Intro to SPC and DOE

Course format: **Free** instructor-led online training
Course duration: 4 hours, typically in two 2-hour sessions

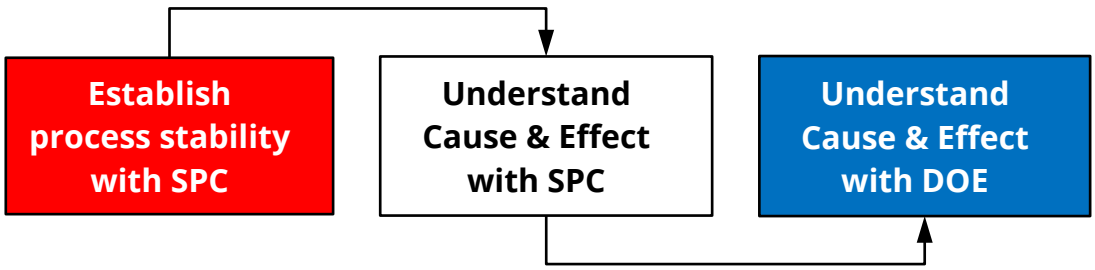
Course overview

Intro to SPC and DOE is a free workshop designed to introduce *Statistical Process Control* and *Design of Experiments* to two groups of people.

- People that are unfamiliar with SPC and/or DOE
- People with unsatisfactory experience with SPC and/or DOE.

The course is presented as a series of interesting real-world SPC and DOE case studies that demonstrate some of the pitfalls that can lead to SPC and DOE disappointment as well as the right approach to assure SPC and DOE success. After attending this free course, attendees can decide if one of Pyzdek's *Cost Reduction Strategies* courses make sense for them.

The fundamental structure of the course is shown in this sketch:



Pre-requisites

There are no pre-requisites for this course, however attendees are encouraged to bring a laptop equipped with JMP or Minitab statistical software, if available.

Benefits to attendees

- Free learning!
- Why SPC is a key foundation of continuous improvement (along with Lean Principles)
- Why *Lean Principles* → *Statistical Process Control* → *Design of Experiments* is the right sequence for best process improvement results
- Why Design of Experiments is needed to minimize defects and maximize profits
- How statistical software has made SPC and DOE both practical and cost-effective
- Learn useful baseline statistical principles

Course structure

Course content	% of time spent
Hands-on exercises and interpretation of results	80%
SPC principles	10%
DOE principles	10%

Specific topic covered

- How to use SPC and DOE to ***make your processes safer, faster, better & cheaper***
- *The Great Mathematical Quandary*
- The Statistical mindset
- The IMR control chart
- The XBar-R control chart
- Design of Experiments for interaction process models
- Why DOE is a lot more cost-effective now than it was a few years ago

Schedule options

- Two 2-hour segments on a Tuesday & Thursday
- Pyzdek Institute will try to accommodate other schedule requests

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