# PDS SE Training Course Highlights

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Course Descriptions

PDS 3D Theory
TPDS3113

This course is highly recommended for Project Managers, who will get an overall understanding of the PDS 3D applications and their capabilities. This course is also the foundation course for all PDS 3D specialist courses. It explains the theory behind the PDS 3D products so that a variety of advanced users can make good decisions as they use, support, or modify the applications. This course, consisting primarily of lecture and discussion, focuses on the structure of the various PDS modules, their relationship to reference data, their relationship to the RDBMS, and how data flows from one module to another. It is a recommended prerequisite course for courses dealing with interference detection, isometric drawing extraction, spec writing, and report writing. The course includes equipment and piping labs.

Major Topics:

- PDS product overview
- PDS/RDBMS interaction
- How project setup affects the downstream project
- Libraries containing various standards (such as ANSI)
- What is controlled by the libraries
- Customization overview (what exists; what can be customized)
- Equipment overview
- Piping overview
- P&ID-to-Piping data transfer
- Isometric drawing overview
- Orthographic drawing overview
- Interference Checking overview
- MTO Reports overview

Prerequisites:

- Experience in the plant design industry
- Knowledge of CAD system - desirable
- Basic knowledge of computers and Windows operating system

Length:

- 4 days

Pricing (USD):

- $2,200 per enrollment at Intergraph facilities
- $11,000 onsite (plus travel expenses per Intergraph Terms and Conditions)
PDS Project Administration
TPDS3100

This class is designed for system support personnel who will be responsible for maintaining a multi-site PDS project. Major Topics in this class will also benefit those maintaining single-site projects. Familiarity with PDS (project creation, clash and Isometric) and the Oracle database is mandatory (classes covering Microsoft SQL Server available by request). This class is a combination of lecture and lab.

Major Topics:

- RIS/Database overview
- Project creation overview (Express Setup/Advanced User Mode)
- Important setup/post setup project settings
- Plant Monument
- Database customization
- Seed File Settings
- PID-to-Piping setup
- Distributing the master project to remote sites
- Updating remote sites with data from master project and vice-versa
- Use of PDS Audit Tool Utility to verify project integrity
- Clash and Isometric issues
- Archival strategies

Prerequisites:
- Microsoft Operation system knowledge
- RDBMS/RIS Knowledge
- PDS 3D Theory (TPDS3113) - desirable

Length:
- 4 days

Pricing (USD):
- $2,200 per enrollment at Intergraph facilities
- $11,000 onsite (plus travel expenses per Intergraph Terms and Conditions)
PDS Project Setup
TPDS3001

This class is designed for system support personnel who are familiar with Microsoft operating systems, networking, and databases and who will be responsible for keeping the system running, loading and configuring software, and trouble-shooting problems. Senior designers, who will be customizing the software, may also benefit from this class, which deals with topics such as software configuration, PDS/RDBMS interaction plotting queues, network issues, and PDS project creation. The class is not in a lecture/lab format. The Intergraph instructor configures the necessary software for the client's project, explaining every step and site-specific decision. Students observe, then participate by recreating the project with the instructor observing.

Major Topics:
- Project requirements
- Site-specific hardware and software configuration
- Configuring the RDBMS
- Setting up queues
- Setting up PDS in the site-specific network environment
- Creating a 2D/3D project and project-related files
- Loading the reference data
- Revising seed data
- Creating areas and models
- PDS Access Control
- Discussion of archival strategies
- PDS product overview

Prerequisites:
- RDBMS/RIS Knowledge

Length:
- 3 days

Pricing (USD):
- $1,650 per enrollment at Intergraph facilities
- $8,250 onsite (plus travel expenses per Intergraph Terms and Conditions)
Creating Equipment Models with PDS 3D
TPDS3102

This course is the first part of the 2-week series for PDS 3D designers. Intended for the piping/equipment designer, who will use PDS 3D to create equipment models, it focuses on the Equipment Modeling portion of PDS.

Major Topics:

- Creating equipment with primitives
- Creating equipment with parametric definitions
- Equipment modification
- Data review/revise
- Nozzle Placement & manipulation

Prerequisites:

- A background in piping or equipment layout is recommended.
- A basic understanding of Windows and MicroStation is required

Length:

- 2 days

Pricing (USD):

- $1,100 per enrollment at Intergraph facilities
- $5,500 onsite (plus travel expenses per Intergraph Terms and Conditions)
Extracting Orthographic Drawings with PDS 3D
TPDS3104

This course is the second part of the 2-week series for PDS 3D designers. It is intended for 3D designers and drafters who will extract multi-disciplinary orthographic drawings from the 3D model.

Major Topics:
- Creating drawings and views
- Composing drawings
- Annotating and dimensioning drawings
- Generating drawing reports
- Drawing hidden line removal
- Extracting and plotting drawings

Prerequisites:
- A background in Plant Design is recommended
- A basic understanding of Windows and MicroStation is required
- Via on-the-job experience

Length:
- 2 days

Pricing (USD):
- $1,100 per enrollment at Intergraph facilities
- $5,500 onsite (plus travel expenses per Intergraph Terms and Conditions)
Creating Piping Models with PDS 3D
TPDS3103

This course is the third and last part in the 2-week series for PDS 3D designers. Intended for the piping designer, who will use PDS 3D to create piping models, it focuses on PDS piping software (PD Design). We recommend that piping group leaders attend this course as well, to understand the system’s capabilities.

Major Topics:

• Routing piping centerlines
• Placing piping and piping components
• Placing piping assemblies
• Placing specialty and instrument items
• Revising and reconstructing models
• Design Checker
• Interactive Isometric extraction

Prerequisites:

• A background in piping is strongly recommended
• A basic understanding of Windows and MicroStation is required

Length:

• 4.5 days

Pricing (USD):

• $2,750 per enrollment at Intergraph facilities
• $13,750 onsite (plus travel expenses per Intergraph Terms and Conditions)
Creating Piping and Equipment Models with PDS 3D
TPDS3121 (special request – onsite only)

This course is intended for the piping/equipment designer, who will use PDS 3D to create piping and equipment models. We recommend that group leaders attend this class too. This is a compressed training class that is only offered on special customer request for onsite training. Due to the compressed course nature lab time had to be reduced.

Major Topics:

- Creating equipment with primitives
- Creating equipment with parametric definitions
- Equipment modification
- Data review/revise
- Nozzle Placement & manipulation
- Routing piping centerlines
- Placing piping and piping components
- Placing piping assemblies
- Placing specialty and instrument items
- Revising and reconstructing models
- Design Checker
- Interactive Isometric extraction

Prerequisites:

- A background in piping and equipment layout is recommended
- A basic understanding of Windows and MicroStation is required

Length:

- Contact PDS Service Manager

Pricing (USD):

- Contact PDS Service Manager
PDS Clash Detection
TPDS3105

This course is designed for piping designers, piping engineers, system programmers and system managers who will be responsible for clash detection in PDS projects, and for the creation and maintenance of interference detection reports. It is recommended that piping group leaders and supervisors attend this course. This course covers the creation, diagnostics and management of interference detection reports on a project wide basis.

Major Topics:
- Rules for clash checking
- Creating and verifying envelopes
- Envelope diagnostics
- Interference checker and manager
- Interference reporting
- Interference plotting

Prerequisites:
- As a minimum, students should have some familiarity with the PDS piping software
- PDS 3D Theory (TPDS3113) - recommended

Length:
- 2.5 days

Pricing (USD):
- $1,650 per enrollment at Intergraph facilities
- $8,250 onsite (plus travel expenses per Intergraph Terms and Conditions)
Spec Writing with PDS 3D
TPDS3107

This course is designed for piping designers/engineers and PDS administrators responsible for the creation and maintenance of piping specifications, code list, labels and other engineering design data. During the week of training, students will complete a spec writing exercise from start to finish.

Major Topics:

- Object and text libraries
- Dimension and Spec Tables
- Standard Note libraries
- Piping Job Specifications
- Labels
- Implied Materials
- RDB customization
- Interactive Spec Writer

Prerequisites:

- Familiarity with piping specifications in the plant design industry
- PDS 3D Theory (TPDS3113) – recommended
- Creating Piping Models with PDS 3D (TPDS3103) – recommended
- Familiarity with a Windows compatible ASCII editor such as Notepad, PFE, etc.

Length:

- 4.5 days

Pricing (USD):

- $2,750 per enrollment at Intergraph facilities
- $13,750 onsite (plus travel expenses per Intergraph Terms and Conditions)
Advanced Spec Writing
TPDS3107

This course is designed for PDS spec managers and PDS administrators responsible for
the creation and maintenance of piping specifications and other engineering design data.
During the two days of training, students will understand the details of gaskets and bolts,
create a specialty/instrument spec, generate RDB revision manager reports and
customize the place component and active segment data forms.

Major Topics:
- Component I/Form Customization
- Commodity Synonym Library
- Gaskets, Bolts and Nuts
- Specialty/Instrumentation Specifications
- Piping Job Spec Report Manager
- Verify RDB Library
- Reference Data Revision Manager

Prerequisites:
- Familiarity with piping specifications in the plant design industry
- Spec Writing with PDS 3D (TPDS3107) – required

Length:
- 2 days

Pricing (USD):
- $1,100 per enrollment at Intergraph facilities
- $5,500 onsite (plus travel expenses per Intergraph Terms and Conditions)
Writing Reports using PDS 3D
TPDS3108

This course is designed for the individual who will generate, modify and maintain the reports for PDS projects. Students will learn to write custom report formats to extract data from piping and equipment models.

Major Topics:

- Report creation
- Report formatting
- Report discrimination
- Report management data

Prerequisites:
- PDS 3D Theory (TPDS3113) - recommended
- Familiarity with an ASCII editor such as Notepad, PFE32, etc.

Length:
- 2.5 days

Pricing (USD):
- $1,650 per enrollment at Intergraph facilities
- $8,250 onsite (plus travel expenses per Intergraph Terms and Conditions)
Extracting Isometric Drawings with PDS 3D TPDS3109

This course is designed for the individual who will generate, modify, and maintain the piping isometrics for a PDS project. This course presents the operation and customization of the PDS ISOGEN package. PDS ISOGEN is used to extract isometric drawings and bills of material from the PDS piping and equipment models.

Major Topics:

- Interactive and Batch extraction
- Debugging problem pipelines
- Modification of option files
- Customizing isometric drawing contents
- Creating user-defined symbols and MTO neutral files

Prerequisites:

- PDS 3D Theory (TPDS3113) - recommended
- Creating Piping Models with PDS 3D (TPDS3103) – recommended

Length:

- 4.5 days

Pricing (USD):

- $2,750 per enrollment at Intergraph facilities
- $13,750 onsite (plus travel expenses per Intergraph Terms and Conditions)
PDS Advanced Isometric Drawing Extraction
TPDS3116

This 2-day course is designed for the individual who will modify and maintain the piping isometrics for a PDS project. It assumes the student is already familiar with the isometric drawing extraction process and is familiar with basic customization of the isometric output. It focuses on productivity enhancements and resolving problems related to isometric drawing production. Students are encouraged to bring examples of problem areas to learn possible ways of resolving them.

Major Topics:

• Known Limitations and Common Workarounds
• Using Isometric Revision Tracking
• Troubleshooting complex problems
• Advanced Title block Mapping
• Representing New Pipe Supports on Isometric
• Project Reports
• New Productivity Features
• Discussion of student problems

Prerequisites:

• A working knowledge of PDS 3D (At least 1 year experience with PDS and ISOGEN)
• Extracting Isometric Drawings with PDS 3D (TPDS3109) – required

Length:

• 2 days

Pricing (USD):

• $1,100 per enrollment at Intergraph facilities
• $5,500 onsite (plus travel expenses per Intergraph Terms and Conditions)
PDS Piping and Equipment EDEN 
TPDS3110

This course is designed for individuals who will be defining piping, equipment and electrical symbols. Students learn how to define PDS symbols and create forms using DBACCESS utility. The definition procedures for piping symbols are introduced, accompanied by the EDEN language structure. The format of generic files is discussed.

Major Topics:

- Definition of PDS symbols for piping
- Creation of PDS Forms for specialty items
- EDEN - piping utilities
- Manipulation of tables for piping symbols
- Definition of PDS symbols for equipment
- EDEN – equipment utilities
- EDEN – equipment debugger

Prerequisites:
- Spec Writing with PDS 3D (TPDS3107) - required
- Familiarity with a Microsoft compatible ASCII editor such as Notepad, PFE32, etc.

Length:

- 4.5 days

Pricing (USD):

- $2,750 per enrollment at Intergraph facilities
- $13,750 onsite (plus travel expenses per Intergraph Terms and Conditions)
PDS Orthographic Drawing Setup for Administrators
TPDS3114

This course is designed for PDS administrators and design leaders, and focuses on the setup and customization of PD_Draw.

Major Topics:

• Drawing Type setup
• Creation of new drawing types
• Drawing and Drawing View creation by ASCII file
• Label creation and customization using Reference Data Manager
• Project Data Manager customization options
• Setup and use of a design volume coordinate system
• Hidden-Line setup using pre-processor and post-processor options
• Plotting setup (queue descript file and color tables)
• Drawing reports
• Mass Annotation options

Prerequisites:

• A working knowledge of PDS 3D
• Extracting Orthographic Drawings with PDS 3D (TPDS3104) - required

Length:

• 3 days

Pricing (USD):

• $1,650 per enrollment at Intergraph facilities
• $8,250 onsite (plus travel expenses per Intergraph Terms and Conditions)
Pipe Support Modeler  
TPDS3115

This 3-day course is designed for pipe support designers, piping designer/engineers, and PDS reference database managers responsible for the placement, creation and maintenance of the pipe support reference database. During the training, students will be able to place a newly created pipe support and extract pipe support drawings.

Major Topics:

- Pipe Support Modeler Overview
- Load pipe support reference data
- Place delivered pipe supports
- Extract pipe support drawings
- Creation of pipe support reference data
- Creation of pipe support EDEN
- Creation of pipe support Forms
- Modification of pipe support drawings

Prerequisites:

- Familiarity with Piping and pipe support design in the plant design industry
- PDS Piping Design (TPDS3103) is desirable or on-the-job experience using PDS piping design module
- Spec Writing with PDS 3D (TPDS3107) - required. Note: Course maybe waived if user has one year of RDB management experience
- PDS Piping and Equipment EDEN (TPDS3110) – required

Length:

- 3 days

Pricing (USD):

- $1,650 per enrollment at Intergraph facilities
- $8,250 onsite (plus travel expenses per Intergraph Terms and Conditions)
PDS Stress Analysis
TPDS3117

This course is designed for piping designers, piping coordinators, and stress analysis personnel, who will be responsible for generating and the usage of the PDS stress neutral file for PDS projects. It is recommended that piping group leaders and stress analysis supervisors attend this course. This course covers the creation, diagnostics and management of stress analysis neutral file for input into third party stress analysis software on a project wide basis. Students are encouraged to bring examples of problem areas to learn possible ways of resolving them.

Major Topics:

• Creating a Defaults File
• Setting up the Project Defaults
• Generating a Stress Neutral File
• Understanding the Stress Neutral File
• Stress Neutral File Import into Stress Analysis Software
• Troubleshooting Results

Prerequisites:

• As a minimum, students should have some familiarity with the PDS Piping software

Length:

• 2 days

Pricing (USD):

• $1,100 per enrollment at Intergraph facilities
• $5,500 onsite (plus travel expenses per Intergraph Terms and Conditions)
Material Data Publisher
TPDS3119

This course lays the foundation for using the Material Data Publisher utility of the PDS 3D products. Topics covered in this class will extend the capabilities of the PD_Report to generate and maintain the reports for the PDS projects. It focuses on understanding the structure of the new mto database. Students will be able to create custom reports to extract data from piping and equipment models and will also learn to integrate other data sources with mto database using Open Database Connectivity (ODBC) to enhance the Bill of Material report production.

Major Topics:

• Material Data Publisher overview
• Understand the Material Data Publisher database structure
• Access published data from an application that uses ODBC
• Use Microsoft Access to demonstrate the utilization of the published data in the following areas:
  o Tracking design progress
  o Issued Isometric sheets control system
  o Billing report and purchase requisitions

Prerequisites:

• An introductory knowledge of PDS 3D and relational database concepts is recommended
• Microsoft Access or other database knowledge – recommended

Length:

• 2 days

Pricing (USD):

• $1,100 per enrollment at Intergraph facilities
• $5,500 onsite (plus travel expenses per Intergraph Terms and Conditions)
SupportModeler User
TPFS1001

This hands-on course is intended to teach Designers and Engineers how to open and navigate Support Modeler projects, model pipe supports and create fabrication drawings. At the completion of this course, the user will be fully qualified to model pipe supports and produce fabrication drawings. The course covers the Support Modeler for Intergraph PDS.

Major Topics:

• Working with Projects, folders and models.
• Definition of Supports, Components & Assemblies
• Active Parameters and Connect to Pipe
• Placing and manipulating supports and components
• Editing and reviewing supports and components
• Creating and manipulating Fabrication Drawings
• Interface to PDS
• Reporting and Material Take-Offs

Prerequisites: None

Length:

• 1 day

Pricing (USD):

• $550 per enrollment at Intergraph facilities
• $2,750 onsite (plus travel expenses per Intergraph Terms and Conditions)
SupportModeler Administrator / Customization
TPFS1002

This course is intended for administrators interested in installing, setting-up and customizing SupportModeler. At the completion of this course, the administrator will be able to support and customize the components, interface and fabrication drawings produced by SupportModeler. The course covers the Support Modeler for Intergraph PDS.

Major Topics:

- SupportModeler installation
- Project creation and maintenance
- Customizing the interface to Intergraph PDS
- Introduction to support object customization
- Fabrication drawing customization

Prerequisites:

- SupportModeler User Training (TPFS1001)
- Knowledge of Microsoft Access

Length:

- 2 days

Pricing (USD):

- $1,100 per enrollment at Intergraph facilities
- $5,500 onsite (plus travel expenses per Intergraph Terms and Conditions)

Please note that this course only covers the basics of support creation. Please contact Intergraph for consulting regarding libraries and/or components creation.
SupportModeler Library Creation/Customization Training
TPFS1003

This course is intended for administrators interested in creating new components and assemblies for use with SupportModeler. This allows customers to build in company standard or special components and assemblies into SupportModeler.

Major Topics:

• Include library creation
• Function syntax
• Library conventions
• Relationships
• Inheritance
• Property
• Rules
• Graphic primitives
• Data sources
• DB_QUERY rule function
• 3D Geometry

Also
• Discussion of metric versus imperial units
• BOM descriptions
• Connect points
• Using pre-defined components
• Bitmap preparation

A review of delivered libraries and concepts is included.

At the completion of this course, the administrator will be able to create moderately complex components and assemblies.

Course Format: Lecture, Demonstration, and Lab

Prerequisites:

• SupportModeler Administration/Customization training (TPFS1002)
• Basic programming skills (ie. Basic, Visual Basic, or C languages) and experience with Microsoft Access and image editing software. A programming background IS REQUIRED.

Length:

• 3 days

Pricing (USD):

• $1,650 per enrollment at Intergraph facilities
• $8,250 onsite (plus travel expenses per Intergraph Terms and Conditions)
Project Engineer HVAC
TARH2600

Project Engineer HVAC is a 2 1/2-day course designed for the HVAC engineer, designer or draftsperson. Students will learn about component placement from a catalog database. Preliminary duct layout, default fitting tables, system parameters, component usage, and report/schedule generation from student designs are also taught. The class consists of a mix of lecture and hands-on lab.

Major Topics:

- Device creation and placement
- Fitting creation and placement
- Duct routing
- Device, fitting, and duct manipulations
- Catalog and project database creation
- Report generation
- System Modification

Prerequisites:

- A basic understanding of Windows and MicroStation is required
- Knowledge of HVAC systems layout and design concepts
- Familiarity with a text editor recommended (Notepad or PFE)

Length:

- 3 days

Pricing (USD):

- $1,650 per enrollment at Intergraph facilities
- $8,250 onsite (plus travel expenses per Intergraph Terms and Conditions)
Project Engineer HVAC Customization
TARH2611

This course is designed for persons responsible for the creation of reference data to be used in the PE-HVAC product. The course includes implementation information for the reference data and customization information for PE-HVAC components, using the EDEN programming language. Students learn to create the Specification, modify the delivered Report templates, and customize the delivered components and fittings.

Major Topics:

- Database Creation
- Creating a new Specification
- Customizing report templates
- Modify existing fittings
- Creating EDEN Parametrics

Prerequisites:

- Project Engineer HVAC (TARH2600) – required
- PDS Piping and Equipment EDEN (TPDS3110) - desirable

Length:

- 2 days

Pricing (USD):

- $1,100 per enrollment at Intergraph facilities
- $5,500 onsite (plus travel expenses per Intergraph Terms and Conditions)
EE Raceway Modeling Operations
TEDE6111

This course is designed for persons responsible for the modeling of electrical raceways. The course includes instructions for the use of EE Raceway Modeling software in production and maintenance of electrical raceway designs. Students learn to design, modify, and model electrical raceway systems in a three-dimensional environment.

Major Topics:

- Routing One-lines
- Placing manual fittings
- Revising tray and conduit
- Element annotation
- Generation of MTO Reports

Prerequisites:

- A basic understanding of Windows and MicroStation is required.

Length:

- 3 days

Pricing (USD):

- $1,650 per enrollment at Intergraph facilities
- $8,250 onsite (plus travel expenses per Intergraph Terms and Conditions)
Creating Reference Data for EE Raceway
TEDE6211

This Course is designed for persons responsible for the creation of reference data to be used in the EE Raceway product, for the design of electrical raceways. The Course includes implementation information for the reference data, and customization information for Electrical Raceway components, using the EDEN programming language. Students learn to create the Specification and modify the delivered Specifications, and customize the delivered components.

Major Topics:

• Database Creation
• Load Database Process
• Creating a new Specification

Prerequisites:

• EE Raceway Modeling Operations Course (TEDE6111)
• PDS Piping and Equipment EDEN (TPDS3110) – desirable

Length:

• 2 days

Pricing (USD):

• $1,100 per enrollment at Intergraph facilities
• $5,500 onsite (plus travel expenses per Intergraph Terms and Conditions)
EE-Raceway Modeling Operations, Equipment and Drawings
TEDE6112 (*special request onsite only*)

This Course is intended for 3D electrical designers and drafters who will use PDS3D to create electrical equipment models; it focuses on the Equipment Modeling portion of PDS.

**Major Topics:**

- Creating Equipment with Primitives
- Equipment modifications
- Datum point placement
- Data review/revise

**Prerequisites:**

- A basic understanding of Windows and Microstation is required
- Background in Plant Design is recommended

**Length:**

- Special Request – contact PDS Service Manager

**Pricing (USD):**

- SPECIAL REQUEST – Onsite only. For pricing contact PDS Service Manager.
EE-Raceway Drawings with PDS3D
TEDE6113 (special request onsite only)

This Course is intended for 3D electrical designers and drafters who will extract orthographic drawings from the 3D Raceway model.

Major Topics:

• Creating drawings and views
• Compose drawings
• Annotation and dimensioning drawings
• Drawing hidden line removal
• Extracting and plotting drawings

Prerequisites:

• Background in Plant Design is recommended
• A basic understanding of Windows and Microstation is required

Length:

• Special Request – contact PDS Service Manager

Pricing (USD):

• SPECIAL REQUEST – Onsite only. For pricing contact PDS Service Manager.
EE-Raceway Modeling Operations, Equipment and Drawings
TEDE6114 (special request onsite only)

This Course is a combined course of Raceway and electrical equipment and drawings. The Course includes instructions for the use of PDS in production and maintenance of electrical raceway designs. Students learn to design, modify and model electrical raceway systems in a three-dimensional environment.

Major Topics:

- Routing One-Lines
- Placing manual fittings
- Revising tray and conduit
- Creating Equipment with Primitives
- Equipment modifications
- Datum point placement
- Data review / revise
- Generation of MTO reports
- Creating drawings and views
- Compose drawings
- Annotation and dimensioning
- Drawing hidden line removal
- Extracting and plotting drawings

Prerequisites:

- A basic understanding of Windows and Microstation is required
- Background in Plant Design is recommended

Length:

- Special Request – contact PDS Service Manager

Pricing (USD):

- SPECIAL REQUEST – Onsite only. For pricing contact PDS Service Manager.
FrameWorks Plus
TSTR8001

The FrameWorks Plus (FW+) course covers command usage and application of FrameWorks Plus software to structural projects. It is designed for engineers and designers who plan and layout structures and who prepare analytical models for analysis and design. The course is equally suited to structural drafters who perform modeling and drawing production tasks. Throughout the course, the instructor uses a combination of lecture and lab to introduce and explain usage. Upon completion of the course, students should have a working knowledge of the fundamental use of FrameWorks Plus and sufficient understanding of how to apply the software in the project environment.

Major Topics:

- Project, seed model and model creation via PD_SHELL and FW+ manager
- FW+ view symbology definition, creation and modification of FW views
- Placement and manipulation of grids
- Placement manipulation and modification of linear and solid elements
- Definition of loads and other analytical attributes
- Interface to 3rd party analytical packages
- Material take-off, Center of Gravity and Analytical reports
- Drawing production
- Propagation
- Interface to other Intergraph structural and PDS products
- Envelope File Generation
- Design Review Integration
- Product Customization

Prerequisites:

- Structural design and drafting experience
- A basic understanding of Windows and MicroStation is required

Length:

- 4 days

Pricing (USD):

- $2,200 per enrollment at Intergraph facilities
- $11,000 onsite (plus travel expenses per Intergraph Terms and Conditions)