Course 5 Industrial Electronics with PLC Technology

1	2330A	Current and Voltage
2	2330B	Controlling Current and Voltage
3	2333A	Power Distribution
4	2333B	Portable Extension Cords
5	2336A	Static Electricity
6	2336B	Electric Currents and Semiconductor Devices
7	2101A	Fractions and Decimal Numbers
8	2101B	Reciprocals, Percentage & Powers of Numbers
9	2339A	The Three Basics of Electric Circuits: Voltage, Current and Resistance
10	2339B	Ohm's Law, Conductors, and Insulators
11	2342A	Connecting and Tracing Battery Circuits
12	2342B	Identifying Components
13	2342C	Tracing Wiring on Printed Circuit Boards
14	2102A	Roots of Numbers, Ratio, and Proportion
15	2102B	Inverse Proportion and Negative Numbers
16	2323A	Parallel Circuits
17	2323B	Equivalent Circuits
18	2323C	Applications of Kirchhoff's Law
19	2324A	Series-Parallel Circuits
20	2324B	Voltage and Power
21	2511A	Vital Statistics of AC Circuits
22	2511B	Magnetism and Magnetic Circuits
23	2511C	Induced Voltage and Current
24	2313A	Thinking Circuits and Automatic Switches
25	2313B	Relays and Robots
26	2103A	Scientific Notation
27	2103B	Units of Measure

28	2304A	Inductance
29	2304B	Mutual Inductance & Magnetic Coupling
30	2304C	Transformers
31	2512A	Electrical Charges and Capacitance
32	2512B	Capacitors in Action
33	2403A	Rectifiers and Amplifiers
34	2403B	Transistors and FET Amplifiers
35	2104A	Reading and Using Graphs
36	2104B	Phasors and Formulas
37	2314	Simplifying Circuit analysis by using Kirchhoff's Laws
38	2315	Currents and Voltages in AC Circuits
39	2316	Resonant Circuits
40	2401	Using Semiconductor Diodes
41	2402	Operation of Semiconductor Devices
42	2503	Unregulated Power Supplies
43	2404	Operation of Tubes and Transistors
44	2405	Amplifiers
45	2412	How to Work with Transistors
46	2601	Audio Amplifiers and Equipment
47	2406	Radio Frequency Amplifiers
48	2407	Oscillators
49	2431	Operational Amplifiers
50	2201	Measuring Instruments
51	2202	Understanding and Using the Oscilloscope
52	3610	Regulated Power Supplies
53	2607	Systematic Troubleshooting
54	3342	Circuit Response to Non--Sinusoidal Waveforms
55	3463	Digital Switching Units

56	3104	Binary Coding and Computer Arithmetic
57	3464	Logic Circuit Tracing by Using Boolean Algebra
58	3466	Digital IC Families with Practical Operating Requirements
59	3343	Clippers, Clampers and Binaries
60	3465	Pulse Processing Circuits
61	3467	Important Digital IC Circuits
62	3468	Digital Systems and How to Troubleshoot Them
63	3471	An Overview of Industrial Control
64	3472	Methods and Operation of the Controller
65	3473	DC Motors and Drives
66	3474	AC Motors and Drives
67	3475	Servo Motors and Servomechanisms
68	3476	Pressure Systems and Temperature Control
69	3477	Flow Control and Level Control Systems
70	3478	Analytical and Industrial Instrumentation
71	3479	Detection Sensors
72	3480	Programmable Logic Controllers
73	3481	PLC Programming, Interfacing and Troubleshooting
74	3482	Motion Control
75	3483	Functional Systems
76	3220	Introduction to Robotics
77	3222	Mechanics Part I - Statics
78	3224	Mechanics Part II- Dynamics
*	3700	Associate-Level CET Study Guide

*Optional exam, not required for graduation and not graded.
Provided upon student request.