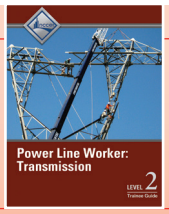
Connectors, Conductor Terminations, and Splicing *(25 Hours)*
ISBN 978-0-13-296794-5
(Module ID 82304-12) Describes the procedures and materials required to prepare and complete terminations and splices on insulated and non-insulated conductors and cables. Coverage is provided for both medium- and high-voltage circuits. Hydraulic presses and crimpers are introduced, along with hi-pot testing procedures for terminations and splices.

Equipment Testing and Maintenance *(30 Hours)*
ISBN 978-0-13-296795-2
(Module ID 82305-12) Identifies the testing procedures required and explains how to properly maintain substation components. Coverage of testing and maintenance procedures is provided for power transformers, potential devices, various circuit breakers, disconnects and switches, capacitors, and reactors.

System Protection and Control *(12.5 Hours)*
ISBN 978-0-13-296796-9
(Module ID 82306-12) Describes the protective functions required in the substation environment to defend against overloads, fault currents, and other incidents that can disrupt service or damage the system. Offers coverage of the components used to provide both protection and system control. An introduction to the various protective relay schemes used in today's substations is included.

Fundamentals of Crew Leadership *(20 Hours)*
ISBN 978-0-13-292245-6
(Module ID 46101-11, Second Edition) Covers basic leadership skills and explains different leadership styles, communication, delegating, and problem solving. Jobsite safety and the crew leader's role in safety are discussed, as well as project planning, scheduling, and estimating. Includes performance tasks to assist the learning process.

L2 POWER LINE WORKER: TRANSMISSION



LEVEL 2

Curriculum Notes

- 175 Hours
- Published: 2011
- Downloadable instructor resources that include module tests, PowerPoints®, and performance profile sheets are available at www.nccer.org/irc.

PAPERBACK	ISBN
Trainee Guide: $99.99	978-0-13-273033-4

MODULES

The modules listed below are included in the Trainee Guide. The following ISBNs are for ordering individual modules only.

Alternating Current and Three-Phase Systems *(17.5 Hours)*
ISBN 978-0-13-274259-7
(Module ID 80201-11; from *Power Line Worker: Distribution Level Two*) Introduces the development of both single- and three-phase alternating current. Analyzes the relationship of AC phases and introduces key components used to refine AC power. Discusses the operation of transformers and introduces advanced AC concepts such as reactive power and the power factor.

Transmission Structure Rigging *(17.5 Hours)*
ISBN 978-0-13-296770-9
(Module ID 81201-11) Covers rigging equipment and practices specific to transmission structures. Coverage includes slings, crane stability, and the safe use of personnel platforms.

Transmission Structure Erection *(50 Hours)*
ISBN 978-0-13-274276-4
(Module ID 81202-11) Describes the erection requirements for various types of transmission structures, including steel towers, wood structures, and different types of poles. Covers general construction requirements, as well as right-of-way clearing, foundations, framing and erection, guying and anchoring, and grounding and bonding.

Transmission Equipment Installation *(50 Hours)*
ISBN 978-0-13-274277-1
(Module ID 81203-11) Focuses on the safe installation of insulators and conductors. Coverage includes stringing and splicing of conductors, conductor terminations, conductor sagging, clipping in, and the installation of accessories such as vibration dampers, spacers, warning lights, and day markers.

Transmission System Maintenance *(40 Hours)*
ISBN 978-0-13-274278-8
(Module ID 81204-11) Coverage includes safety practices related to working with helicopters, as well as inspection of insulators, towers, and poles. Discusses clearance procedures and environmental concerns such as protection of wetlands, waterways, and wildlife.

L3 POWER LINE WORKER: TRANSMISSION

LEVEL 3

Curriculum Notes

- 200 Hours
- Published: 2012
- Downloadable instructor resources that include module tests, PowerPoints®, and performance profile sheets are available at www.nccer.org/irc.

PAPERBACK	ISBN
Trainee Guide: $99.99	978-0-13-294867-8

MODULES

The modules listed below are included in the Trainee Guide. The following ISBNs are for ordering individual modules only.

Construction, Maintenance, and Repair – Live-Line Barehand *(40 Hours)*
ISBN 978-0-13-296772-3
(Module ID 81301-12) Describes the methods used to work on live transmission lines by bonding to the line. Covers safety practices and PPE, and includes coverage of bonded buckets, non-conductive suits, insulated ladders, bonding jumpers, and rescue procedures.

Reconductoring Transmission Lines *(40 Hours)*
ISBN 978-0-13-296775-4
(Module ID 81302-12) Describes the replacement of existing transmission conductors as contrasted with installation of new conductors. Coverage includes pulling equipment setup, guard structures, and permit requirements. Includes live-line replacement as well as use of the existing conductors to pull the replacement conductors.

Construction, Maintenance, and Repair – Hot Stick *(80 Hours)*
ISBN 978-0-13-296774-7
(Module ID 81303-12) Covers tools such as hot sticks, shotgun sticks, and wire tongs, along with the PPE and safe work practices that are critical elements of live-line and bare-hand work. Includes coverage of live-line tasks such as replacing insulators, cross-arms, and spacers.

Lift Planning *(40 Hours)*
ISBN 978-0-13-266190-4
(Module ID 38302-11; from *Advanced Rigger, First Edition*) Discusses lift plan implementation, including reference information, calculations, single- and multiple-crane lifting, critical lifts, and engineering considerations.