

2023 - 2024 4th Year Syllabus and Schedule

Test Date:	9/4/2023	Transformers	Level	III	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
1	Electrical Safety	Transformers Textbook Ch. 3	Lesson 1	8/14/2023	8/16/2023
2	Special Transformers	Transformers Textbook Ch. 10	Lesson 2	8/16/2023	8/21/2023
3	Special Connections	Transformers Textbook Ch. 11	Lesson 3	8/21/2023	8/23/2023
4	Selection and Installation	Transformers Textbook Ch. 12	Lesson 4	8/23/2023	8/28/2023
5	Maintenance and Troubleshooting	Transformers Textbook Ch. 13	Lesson 5	8/28/2023	9/4/2023

Test Date:	10/2/2023	Motor Control	Level	I	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
6	Introduction to Magnetic Motor Control	Fundamentals of Motor Control	Lesson 1	9/4/2023	9/4/2023
7	Manual Pilot Devices	Fundamentals of Motor Control	Lesson 2	9/4/2023	9/6/2023
8	Automatic Pilot Devices	Fundamentals of Motor Control	Lesson 3	9/6/2023	9/11/2023
9	Magnetic Control Relays	Fundamentals of Motor Control	Lesson 4	9/11/2023	9/13/2023
10	Control Transformers	Fundamentals of Motor Control	Lesson 5	9/13/2023	9/18/2023
11	Magnetic Contactors	Fundamentals of Motor Control	Lesson 6	9/18/2023	9/20/2023
12	Basic Motor Starters	Fundamentals of Motor Control	Lesson 7	9/20/2023	9/25/2023
13	Basic Timers	Fundamentals of Motor Control	Lesson 8	9/25/2023	9/27/2023
14	Control Diagrams and Drawings	Fundamentals of Motor Control	Lesson 9	9/27/2023	10/2/2023

Test Date:	11/1/2023	Motor Control	Level	II	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
15	Basic Electronics for Motor Control Devices	Fundamentals of Motor Control	Lesson 1	10/2/2023	10/4/2023
16	More Electronics for Motor Control Devices	Fundamentals of Motor Control	Lesson 2	10/4/2023	10/9/2023
17	Solid-State Motor Control Pilot Devices	Fundamentals of Motor Control	Lesson 3	10/9/2023	10/11/2023
18	Solid-State Relays	Fundamentals of Motor Control	Lesson 4	10/11/2023	10/16/2023
19	Motor Control Centers	Fundamentals of Motor Control	Lesson 5	10/16/2023	10/18/2023
20	Special Purpose Starters	Fundamentals of Motor Control	Lesson 6	10/18/2023	10/23/2023
21	Electronic Programmable Timers	Fundamentals of Motor Control	Lesson 7	10/23/2023	10/25/2023
22	Special Control Components	Fundamentals of Motor Control	Lesson 8	10/25/2023	10/30/2023
23	AC Motor Speed Control	Fundamentals of Motor Control	Lesson 9	10/30/2023	11/1/2023

Test Date:	11/22/2023	Torque	Level	I	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
24	Torque Theory	Torque (J242)	Lesson 1	11/20/2023	11/22/2023
25	Threaded Fasteners Basics	Torque (J242)	Lesson 2	11/20/2023	11/22/2023
26	Introduction to Torque Applications	Torque (J242)	Lesson 3	11/20/2023	11/22/2023
27	Torque Products	Torque (J242)	Lesson 4	11/20/2023	11/22/2023
28	Real World Electrical Torque Applications	Torque (J242)	Lesson 5	11/20/2023	11/22/2023

**** Gray Area - Complete during Thanksgiving Break**

Test Date	12/25/2023	Orientation	Level	III	Test Grade
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
29	The National Electrical Benefit Fund (NEBF)	Orientation	Lesson 1	12/13/2023	12/25/2023
30	After Apprenticeship	Orientation	Lesson 2	12/13/2023	12/25/2023
31	Soon to be an Instructor	Orientation	Lesson 3	12/13/2023	12/25/2023
32	This is a National Program	Orientation	Lesson 4	12/13/2023	12/25/2023
33	Keys to Success-Motivation and Leadership	Orientation	Lesson 5	12/13/2023	12/25/2023
34	The National Labor Relations Board	Orientation	Lesson 6	12/13/2023	12/25/2023
35	The Economics of Unemployment	Orientation	Lesson 7	12/13/2023	12/25/2023
36	The Realities of Construction	Orientation	Lesson 8	12/13/2023	12/25/2023

****Gray Area - Complete during December Break**

Test Date:	12/6/2023	Motor Control	Level	III	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
37	DC Motor Control	Fundamentals of Motor Control	Lesson 1	11/6/2023	11/8/2023
38	Understanding Analog Signals	Fundamentals of Motor Control	Lesson 2	11/8/2023	11/15/2023
39	Analog Pilot Devices	Fundamentals of Motor Control	Lesson 3	11/13/2023	11/15/2023
40	Working With Solid-State Devices in Motor Control	Fundamentals of Motor Control	Lesson 4	11/15/2023	11/20/2023
41	Variable Frequency Drives	Fundamentals of Motor Control	Lesson 5	11/20/2023	11/22/2023
42	Programmable Logic Controllers	Fundamentals of Motor Control	Lesson 6	11/22/2023	11/27/2023
43	Controlling Synchronous, Stepper, and Servo Motors	Fundamentals of Motor Control	Lesson 7	11/27/2023	11/29/2023
44	Networked Motor Control	Fundamentals of Motor Control	Lesson 8	11/29/2023	12/4/2023
45	Troubleshooting Electrical Systems	Fundamentals of Motor Control	Lesson 9	12/4/2023	12/6/2023

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Test Date:	3/4/2024	PLC	Level	I	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
46	PLC and Critical Safety Practices	PLC's (S631)	Lesson 1	1/15/2024	1/17/2024
47	PLC Electrical Principles, Ratings, and Circuit Calculations	PLC's (S631)	Lesson 2	1/17/2024	1/22/2024
48	PLC Programming Symbols, Diagrams, and Logic Functions	PLC's (S631)	Lesson 3	1/22/2024	1/24/2024
49	PLC Hardware, Memory, and Operating Cycle	PLC's (S631)	Lesson 4	1/24/2024	1/29/2024
50	PLC Systems, Circuits, and Interface Devices	PLC's (S631)	Lesson 5	1/29/2024	1/31/2024
51	PLC Programming Diagrams, Addresses, and Bit Instructions	PLC's (S631)	Lesson 6	1/31/2024	2/5/2024
52	PLC Programming Timer and Counter Instructions	PLC's (S631)	Lesson 7	2/5/2024	2/7/2024
53	PLC analog Device Installation, Programming, and Troubleshooting	PLC's (S631)	Lesson 8	2/7/2024	2/12/2024
54	PLC Installations and Startup	PLC's (S631)	Lesson 9	2/12/2024	2/14/2024
55	Troubleshooting Methods and Test Instrument Operation	PLC's (S631)	Lesson 10	2/14/2024	2/19/2024
56	Testing and Troubleshooting Electrical Devices and PLC Hardware	PLC's (S631)	Lesson 11	2/19/2024	2/21/2024
57	Troubleshooting with PLC Software	PLC's (S631)	Lesson 12	2/21/2024	2/26/2024
58	PLC System Maintenance	PLC's (S631)	Lesson 13	2/26/2024	3/4/2024

Test Date:	4/3/2024	Power Quality	Level	I	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
60	Why care about power quality?	Power Quality Textbook	Lesson 1	3/4/2024	3/6/2024
61	The basics of power quality	Power Quality Textbook	Lesson 2	3/6/2024	3/11/2024
62	Safety	Power Quality Textbook	Lesson 3	3/11/2024	3/13/2024
63	Using the right tool	Power Quality Textbook	Lesson 4	3/13/2024	3/18/2024
64	Monitor setup	Power Quality Textbook	Lesson 5	3/18/2024	3/20/2024
65	Data collection and analysis	Power Quality Textbook	Lesson 6	3/20/2024	3/25/2024
66	Practical Examples	Power Quality Textbook	Lesson 7	3/25/2024	3/27/2024
67	Rule of thumb	Power Quality Textbook	Lesson 8	3/27/2024	4/1/2024
68	Mitigation equipment	Power Quality Textbook	Lesson 9	4/1/2024	4/3/2024

Test Date:	4/29/2024	Building Automation	Level	III	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
69	Introduction to Building Automation	Building Automation: Control Dev	Lesson 1	4/3/2024	4/8/2024
70	Electrical Systems	Building Automation: Control Dev	Lesson 2	4/8/2024	4/10/2024
71	Lighting Sources and Controls	Building Automation: Control Dev	Lesson 3	4/10/2024	4/15/2024
72	Lighting Systems Control Devices	Building Automation: Control Dev	Lesson 4	4/15/2024	4/17/2024
73	HVAC Systems	Building Automation: Control Dev	Lesson 5	4/17/2024	4/22/2024
74	HVAC Systems Applications	Building Automation: Control Dev	Lesson 6	4/22/2024	4/24/2024
75	Automated Building Operation and Applications	Building Automation: Control Dev	Lesson 7	4/24/2024	4/29/2024

Test Date:	6/19/2024	Structured Cabling	Level	I	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
76	The Need for Structured Cabling Systems	Structured Cabling (S581)	Lesson 1	5/1/2024	5/6/2024
77	Introduction to Structured Cabling Standards and Codes	Structured Cabling (S581)	Lesson 2	5/6/2024	5/8/2024
78	Structured Cabling Standards	Structured Cabling (S581)	Lesson 3	5/8/2024	5/13/2024
79	Cables and Connectors	Structured Cabling (S581)	Lesson 4	5/13/2024	5/15/2024
80	Structured Cabling System Performance	Structured Cabling (S581)	Lesson 5	5/15/2024	5/20/2024
81	Unshielded Twisted Pair Connecting Hardware	Structured Cabling (S581)	Lesson 6	5/20/2024	5/22/2024
82	Telecommunications Pathways and Spaces	Structured Cabling (S581)	Lesson 7	5/22/2024	5/27/2024
83	Telecommunications Cabling Administration	Structured Cabling (S581)	Lesson 8	5/27/2024	5/29/2024
84	Telecommunications Grounding and Bonding	Structured Cabling (S581)	Lesson 9	5/29/2024	6/3/2024
85	Configuring Structured Cabling Systems	Structured Cabling (S581)	Lesson 10	6/3/2024	6/5/2024
86	Residential Cabling Systems	Structured Cabling (S581)	Lesson 11	6/5/2024	6/10/2024
87	Certifying the UTP Cabling System	Structured Cabling (S581)	Lesson 12	6/10/2024	6/19/2024

Test Date:	7/17/2024	Code, Standards, and Practices 5	Level	I	Test Grade:
Syllabus Number	Title	Book Name	Lesson/Lab #	Date	Due Date
88	Installing Electrical Services	Code, Standards, and Practices 5	Lesson 1	6/19/2024	6/24/2024
89	Swimming Pools, Fountains, and Similar Instal	Code, Standards, and Practices 5	Lesson 2	6/24/2024	6/26/2024
90	Understanding Emergency and Standby System	Code, Standards, and Practices 5	Lesson 3	6/26/2024	7/1/2024
91	Over 1000 volt installations	Code, Standards, and Practices 5	Lesson 4	7/1/2024	7/3/2024
92	Remote-Control, Signaling, and Power-Lim	Code, Standards, and Practices 5	Lesson 5	7/3/2024	7/8/2024
93	2017 NEC Changes - Part 1	Code, Standards, and Practices 5	Lesson 6	7/8/2024	7/10/2024
94	2017 NEC Changes - Part 2	Code, Standards, and Practices 5	Lesson 7	7/10/2024	7/17/2024

**** Official last day is June 6, 2024 **Schedule will change based on class ability to absorb material and testing **This syllabus is a guide, Instructor will approve changes as necessary**