

# Core Curriculum

## 1st Year Syllabus

VEEP SD03 2024



## Core Curriculum: Course Selection Per Year

1st Year Core	
PTSI Online Learning System Review	0
Harassment Prevention: Awareness and Responsibilities - 2023 - CML	0
Reading Comprehension - CML	0
Constructing Your Future - CML	0.5
Tech Math CML	0
Introduction to Apprenticeship - CML	3
OSHA-10	0
VEEP Basic First Aid/Basic Life Support	0
VEEP Suicide Awareness and Prevention	0
Electrical Job Information 1 - CML	7.5
Electrical Theory 1: Direct Current - CML	15
Construction Drawings - CML	3.5
Conduit System Fabrication 1 - CML	4
Applied Codeology, Navigating the 2023 NEC - CML	4
Electrical Industry Applications Manual, Lesson 1 - Splicing Conductors	0.25
Electrical Industry Applications Manual, Lesson 2 - Installing a Duplex Receptacle	0.25
Electrical Industry Applications Manual, Lesson 3 - Installing a Single Pole Switch	0.25
Electrical Industry Applications Manual, Lesson 4 - Installing a Switched Duplex Receptacle	0.25
Electrical Industry Applications Manual, Lesson 8 - Using a Hacksaw	0.25
Electrical Industry Applications Manual, Lesson 9 - Lifting and Carrying Conduit	0.25
Electrical Industry Applications Manual, Lesson 11 - Hand Bending a 90° Stub-up	0.25
Electrical Industry Applications Manual, Lesson 12 - Hand Bending a Box Offset	0.25

# Core Curriculum: 1st Year Core Courses

	Credits	Page	Date
<b>PTSI Online Learning System Review</b>			
PTSI001	0.0	1	
<b>Harassment Prevention: Awareness and Responsibilities - 2023 - CML</b>			
J158LM.D	0.0	2	
<b>Reading Comprehension - CML</b>			
J199LM	0.0	2	
<b>Constructing Your Future - CML</b>			
J200LM.J1	0.5	3	
<b>Tech Math CML</b>			
VEEP.LC12	0.0	3	
<b>Introduction to Apprenticeship - CML</b>			
J200LM.J2	3.0	4	
<b>OSHA-10</b>			
VEEP.LC1	0.0	4	
<b>VEEP Basic First Aid/Basic Life Support</b>			
VEEP.LC2	0.0	4	
<b>VEEP Suicide Awareness and Prevention</b>			
VEEP.LC15	0.0	5	
<b>Electrical Job Information 1 - CML</b>			
J221LM.P	7.5	5	
<b>Electrical Theory 1: Direct Current - CML</b>			
J202LM.M	15.0	6	

# Core Curriculum: 1st Year Core Courses

	Credits	Page	Date
<b>Construction Drawings - CML</b>			
J244LM.J1	3.5	7	
<b>Conduit System Fabrication 1 - CML</b>			
J204LM.I1	4.0	8	
<b>Applied Codeology, Navigating the 2023 NEC - CML</b>			
J207LM.N	4.0	9	
<b>Electrical Industry Applications Manual, Lesson 1 - Splicing Conductors</b>			
≡ J300.K	0.25	10	
<b>Electrical Industry Applications Manual, Lesson 2 - Installing a Duplex Receptacle</b>			
≡ J300.K	0.25	10	
<b>Electrical Industry Applications Manual, Lesson 3 - Installing a Single Pole Switch</b>			
≡ J300.K	0.25	10	
<b>Electrical Industry Applications Manual, Lesson 4 - Installing a Switched Duplex</b>			
≡ J300.K	0.25	10	
<b>Electrical Industry Applications Manual, Lesson 8 - Using a Hacksaw</b>			
≡ J300.K	0.25	10	
<b>Electrical Industry Applications Manual, Lesson 9 - Lifting and Carrying Conduit</b>			
≡ J300.K	0.25	10	
<b>Electrical Industry Applications Manual, Lesson 11 - Hand Bending a 90° Stub-up</b>			
≡ J300.K	0.25	10	
<b>Electrical Industry Applications Manual, Lesson 12 - Hand Bending a Box Offset</b>			
≡ J300.K	0.25	10	



# Core Curriculum: Course Level and Credit Summary

## ***PTSI Online Learning System Review***

Item Code: PTSI001

Core Curriculum Year: 1

Core Credits

Advanced Credits

0.0

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Notifications:*

*This course is designed to inform the users of the ProTech Skills Institute (PTSI) Online Learning System and its associated resources with the basics of how to interact with the tools. This course shows the user how the system is laid out and provides insight into how to get the most out of this*

*Required Material(s):*

Lesson 1 Online Learning System Layout

Lesson 2 My Records

Lesson 3 PTSI Mobile App

## ***Harassment Prevention: Awareness and Responsibilities - 2023 - CML***

Item Code: J158LM.D

Core Curriculum Year: 1

Core Credits

Advanced Credits

0.0

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Notifications:*

*This course meets DOL and Committee requirements to provide anti-harassment training to apprentices*

*Required Material(s):*

Lesson 1 Prohibited Harassment

Lesson 2 Sexual Harassment

Lesson 3 Reporting Harassment

# Core Curriculum: Course Level and Credit Summary

## **Reading Comprehension - CML**

Item Code: J199LM

Core Curriculum Year: Advanced

Core Credits

Advanced Credits

0.0

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Required Material(s):*

Lesson 1	Pre-Assessment
Lesson 2	Reading StrategiesLMS Moodle Quiz
Lesson 3	Text Comprehension
Lesson 4	Paragraph Organization
Lesson 5	Drawing Connections
Lesson 6	Applying Reading Comprehension to Math
Lesson 7	Reading Comprehension Practice Quizzes
Lesson 8	Reading Comprehension Final Exam
Lesson 9	Completion Certificate

## **Constructing Your Future - CML**

Item Code: J200LM.J1

Core Curriculum Year: 1

Core Credits

Advanced Credits

0.5

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Required Material(s):*

Lesson 1	What to Expect
Lesson 2	Opportunities Abound
Lesson 3	Personal Responsibilities & Expectations
Lesson 4	Safety Never Takes a Break
Lesson 5	What it Takes to Succeed

# Core Curriculum: Course Level and Credit Summary

## **Tech Math CML**

Item Code: **VEEP.LC12**

Core Curriculum Year: Advanced

Core Credits

Advanced Credits

0.0

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Required Material(s):*

## **Introduction to Apprenticeship - CML**

Item Code: **J200LM.J2**

Core Curriculum Year: 1

Core Credits

Advanced Credits

3.0

*Course Prerequisite(s): Constructing Your Future*

*Other Prerequisites: None*

*Required Material(s):*

- Lesson 1 Welcome to the Beginning of Your Electrical Career!
- Lesson 2 Preparing for Your Apprenticeship
- Lesson 3 The Economics of Working in Construction
- Lesson 4 The Organized Electrical Industry
- Lesson 5 Reaping the Rewards of the IBEW-NECA Partnership

## **OSHA-10**

Item Code: **VEEP.LC1**

Core Curriculum Year: Advanced

Core Credits

Advanced Credits

0.0

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Required Material(s):*

# Core Curriculum: Course Level and Credit Summary

## **VEEP Basic First Aid/Basic Life Support**

Item Code: VEEP.LC2

Core Curriculum Year: Advanced

Core Credits

Advanced Credits

0.0

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Required Material(s):*

## **VEEP Suicide Awareness and Prevention**

Item Code: VEEP.LC15

Core Curriculum Year: Advanced

Core Credits

Advanced Credits

0.0

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Required Material(s):*

# Core Curriculum: Course Level and Credit Summary

## ***Electrical Job Information 1 - CML***

*Item Code:*      **J221LM.P**

**Core Curriculum Year: 1**

**Core Credits**

**Advanced Credits**

**7.5**

***Course Prerequisite(s): None***

***Other Prerequisites: None***

***Required Material(s):***

- Lesson 1    Safety and Awareness in the Workplace of an Electrical Worker
- Lesson 2    Identifying Some Basic Tools and Common Materials of the Electrical Trade
- Lesson 3    Basics of Insulated Conductors
- Lesson 4    Choosing and Installing Anchors and Fasteners
- Lesson 5    Types of Building Construction
- Lesson 6    Conductor Installation
- Lesson 7    Devices and Switches
- Lesson 8    Introduction to Firestopping
- Lesson 9    Sizing Building Wire
- Lesson 10    Topic Review

# Core Curriculum: Course Level and Credit Summary

## ***Electrical Theory 1: Direct Current - CML***

Item Code: J202LM.M

Core Curriculum Year: 1

Core Credits

Advanced Credits

15.0

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Required Material(s):*

- *DC Theory Textbook (S640)*
- *TI-30X IIS Solar Calculator (S159)*
- *Test Instruments and Applications Textbook (S571)*
- *Student Notebook 1 (N202)*
- *Building a Foundation in Mathematics (S665)*
- *Ugly's Electrical References (S1154)*

- Lesson 1 Introduction to DC Theory: Terminology and the Basics
- Lesson 2 Series Circuits
- Lesson 3 Parallel Circuits
- Lesson 4 Combination Circuits
- Lesson 5 DC Circuit Analysis
- Lesson 6 Switches and Conductors
- Lesson 7 Magnetism and Electromagnetism
- Lesson 8 Resources
- Lesson 9 Support - Labs
- Lesson 10 Final Circuit Assessment

# Core Curriculum: Course Level and Credit Summary

## ***Construction Drawings - CML***

Item Code: J244LM.J1

Core Curriculum Year: 1

Core Credits

Advanced Credits

3.5

*Course Prerequisite(s): None*

*Other Prerequisites: None*

*Required Material(s):*

- *Construction Drawings Textbook (S748)*
- *Commercial Blueprints (S136.H)*
- *electrical training ALLIANCE Architectural Scale (S187)*
- *Student Notebook 1 (N202)*

Lesson 1 Introduction to Blueprints and the Design Process

Lesson 2 Scaling and Dimensions

Lesson 3 Plan Views

Lesson 4 Elevations

Lesson 5 Details and Sections

Lesson 6 Schedules and Specifications

# Core Curriculum: Course Level and Credit Summary

## **Conduit System Fabrication 1 - CML**

Item Code: J204LM.11

Core Curriculum Year: 1

Core Credits

Advanced Credits

4.0

*Course Prerequisite(s): Electrical Job Information 1*

*Other Prerequisites: None*

*Required Material(s):*

• *Conduit Bending and Fabrication Textbook (\$495)*

• *TI-30X IIS Solar Calculator (\$159)*

- Lesson 1 Raceways and Conduit Systems
- Lesson 2 Cutting and Threading Conduit
- Lesson 3 Hand Bending 90° Bends
- Lesson 4 Hand Bending Offsets and Kicks
- Lesson 5 Hand Bending Saddles and Corner Offsets
- Lesson 6 Underground Conduit Installation
- Lesson 7 Resources
- Lesson 8 Support - Labs



# Core Curriculum: Course Level and Credit Summary

## ***Applied Codeology, Navigating the 2023 NEC - CML***

Item Code: J207LM.N

Core Curriculum Year: 1

Core Credits

Advanced Credits

4.0

***Course Prerequisite(s): Electrical Job Information 1***

***Other Prerequisites: None***

***Required Material(s):***

• ***Applied Codeology Textbook (S01723)***

• ***National Electrical Code - 2023 (S1150)***

- Lesson 1 Overview, Organization, and Chapter 1 of the *National Electrical Code*
- Lesson 2 Planning the Installation
- Lesson 3 Building the Installation
- Lesson 4 Using the Electricity
- Lesson 5 Special Occupancies
- Lesson 6 Special Equipment
- Lesson 7 Special Conditions
- Lesson 8 Communications
- Lesson 9 Tables and the Informative Annexes
- Lesson 10 The Codeology Method
- Lesson 11 Post-Course Assessment

# Core Curriculum: Course Level and Credit Summary

## ***Applications Manual***

*Item Code:*        **J300.K**

**Core Curriculum Year: 1 and 2**

**Core Credits**

**Advanced Credits**

**Level I/II**

***Course Prerequisite(s): None***

***Required Material(s): None***

Lesson 1	Splicing Conductors	0.25
Lesson 2	Installing a Duplex Receptacle	0.25
Lesson 3	Installing a Single Pole Switch	0.25
Lesson 4	Installing a Switched Duplex Receptacle	0.25
Lesson 5	Proper Device Installation Techniques, GFCI Rough-In	0.25
Lesson 6	Using Anchors to Install a Metal Enclosure	0.25
Lesson 7	Installing a Retrofit "Old Work" Electrical Box	0.25
Lesson 8	Using a Hacksaw	0.25
Lesson 9	Lifting and Carrying Conduit	0.25
Lesson 10	Erecting an Extension Ladder	0.25
Lesson 11	Hand Bending a 90° Stub-up	0.25
Lesson 12	Hand Bending a Box Offset	0.25
Lesson 13	Cutting a Hole in a Metal Enclosure for an EMT Connector	0.25
Lesson 14	Installing a Raceway Support System (Trapeze)	0.25
Lesson 15	Threading Conduit (Tapered Thread)	0.25
Lesson 16	Installing Flexible Metallic Conduit	0.25
Lesson 17	Installing Armor Clad and Metal Clad Cables	0.25
Lesson 18	Installing a Luminaire (Recessed "Can" Fixture)	0.25
Lesson 19	Installing a Luminaire (2' x 4' Fluorescent)	0.25
Lesson 20	Wire Pulling Techniques	0.25
Lesson 21	Terminating a Category 5e or 6/6A Work Area Outlet	0.25
Lesson 22	Labeling and Marking	0.25
Lesson 23	"Trimming Out" an Electrical Panel	0.25
Lesson 24	Exothermic Welding of Copper Conductors	0.25
Lesson 25	Connecting a Dual-Voltage, Wye-Wound Motor	0.25

**ATTENTION:** Your JATC will choose four out of the 25 Applications Manual lessons to be presented to students during the first year, and four out of the remaining Applications to be presented to students during the second year. Any Applications presented above the four per year must be matched with additional classroom time beyond 180 hours.