

**Design of Experiments (DOE) with Minitab**

**Course Number:** MTNB-106
**Duration:** 1 day

**Overview**

In this Design of Experiments (DOE) with Minitab training course, students learn how to create common experiments, control for covariates in the model, and analyze and improve upon those experiments. Minitab® experiments include full factorial, fractional factorial, split-half designs, response surface, and mixtures.

**Prerequisites**

All students should have taken [Minitab Basics](file:////training/minitab-basics) and [Basic Statistics with Minitab,](file:////training/minitab-basic-statistics) or have equivalent experience.

**Materials**

All Minitab training students receive comprehensive courseware.

**Software Needed on Each Student PC**

Each student should have Minitab software installed (or use the [free 30-day trial](https://www.minitab.com/en-us/products/minitab/free-trial/)).

**Objectives**

* Create common experiments
* Control for covariates in the model
* Analyze and improve conducted experiments

**Outline**

* Optimizing a System with DOE
* Creating a Design from an Existing File
* Analyzing Variation as a Response
* Removing the Effects of Extraneous Variables
* Planning an Experiment with Many Factors and Few Runs
* Experimenting with Hard-to-Change (HTC) Factors
* Designing and Analyzing Response Surface Designs
* Designing and Analyzing Mixture Designs