



# Voltage Control



## Background

This online course is delivered through [Spark! By OES-NA](#). The course is intended to provide an overview to the Bulk Electric System and the transmission facilities that exists. It is intended to provide students with the basic understanding of the components of the transmission system. Topics covered in this course include: reactive power flow, causes of low voltage, causes of high voltage, effects of low voltage, effects of high voltage, and the purpose and operation of voltage control equipment Each lesson is culminated with a review and quiz. Upon completion of the lessons, there is a final assessment that consists of 10 multiple choice questions. Individuals must attain a passing grade of 70% on the final assessment in order to be awarded the NERC CEHs.

## Course Level

Not Applicable

## Target Audience

The course is intended for: new operators to the system that will have the responsibility of voltage control; generation operators who want to expand their knowledge of system voltage control; individuals who desire additional information related to how voltage is controlled on the Bulk Electric System; and those individuals trying to understand transmission equipment as part of NERC Certification Preparation.

## NERC Continuing Education Hours

**TOTAL:** 1.5 CEHs  
**Standards:** 0.0 CEHs  
**Ops Topics:** 1.5 CEHs  
**Sim:** 0.0 CEHs

## NERC Emergency Training Requirement

1.5 hours of Emergency Training

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## Course Content

The course steps through lessons related to various aspects to controlling voltage on the Bulk Electric System. Each lesson identifies and explains the various aspects related the following content:

- Reactive power flow
- Causes of low voltage
- Causes of high voltage
- Effects of low voltage
- Effects of high voltage
- Purpose and operation of voltage control equipment

## Delivery Schedule

Since the course is delivered on an individual basis via the Internet, individuals have the ability to set their own pace and schedule for completion of the course. Registered students are provided with 6 months from the time of registration to complete the course.

## Student Requirements

- Students must sign-in using their individual log-in and password to access the course.
- Students are required to provide their NERC SO Certification # and other applicable contact information during the course registration process.
- Students must complete all course material prior to attempting the final assessment.
- Students must successfully earn a 70% grade on the final activity assessment.
- Students must submit a course evaluation form. (Level of completion is not measured, but full completion is desired)

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