AVIPLAN | Public Online Training

AviPLAN Advanced | Airside Planning and Design for Experienced Users

The advanced AviPLAN course builds on users' existing skills, offering deeper insights into functionality and global case studies to unlock the software's full potential

Who should attend?

Recommended for trained or experienced users of any AviPLAN product

Duration

12 hours (4 hours x 3 days)

Prerequisites

- Prior experience or training in AviPLAN is required
- A basic understanding of AutoCAD® or BricsCAD® or MicroStation®
- A basic knowledge of national/international airport planning regulations
- A sound understanding of airport planning concepts

Why choose this training format?

- Easy to join online instructor-led sessions from any location, minimizing travel and scheduling conflicts
- Scheduled sessions offer a clear timeline, helping participants stay on track
- Access to training materials, enabling reinforcement of learning
- Reduced travel and accommodation make this format a budget-friendly solution

Course Content

Introduction

- General introduction
- Installation guidelines and Start options

Global and drawing related settings

- Working units and regulations
- Assigning the default session layer and dimension style
- Saving, applying and sharing settings templates
- Creating and sharing user-defined airplane labels
- Conflict analysis options

Park command

- Terrain selection; Using the Drawing X,Y plane or a Terrain object
- Interactively creating and applying airplane configurations
- Handling sessions with CAD functionality vs AviPLAN functionality
- Saving, moving, copying, reopening, deleting and importing sessions

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Drawing Manager command

- Managing and assigning CAD layers with AviPLAN
- Creating and applying complex property templates
- Editing and applying Airplane Configurations
- Converting sessions to 3D
- How to locate and manage sessions in a drawing
- How to use Saved Session Views to easily enable repeated display of simulation scenarios
- Organizing and structuring your design work

Path command

- Understanding program limitations and assumptions
- Simulation speed settings and principals
- Understanding effective steering angles, steering limits, and steering rate
- How to increase accuracy by starting/ending simulations via SmartTarget
- How to edit constructed paths
- Splitting constructed paths into sections for more detailed analysis and varied element display
- Pushback functionality and best practices

Case study demonstrations

- 2D and 3D analysis of an apron design with restricted lead-in and lead-out procedures incl. marking design
- A major airline enquires about operating wide body airplanes at a regional airport. We explore taxiway routing options to identify areas of non-compliance and possible solutions

Group Manager command

- Creating groups of airplanes for Stand, Fillet. Group Path and Group Lead-in commands
- Saving, selecting and sharing your custom airplane groups

Group Path command

- Settings, selections and CAD drawing requirements
- Selecting/adding airplanes and/or airplane groups
- Manual vs. automatic construction point selection
- Building a Group Path from scratch
- How to use existing Path sessions to rapidly construct and modify Group Paths
- Connecting Group Path simulations to analyze alternative procedures along a path
- Using conflict detection to analyze main gear to pavement edges compliance
- Using conflict detection to analyze wingtip clearance to apron limit markings
- Interpreting results and creating reports

Case study demonstrations

- Study a route for a large group of airplanes from runway to apron-taxiway, checking for main gear and wingtip clearance compliance and creating reports
- Create a Group Path on the basis of a previously created single Path, as a feasibility study, to analyze the planned taxiway routing for a larger variety of airplanes

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Fillet command

- Review regulation design criteria for ICAO/EASA/FAA
- How to choose the correct airplane design groups and effective wheelbase parameters
- How to create and apply large groups of airplanes to ensure design longevity
- Rapidly construct regulation compliant taxiway edges with intersection fillets and shoulders

Case study demonstrations

- Create all edges for a complex group of taxiway intersections based on centerlines only
- Create a series of overlapping sessions to visualize a complete taxiway system

Vehicle Editor command

- Creating vehicles and combinations
- Dimensions, coupling characteristics, steering properties etc.
- Selecting the vehicle in the Select Object dialog

Case study demonstrations

- Create a vehicle from a manufacturers data sheet and then assess the architects plans for a new parcel sorting distribution center to verify entry, docking and exit routes
- The customer now upsizes their transporter fleet vehicle and we need to reassess the facility

Bridge Editor command

- Editing the operational/working range of apron drive Passenger Boarding Bridges
- Adding bridge mounted services and ducting

Stand command

- Apron drive passenger boarding bridge setup; selection, settings and configuration
- Pedestal passenger boarding bridge setup; selection, settings and configuration
- Lead-in line setup; positioning, limits and settings
- Using the automated airplane positioning methods
- Adding and positioning stop lines using range indicator assistant
- In-ground services setup; selection, positioning and settings
- Docking rules and Dock-to-door selection (Apron drive types)
- Assessing MultiDock connections (Apron drive types)
- Defining alternative bridge stowing and maintenance positions (Apron drive types)
- Defining waypoints to control cabin moving during docking animation
- Bridge mounted services; selection, positioning and settings (Apron drive types)
- Conflict detection e.g., bridge to bridge, bridge to airplane and airplane to ground markings
- Reviewing output and solving errors in the Stand Results dialog

Case study demonstrations

- To complete the compliance study from the previous Path and Group Path exercises we now redesign one stand to accommodate the planned arrival of wide body aircraft
- We import a predesigned MARS stand and begin to assess alternating operation, docking procedures, service connections, upper-deck docking, inner stand conflict detection and more
- To relieve congestion, it is planned to extend a section of existing parallel taxiway, which will then encroach the terminal apron. We need to redesign the parking configuration in a bid to retain all contact stands and where possible maintain the current airplane mix and safe operational procedures

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Group Lead-in command

- Verifying stand designs by analyzing lead-in paths for “as planned” groups of airplanes
- Using SmartTarget to align all airplanes on “as planned” stop lines
- Landing gear conflict analysis with in ground obstacles
- Wingtip conflict analysis with above ground obstacles
- Interpreting results and creating reports

Case study demonstration

- Create Group Lead-in sessions for the previously redesigned and relocated stands to assess appropriate alignment and the handling of likely landing gear and wingtip conflicts

2D Presentation command

- Handling single and multiple simulations
- Changing plan view camera positions and following objects
- Previewing animations
- Recording and saving to WMV or MP4 video formats

Case study demonstration

- By combining several of the simulations created during other case studies, we learn how to create a 2D video that demonstrates a basic turnaround procedure

3D Presentation command

- Handling single and multiple simulations
- Changing camera positions in 3D view and following 3D objects
- Previewing animations
- Recording and saving to WMV or MP4 video formats

Case study demonstrations

- By combining several of the simulations created during other case studies, we learn how to create a 3D video that may, through varying camera perspectives, reveal previously unnoticed problems or better represent intended procedures
- Attendees are given a completed video presentation; they are also given a drawing containing all the simulation sessions necessary to reconstruct the video from scratch

Homework

- The instructor demonstrates various case study scenarios during the course. Participants receive limited-time access to the case study drawing files and data sets used in the course. This enables participants to revisit the material and replicate the demonstrated case studies at their own pace to support continued learning

Contact Us

To register or request additional information, please contact your Account Manager or email infoaviation@transoftsolutions.com