 HART Process Control Systems	<a href="#">Skill PDF</a>		X
	W40082-AA00XEN-E1 - Mastering Programmable Controllers - AB CompactLogix L32 (99-PCAB53)			
	 1 PLC-Based Liquid Level and Flow Control	<a href="#">Skill PDF</a>		X
	W40083-AA00XEN-E1 - PLC Process Control - Siemens S7-1200 (99-PCS712)			
	 1 PLC-Based Liquid Level and Flow Control	<a href="#">Skill PDF</a>		X
	W40084-AA00XEN-E1 - PLC Process Control - AB CompactLogix L16 (99-PCAB53A)			

	 1 PLC-Based Liquid Level and Flow Control	<a href="#">Skill PDF</a>	X
	WB270-XE00AEN-E2 - Process Control Systems (T5552)		
	 1 Introduction to Process Control	<a href="#">Skill PDF</a>	X
	 2 Instrument Tags	<a href="#">Skill PDF</a>	X
	 3 Piping and Instrumentation Diagrams	<a href="#">Skill PDF</a>	X
	 4 Loop Controllers	<a href="#">Skill PDF</a>	X
	 5 Final Control Elements	<a href="#">Skill PDF</a>	X
	 6 Level Measurement	<a href="#">Skill PDF</a>	X
	 7 Liquid Level Control	<a href="#">Skill PDF</a>	X
	 8 Methods of Automatic Control	<a href="#">Skill PDF</a>	X
	 9 Basic Flow Measurement and Control	<a href="#">Skill PDF</a>	X
	 10 Control Loop Performance	<a href="#">Skill PDF</a>	X
	 11 Ultrasonic Level Measurement and Control	<a href="#">Skill PDF</a>	X
	 12 Differential Pressure Flow Measurement and Control	<a href="#">Skill PDF</a>	X
	Quality Assurance		
			
	V19017-CA00XEN-E1 - Measurement Tools 1 (950-MES1)		
	 1 Basic Measurement	<a href="#">Skill PDF</a>	X
	 2 Precision Measurement Tools	<a href="#">Skill PDF</a>	X
	 3 Dimensional Gauging	<a href="#">Skill PDF</a>	X
	 4 Introduction to SPC	<a href="#">Skill PDF</a>	X
	 5 Control Chart Operation	<a href="#">Skill PDF</a>	X
	 6 Control Chart Analysis	<a href="#">Skill PDF</a>	X
	 7 Geometric Dimensioning and Tolerancing	<a href="#">Skill PDF</a>	X
	 8 Location Tolerances	<a href="#">Skill PDF</a>	X
	 9 Orientation Tolerances	<a href="#">Skill PDF</a>	X
	 10 Form Tolerances	<a href="#">Skill PDF</a>	X
	W11105-DC00UEN-E1 - Quality Assurance 1 (94-QC1)		
	 1 Basic Measurement	<a href="#">Skill PDF</a>	X
	 2 Precision Measurement Tools	<a href="#">Skill PDF</a>	X
	 3 Dimensional Gauging	<a href="#">Skill PDF</a>	X
	 4 Introduction to SPC	<a href="#">Skill PDF</a>	X
	 5 Control Chart Operation	<a href="#">Skill PDF</a>	X
	 6 Control Chart Analysis	<a href="#">Skill PDF</a>	X
	 7 SPC Problem Solving	<a href="#">Skill PDF</a>	X
	 8 Geometric Dimensioning and Tolerancing	<a href="#">Skill PDF</a>	X
	 9 Location Tolerances	<a href="#">Skill PDF</a>	X
	 10 Orientation Tolerances	<a href="#">Skill PDF</a>	X
	 11 Form Tolerances	<a href="#">Skill PDF</a>	X

	W11145-XA00XEN-E1 - Portable Precision Gauging 1 (990-PG1)		
	 1 Basic Measurement	<a href="#">Skill PDF</a>	X
	 2 Precision Measurement	<a href="#">Skill PDF</a>	X
	 3 Dimensional Gauging	<a href="#">Skill PDF</a>	X
	W19149-XA00XEN-E1 - Portable Measurement Tools (990-MES1)		
	 1 Basic Measurement	<a href="#">Skill PDF</a>	X
	 2 Precision Measurement Tools	<a href="#">Skill PDF</a>	X
	 3 Dimensional Gauging	<a href="#">Skill PDF</a>	X
	WXMT101-XX00XEN-E2 - Inspection Techniques 1		
	 1 Calibrating and Mastering Gauges		X
	 2 Variable Gauges and Micrometers		X
	 3 Plug Gauges, Thread Gauges, and Attribute Gauges		X
	WXMT202-XX00XEN-E2 - Surface Plates		
	 1 Surface Plates		X
	WXMT203-XX00AEN-E2 - Gauge Blocks		
	 1 Gauge Blocks		X
	WXMT204-XX00XEN-E2 - Test Indicators		
	 1 Test Indicators		X
	WXMT205-XX00XEN-E2 - Height Gauges		
	 1 Height Gauges		X
	WXMT206-XX00XEN-E2 - Bench Comparators		
	 1 Introduction to Bench Comparators		X
	WXMT207-XX00XEN-E2 - Optical Comparators		
	 1 Introduction to Optical Comparators		X
	WXMT208-XX00XEN-E2 - Bore Gauges		
	 1 Comparative Bore Gauges		X
	WXMT209-XX00XEN-E2 - Air Gauges		
	 1 Introduction to Air Gauging		X
	WXMT210-XX00XEN-E2 - Specialty Micrometers		
	 1 Specialty Micrometers		X
	WXMT211-XX00XEN-E2 - Miscellaneous Inspection Instruments		
	 1 Surface Texture and Hardness Testing		X



	WXQS101-XX00XEN-E1 - ISO 9000 and TS 16949		
	 1 Quality Systems Overview		X
	 2 International Standards		X
	 3 ISO / TS 16949 Part One		X
	 4 ISO / TS 16949 Part Two		X
	WXQS202-XX00XEN-E2 - Statistical Process Control 1		
	 1 Introduction to SPC		X
	 2 Control Chart Operation		X
	 3 Control Chart Analysis		X
	WXQS304-XX00XEN-E2 - Statistical Process Control 2		
	 1 Control Charts and Process Capability		X
	WXQS305-XX00XEN-E3 - Quality Control Concepts		
	 1 Quality Tools		X
	 Safety		
	WXSA101-XX00XEN-E2 - Safety Practices and Regulations		
	 1 Workplace Safety		X
	WXSA102-XX00XEN-E2 - Personal Protective Equipment		
	 1 PPE in the Workplace		X
	WXSA103-XX00XEN-E2 - Hazardous Communication		
	 1 Hazardous Material Communication		X
	WXSA104-XX00XEN-E2 - Confined Spaces		
	 1 Confined Spaces Safety		X
	WXSA105-XX00XEN-E2 - Lockout/Tagout		
	 1 Lockout/Tagout		X
	WXSA106-XX00XEN-E2 - Accident Response		
	 1 Accident Response		X
	WXSA206-XX00XEN-E2 - Overhead Crane Safety		
	 1 Introduction to Overhead Cranes		X
	 Thermal		
			
	W11604-XE00XEN-E2 - Thermal Systems 1 (T7081)		
	 1 Introduction to Thermal Science	<a href="#">Skill PDF</a>	X
	 2 Thermal Properties and Heat Transfer	<a href="#">Skill PDF</a>	X

	 3 Thermodynamic Laws and Cycles	<a href="#">Skill PDF</a>	X
	W11605-XA00AEN-E1 - Environmental Applications (T7083)		
	 1 Thermal System Performance	<a href="#">Skill PDF</a>	X
	 2 Insulation	<a href="#">Skill PDF</a>	X
	 3 Psychrometrics	<a href="#">Skill PDF</a>	X
	 4 Residential Heating and Cooling	<a href="#">Skill PDF</a>	X
	W12305-XB00UEN-E2 - Geothermal (950-GEO1)		
	 1 Introduction to Geothermal Heat Pump Systems		X
	 2 Geothermal Closed-Loop Source Circuit Operation	<a href="#">Skill PDF</a>	X
	 3 Compressors	<a href="#">Skill PDF</a>	X
	 4 Condensers and Evaporators	<a href="#">Skill PDF</a>	X
	 5 Heat Pump Components	<a href="#">Skill PDF</a>	X
	 6 Geothermal Heat Pump Control and Operation	<a href="#">Skill PDF</a>	X
	 7 Geothermal Heat Pump Performance	<a href="#">Skill PDF</a>	X
	W12306-AB00UEN-E2 - Geothermal Troubleshooting (950-GEO2)		
	 1 Geothermal Heat Pump System Troubleshooting	<a href="#">Skill PDF</a>	X
	W12307-XB00UEN-E2 - Geothermal Desuperheater (950-GEO1D)		
	 1 Geothermal Desuperheater Operation	<a href="#">Skill PDF</a>	X
	W12308-AB00UEN-E2 - Geothermal Troubleshooting with Desuperheater (950-GEO2D)		
	 1 Geothermal Desuperheater Troubleshooting	<a href="#">Skill PDF</a>	X
	W12310-XA00UEN-E1 - Geothermal Flush Cart Learning System (95-GEO3)		
	 1 Geothermal Flush Cart Operation	<a href="#">Skill PDF</a>	X
	WB787-XC00AEN-E1 - Thermal Technology 1 (96-TT1)		
	 1 Introduction to Thermal Science	<a href="#">Skill PDF</a>	X
	 2 Thermal Properties and Heat Transfer	<a href="#">Skill PDF</a>	X
	 3 Thermodynamic Laws and Cycles	<a href="#">Skill PDF</a>	X
	WB788-XB00AEN-E1 - Thermal Technology 2 (96-TT2)		
	 1 Introduction to Refrigeration Systems	<a href="#">Skill PDF</a>	X
	 2 Refrigeration Thermodynamics	<a href="#">Skill PDF</a>	X
	 3 Refrigeration/Heat Pump Operation	<a href="#">Skill PDF</a>	X
	Workplace Effectiveness		

	W11901-XA00AEN-E1 - Enterprise Systems 1 (96-ES1)		
	 1 Technology Sectors 1		X
	 2 Technology Sectors 2	<a href="#">Skill PDF</a>	X
	 3 Team Concepts	<a href="#">Skill PDF</a>	X
	 4 Product Design	<a href="#">Skill PDF</a>	X
	 5 Business Presentations	<a href="#">Skill PDF</a>	X
	 6 Internet Research	<a href="#">Skill PDF</a>	X
	WXAM101-XX00XEN-E2 - Principles of Advanced Manufacturing		
	 1 Advanced Manufacturing		X
	WXMA101-XX00XEN-E2 - Mathematics 1		
	 1 Basic Math		X
	 2 Fractions, Decimals, and Percentages		X
	 3 Basic Geometry		X
	WXMA304-XX00XEN-E2 - Trigonometry 1		
	 1 Trigonometry		X
	WXPD101-XX00XEN-E2 - Communication Skills		
	 1 Communication		X
	WXPD102-XX00XEN-E2 - Conflict Resolution		
	 1 Conflict Management		X
	WXPD103-XX00XEN-E2 - Working in Groups		
	 1 Working in Groups		X
	Amatrol Learning Center		

