What sets MAYA TRAINING apart:

- No matter your level, our courses can be **customized** to fit your teams' needs!
- Our trainers are **consulting engineers** operating in a broad range of industries.
- Ask about our **mobile classroom**: we bring the laptops to your door!
- Maya **develops** the NX thermal and flow solver: we bring this **expertise** to you!
- We offer **web-based** courses.
- **Flexibility in time**: we can work around your schedule!
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- Easy credit card payments available

We offer these courses locally (Maya HQ in Montreal, Canada) and internationally. Courses are typically between one- to five-days long. Our courses are offered in partnership with the Siemens PLM Software Education Centers.

Hands-on learning experience: All our courses are composed of both lecture and hands-on workshop examples. Upon completion of the course, students receive a certificate of completion, lecture notes and an online access to the tutorial files.
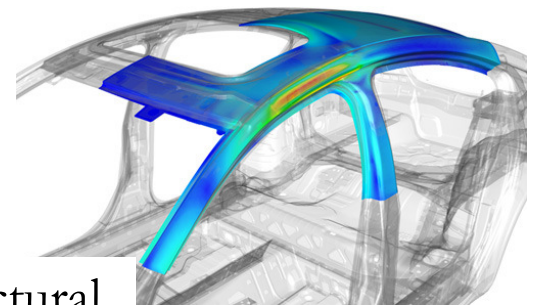
Right time, right place, right way:

- **Our instructors can come to your company site! We can customize course content to fit your schedule and industry!**
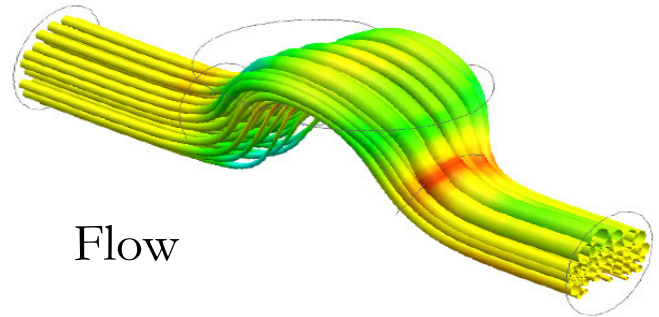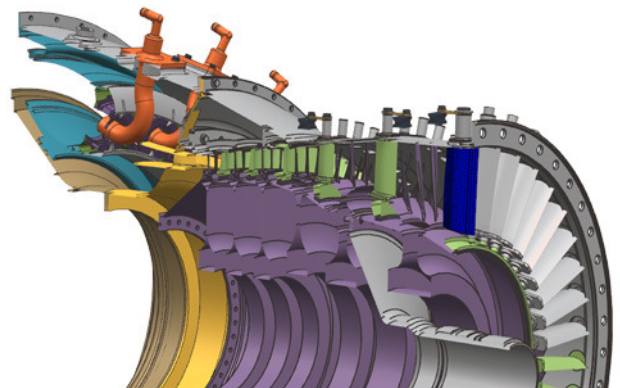

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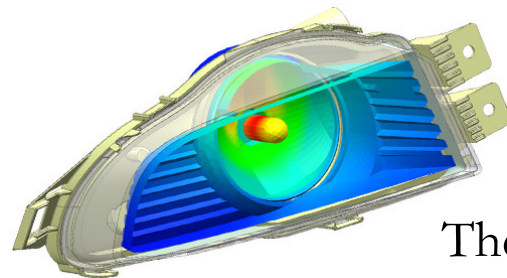
Thermal

Structural

Product Design

NX Advanced Simulation Processes

User Level	Beginner
Duration	3 days

Advanced Simulation Processes introduces the finite element modeling and analysis tool integrated in NX. It is intended for design engineers and analysts who want to learn the details of how to do finite element analysis on NX models.

The course covers the details of the FEA processes from model preparation, mesh generation and manipulation, material definition, loads and boundary conditions, FEA model checking and solving, to post-processing the results.

Who Should Attend

Design engineers, Analysts

Prerequisites

Required courses: Basic Design
Other recommended courses: Essentials for NX Designers

Participant needs to have a basic understanding of finite element analysis principles and a working knowledge of NX modeling.

Provided Course Material

Student Guide
Activity Material
After course completion: Online Tutorials

Course Topics

- Introduction to Advanced Simulation
- Simulation Navigator
- Selecting entities
- Meshing and mesh quality
- Setting boundary conditions
- Boundary condition types and techniques
- Solving
- Post-processing
- Geometry idealization, repair, and abstraction
- Synchronous Modeling
- Mesh collectors
- Materials and physical properties
- Model quality
- Reports

NX Advanced Simulation Solutions

User Level	Intermediate
Duration	2 days

Advanced Simulation Solutions covers applications of various Finite Element Analysis types (e.g. static, modal, thermal, buckling solutions), contact analysis, and optimization.

Who Should Attend	Course Topics
Design engineers, Analysts	
Prerequisites	• Linear static analysis
	• Modal analysis
Required courses: Advanced Simulation Processes	• Response Simulation
Other recommended courses: Basic Design	• Thermal analysis
	• Buckling analysis
Participants also need to have a basic understanding of finite element analysis principles and a working knowledge of NX modeling.	• Surface-to-surface contact and gluing
	• Symmetry
	• Assembly FEM
	• DESOPT 200 Optimization
	• Optimization
	• Nonlinear statics analysis
Provided Course Material	• Import and export of model data
	• Templates
Student Guide	
Activity Material	
After course completion: Online Tutorials	

FEMAP 101

User Level	Beginner
Duration	3 days

The FEMAP course provides the Engineer new to Femap with a substantial introduction to the software, its structure, capabilities, and how to take advantage of its efficiency and strengths. For the engineer who already is using Femap, this course will fill in the grey areas, provide important time-saving knowledge, and guide them on their way to becoming a Femap expert.

Who Should Attend

Design engineers, Analysts

Prerequisites

Knowledge of the theory and principles of finite element analysis and structural engineering

Provided Course Material

Student Guide
Activity Material
After course completion: Online Tutorials

Course Topics

- The Femap user interface and on-line help
- Materials and properties
- Building geometry
- Meshing geometry
- Importing and modifying geometry
- Loads and boundary conditions
- Model organization
- Visualizing and documenting results
- Assembly modeling
- Specialized in-depth training

NX Laminate Composites

User Level	Intermediate
Duration	1 day

The NX Laminate Composites course is a comprehensive presentation of the composite laminates tools integrated in NX Advanced Simulation. The course includes laminate simulation processes, draping, failure analysis, optimization, finite element model solution, pre and post-processing, as well as a review of the laminates theory. The hands-on activities and case studies are presented using NX Laminate Composites and NX Advanced Simulation.

Who Should Attend	Course Topics
Design engineers, Analysts	- Overview of NX Laminate Composites - Zone-based laminate process - Ply-based laminate process - Draping - Materials and micromechanics - Solution and post-processing - Laminate theory - Laminate failure - Laminate optimization
Prerequisites	
Required courses: Advanced Simulation Processes Participant needs a working knowledge of NX modeling, basic understanding of structural analysis and laminate composite materials, and familiarity with NX Nastran, MSC Nastran, or ANSYS.	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Response Simulation

User Level	Advanced
Duration	3 days

The NX Response Simulation course offers training in the use of Response Simulation for analysis of mechanical components subjected to dynamic loads. In addition the course covers the general theory and methods behind the software and the consideration important to accurate results such as modal sufficiency. The course also provides opportunities for hands-on practice with NX Response Simulation software. A variety of examples will be used to demonstrate typical approaches for problems with transient, sinusoidal, shock and random excitations. Class participants are invited to submit examples of problems.

Who Should Attend

This course is intended for designers and engineers who need to characterize dynamic responses including transient, sinusoidal, random, and shock spectrum.

Prerequisites

Required courses: Advanced Simulation Processes

Provided Course Material

Student Guide
Activity Material
After course completion: Online Tutorials

Course Topics

- Review of fundamentals of mechanical vibrations - single and multiple degrees of freedom
- Review of the finite element method for structural dynamics
- Selected topics in modal analysis: Mode sufficiency, data recovery, attachment and constraint modes, damping definition in dynamic analysis
- Theory review and hands-on practice with NX RS for:
    - Transient response analysis
    - Frequency response analysis
    - Random response analysis
    - Response spectrum analysis

NX Motion Simulation

User Level	Intermediate
Duration	3 days

Motion Simulation Simulation is a CAE software application used to apply motion simulations to a mechanism model. Upon successful completion of this course students will understand how to apply and edit motion simulations, use motion simulations to analyze, troubleshoot and optimize a mechanism design.

While this course does include classic engineering topics such as statics, dynamics, kinematics and kinetics, the primary objective of this course is to train users in the use and application of the engineering software package. This course will not serve as a substitute for formal engineering education on these topics.

Who Should Attend	Course Topics
Designers and engineers who need to create and articulate motion studies using NX models	• Introduction and fundamental skills • Kinematic/dynamic simulations • Motion objects (links and joints) and motion drivers • Applied forces, torques, dampers, springs, bushings, and contacts • Articulation and animation • Range of motion analysis and interference checking • Analysis results, including graphing and spreadsheets • Advanced analysis, including flexible bodies and PMDC motors
Prerequisites	
Required courses: Essentials for NX Designers Other recommended courses: Practical Applications of NX	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Thermal Analysis

User Level	Intermediate
Duration	3 days

The NX Thermal Analysis course introduces product simulation and analysis in NX for heat transfer applications. Students will learn the skills necessary to carry out sophisticated thermal analysis quickly and easily. This course covers basic and advanced thermal topics such as duct flow, parallel processing, advanced radiation, and others.

Who Should Attend

Design engineers and analysts who use NX to model heat transfer.

Prerequisites

Required courses: Advanced Simulation Processes
Working knowledge of NX modeling.
Basic understanding of finite element analysis

Provided Course Material

Student Guide
Activity Material
After course completion: Online Tutorials

Course Topics

- Overview of NX Thermal
- Meshing and material properties
- Heat transfer introduction
- Thermal initial conditions and boundary conditions
- Thermal couplings
- Radiation
- Thermal solution options and solving
- Post-processing specific for NX Thermal
- Duct flow networks
- Parallel processing
- Thermal mapping

NX Space Systems Thermal

User Level	Beginner
Duration	5 days

The NX Space Systems Thermal course provides students with comprehensive instruction in the use of NX to build spacecraft models, simulating orbital heating including solar and planet fluxes as well as conduction, radiation and convection within the model. Students will learn the skills necessary to build or modify geometry, create a finite element mesh, define orbits and articulation, and carry out sophisticated thermal analysis of spacecraft. The course covers both theoretical and practical aspects of how the software handles heat transfer and includes a variety of examples and tutorials addressing techniques for each step in the process.

Who Should Attend	Course Topics
Designers, engineers who use NX to model heat transfer and radiation in aerospace applications	
Prerequisites	• Introduction to NX
	• Geometry creation
None	• Meshing for thermal analysis
	• Primitives
Provided Course Material	• Thermal boundary conditions
	• Thermal couplings
Student Guide	• Radiation theory
Activity Material	• Thermo-optical properties
After course completion: Online Tutorials	• Orbital heating
	• Articulation
	• Solar heating on a planet surface
	• Duct networks
	• Solution attributes
	• Solving
	• Post processing
	• Temperature Mapping
	• Advanced topics

NX Thermal and Flow Analysis

User Level	Intermediate
Duration	3 days

The NX Thermal and Flow Analysis course provides students with comprehensive instruction in the use of NX Thermal and Flow to model heat transfer and 3D fluid flow problems. Students will learn the skills necessary to carry out sophisticated thermal and Computational Fluid Dynamics (CFD) analysis quickly and easily. The course covers both theoretical and practical aspects of how the software handles heat transfer by conduction, convection and radiation and includes a variety of examples and tutorials addressing a wide range of applications.

Who Should Attend	Course Topics
Designers, engineers who use NX to model heat transfer and fluid flow	- Meshing for thermal analysis - Meshing for flow analysis - Thermal boundary conditions - Thermal couplings - Radiation to environment - Flow boundary conditions - Convection modeling - Solution attributes - Solving - Post processing - Mapping
Prerequisites	
Required courses: Advanced Simulation Processes Participant needs to have a working knowledge of NX modeling, and a basic understanding of finite element analysis (FEA) and computational fluid dynamics (CFD) principles.	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Advanced Thermal and Flow Analysis

User Level	Advanced
Duration	2 days

The NX Advanced Thermal and Flow Analysis course provides students with comprehensive instruction in the use of the NX Thermal and Flow - advanced software to model heat transfer, radiation and 3D fluid flow problems. Students will learn the skills necessary to incorporate comprehensive radiation modeling including solar and radiative heating, fully coupled with thermal and fluid flow analysis. Students learn how to apply advanced thermal and flow boundary conditions. The course covers both theoretical and practical aspects of how the software handles heat transfer by conduction, convection and radiation and includes a variety of examples and tutorials addressing a wide range of applications.

Who Should Attend	Course Topics
Designers, engineers who use NX to model complex heat transfer and fluid flow for challenging multi-physics applications	- Solar heating - Radiative heating - Advanced thermo-optical properties - Duct networks - Supersonic flow boundary condition - Rotating frames of reference - Rotational and translational periodicity - Advanced thermal coupling types - Articulating models - Active fan controller - Non-Newtonian fluids - Humidity and scalar fluid mixtures - Peltier cooler (TECs) - Joule heating - Ablation and charring - Material libraries - Phase change - Particle tracking
Prerequisites	
Required courses: NX Thermal and Flow Analysis	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Electronic Systems Cooling

User Level	Beginner
Duration	5 days

The NX Electronic Systems Cooling course provides students with comprehensive instruction in the use of NX to build Electronic Systems Cooling models, simulating heat transfer and 3D fluid flow in electronics applications. Students will learn the skills necessary to build or modify geometry, create a finite element mesh, and carry out sophisticated thermal and fluid flow analysis quickly and easily. The course covers both theoretical and practical aspects of how the software handles heat transfer by conduction, convection and radiation and includes a variety of examples and tutorials addressing techniques for each step in the process.

Who Should Attend	Course Topics
Designers, engineers who use NX to model heat transfer and fluid flow in electronics applications	• Introduction to NX • Geometry creation • Geometry simplification • Meshing for thermal analysis • Meshing for flow analysis • Thermal boundary conditions • Thermal couplings • Radiation to environment • Flow boundary conditions • Convection modeling • Solution attributes • Solving • Post processing • Advanced topics
Prerequisites	
None	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

FEMAP Thermal and Flow Analysis

User Level	Intermediate
Duration	3 days

The Femap Thermal/Flow course provides students with comprehensive instruction in how to model heat transfer and fluid flow problems using Femap Thermal/Flow. Participants will learn the skills necessary to carry out sophisticated thermal and CFD analysis quickly and easily, including geometry construction and manipulation, meshing, fluid flow and heat transfer modeling, boundary condition application, solution setup, post-processing and model validation. The course deals with both theoretical and practical aspects of how the software handles fluid flow and heat transfer, and includes a variety of examples and tutorials addressing a wide range of applications.

Who Should Attend

Designers, Engineers who need to model and simulate heat transfer or fluid flow in components or complex systems using Femap Thermal and Flow

Prerequisites

Any knowledge of Femap will help, especially meshing and creating/manipulating element groups.

Other recommended courses: FEMAP 101

Provided Course Material

Student Guide
Activity Material
After course completion: Online Tutorials

Course Topics

- Meshing for TMG and groups
- TMG selection
- Basic BCs
- FE studies and manager
- Conduction
- Thermal couplings
- Flow modeling
- Convection
- Radiation
- Solver control
- Steady-state/transient analysis
- Temperature mapping

NX Flow Analysis

User Level	Intermediate
Duration	3 days

The NX Flow Analysis course introduces product simulation and analysis in NX for 3D fluid flow applications. Students will learn the skills necessary to carry out sophisticated computational fluid dynamics (CFD) analysis quickly and easily. This course covers basic and advanced flow topics such as turbulence modeling, rotating frame of reference, humidity modeling, particle tracking, and others.

Who Should Attend

Design engineers and analysts who use NX to model fluid flow.

Prerequisites

Required courses: Advanced Simulation Processes
Working knowledge of NX modeling.
Basic understanding of finite element analysis (FEA) and computational fluid dynamics (CFD) principles.

Provided Course Material

Student Guide
Activity Material
After course completion: Online Tutorials

Course Topics

- Overview of NX Flow
- Fluid volume creation and meshing
- Meshing and material properties
- Flow initial conditions and boundary conditions
- Flow solution options and solving
- Post-processing specific for NX Flow
- Non-Newtonian flow
- Periodic flow
- Moving frame of reference
- High speed flows
- Turbulent flow
- Humidity
- Particle tracking
- Flow mapping

NX Basic Design

User Level   Beginner
Duration   2 days

Basic Design is designed to give an entry level user a high-level overview of NX modeling, assemblies and drafting topics. This one class allows the student to transfer classroom instruction to job productivity through professional instruction related to product design, assembly modeling, and master model concepts.

At the completion of the Basic Design class, the student will be able to develop basic solid and assembly models as well as drawings using the master model concept. These concepts can be applied in the real world of product development. This class reinforces the intimate knowledge of software's developments and instructs the students based on the underlying principles incorporated within the NX product suite.

Who Should Attend	Course Topics
Designers, engineers, manufacturing engineers, application programmers, NC programmers, CAD/CAM managers, and system managers who need to manage and use NX	- Introduction and overview - NX part files - User interface - Sketcher - Datum features - Swept features - Holes - Edge operations - Introduction to assemblies - Assembly constraints - Introduction to drafting
Prerequisites	
None	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

Essentials for NX Designers

User Level	Beginner
Duration	5 days

Essentials for NX Designers is designed to launch students on the path of productivity. This course is designed to meet the student's expectation to transfer classroom instruction to productivity on the job. The Essentials for NX Designers course engages the student through professional instruction pertaining to product model design, product model detailing, assembly modeling and the basics of the master model concept.

At the completion of Essentials for NX Designers the student will productively develop solid models, detail drawings, and product assemblies. The class introduces assembly modeling in the context of a real-life scenario that includes parts modeled by the student as well as part models that have already been created.

Who Should Attend	Course Topics
Engineers, Designers, CAD/CAM Managers, Drafters, Checkers	• User interface • Holes • Coordinate systems • Create expressions • Introduction to sketching • Shell • Datums • Instance arrays • Modeling theory – based on extrude, revolve • Blending and chamfers • Part structure and edits • Basic assembly modeling • Intermediate sketching topics • Assembly constraints • Trim body • Master model concept • Extrude options, including draft and limits • Creating and editing drawings and annotation
Prerequisites	
None	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Sketching Fundamentals

User Level	Intermediate
Duration	2 days

The NX Sketching Fundamentals course teaches you how to create sketches in NX. Class lectures and hands-on activities demonstrate good sketching techniques for parametric solid modeling.

Who Should Attend	Course Topics
Designers, NC programmers, Engineers, CAD/CAM managers, Manufacturing engineers, System managers, Application programmers	- Sketching in Modeling and the Sketch task environment - Creating sketches - Constraining sketches - Projecting, offsetting, and patterning sketch curves - Sketching on a path
Prerequisites	
Recommended courses: Essentials for NX Designers or NX Basic Design	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Synchronous Modeling Fundamentals

User Level	Intermediate
Duration	1 day

The Synchronous Modeling Fundamentals course teaches Synchronous Modeling design techniques and is aimed at users familiar with NX. Synchronous Modeling technology unites parametric and history-free modeling techniques. It can be used regardless of the origin or associativity of the model. This course provides hands-on activities and practice projects that teach both history-free and parametric constraint-driven design techniques.

Who Should Attend	Course Topics
Engineers, Designers, CAD/CAM Managers	- Synchronous modeling - Modify face - Synchronous Modeling relationships - Detail Feature - Dimension commands - Reuse commands - Edit Cross Section and Edit Section - Optimize Face - Adaptive Shell - Delete face - Synchronous Modeling Projects
Prerequisites	
Required courses: Essentials for NX Designers or NX Basic Design	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Synchronous Modeling and Parametric Design

User Level	Intermediate-Advanced
Duration	3 days

The Synchronous Modeling and Parametric Design course is designed to sustain the momentum launched in earlier NX courses. As a second tier course, Synchronous Modeling and Parametric Design (SMP) aims to capitalize on the designers heightened skill level and propel his or her job productivity to the next level. This course includes key productivity skills that delve deeper into the advanced and associative modeling concepts.

Who Should Attend	Course Topics
Engineers, Designers, CAD/CAM Managers	• Documenting design intent (Layers, Feature sets, Product Interfaces)
Prerequisites	• Editing parametric models (Replace features, Suppression, model updates)
Required courses: Essentials for NX Designers or NX Basic Design	• Associative curve operations (Project, Join, Intersect, Wrap/Unwrap, Text) • General pockets and pads (General, Emboss, Offset)
Provided Course Material	• Blending techniques (Overflow, Edge options, Face blends and options)
Student Guide Activity Material After course completion: Online Tutorials	• Design optimization (Optimization study, options, algorithms) • Synchronous modeling (History and History Free Mode) • Design intent and model construction

Intermediate NX Design and Assemblies

User Level	Intermediate
Duration	5 days

Intermediate NX Design and Assemblies is designed to advance students further up the productivity curve. As a second tier course Intermediate NX Design and Assemblies builds on the tools you deployed as a result of attending the Essentials for NX Designers course. This method-based course focuses the student on productive modeling techniques that capture design intent in the context of the Master Model. Delivering on that outcome, this course will incorporate sketching, inter-part modeling, design intent, and several assembly topics as a significant part of the instruction.

Who Should Attend	Course Topics
Engineers, Designers, CAD/CAM Managers	
Prerequisites	• Sketching
	• Associative Offset Curves
Required courses: Essentials for NX Designers or NX Basic Design	• Expressions
	• Duplicating Features
	• Assembly functions
Provided Course Material	• Part Families
	• Top/down assembly modeling
	• Assembly Arrangements
Student Guide	• Face Operations
Activity Material	• Extract and Delete Face
After course completion: Online Tutorials	• Interpart modeling
	• Interpart expressions
	• Variable and Overflow blends
	• Component Arrays
	• Revise & Replace Components

Introduction to NX for Experienced Users

User Level	Beginner-Intermediate
Duration	5 days

The Introduction to NX for Experienced Users course provides an introduction to NX for those students who will be using NX on a daily basis. Upon completion of this course, accomplished 3D Parametric CAD users will have the capability to create and modify parts, assemblies, and products in NX, leveraging their years of parametric modeling experience. The pace and topics of this course have been carefully planned specifically for the experienced 3D Parametric CAD user. At the completion of this course the student will productively develop solid models, detail drawings, and product assemblies. This course introduces assembly modeling in the context of a real-life scenario that includes parts modeled by the student as well as part models that have already been created.

Who Should Attend	Course Topics
Engineers, Designers, CAD/CAM Managers	- Working with existing parts - NX user interface - Sketching - Datum and Swept features - Trim Body, Hole features - Expressions - Coordinate systems - Part Navigator - Associative copies - Face and edge operations - Basic freeform - Creating and modifying assemblies - Assembly Constraints and Arrangements - Reference Sets - Interpart geometry and references - Component arrays - Reuse Library - Revise and replace components - Drafting
Prerequisites	
Working knowledge of parametric modeling and master model concept	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Routing Electrical

User Level	Intermediate-Advanced
Duration	2 days

The Routing Electrical course illustrates how to create connection and component lists, how to qualify parts for use in routing assemblies, how to place parts in a wiring assembly, or to create and edit wiring paths, how to assign components and connectors (manually and automatically), and how to create formboards.

Who Should Attend	**Course Topics**
Engineers, Designers, CAD/CAM Managers	• Creating and using connection lists and component lists
Prerequisites	• Qualifying parts
	• Placing parts
Required course: Intermediate NX Design and Assemblies	• Routing wiring segments
	• Assigning components, connectors and wire routing
The student should understand the logical connections of wiring diagrams and have a working knowledge of the following: NX part file management and have a basic understanding of industrial wiring and harness applications	• Adding overstock
	• Creating formboards
	• Synchronizing formboards
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX PCB Exchange

User Level	Intermediate
Duration	1 day

The NX PCB Exchange course introduces the student to NX workflows which allow design collaboration between NX CAD designers and electrical CAD designers. PCB Exchange helps you communicate and share data between electronic and mechanical CAD designs (ECAD to MCAD and vice versa), update and verify revisions during the different stages of the ECAD to MCAD interaction, and export ready-to-solve MCAD models into NX Electronic Systems Cooling. This course covers the daily use features of PCB Exchange, and explains how the application may be customized for specific design environments. It also illustrates how PCB Exchange may be used to generate board thermal models that can be analyzed using NX Electronics Systems Cooling.

Who Should Attend

- Mechanical or electrical designers who are involved in product design using NX
- Product thermal analysts
- Anyone involved in integrated product development

Prerequisites

Required courses: NX Basic Design or Essentials for NX Designers

Provided Course Material

Student Guide
Activity Material
After course completion: Online Tutorials

Course Topics

- PCB Exchange introduction
- PCA definitions: naming and attributes
- Information exchange: read and write ECAD files
- PCB Exchange customization
- PCA thermal analysis

Solid Edge

User Level	Beginner
Duration	3 days

The SolidEdge course engages the student through professional instruction pertaining to product model design, product model detailing, and the Synchronous Modeling technology.

Who Should Attend	Course Topics
Engineers, Designers, CAD/CAM Managers, Drafters, Checkers	- Master model concept - Surfacing & freeform - Sketching & parametrics - Feature modeling - Assemblies & mating conditions - Sheet metal modeling - Family part creation & expressions - Associative offset curves - Assemblies arrangements - Synchronous Modeling tools
Prerequisites	
None	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Using Teamcenter for Simulation

User Level	Beginner
Duration	4 days

The Using Teamcenter for Simulation course expands the concept of collaborative product data management (cPDM), into a collaborative environment to share CAE product data. You will become familiar with CAE Manager, CAE Structure Designer, Simulation data types and data model, CAE-related processes, and CAE related automation.

Who Should Attend	Course Topics
Design engineers, analysts, or any user dealing with CAE data within a Teamcenter environment	• Locating and identifying CAE item types • Navigating the CAE Manager • Creating and importing analysis data • Searching for existing data • Launching analysis tools • Using the batch mesher • Generating CAE structures • Working with composite structures • Creating new revisions • Releasing data
Prerequisites	
Participant needs to have a basic understanding of finite element analysis data and workflow and understand the basics of Teamcenter	
Provided Course Material	
Student Guide Activity Material After course completion: Online Tutorials	

NX Knowledge Fusion for Designers

User Level	Intermediate
Duration	2 days

Description: Knowledge Fusion for Designers provides students with a comprehensive overview of the NX Knowledge Fusion application.

Knowledge Fusion enables the user to develop applications and control NX objects via engineering rules that extend beyond a purely geometric nature. With the power of Knowledge Fusion, engineers and designers will be able to construct reusable and associated knowledge driven components that are easy to control and manipulate, so that the design intent or design goal can be achieved in a very quick way.

Who Should Attend

Engineers, Designers, End users of Knowledge Fusion applications, High-end NX users, Knowledge Fusion core application developers

Prerequisites

Required courses: Essentials for NX Designers or NX Basic Design

Provided Course Material

Student Guide
Activity Material
After course completion: Online Tutorials

Course Topics

- Basic concepts of Knowledge Fusion
- Knowledge Fusion navigator
- Design control
- Adoption
- User defined features
- Assemblies
- Optimization

NX Open API Programming

User Level	Intermediate
Duration	3 days

The NX Open API Programming course teaches how the NX environment can be tailored to suit the users' specific needs. The students will learn how NX can help them apply best practices in their engineering processes and intelligently control change propagation in their product designs. Practice and real-world examples show how a streamlined NX environment improves the design processes. The NX Open API Programming course introduces to the NX Open Application Programming Interface (API) and its entire collection of toolkits. This course teaches the basics of interfacing with the Common API through Visual Basic.NET, C#, C/C++ and Java. Journaling and toolbar customization are also covered. The course includes hands-on lab time for an enhanced learning experience.

Who Should Attend

Application developers interested in creating NX Open API programs

Prerequisites

Required courses: Essentials for NX Designers

Student should have a basic understanding of modeling and NX and working knowledge of one of the following: Visual Studio, Visual Basic.NET, C#, C/C++ or Java

Provided Course Material

Student Guide
Activity Material

Course Topics

- Understanding the common API
- Using the journal tool
- Turning journals into applications
- Understanding runtime license control
- Compiling Visual Basic.NET, C#, C/C++ and Java Open API programs
- Open C
-

NX for the Lighting Industry

User Level	Intermediate
Duration	3 days

The NX for the Lighting Industry course provides students with comprehensive instruction in the use of the NX Thermal and Flow - advanced software to model heat transfer, radiation and 3D fluid flow problems that are relevant to the lighting industry. This course is derived from both the NX Thermal and Flow and the NX Advanced Thermal & Flow analysis courses, and contains some extra material related to lighting system analysis. The course covers both theoretical and practical aspects of how the software handles heat transfer by conduction, convection and radiation and includes a variety of examples and tutorials..

Who Should Attend

Designers, engineers who use NX to model complex heat transfer and fluid flow for challenging multi-physics applications

Prerequisites

Required courses: Advanced Simulation Processes

Provided Course Material

Student Guide
Activity Material
After course completion: Online Tutorials

Course Topics

- Meshing for thermal analysis
- Meshing for flow analysis
- Thermal boundary conditions
- Thermal couplings
- Radiation to environment
- Flow boundary conditions
- Convection modeling
- Solution attributes
- Solving
- Post processing
- Mapping
- Advanced thermal coupling types
- Solar heating
- Radiative heating
- Advanced thermo-optical properties
- Humidity and condensation
- Joule heating
- Parallel processing

Registration Information

Enrollment is limited and classes fill quickly. To ensure availability, early registration is encouraged. For your convenience, MAYA offers many ways to register for classes:
Phone: (514) 369-5706
Web: www.mayahtt.com
E-Mail: Marc.Lafontaine@mayasim.com
Please have the following information ready:
• Course name
• Preferred date and location of training
• Sold-to number or customer installation number
• Payment method (credit card, purchase order, cheque or training coupons)
 Do not assume that you have a guaranteed seat until you have received confirmation by phone, fax, or email.

Course Details & Prerequisites

Courses usually span from 8AM to 4PM, unless notified otherwise.
The course instructor will contact the client at least 5 to 10 business days before the course start date to discuss and confirm course logistics, materials and a course agenda.
Prerequisites listed for each course are provided to benefit the student. In fairness to all students attending, and to ensure that all planned course topics can be completed in their entirety, students must meet prerequisites prior to attending the course. Maya accepts no responsibility for students who do not meet course prerequisites.

Payment Methods

By Cheque, please remit to:
Maya Simulation Technologies, PO Box 324, Brattleboro, Vermont 05301-0324

By Credit Card (VISA, MASTERCARD or AMEX), please contact Marc Lafontaine (Marc.Lafontaine@mayasim.com) to request and fill out a credit card authorization form.

Cancellation Policy

To maximize the effectiveness of our training sessions, Maya limits the number of attendees per class.

Substitutions may be made at any time – please advise in advance. Registrants who have been confirmed for specific training sessions may reschedule or cancel reservations without penalty up to ten business days before the scheduled class start date either by calling (514) 369-5706, or with sufficient lead time, by written notification to Marc.Lafontaine@mayasim.com.

Individuals who cancel a confirmed enrollment less than ten business days before the class and fail to provide a qualified replacement to fill the enrollment will be billed for 30 percent of the full tuition fee (list price). Individuals who cancel a confirmed enrollment less than five business days before the class and fail to provide a qualified replacement to fill the enrollment will be billed for 100 percent of the full tuition fee (list price). Those who fail to appear for training as scheduled will be billed for 100 percent of the full tuition fee (list price).

Maya reserves the right to reschedule or cancel any scheduled class upon ten business days notice to confirmed registrants. Registrants may then enroll in the next available offering of the course, or cancel the registration. In the event of cancellation by Maya, any payment made for the cancelled class will be refunded.

The client understands and agrees that Maya shall not, in any way, be held responsible for any costs, including loss of airfare or other transportation costs, hotel expenses or other damages, which the client may suffer in the event that Maya cancels or reschedules a class.

Cancellation or rescheduling of client-site training less than ten business days before the scheduled start date will be subject to a cancellation fee of 100 percent of the contracted fee.