

Spec Ops – Altium Designer Course Agenda

The Spec Ops course builds on the basic skills that users have acquired through the Boot Camp training or from personal experience. Students who are new to using Altium Designer would be better served to enroll in the Boot Camp training class before attending Spec Ops training.

Nine Dot Connects provides a short quiz that helps a student to decide which of the two courses - the Boot Camp or Spec Ops – is appropriate. Check out the link -

<https://www.ninedotconnects.com/training-ad-quiz>.

The Spec Ops manual was written using AD18 and is recommended for use with that specific version. This way all the screen captures in the manual are accurate.



The Spec Ops course has no library training – it is more centered on the PCB editor.

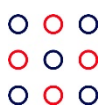
Like Boot Camp training, the course is broken into modules of training where a subject is presented and an exercise follows each module to reinforce the learning process.

While Boot Camp progresses through a standard PCB project flow with many exercises depending upon the results of the previous modules, Spec Ops is a modularized course. Any of the 18 modules of Spec Ops training can be taught on their own. Alternatively, students have the option with Nine Dot Connects to bundle together whatever training modules they like to configure their own customized training.

In 3 days, Spec Ops will help student become more productive in the PCB environment through effective use of Altium Designer and its features. Along with detailed documentation and data management topics, advanced routing and construction techniques will be explored. Mastering high-speed design constructs like differential pair routing, length matching and tuning will be introduced and reinforced. Additionally, students will be introduced to many of Altium Designer's latest features, geared toward maximizing innovation and efficiency.

- Day 1 - Data Management, What's New in AD18 and Schematic Spec Ops
- Day 2 - Board Setup, Rules and Placement
- Day 3 – Routing, Length Tuning and PCB Spec Ops

The ideal entrant into our Spec Ops course will be a Nine Dot Connects Boot Camp graduate or an Altium Designer user who is comfortable with navigating the software. The student gaining the most would be the PCB designer who wants a boost in productivity, design accuracy, or level of detail in their designs, as well as the engineer who is looking to achieve the next level of creativity and innovation.



Leader in EDA and PCB training and service

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[ninedotconnects.com/training](https://www.ninedotconnects.com/training)

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Day 1 – Data Management, What’s New in AD18 and Schematic Spec Ops

- Mod 1- Data Management
- Mod 2 – What’s New in AD18?
- Mod 3 – Schematic Directives (setting up PCB rules in a schematic)
- Mod 4 – Multi-Channel Design (repeated circuitry)
- Mod 5 – PCB Back-Annotation
- Mod 6 – Pin-Swapping and Part-Swapping

Day 2 – Board Setup, Rules and Placement

- Mod 7 – Selections and Conversions
- Mod 8 – Rigid – Flex design
- Mod 9 – Design rules
- Mod 10 - Multi-Board Design
- Mod 11 – PCB Rooms
- Mod 12 – Footprint Placement Tools

Day 3 – Routing, Length Tuning and PCB Spec Ops

- Mod 13 – Interactive Routing
- Mod 14 – Length Tuning
- Mod 15 - xSignals
- Mod 16 – PCB Blind/Buried vias and back-Drilling Thru-Holes
- Mod 17 – ActiveRoute and Fanouts
- Mod 18 – Draftsman

