DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

Course Catalog

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Learning Experience | Course Catalog

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SIMULIA

Advanced Abaqus	1
Abaqus/CAE: Geometry Import and Meshing	2
Abaqus/Explicit: Advanced Topics	3
Abaqus for Offshore Analysis	4
Adaptive Remeshing in Abaqus/Standard	5
Advanced Abaqus Scripting	6
Analysis of Composite Materials with Abaqus	8
Analysis of Geotechnical Problems with Abaqus	9
Automotive NVH with Abaqus	11
Buckling, Postbuckling and Collapse Analysis	12
Composites Modeler for Abaqus/CAE	13
Connector Elements and Mechanism Analysis with Abaqus	15
Co-simulation with Abaqus and Dymola	16
Crashworthiness Analysis with Abaqus	17
CZone for Abaqus	18
Electromagnetic Analysis with Abaqus	19
Element Selection in Abaqus	20
Fitness-for-Service Analysis with Abaqus	21
GUI Customization with Abaqus	23
Heat Transfer and Thermal-Stress Analysis with Abaqus	24
Introduction to Abaqus	25
Introduction to Abaqus/CAE	26
Introduction to Abaqus/Standard and Abaqus/Explicit	27
Introduction to Abaqus Scripting	28
Linear Dynamics with Abaqus	29
Metal Forming with Abaqus	30
Metal Inelasticity in Abaqus	31
Modeling Contact and Resolving Convergence Issues with Abaqus	32
Modeling Contact with Abaqus/Standard	34
Modeling Extreme Deformation and Fluid Flow with Abaqus	35
Modeling Fracture and Failure with Abaqus	37
Modeling Rubber and Viscoelasticity with Abaqus	38

Modeling Stents Using Abaqus	39
Obtaining a Converged Solution with Abaqus	40
Structural-Acoustic Analysis Using Abaqus	41
Substructures and Submodeling with Abaqus	42
Tire Analysis with Abaqus: Advanced Topics	43
Tire Analysis with Abaqus: Fundamentals	44
Writing User Subroutines with Abaqus	45
CST Studio Suite	47
CST Studio Suite - Charged Particle Applications	48
CST Studio Suite - EDA / SI-PI	50
CST Studio Suite - EMC/EMI	51
CST Studio Suite - Low Frequency	52
CST Studio Suite - Microwave and Antenna	53
CST Studio Suite - Multiphysics	54
CST Studio Suite - Spark3D	55
Introduction to CST Studio Suite	56
fe-safe	58
Automating Analysis in fe-safe	59
Fatigue of Welds in fe-safe (FWFS)	60
Introduction to fe-safe	62
Introduction to fe-safe/Rubber	63
Isight	65
Introduction to Isight	66
Isight Component Development	68
Optimizing Engineering Methods with Isight	69
Uncertainty Quantification with Isight	70
OPERA	71
Introduction to Opera-2d	72
Introduction to Opera-3d	73
Magnet Simulation with Opera	74
Multiphysics Analysis in Opera-3d	76
PowerFLOW	77
Introduction to PowerDELTA	78
Introduction to PowerFLOW	79
Simpack	80
Introduction to Simpack	81

Simpack Automotive	82
Simpack Contact Mechanics	83
Simpack Drivetrain	85
Simpack Engine	86
Simpack Flexible Bodies	87
Simpack FlexTrack	88
Simpack NVH	89
Simpack Rail	90
Simpack Scripting	91
Simpack User Routines	92
Simpack Wind	93
XFlow	94
Introduction to XFlow	95
XFlow Advanced	96
XFlow Complete	97
XFlow Intermediate	98

SIMULIA

Advanced Abaqus

Abaqus/CAE: Geometry Import and Meshing	
Course Code	SIM-en-CAGIM-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course provides an in-depth look at several advanced Abaqus/CAE capabilities: CAD geometry import and repair, meshing and partitioning of complicated geometry.
Objectives	Upon completion of this course you will be able to: - Import, edit, and repair CAD geometry. - Import and edit orphan meshes. - Use virtual topology to ease the meshing of complicated geometry. - Partition geometry to enable different meshing techniques.
Prerequisites	None
Available Online	Yes

Abaqus/Explicit: Advanced Topics	
Course Code	SIM-en-ADXP-A-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	The course emphasizes practical skills and techniques that are needed for analyses with Abaqus/Explicit.
Objectives	Upon completion of this course you will be able to: - Use the explicit dynamics method effectively, including the application of general contact, mass scaling, and adaptive remeshing - Use Abaqus/Explicit and Abaqus/Standard together to solve difficult problems, including results transfer and co-simulation - Model high-strain-rate deformation and failure - Filter output
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Abaqus for Offshore Analysis	
Course Code	SIM-en-OFFSH-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	This course is recommended for engineers with experience using Abaqus who work in the Oil and Gas industry.
Description	This course was designed by SIMULIA UK in support of their offshore customers to provide them a more indepth, industry-specific training. The workshops in this course are completely new and were developed from customer applications.
Objectives	The topics covered in this course include: - Review nonlinear material behavior (metal plasticity and hyperelasticity) - Capabilities of Abaqus element types in general - Specific element discussions include drag chain, pipe, PSI and ITT elements - Pipe-soil interaction, including lateral buckling of a pipe line on a seabed - Abaqus/Aqua capabilities in Abaqus/Standard to model wave, buoyancy, current & wind loading - Coupled Eulerian-Lagrangian (CEL) approach in Abaqus/Explicit
Prerequisites	None
Available Online	Yes

Adaptive Remeshing in Abaqus/Standard	
Course Code	SIM-en-ADAP-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course provides an in-depth coverage of the Abaqus features which address adaptive remeshing for solution accuracy.
Objectives	Upon completion of this course you will be able to: - Set up an adaptive remeshing process - Specify adaptive remeshing rules - Interpret error indicators and their associated output variables
Prerequisites	- This course is recommended for engineers with - experience using Abaqus
Available Online	Yes

Advanced Abaqus Scripting	
Course Code	SIM-en-SCRPT-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This seminar is offered as a follow-up to the Introduction to Abaqus Scripting course. It is a deeper dive into both Python and the Abaqus Scripting Interface and gives users more hands on exposure with practically oriented workshops of moderate complexity. This course also provides pointers for more specialized and advanced topics.
Objectives	Upon completion of this course you will be able to: - Help students to develop a high level understanding of the Abaqus scripting capabilities and gain some proficiency. - Organize and present the deeper technical details of Python and the Abaqus Scripting Interface. - Expose the strengths and weaknesses of Abaqus scripting. - Encourage the student to use scripting in new ways. - This advanced seminar will take a deeper dive into: - The Abaqus Scripting Interface (ASI) - The core functionality of the Python language and libraries
Prerequisites	Experience scripting with Python and Abaqus is recommended.

Advanced Abaqus Scripting	
Available Online	Yes

Analysis of Composite Materials with Abaqus	
Course Code	SIM-en-MAT-A-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	Composite materials are used in many design applications because of their high stiffness-to-weight ratios. This seminar shows you how to use Abaqus effectively to model composite materials.
Objectives	Upon completion of this course you will be able to: - Define anisotropic elasticity for combining the fibermatrix response - Define composite layups - Model progressive damage and failure in composites - Model delamination and low-cycle fatigue of composite structures - Model sandwich composite structures and stiffened composite panels
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Analysis of Geotechnical Problems with Abaqus	
Course Code	SIM-en-GEOT-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	This seminar is recommended for engineers with experience using Abaqus/Standard.
Description	Participants are given an overview of modeling geotechnical problems. Experimental testing and how it relates to the calibration of constitutive models for geotechnical materials is reviewed. The seminar teaches users how to use and calibrate the different geotechnical material constitutive models available in Abaqus and discusses the limitations of these models. The coupling between fluid flow and stress/deformation in the analysis of porous media is also considered. Modeling issues related to geotechnical problems are addressed and numerous illustrative examples are examined
Objectives	Upon completion of this course you will be able to: - An overview of modeling geotechnical problems - Experimental testing and how it relates to the calibration of constitutive models for geotechnical materials - How to use and calibrate the different geotechnical material constitutive models available in Abaqus - The limitations of these models - The coupling between fluid flow and stress/ deformation in the analysis of porous media - Modeling issues related to geotechnical problems
Prerequisites	None

Analysis of Geotechnical Problems with Abaqus	
Available Online	Yes

Automotive NVH with Abaqus	
Course Code	SIM-en-NVH-A-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course focuses on applying the linear dynamics capabilities in Abaqus to NVH-related simulation.
Objectives	Upon completion of this course you will be able to: - Perform natural frequency extractions - Perform sound radiation analyses (acoustics) - Include nonlinear preloading effects in your NVH simulations - Perform Brake squeal analyses - Create constraints and connections for Automotive NVH models - Use substructuring techniques to run your NVH simulations more efficiently - Perform advanced NVH postprocessing (via plugins)
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Buckling, Postbuckling and Collapse Analysis	
Course Code	SIM-en-BUCK-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course blends the theoretical background on such topics as geometric nonlinearity and the Riks method together with examples, guidelines and workshops.
Objectives	Upon completion of this course you will be able to: - Perform linear eigenvalue buckling analysis - Perform postbuckling analysis using the regular and damped static solution procedures - Perform postbuckling analysis using the modified Riks method - Perform postbuckling analysis using dynamics solution procedures
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Composites Modeler for Abaqus/CAE	
Course Code	SIM-en-CMA-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	This is an advanced seminar for users who are already familiar with the native Abaqus/CAE composites modeling functionality.
Description	This is an advanced seminar for users who are already familiar with the native Abaqus/CAE composites modeling functionality. Therefore, the Analysis of Composite Materials with Abaqus seminar is recommended as a prerequisite. At the very least, attendees should be familiar with the Abaqus/CAE composite layup functionality. Attendees should also be comfortable postprocessing the results of composites simulations using Abaqus/CAE. An understanding of how composites are manufactured is also helpful.
Objectives	In this course you will learn about: - Composites Modeler for Abaqus/CAE, an add-on product to Abaqus/CAE - How to use Composites Modeler for Abaqus/ CAE to account for accurate fiber angles and ply thicknesses in Abaqus simulations to achieve unprecedented accuracy - How to review and quickly modify your composites models to iteratively improve your designs - How to use your composites model to generate manufacturing data thereby ensuring that the analyzed model closely corresponds to the real structure

Composites Modeler for Abaqus/CAE	
Prerequisites	The Analysis of Composite Materials with Abaqus seminar is recommended as a prerequisite. At the very least, attendees should be familiar with the Abaqus/CAE composite layup functionality. Attendees should also be comfortable post-processing the results of composites simulations using Abaqus/CAE. An understanding of how composites are manufactured is also helpful.
Available Online	Yes

Connector Elements and Mechanism Analysis with Abaqus	
Course Code	SIM-en-FLEX-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	The goals of this course are to explore the variety of connection types available in Abaqus and to understand how to define connections that suit your needs.
Objectives	The topics include: - Comparison of connectors and MPCs - Basic connector components - Assembled kinematic connections - Local relative displacements and rotations - Defining stops and locks - Defining connector friction - Connector failure - Actuating components of relative motion - Sensors and actuators - Output and postprocessing
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Co-simulation with Abaqus and Dymola	
Course Code	SIM-en-DYM-A-V30R2021
Available Release	SIMULIA 2021
Duration	4 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	Abaqus-Dymola co-simulation is useful when logical modeling needs to be included in a physical system simulation; for example, it can be used to couple Antilock Braking System (ABS) logic modeled in Dymola with an Abaqus rolling tire and brake simulation.
Objectives	Upon completion of this course you will be able to: - Set up an Abaqus model for Abaqus-Dymola cosimulation - Create a simple control system in Dymola - Run a co-simulation
Prerequisites	None
Available Online	Yes

Crashworthiness Analysis with Abaqus	
Course Code	SIM-en-CRASH-A-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Advanced
Audience	New and experienced users of Abaqus who will perform structural crashworthiness or occupant safety simulations.
Description	This course is the ideal way to obtain a working knowledge of how to use Abaqus for crashworthiness analysis.
Objectives	Upon completion of this course you will be able to: - Abaqus fundamentals and input syntax - General "automatic" contact modeling - Element selection for crash simulation - Constraints and connections modeling - Material models used in crash simulation - Multiple mechanism damage and failure modeling
Prerequisites	No previous knowledge of Abaqus is required, but knowledge of finite elements and engineering mechanics is necessary.
Available Online	Yes

CZone for Abaqus	
Course Code	SIM-en-CZA-A-V30R2021
Available Release	SIMULIA 2021
Duration	4 hours
Course Material	
Level	Advanced
Audience	Engineers with experience using Abaqus/Explicit
Description	By attending this half-day class you will learn how to include crushable composite structures in your impact simulations.
Objectives	Upon completion of this course you will be able to: - Include crushable composite structures in your impact simulations - Understand guidelines for defining crushable composite materials based on composite coupon and component testing - Incorporate crushable composite structures into your models and how to postprocess CZA analysis results
Prerequisites	The Abaqus/Explicit: Advanced Topics and Analysis of Composite Materials with Abaqus seminars are recommended as prerequisites
Available Online	Yes

Electromagnetic Analysis with Abaqus	
Course Code	SIM-en-EMAG-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	Abaqus provides computational electromagnetic capabilities for the simulation of problems involving steady-state electrical conduction, piezoelectric phenomena and low-frequency eddy currents. In this course, you will learn how to analyze low frequency eddy current problems in Abaqus/Standard.
Objectives	Upon completion of this course you will be able to: - Set up and create electromagnetic models with Abaqus - Perform low frequency eddy current analyses with Abaqus - Perform transient eddy current analyses with Abaqus - Perform magnetostatic analyses with Abaqus
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Element Selection in Abaqus	
Course Code	SIM-en-ELEMC-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course provides a brief overview of the distinguishing characteristics of the wide range of continuum and structural elements available in Abaqus for stress analyses. It explains modeling features that may cause certain types of elements to behave poorly.
Objectives	Upon completion of this course you will be able to: - Understand the distinguishing characteristics of the wide range of continuum and structural elements available in Abaqus for stress analyses - Understand modeling features that may cause certain types of elements to behave poorly - Choose appropriate element types for different applications including the effects of fully or nearly incompressible material behavior, contact, bending, etc.
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Fitness-for-Service Analysis with Abaqus	
Course Code	SIM-en-FFSA-F-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Fixed–Equipment Reliability Engineers
Description	Pressure vessels and piping equipment are periodically assessed based on guidelines prescribed by documents such as ASME/API-579 Fitness-for-Service (FFS). Finite element based Level – 3 assessments are often utilized to assess equipment with complex geometries and loading conditions. The course discusses methods for modeling common pressure vessels such as distillation towers, storage vessels, etc. using Abaqus/CAE. Methods for the application and verification of loads such as weight of contents, internal pressure, etc. using Abaqus/Standard, as required for Level-3 FFS assessments, are also discussed. Procedures for analyzing metal loss using the finite element method by mapping thickness readings from scans are also discussed.
Objectives	Upon completion of this course you will be able to: - Use Abaqus/CAE to create finite element models of common plant structures. - Use Abaqus/CAE to submit and monitor analysis jobs. - Use Abaqus to perform buckling, elastic-plastic analyses.
Prerequisites	None

Fitness-for-Service Analysis with Abaqus	
Available Online	Yes

GUI Customization with Abaqus	
Course Code	SIM-en-GUIC-A-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Advanced
Audience	Users interested in modifying and extending the capabilities of Abaqus by customizing their Abaqus interface
Description	This course introduces the Abaqus GUI Toolkit through a combination of lectures, examples and workshops.
Objectives	The goal of this course is to train you to use the Abaqus GUI Toolkit to customize the Abaqus/CAE interface or build your own applications - Learn how to build dialogs and issue commands from the GUI - Learn how to create and modify GUI modules and toolsets - Learn how to create custom applications
Prerequisites	This seminar assumes prior knowledge of the Python programming language and the Abaqus kernel commands. Thus, students must attend the Introduction to Abaqus Scripting seminar prior to attending this class. Experience with object-oriented programming and GUI toolkits is recommended, but not required.
Available Online	Yes

Heat Transfer and Thermal-Stress Analysis with Abaqus	
Course Code	SIM-en-HEAT-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	The success of many structural designs requires a thorough understanding of both the thermal and mechanical response of the design. Temperature-dependent material properties, thermally-induced deformation, and temperature variations all may be important design considerations.
Objectives	Upon completion of this course you will be able to: - Perform steady-state and transient heat transfer simulations - Solve cavity radiation problems - Model latent heat effects - Perform adiabatic, sequential, and fully coupled thermal-stress analyses - Model contact in heat transfer problems
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Introduction to Abaqus	
Course Code	SIM-en-ABI-F-V30R2021
Available Release	SIMULIA 2021
Duration	32 hours
Course Material	
Level	Fundamental
Audience	Simulation Analysts
Description	This course is a comprehensive and unified introduction to the modeling and analysis capabilities of Abaqus. It teaches you how to solve linear and nonlinear problems, submit and monitor analysis jobs and view simulation results using the interactive interface of Abaqus.
Objectives	Upon completion of this course you will be able to: - Use Abaqus/CAE to create complete finite element models. - Use Abaqus/CAE to submit and monitor analysis jobs. - Use Abaqus/CAE to view and evaluate simulation results. - Solve structural analysis problems using Abaqus/ Standard and Abaqus/Explicit, including the effects of material nonlinearity, large deformation and contact.
Prerequisites	None
Available Online	Yes

Introduction to Abaqus/CAE	
Course Code	SIM-en-ICAE-F-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Simulation Analysts
Description	Abaqus/CAE provides a complete interactive environment for creating Abaqus models, submitting and monitoring analysis jobs and viewing and manipulating simulation results.
Objectives	Upon completion of this course you will be able to: - Use Abaqus/CAE to create complete finite element models. - Use Abaqus/CAE to submit and monitor analysis jobs. - Use Abaqus/CAE to view and evaluate simulation results
Prerequisites	None
Available Online	Yes

Introduction to Abaqus/Standard and Abaqus/Explicit	
Course Code	SIM-en-IABA-F-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Simulation Analysts
Description	This introductory course is the ideal way to obtain a working knowledge of how to use both Abaqus/ Standard and Abaqus/Explicit to solve linear and nonlinear problems. The seminar introduces you to the analysis capabilities of Abaqus using the keywords interface.
Objectives	Upon completion of this course you will be able to: - Complete finite element models using Abaqus keywords. - Submit and monitor analysis jobs. - View and evaluate simulation results. - Solve structural analysis problems using Abaqus/ Standard and Abaqus/Explicit, including the effects of material nonlinearity, large deformation and contact.
Prerequisites	None
Available Online	Yes

Introduction to Abaqus Scripting	
Course Code	SIM-en-ISRPT-F-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Audience Simulation Analysts
Description	This seminar covers basic usage of the Abaqus Scripting Interface and Python's syntax. It includes numerous hands-on exercises for the student to learn to automate tasks that are common to most analysts.
Objectives	Upon completion of this course you will be able to: - Help students to develop a high level understanding of the Abaqus scripting capabilities. - Organize and present the technical details of Python and the Abaqus Scripting Interface. - Expose the strengths and weaknesses of Abaqus scripting. - Encourage the student to use scripting in new ways.
Prerequisites	None
Available Online	Yes

Linear Dynamics with Abaqus	
Course Code	SIM-en-LNDYN-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course introduces the user to the algorithms and methods used to study linear dynamic problems with Abaqus/Standard.
Objectives	Upon completion of this course you will be able to: - Extract eigenmodes about a certain frequency - Determine whether the number of extracted eigenmodes is sufficient to represent the structure's response adequately - Perform transient, steady-state, response spectrum and random response analyses using the eigenmodes - Use multiple base motions - Apply damping in linear problems
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Metal Forming with Abaqus	
Course Code	SIM-en-METF-A-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Advanced
Audience	This course is recommended for engineers with experience using Abaqus
Description	Metal forming processes are highly nonlinear because they involve geometric, material and contact nonlinearities.
Objectives	In this course you will learn practical modeling skills and techniques for: - Stamping - Hydroforming - Punch stretching - Forging - Rolling - Drawing - Superplastic forming
Prerequisites	None
Available Online	Yes

Metal Inelasticity in Abaqus	
Course Code	SIM-en-METAL-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This seminar provides a brief overview of the inelastic behavior observed in metals and the basic concepts of plasticity theory.
Objectives	Upon completion of this course you will be able to: - Metals that show inelastic work hardening - The Bauschinger effect - "Ratchetting" and relaxation of the mean stress under cyclic loading - Strain-rate-dependent inelastic behavior - Temperature-dependent plasticity - Heat generated by plastic deformation - Ductile failure of metallic materials - Plastic behavior in porous and brittle (cast iron) metals - Creep behavior in metals
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Modeling Contact and Resolving Convergence Issues with Abaqus	
Course Code	SIM-en-MCRC-A-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This 3-day course provides an in-depth discussion on solving nonlinear problems in Abaqus/Standard with an emphasis on modeling and convergence-related issues for contact. Engineers at Abaqus have developed many techniques and guidelines for solving challenging contact problems. Convergence issues related to complicated material models and geometrically unstable behavior are also covered. Many years of practical experience in understanding and resolving convergence issues have been condensed into this course.
Objectives	Upon completion of this course you will be able to: - Define general contact and contact pairs - Define appropriate surfaces (rigid or deformable) - Model frictional contact - Model large sliding between deformable bodies - Resolve overclosures in interference fit problems - Understand how nonlinear problems are solved in Abaqus - Develop Abaqus models that will converge - Identify modeling errors that cause models to experience convergence difficulties - Recognize when a problem is too difficult or too illposed to be solved effectively

Modeling Contact and Resolving Convergence Issues with Abaqus	
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Modeling Contact with Abaqus/Standard	
Course Code	SIM-en-CONT-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	Participants are given a brief overview of the contact formulation and contact logic used in Abaqus/ Standard. The hands-on workshops provide ample opportunity to use the concepts developed in the lectures and to learn how to postprocess the results of a contact analysis.
Objectives	Upon completion of this course you will be able to: - Define general contact and contact pairs - Define appropriate surfaces (rigid or deformable) - Model frictional contact - Model large sliding between deformable bodies - Resolve overclosures in interference fit problems
Prerequisites	This course is recommended for engineers with experience using Abaqus/Standard
Available Online	Yes

Modeling Extreme Deformation and Fluid Flow with Abaqus	
Course Code	SIM-en-FLOW-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This seminar aims at providing users with a solid understanding of the Coupled Eulerian-Lagrangian (CEL) and Smoothed Particle Hydrodynamic (SPH) methods and illustrating approaches to setting-up and analyzing real world problems using these advanced analysis methods.
Objectives	Upon completion of this course you will be able to: - Create Eulerian meshes and define the initial material location within an Eulerian mesh - Specify initial conditions, boundary conditions and loads to materials in the Eulerian domain - Use general contact to model Eulerian-Lagrangian interactions - Create SPH meshes - Automatically convert conventional continuum elements to SPH particles - Define initial conditions, boundary conditions, and loads on SPH particles - Define contact interactions between SPH particles an element-based or analytical surfaces - Understand the differences between the CEL, SPH, and CFD approaches

Modeling Extreme Deformation and Fluid Flow with Abaqus	
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Modeling Fracture and Failure with Abaqus	
Course Code	SIM-en-FRAC-A-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	Fracture and failure modeling allows for product designs that maximize the safe operating life of structural components. Abaqus offers many capabilities that enable fracture and failure modeling. This seminar provides a detailed discussion of these capabilities.
Objectives	Upon completion of this course you will be able to: - Use proper modeling techniques for capturing crack-tip singularities in fracture mechanics problems - Use Abaqus/CAE to create meshes appropriate for fracture studies - Calculate stress intensity factors and contour integrals around a crack tip - Simulate material damage and failure - Simulate crack growth using cohesive behavior, VCCT, and XFEM - Simulate low-cycle fatigue crack growth
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Modeling Rubber and Viscoelasticity with Abaqus	
Course Code	SIM-en-MRUB-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course provides a brief overview of finite deformations and the material models used for rubber and resilient foam.
Objectives	Upon completion of this course you will be able to: - Use experimental test data to calculate material constants - Check the stability of the Abaqus material model at extreme strains - Obtain the best possible material constants from the available test data - Select elements for modeling rubber and foams - Design an appropriate finite element mesh - Model viscoelastic behavior in both the time and frequency domain - Use a user subroutine to define the hyperelastic behavior
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Modeling Stents Using Abaqus	
Course Code	SIM-en-STENT-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course focuses on the use of Abaqus for modeling and analyzing stents. However, its content can also be useful when modeling other types of medical devices. The course is targeted at engineers responsible for the design of medical devices who are looking to accelerate their understanding of the highly complex mechanical behavior associated with performance of such devices.
Objectives	Upon completion of this course you will be able to: - Create geometry for modeling stents and tools - Choose the proper element type - Choose material models: elastic-plastic (Stainless Steel), superelastic-plastic (Nitinol), hyperelastic (vessels) - Perform stent analyses: Static, Implicit and Explicit Dynamics - Define contact and constraints - Postprocess stent analyses - Perform fatigue evaluation
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Obtaining a Converged Solution with Abaqus	
Course Code	SIM-en-CONV-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	Obtaining converged solutions for highly nonlinear simulations can sometimes be challenging. Difficulties can arise, especially in simulations involving contact, complicated material models and geometrically unstable behavior. Many years of practical experience in understanding and resolving convergence issues have been condensed into this course.
Objectives	Upon completion of this course you will be able to: - Understand how nonlinear problems are solved in Abaqus - Develop Abaqus models that will converge - Identify modeling errors that cause models to experience convergence difficulties - Recognize when a problem is too difficult or too illposed to be solved effectively
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Structural-Acoustic Analysis Using Abaqus	
Course Code	SIM-en-ACOU-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This seminar covers the fundamentals of acoustics phenomena and then shows how to use Abaqus to solve a wide range of acoustics problems.
Objectives	Upon completion of this course you will be able to perform: - Pure acoustics analysis - Coupled structural-acoustic analysis - Scattering and shock analysis - Mesh size and mesh density effects for different analysis procedures - Acoustic analysis output and postprocessing
Prerequisites	This course is recommended for engineers with experience using Abaqus. Some understanding of acoustics is helpful but is not required.
Available Online	Yes

Substructures and Submodeling with Abaqus	
Course Code	SIM-en-SUPSUB-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	The size and complexity of designs that are analyzed and tested with Abaqus continues to grow. Substructures and submodeling are two effective techniques that allow the analyst to study problems that are too large to simulate with a conventional modeling approach.
Objectives	Upon completion of this course you will be able to: - Understand the difference between substructuring and submodeling - Build, translate, rotate and reflect substructures - Build preloads into substructures - Design meshes for submodel analysis - Perform solid-to-solid, shell-to-shell, and shell-to solid submodeling
Prerequisites	This course is recommended for engineers with experience using Abaqus
Available Online	Yes

Tire Analysis with Abaqus: Advanced Topics	
Course Code	SIM-en-TIRE2-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	This course is recommended for tire analysts with experience using Abaqus
Description	Modern tires are among the most complex structures in production and their complexities span a broad range of the capabilities available in Abaqus. This seminar covers topics addressing advanced tire modeling techniques and serves as a follow-up to the Tire Analysis with Abaqus: Fundamentals course.
Objectives	Topics covered in this course include: - Steady-state rolling using Eulerian techniques in Abaqus/Standard - Hydroplaning simulation using Coupled Eulerian-Lagrangian technique - Efficient steady-state dynamics analysis - Transient analysis using Abaqus/Explicit - Substructuring and submodeling
Prerequisites	Tire Analysis with Abaqus: Fundamentals
Available Online	Yes

Tire Analysis with Abaqus: Fundamentals	
Course Code	SIM-en-TIRE-F-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Fundamental
Audience	This course is recommended for tire analysts with experience using Abaqus
Description	Modern tires are among the most complex structures in production and their complexities span a broad range of the capabilities available in Abaqus. Since tire modeling is a specialized field, this seminar covers the many important yet basic capabilities in Abaqus that are specifically relevant to tire modeling.
Objectives	In this course you will learn about: - Choosing appropriate elements - Methods of modeling reinforcement - Contact modeling details pertinent to tire modeling - Fundamentals of material modeling-stress and strain measures, material directions - Linear elasticity, hyperelasticity and viscoelasticity - Efficient axisymmetric to three-dimensional model generation and results transfer
Prerequisites	None
Available Online	Yes

Writing User Subroutines with Abaqus	
Course Code	SIM-en-SUBR-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	This course is recommended for engineers with experience using Abaqus.
Description	This course explains when to consider the use of such user subroutines and how to approach their development. Detailed descriptions are given of the data required for these subroutines, the additional statements to be included and the variables that are available within the routine. Particular attention is paid to highlighting good practice in user subroutine development.
Objectives	In this course you will learn about: - When and how to use subroutines - DLOAD, VDLOAD, and UTRACLOAD for specifying user-defined loading - FILM for specifying user-defined film conditions - USDFLD and VUSDFLD for defining field variable dependence - UVARM for defining a user output variable - UHYPER for modeling hyperelastic materials - UMAT and VUMAT for allowing constitutive models to be added to the program - UEL and VUEL for allowing the creation of userdefined elements
Prerequisites	A working knowledge of the finite element method and programming in either Fortran or C

Writing User Subroutines with Abaqus	
Available Online	Yes

SIMULIA

CST Studio Suite

CST Studio Suite - Charged Particle Applications	
Course Code	SIM-en-CSTCPD-A-V30R2021
Available Release	SIMULIA 2021
Duration	9.50 hours
Course Material	
Level	Advanced
Audience	Charged particle dynamic experts
Description	Throughout this course you will become familiar with the use of the Charged Particle Module. You will be able to use and run the different solvers available within the CST STUDIO SUITE environment. This training course is well suited for the design of vacuum electronic devices, the Accelerator community and any applications taking into account the propagation of a charged particle beam under vacuum or a dispersive media like a plasma. The Multipactor analysis is also one of the capabilities of this tool.
Objectives	Upon completion of the course you will: - • Understand how to define a Particle Source and apply the Available Emission Models to it. - • Load Different Types of Precalculated Fields for the Particle Simulation. - • Use the Different Postprocessing Capabilities to read out Fields and Particle Result Data. - • Use and run the Tracking and the PIC solver. Be familiar with the Wakefield analysis for Accelerator components. - • Characterize material properties such as the secondary electron emission.
Prerequisites	Introduction to CST STUDIO SUITE

CST Studio Suite - Charged Particle Applications	
Available Online	Yes

CST Studio Suite - EDA / SI-PI	
Course Code	SIM-en-CSTEDA-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	PCB layout engineers and SI/PI/EMC simulation analysts
Description	This course describes and demonstrates how to use CST for Signal Integrity/high speeds technology. The course will go over some fundamentals of how to set-up and run an electromagnetic simulation - it will take the viewpoint of how to do this for electronics applications and spends a good amount of time on features and tools that are helpful and specific for this area.
Objectives	Upon completion of the course you will: - Be able to perform basic functions in terms of modeling, setup of simulation, importing layout boards and analyzing pre- and postprocessing results - Get an overview on suitable solvers for specific SI/ PI applications. - Know how to set up and run the solvers and tools for different SI and PI
Prerequisites	None (basic knowledge of SI, PI and EMC analysis)
Available Online	Yes

CST Studio Suite - EMC/EMI	
Course Code	SIM-en-CSTEMC-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	This course is intended for engineers involved in electromagnetic compatibility (EMC), electromagnetic interference (EMI), electrostatic discharge (ESD), electromagnetic environmental effects (E3) and antenna integration.
Description	This course covers the EMC Module providing an overview on how simulation can be applied towards electromagnetic compatibility (EMC) design and analysis for emissions and immunity, conducted and radiated.
Objectives	The EMC Module expands upon the CORE Module basics to provide an overview on how simulation can be applied towards electromagnetic compatibility (EMC) design and analysis. Upon completion, you will understand the different solvers, sources and outputs for EMC simulation, and you will be able to set up simulations for emissions and immunity, shielding effectiveness, 3D EM and circuit co-simulations, and cable modeling.
Prerequisites	Introduction to CST Studio Suite
Available Online	Yes

CST Studio Suite - Low Frequency	
Course Code	SIM-en-CSTLFS-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Low Frequency Electromagnetic Simulation Analysts
Description	This course aims to improve users' experience with the tools in CST Studio Suite dedicated to electromagnetic simulation of low-frequency and static applications. After a short overview of the basic usage of CST Studio Suite, the course focuses on the various available sources and solvers in CST EM Studio.
Objectives	Upon completion of the course you will: - • Be able to perform basic functions in terms of modeling, setup of simulation, and analyzing pre- and postprocessing results. - • Get an overview on static and low frequency solvers available in CST EM STUDIO. - • Understand how to set-up and run simulations for different static and low frequency applicaitons.
Prerequisites	None
Available Online	Yes

CST Studio Suite - Microwave and Antenna	
Course Code	SIM-en-CSTMWA-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Electromagnetic Simulation Analysts & Antenna Designers
Description	Throughout this course you will become familiar with the high frequency solvers used to simulate different type of antennas. This course will also discuss more specific topics like antenna matching network and SAR calculations in the human body.
Objectives	Upon completion of this course you will be able to: - - Construct & simulate antennas using different solvers. - - Visualize & extract primary results (S-Parameters, Nearfield distribution, Farfield) & more advanced results using postprocessing (i.e. Potential Bandwidth, SAR). - - Handle imported CAD models. - - Design simple matching network. - - Use the Hybrid Solver to simulate more complex RF Systems.
Prerequisites	Introduction to CST Studio Suite
Available Online	Yes

CST Studio Suite - Multiphysics	
Course Code	SIM-en-CSTMPS-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Recommended for Electromagnetic Simulation Analysts who also need thermal and mechanical analysis as part of their workflow
Description	This course describes how to use CST's Multiphysics Studio to perform thermal and mechanical analysis. The course reviews the basic concepts of heat transfer and mechanical behaviors of materials, then explains the sources, boundary conditions, meshing and solver options available in MPS, and illustrates the steps of an EM-Thermal-Mechanical coupled simulation.
Objectives	Upon completion of the course you will: - - Obtain basic thermal and mechanical theories - - Get an overview of CST's Multiphysics Studio's capabilities - - Understand basic sources, boundary conditions, meshing options and solver options in CST Multiphysics Studio - - Be able to run an EM-Thermal-Mechanical coupled analysis
Prerequisites	Introduction to CST Studio Suite
Available Online	Yes

CST Studio Suite - Spark3D	
Course Code	SIM-en-CSTSP3-A-V30R2021
Available Release	SIMULIA 2021
Duration	4.67 hours
Course Material	
Level	Advanced
Audience	Electromagnetic Simulation Analysts
Description	Throughout this course you will become familiar with the Spark3D interface and how to perform basic functions in terms of modeling, setup of simulation, and analyzing pre-/post-processing results. This course also provides a general introduction to Multipactor and Corona discharge effects.
Objectives	Upon completion of the course you will be able to: - - • Understand basic modeling and simulation setup within Spark3D - • Analyze Spark3D results - • Understand general aspects of Multipactor and Corona discharge effects
Prerequisites	Basic knowledge of electromagnetic simulation software like CST Studio Suite
Available Online	Yes

Introduction to CST Studio Suite	
Course Code	SIM-en-CSTCOR-F-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Electromagnetic Simulation Analysts
Description	Throughout this course you will become familiar with the basic usage of CST STUDIO SUITE in terms of its modeling and simulation capabilities. Participants will learn about the general setup, submission, and result analysis procedures for high-frequency 3D electromagnetic simulations. This class will also introduce the various high frequency solvers available CST MICROWAVE STUDIO and provide a behind-the-scenes look into the FIT and FEM algorithms for the general purpose Time-Doman and Frequency-Domain solvers respectively.
Objectives	Upon copmletion of this course you will be able to: - Navigate the general layout of the CST SUTDIO SUITE interface - Generate CAD geometries within the native modeling interface - Set up the project environment with the desired units, frequency settings, background materials and boundary conditions - Understand the various material types that exist and how to define them - Setup excitations using lumped elements and waveguide ports - Setup result monitors to obtain 2D/3D field data - Choose and set up the most appropriate solver and algorithm for high frequency applications.

Introduction to CST Studio Suite	
	- Run Time-Domain (FIT) and Frequency-Domain (FEM) simulations including parametric sweeps and optimizations. - Analyze simulation results such as S-parameters, voltages, currents, 3D nearfields and farfields. - Extract data from the standard result set through the use of post-processing templates
Prerequisites	None
Available Online	Yes

SIMULIA

fe-safe

Automating Analysis in fe-safe	
Course Code	SIM-en-AAFS-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	In this course you will learn how to extend typical GUI analysis in fe-safe to include different methods of automated fatigue analysis.
Objectives	Upon completion of this course you will be able to: - Set up and run various automated fatigue analyses using fe-safe - Export a project used with fe-safe to replicate analysis - Use pre-scanning and group commands in a macro file - Change project settings and run analysis in a macro - Change project settings and run analysis in a batch file - Troubleshoot and customize batch files and macros
Prerequisites	Introduction to fe-safe
Available Online	Yes

Fatigue of Welds in fe-safe (FWFS)	
Course Code	SIM-en-FWFS-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This 1-day course provides a focused discussion on simulating the number of cycles till fatigue failures at welds in welded structures. The methods are based on predicting a crack through a certain thickness, in welded structures at the welds (toe, root, throat, etc. failure mechanisms in welds can be included). Both classification methods (such as BS5400 and BS7608) and structural stress methods (such as the Verity® module in fe-safe) will be covered.
Objectives	Upon completion of this course you will be able to: - Set up and run various weld fatigue analyses using fe-safe including - Understand modeling requirements for line welds and spot welds - Understand the background of the supported weld fatigue methods - Set up FEA models for weld fatigue and import results into fe-safe - Use BS5400 Weld Finite Life algorithm in fe-safe - Define weld lines for structural stress calculations - Use the Verity® module in fe-safe based on structural stress calculations - Select a material for fatigue analysis using structural stress methods - Run weld methods and/or base metal fatigue simultaneously

Fatigue of Welds in fe-safe (FWFS)	
	- Postprocess weld fatigue in fe-safe and using a viewer
Prerequisites	Introduction to fe-safe
Available Online	Yes

Introduction to fe-safe	
Course Code	SIM-en-IFES-F-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Simulation Analysts
Description	In this practical introduction to fe-safe you will learn how to set up and run various fatigue analyses using fe-safe. The course includes many hands-on tutorials and practical examples.
Objectives	Upon completion of this course you will be able to: - Set up and run various fatigue analyses using fesafe - Set up models and import models into fe-safe - Select a material for fatigue analysis - Set up your loadings - Run various analyses in fe-safe
Prerequisites	None
Available Online	Yes

Introduction to fe-safe/Rubber	
Course Code	SIM-en-IFSR-F-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Simuation Analyst: This course is recommended for engineers with experience using an FEA solver and the fe-safe GUI. Some overview of the fe-safe/Rubber GUI is given, but users are expected to know how to use the Abaqus/CAE and Abaqus/Viewer interfaces. Suggested prerequisites: Introduction to Abaqus and Introduction to fe-safe.
Description	This 2-day course provides background information and hands-on experience for calculating fatigue of elastomers using Abaqus and fe-safe/Rubber
Objectives	FEA Modeling for fe-safe/Rubber in Abaqus/CAE - Using the fe-safe/Rubber Interface - Stress-strain relationship for rubber materials in Abaqus - Theory of fatigue crack growth under relaxing and non-relaxing loads - Overview of material calibration and how to enter material properties in fe-safe - Calibrating the crack precursor size for fe-safe/Rubber - Variable amplitude loading and multiple block loading for fe-safe/Rubber - Postprocessing exports from fe-safe/Rubber (spreadsheet and Abaqus/Viewer) - Using fe-safe/Rubber output in the stand-alone Endurica damage sphere viewer - Industry examples

Introduction to fe-safe/Rubber	
Prerequisites	- Introduction to Abaqus - Introduction to fe-safe
Available Online	Yes

SIMULIA

Isight

Introduction to Isight	
Course Code	SIM-en-ISGT-F-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Simulation Analysts
Description	Isight is a Process Integration and Design Optimization (PIDO) software framework, which enables various applications to be easily integrated. With Isight you can create flexible simulation process flows to automate the exploration of design alternatives and identification of optimal performance parameters. This course comprehensively covers the Design and Runtime Gateways along with several fundamental components, exposing users to the ways in which a workflow can be built in Isight and the ways in which the design space can be explored.
Objectives	Upon completion of this course you will be able to: - Automate a series of functions to create a Sim-flow - Add components to a Sim-flow - Set up the core component - Configure components to pass data to/from each other - Execute a Sim-flow - Visualize Sim-flow results - Evaluate design alternatives - Create a Sim-flow to capture a process, by integrating various software in the company. - Perform Design Optimization and gain Design Space understanding by using various techniques such as DOE, Optimization, Monte Carlo etc.

Introduction to Isight	
Prerequisites	None
Available Online	Yes

Isight Component Development	
Course Code	SIM-en-ISCD-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course covers the process of designing, building, publishing, debugging and testing custom components and plug-ins, utilizing the Isight SDK. The course is highly interactive with a strong emphasis on practical workshops using a standard Integrated Development Environment (IDE).
Objectives	Upon completion of this course you will be able to: - Understand component requirements - Develop component packages for Isight
Prerequisites	This course is recommended for engineers with experience using Isight
Available Online	Yes

Optimizing Engineering Methods with Isight	
Course Code	SIM-en-ISOM-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts or Scientists
Description	This course will provide a brief overview of Isight and optimization before moving on to discuss nonlinear optimization theories and applications. Topics such as techniques for design space searching, multi-objective optimization, optimization strategy, and multidisciplinary optimization will be covered during the seminar. Attendees will learn key differences between the optimization algorithms offered by Isight, how to choose the preferred method depending on the problem, how to remedy issues with run-time performance, and other topics relevant to improving the usage and value of Isight for real engineering optimization problems.
Objectives	Gain hands-on experience to understand nonlinear optimization theories and techniques: - - How does exploring the design space can assist with optimization - - The capabilities of different optimization techniques and exploration strategies - - Methodologies for Multidisciplinary Design Optimization (MDO)
Prerequisites	Introduction to Isight
Available Online	Yes

Uncertainty Quantification with Isight	
Course Code	SIM-en-ISUQ-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	- Simulation Analysts - Design Engineers - Quality Engineers - Manufacturing Engineers - Reliability Engineers - Student and any one interested in doing stochastic analysis
Description	This course introduces Isight users to methods dealing with statistical behavior as a result of variability in the system. It discusses why uncertainty quantification (UQ) analysis is important, presents concepts and methods in Isight to do UQ analysis, and shows users how to use Isight's open architecture to integrate their own algorithms into components as plugins.
Objectives	Upon completion of this course you will be able to: - Use various Isight components to perform stochastic analysis - Understand concepts used in Taguchi, reliability and Six Sigma methods
Prerequisites	Introduction to Isight
Available Online	Yes

SIMULIA

OPERA

Introduction to Opera-2d	
Course Code	SIM-en-OPINT2-F-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Electromagnetic Simulation Engineers
Description	Throughout this course you will become familiar with the Opera-2d interface and scripting language and learn how to perform basic functions in terms of modeling, meshing, configuring, solving, and displaying the results.
Objectives	The course includes: - Introduction to Opera-2d pre and post-processing - Introduction to Electromagnetics and FE Analysis - Advanced GUI Features (Parametrized models, Scripting) - Introduction to Opera-2d solvers - Multiple hands-on sessions using typical models or your own device
Prerequisites	None
Available Online	Yes

Introduction to Opera-3d	
Course Code	SIM-en-OPINT3-F-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Electromagnetic Simulation Analysts
Description	This three-day course covers all main aspects of the finite element modelling process and is aimed at providing sufficient information and hands-on experience to put you on track to successfully analyse your own devices.
Objectives	The course includes: - Introduction to Opera-3d software - Introduction to the Geometric Modeller - Introduction to Computational Electromagnetic, Thermal and Stress Analyses - Introduction to the Finite Element Method - Introduction to the Post-Processor - Command Interpreter and Expression Analyser - Conductors & circuits - Modelling considerations for electromagnetic models - Multiple hands-on sessions using typical models or you own device
Prerequisites	No previous experience using Opera software is required for this course.
Available Online	Yes

Magnet Simulation with Opera	
Course Code	SIM-en-OPMAG-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Electromagnetic Simulation Engineers
Description	This two day course covers Opera's capabilities for designing and simulating magnet technology applications, typically for MRI and NMR magnet systems, particle accelerator magnets, electron beam lithography and microscopy, spectroscopy, ion implanters and others. Throughout this advanced course you will extend your knowledge of simulations using Opera, both 2d and 3d, to modeling of magnets in various applications and postprocessing of the results.
Objectives	The course includes: - - • Overview of magnet technology systems and applications - • Coil modelling - • Permanent magnets - • Modelling and meshing - • Fields and harmonics - • Inductance, capacitance and resistance evaluation - • Eddy current analysis - • Power dissipation and thermal analysis - • Calculating forces on coils and stress analysis - • Shielding AC and DC fields - • Accelerator Magnet Systems
Prerequisites	Introduction to Opera-3d

Magnet Simulation with Opera	
Available Online	Yes

Multiphysics Analysis in Opera-3d	
Course Code	SIM-en-OPMPA-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	
Description	This two-day course covers Opera's capabilities for coupling electromagnetics, thermal and stress analyses to solve multiphysics problems. Lectures and practical sessions are designed to give you both theoretical background and hands-on experience in modelling various multiphysics scenarios.
Objectives	The course includes: - Thermal Analysis - Mechanical Analysis (static and modal stress) - Coupling electromagnetic and thermal analyses - Coupling electromagnetic and mechanical analyses - Using Python to couple complex multiphysics problems - Case studies of coupled electromagnetic and thermal analyses: particle beam heating, induction heating and quench simulations - Case studies of coupled electromagnetic and mechanical analyses: split pair magnet coil and synchronous reluctance motor
Prerequisites	We recommend completing the Introduction to Opera-3d training course before taking this course.
Available Online	Yes

SIMULIA
PowerFLOW

Introduction to PowerDELTA	
Course Code	SIM-en-PDINT-F-V30R2021
Available Release	SIMULIA 2021
Duration	14.50 hours
Course Material	
Level	Fundamental
Audience	- CFD Analysist - CFD Modeler
Description	This two-day introductory class is intended for new users of PowerDELTA. This course is intended to complement the Introduction to PowerFLOW seminar, which describes how to perform CFD analyses with PowerFLOW.
Objectives	Upon completion of this course you will be able to: - Understand basic geometry preparation requirements for PowerFLOW simulation. - Create geometry for aerodynamics analysis simulation. - Analyze, identify, and correct mesh issues to produce high quality PowerFLOW meshes. - Efficiently prepare watertight geometry using the available editing tools.
Prerequisites	This course is recommended for new PowerDELTA users. Some familiarity with interactive preprocessors is helpful but not required. Basic familiarity with CFD is recommended.
Available Online	Yes

Introduction to PowerFLOW	
Course Code	SIM-en-PFINT-F-V30R2021
Available Release	SIMULIA 2021
Duration	11.67 hours
Course Material	
Level	Fundamental
Audience	CFD Analysts
Description	This course is intended for new users of PowerFLOW or those who have recently started using PowerCASE® and PowerVIZ®. Simplified external aerodynamics flow around a passenger vehicle is used to explain key concepts, although sufficient information is provided to enable you to perform routine PowerFLOW simulations for any application.
Objectives	Upon completion of this course you will be able to: - Understand basic PowerFLOW concepts. - Generate a basic PowerFLOW aerodynamics simulation case. - Postprocess and analyze PowerFLOW results to understand basic aerodynamics application. - Understand basic geometry creation requirements for PowerFLOW simulation. - Understand basic Lattice Boltzmann Method theory.
Prerequisites	Basic familiarity with CFD
Available Online	Yes

SIMULIA

Simpack

Introduction to Simpack	
Course Code	SIM-en-SMPKBA-F-V30R2021
Available Release	SIMULIA 2021
Duration	24 hours
Course Material	
Level	Fundamental
Audience	- Simulation analysts and design engineers - Multibody simulation experts with no previous experience of Simpack
Description	This course explains the basics of multibody model set-up, simulation and postprocessing with SIMULIA Simpack.
Objectives	Upon completion of this course you will be able to: - Build multibody models in Simpack - Start the most important Simpack solvers - Postprocess the results - Parameterize models in an efficient way - Set up modular models using Simpack's substructuring concept
Prerequisites	Some familiarity with fundamental multibody concepts
Available Online	Yes

Simpack Automotive	
Course Code	SIM-en-SMPKAU-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	- People who are familiar with Simpack and work in the - automotive sector
Description	This course explains how to set-up road vehicle models and introduces Simpack's Automotive elements (tires, roads, steering controllers, etc) and the Automotive Demo Wizard Database.
Objectives	Upon completion of this course you will be able to: - Build up models with automotive elements - Build up models from automotive database
Prerequisites	Introduction to Simpack
Available Online	Yes

Simpack Contact Mechanics	
Course Code	SIM-en-SMPKCM-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Multibody simulation engineers involved in contact mechanics simulation
Description	This course explains the usage of Simpack's modeling elements for contact mechanics and features that optimize the Simpack solver for generic contact simulations.
Objectives	Upon completion of this course you will be able to: - Use Simpack's modeling elements for contact mechanics and features - Optimize the Simpack solver for generic contact simulations - Have an overview on contact models and methods in Simpack - Model single-point contact search with Moved Markers - Model generic 2D and 3D Multi-point contact methods - Model contact force calculation on rigid and flexible bodies - Perform a minimum distance measurement between arbitrary surfaces - Model examples of rigid and flexible body contact
Prerequisites	Before undertaking this course, you should have completed the Introduction to Simpack training course.

Simpack Contact Mechanics	
Available Online	Yes

Simpack Drivetrain	
Course Code	SIM-en-SMPKDT-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simpack users planning to build up and analyze drivetrain models in Simpack
Description	The drivetrain training gives an overview of Simpack modeling elements and analysis methods available for drivetrain applications.
Objectives	Upon completion of this course you will be able to have an overview of drivetrain applications including: - Joints and Constraints - Bushing and bearing elements - Gear pair Force Elements with different levels of detail - Spline coupling - Drivetrain modeling guidelines and recommendations - Drivetrain modeling guidelines Linear resonance analysis - Order analysis - Operating deflection shapes
Prerequisites	Introduction to Simpack Training course successfully finished
Available Online	Yes

Simpack Engine	
Course Code	SIM-en-SMPKEG-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Simpack users planning to build up and analyze engine models in Simpack.
Description	This course explains how to use Simpack specific modeling elements for engine applications. These include cranktrain modeling, the Dynamic Spring Generation tool, hydraulic lash adjuster, valvetrain, chain drive systems and Simpack Wizard together with the Engine demo database.
Objectives	Upon completion of this course you will be able to: - • Use Simpack's specific modeling elements for engine applications - • Perform simulations using high fidelity cranktrain models - • Generate and model dynamic springs in Simpack - • Model a hydraulic lash adjuster for chain and valvetrain applications - • Perform kinematic and dynamic analyses of single valvetrain models - • Model a chain drive system - • Understand how to use Simpack Wizard together with the Simpack Engine demo database
Prerequisites	Before undertaking this course, you should have completed the Introduction to Simpack training course.
Available Online	Yes

Simpack Flexible Bodies	
Course Code	SIM-en-SMPKFB-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simulation Analysts
Description	This course is about structural flexibility in Simpack. It explains how to import linear finite element (FE) models into Simpack and how to model linear and nonlinear beam structures directly in Simpack.
Objectives	Upon completion of this course you will be able to: - Prepare Abaqus models for use inside Simpack (as an Abaqus substructure) - Integrate finite element models into the Simpack environment - Define appropriate interface connections to the Simpack model - Define appropriate mode selection inside the Simpack environment - Perform Simpack analysis - Perform postprocessing of flexible body results
Prerequisites	This course is recommended for engineers with experience using FEA tools and Simpack
Available Online	Yes

Simpack FlexTrack	
Course Code	SIM-en-SMPKFT-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simpack Rail users interested in advanced train/track interaction, and engineers involved in modelling the dynamic behavior of tracks, bridges, switches and crossings.
Description	This course explains how to set up flexible rail track models in Simpack.
Objectives	Upon completion of this course you will be able to: Set up of a finite element based flexible rail track in Simpack Preparing the FE models for the import Craigh-Bampton reduction - Import of the reduced FE-Models into Simpack Selection of the appropriate FE modeling method Modeling of nonlinear railpads and ballast defects Take advantage of Simpack scripts for semi-automatic flexible track setup
Prerequisites	Introduction to Simpack Course and the Simpack Rail course; the Simpack Flexible Bodies course is beneficial but not mandatory.
Available Online	Yes

Simpack NVH	
Course Code	SIM-en-SMPKNV-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	
Description	This course covers the fundamental theory necessary to understand NVH, along with a detailed look at the NVH functionality within Simpack. Using prepared models, participants have the opportunity to experiment with and compare the various methods.
Objectives	Upon completion of this course you will be able to: - Understand NVH fundamentals and application areas: - Understand NVH functionality within Simpack - Frequency response functions - Linear system response - Spectral analysis - Frequency sweep - Nonlinear Frequency Pass - Order Analysis - Operating Deflection Shapes - Use these methods with complete road and rail vehicles
Prerequisites	
Available Online	Yes

Simpack Rail	
Course Code	SIM-en-SMPKRA-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	- Simulation analysts and design engineers in the railway industry - Multibody simulation experts with no previous experience of railway simulation in Simpack
Description	The Simpack Rail training explains how to use Modeling Elements to simulate rail-wheel contact, how to set up entire vehicle models, and the most important analysis types for rail vehicles. It also introduces rail vehicle specific elements such as tracks, irregularities, wheel and rail profiles, suspension elements.
Objectives	Upon completion of this course you will be able to: - Understand all necessary elements for railway modeling - Set up railway vehicles according to common concepts - Set up, run and analyze typical applications for railway models
Prerequisites	- Before undertaking this course, you should have completed the Introduction to Simpack training course - Some familiarity with fundamental railway theory
Available Online	Yes

Simpack Scripting	
Course Code	SIM-en-SMPKSC-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simpack users wishing to automate any tasks in Simpack
Description	This course explains how to automate tasks in Simpack Pre and Post through scripting. It provides user experience in terms of writing, running and debugging scripts.
Objectives	This course provides an overview of the Simpack scripting capabilities and possible applications. Upon completion of this course you will be able to: - Understand the basics of the scripting languages. - Use Simpack-specific scripting classes. - Create examples for the most common scripting applications. - Write, run and debug scripts.
Prerequisites	Completion of the Simpack Basics training course. Basic programming knowledge is required.
Available Online	Yes

Simpack User Routines	
Course Code	SIM-en-SMPKUR-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simpack users wishing to extend Simpack's built-in functionality by user written Modeling Elements will benefit from this course.
Description	The User Routines training explains how to add userdefined functionality to Simpack by means of Fortran subroutines.
Objectives	Upon completion of this course you will be able to: - Define element parameters including selection menus and units - Program a force law using Simpack states - Program a Simpack filter - Incorporate external routines and libraries into Simpack - Debug user programmed elements
Prerequisites	Completion of the Introduction to Simpack training course. Basic programming skills are recommended
Available Online	Yes

Simpack Wind	
Course Code	SIM-en-SMPKWD-A-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Advanced
Audience	Simpack users planning to build up and analyze wind turbine models in Simpack.
Description	This course explains how to set up wind turbine models in Simpack, how to use the rotorblade generator with linear and nonlinear SIMBEAM elements, wind specific elements (including the interfaces to AeroDyn and HydroDyn), and how to use the Simpack wind load calculation tool.
Objectives	Upon completion of this course you will be able to: - Understand Simpack Wind turbine applications - Model structural components (onshore and offshore foundation, tower, nacelle) - Generate and model Rotorblades in Simpack - Conduct Aero- and Hydro-elastic simulation - Use the Load Calculations Tool - Model high fidelity drivetrains - Conduct a resonance analysis according to GL 2010
Prerequisites	Introduction to Simpack and Simpack Flexible Body Trainings.
Available Online	Yes

SIMULIA

XFlow

Introduction to XFlow	
Course Code	SIM-en-XFINT-F-V30R2021
Available Release	SIMULIA 2021
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Engineers with knowledge or experience in CFD
Description	This course introduces the XFlow Graphical User Interface (GUI), and shows how to run a simulation
Objectives	Upon completion of this course you will be able to: - Get started with the XFlow GUI - Set up a single phase simulation in XFlow - Post-process simulations in XFlow - Learn how to use the different lattice refinement schemes
Prerequisites	None
Available Online	Yes

XFlow Advanced	
Course Code	SIM-en-XFADV-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Engineers with knowledge or experience in CFD
Description	This course introduces the advanced features and scripting capabilities of XFlow
Objectives	Upon completion of this course you will be able to: - Understand the Lattice-Boltzmann Method used in XFlow - Use the different features available for all XFlow solvers: Single Phase, Free surface and Multiphase solvers - Set up internal and external simulations using all the solvers of XFlow - Set up thermal and acoustics analysis in XFlow - Set up simulations in XFlow with different moving parts behaviors - Handle all the postprocessing tools of XFlow - Use advanced features and scripting capabilities of XFlow
Prerequisites	- Before taking this course the completion of the following prequisite courses (or equivalent knowledge) is required: - XFlow Introduction - XFlow Intermediate
Available Online	Yes

XFlow Complete	
Course Code	SIM-en-XFLOW-A-V30R2021
Available Release	SIMULIA 2021
Duration	40 hours
Course Material	
Level	Advanced
Audience	Engineers with knowledge or experience in CFD
Description	This course covers all the XFlow capabilities and how to set up, and postprocess all kind of simulations in XFlow
Objectives	Upon completion of this course you will be able to: - Understand the Lattice-Boltzmann Method used in XFlow - Use the different features available for all XFlow solvers: Single Phase, Free- surface and Multiphase solvers - Set up internal and external simulations using all the solvers of XFlow - Set up thermal and acoustics analysis in XFlow - Set up simulations in XFlow with different moving parts behaviors - Handle all the postprocessing tools of XFlow - Use advanced features and scripting capabilities of XFlow
Prerequisites	None
Available Online	Yes

XFlow Intermediate	
Course Code	SIM-en-XFMED-A-V30R2021
Available Release	SIMULIA 2021
Duration	16 hours
Course Material	
Level	Advanced
Audience	Engineers with knowledge or experience in CFD
Description	This course covers the main features and physics of XFlow.
Objectives	Upon completion of this course you will be able to: - Understand XFlow geometries behaviors and set up simulations with the Enforced and Rigid Body Dynamics geometry behavior. - Import and visualize geometries, perform geometry and healing operations - Understand and use thermal models in XFLow - Understand and use the Free Surface and Multiphase solvers available in XFlow - Postprocess thermal simulations and external and internal Multiphase simulations in XFlow
Prerequisites	- Before taking this course the completion of the following prequisite courses (or equivalent knowledge) is required: - XFlow Introduction
Available Online	Yes

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Course Catalog

V5-6R2017 to V5-6R2022

02 May 2022

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CATIA

CATIA Analysis V5	1
CATIA V5 Analysis	2
ELFINI Structural Analysis	3
FEM Solid	5
FEM Surface	7
Generative Assembly Structural Analysis	9
Generative Dynamic Response Analysis	11
Generative Part Structural Analysis Expert	12
Generative Part Structural Analysis Fundamentals	14
CATIA Equipment and Systems Engineering V5	15
CATIA V5 for Electrical Designers	16
Electrical 3D Design and Documentation	18
Electrical Harness Flattening	19
Electrical Librarian and Harness Installation	20
Electrical Wire Routing	21
CATIA Infrastructure V5	22
V5 Administration	23
CATIA Machining V5	24
Advanced Part Machining	25
Multi-Axis Surface Machining	26
Numerical Control Infrastructure	27
Prismatic Machining	28
Surface Machining	29
CATIA Mechanical Design V5	30
2D Layout for 3D Design (LO1)	31
3D Functional Tolerancing and Annotation	32
CATIA Composites Laser Projection Fundamentals	33
CATIA Detail Drafting	34
CATIA Generative Drafting Fundamentals (ANSI)	35
CATIA Generative Drafting Fundamentals (ISO)	36
CATIA Generative Sheetmetal Design	37
CATIA Part Design	38

CATIA Part Design Added Exercises	39
CATIA Part Design Expert	40
CATIA Product Design	41
CATIA Product Design Added Exercises	42
CATIA Product Design Expert	43
CATIA Sketcher	44
CATIA Surface Design	45
CATIA Surface Design Added Exercises	46
CATIA Tools For Proficient Users	47
CATIA V5-6R2017 Update for Mechanical Designers (UMD27)	48
CATIA V5-6R2018 Update for Designers	49
CATIA V5-6R2019 Update for Designers	50
CATIA V5-6R2020 Update for Designers	51
CATIA V5-6R2021 Update for Mechanical and Shape Designers	52
CATIA V5-6R2022 Update for Mechanical Designers	53
CATIA V5 Design Essentials	54
CATIA V5 Foundations for Aerospace Assembly Designers	56
CATIA V5 Foundations for Aerospace Part Designers	57
CATIA V5 Foundations for Aerospace Part Reviewers	58
CATIA V5 Foundations for Body Designers	59
CATIA V5 Foundations for Chassis Designers	60
CATIA V5 Foundations for Powertrain Designers	61
CATIA V5 Fundamentals	62
CATIA V5 Mechanical Design Expert	63
Composites Grid Approach	64
Composites Part Engineering	65
Composites Part Manufacturing	66
Functional Molded Parts	68
Getting Started with CATIA V5	69
CATIA PLM Express V5	70
CATIA PLM Express Fundamentals	71
CATIA PLM Express Fundamentals - Basic Surface	72
CATIA PLM Express Fundamentals - Surfaces	73
CATIA Product Synthesis V5	74
CATIA Knowledge Fundamentals	75
Knowledge Advisor	76

Knowledge Expert	77
Product Engineering Optimizer (PEO)	78
Product Knowledge Template	79
CATIA Shape Design and Styling V5	80
CATIA ICEM Shape Design Expert	81
CATIA ICEM Shape Design Fundamentals	82
CATIA Imagine and Shape	83
CATIA Surface Design Expert	84
CATIA Surface Design Expert Added Exercises	85
CATIA V5-6R2017 Update for Shape Designers (UHD27)	86
CATIA V5 for Surfaces	87
Developed Shapes	88
FreeStyle Shaper, Optimizer and Profiler (FSS)	89
FreeStyle Sketch Tracer	90
Realistic Shape Optimizer	91

DELMIA

DELMIA Assembly V5	92
Assembly Process Planner	93
DPM Assembly	94
DELMIA D5 QUEST V5	95
QUEST	96
DELMIA Manufacturing Hub V5	97
Basic Process Engineer	98
DELMIA Robotics V5	99
V5 Robotics	100

ENOVIA

Digital Mock-Up V5	101
Digital Mock-Up Basics	102
Digital Mock-Up Navigator	103
Digital Mock-Up Optimizer	104
Digital Mock-Up Space Analysis	105
DMU Engineering Analysis Review	106
DMU Fitting Simulator (FIT)	107

DMU Kinematics Simulator	108
ENOVIA PLM Express V5	109
ENOVIA Smarteam - CATIA PLM Express Fundamentals	110
ENOVIA SmarTeam V5	111
ENOVIA SmarTeam Administration for Foundation, Editor and Web Editor	112
ENOVIA SmarTeam - CATIA Integration	113
ENOVIA SmarTeam - CATIA Supply Chain Engineering Exchange	114
ENOVIA SmarTeam - Editor	115
ENOVIA SmarTeam Fundamentals	116
ENOVIA SmarTeam Installation for Foundation, Editor and Web Editor	117
ENOVIA SmarTeam - Web Editor	118
ENOVIA V5 VPLM	119
ENOVIA V5 VPM for Engineering Collaboration (LEH)	120
ENOVIA V5 VPM for Lifecycle Collaboration (LCN)	121
ENOVIA V5 VPM for Supply Chain Collaboration (WPE)	123
ENOVIA V5 VPM Fundamentals (LUF)	124

CATIA

CATIA Analysis V5

CATIA V5 Analysis	
Course Code	CAT-en-V5A-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	12 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers and Structural Analysts
Description	This course will introduce the concepts and benefits of Finite Element Analysis and the general analysis process. It will teach you how to prepare a model for analysis, create 1D, 2D and 3D FE models and compute a simple static analysis for a single part or an assembly.
Objectives	Upon completion of this course you will be able to: - Create a Finite Element Analysis model - Prepare a solid or a surface model for analysis - Create 1D, 2D and 3D meshes for beam, surface and solid models - Assign properties, loads and constraints, and define assembly connections - Compute an analysis for a part or an assembly - Generate and display analysis results
Prerequisites	Students attending this course should be familiar with basics of CATIA mechanical and surface designing.
Available Online	Yes

ELFINI Structural Analysis	
Course Code	CAT-en-EST-F-V5R28
Available Releases	V5-6R2017 , V5-6R2018
Duration	11 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to use the advanced functionalities provided by the ELFINI Solver. It will also guide you on how to use these functionalities in the overall FEA process. Additionally, you will learn about new analysis types such as Buckling Case, MultiLoads Case, Transfer of Loads and Solution, etc. You will also learn how to use advanced capabilities for post-processing of results.
Objectives	Upon completion of this course you will be able to: - Use the advanced pre-processing capabilities (such as loads and boundary conditions) to create more realistic FE models - Visualize the images of objects used for pre-processing (which is not possible in GPS) - Use advanced case features (such as Buckling, MultiLoads, Envelope) in addition to the standard Static and Frequency cases - Create your own result image templates, customize the post-processing result images, group selective entitites in the result images, and create advanced reports
Prerequisites	Students attending this course should be familiar with Generative Part Structural Analysis Fundamentals,

ELFINI Structural Analysis	
	Generative Assembly Structural Analysis, FEM Surface Meshing.
Available Online	Yes

FEM Solid	
Course Code	CAT-en-FMD-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	4 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers
Description	This course introduces you to the various functionalities available with the FEM Solid (FMD) license in CATIA. You will learn how to create a 3D mesh from existing 2D mesh parts with the help of functionalities such as Tetrahedron Filler, Sweep3D, mesh part transformations, and mesh part extrusion. You will also learn how to directly generate a 3D mesh using OCTREE Tetrahedron Mesher. You will learn how to analyze the generated 3D mesh using the available mesh quality criteria, and how to import/ export the meshes into/from CATIA.
Objectives	Upon completion of this course you will be able to: - Use different solid meshers such as Tetrahedron Filler, OCTREE Tetrahedron Mesher, Sweep3D Mesher - Create a solid mesh using mesh part transformations like Translation, Rotation, and Symmetry on 3D mesh parts - Analyze the solid meshes using the available mesh quality criteria - Import/Export the meshes into/from CATIA
Prerequisites	Generative Part Structural Analysis Fundamentals,Generative Part Structural Analysis

FEM Solid	
	Expert, Generative Assembly Structural Analysis, FEM Surface Meshing
Available Online	Yes

FEM Surface	
Course Code	CAT-en-FMS-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create and edit meshes using Beam Mesher, OCTREE Triangular Mesher, Surface Mesher and Advanced Surface Mesher. You will learn how to create meshes from existing meshes using mesh transformations. You will also learn how to create different types of Welding Meshes. This course will teach you how to make use of knowledgeware parameters while creating Surface Meshes. Additionally, you will learn how to analyze the mesh quality using the available mesh quality checks.
Objectives	Upon completion of this course you will be able to: - Use the various Meshers such as Surface Mesher, Advanced Surface Mesher, Beam Mesher, and OCTREE Triangle Mesher - Create a new mesh using existing mesh with the help of mesh transformation tools and mesh operators - Edit the mesh using the mesh edition tools available within the above mentioned meshers - Analyze the mesh quality using mesh quality checks and tools like Free Edges, Duplicate Elements, Duplicate Nodes, Mesh Interference Checks, etc.

FEM Surface	
Prerequisites	Generative Part Structural Analysis Fundamentals, Generative Assembly Structural Analysis
Available Online	Yes

Generative Assembly Structural Analysis	
Course Code	CAT-en-GAS-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to conduct a Finite Element Analysis on an existing assembly. You will learn how to create connections between assembly components and how to assign appropriate connection properties. You will also learn how to create an analysis assembly from the existing meshed parts.
Objectives	Upon completion of this course you will be able to: - Interpret various types of hypotheses that are used for creating an assembly analysis and differentiate between them - Define analysis connections between assembly components - Use existing assembly constraints to automatically create analysis connections - Assign a connection property to the appropriate analysis connection - Compute a static analysis for an assembly - Create and manage an analysis assembly model using existing meshed parts
Prerequisites	Students attending this course should be familiar with CATIA V5 Fundamentals and Generative Part Structural Analysis.

Generative Assembly Structural Analysis	
Available Online	Yes

Generative Dynamic Response Analysis	
Course Code	CAT-en-GDY-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	4 hours
Course Material	English
Level	Fundamental
Audience	Structural Analysts
Description	This course will teach you how to conduct a harmonic or transient analysis on a single part using finite elements. You will learn how to generate and visualize 2D graphical results and how to export the resulting data in Text or Excel format.
Objectives	Upon completion of this course you will be able to: - Interpret harmonic and transient analyses and differentiate between them - Define the load and restraint excitations - Define the correct prerequisites for an excitation case - Visualize and animate the 3D images of the analysis results - Generate the translation, velocity, and acceleration graphs - Export the results data in Text or Excel format
Prerequisites	Students attending this course should have completed the CATIA V5 Fundamentals and Generative Part Structural Analysis Fundamentals courses
Available Online	Yes

Generative Part Structural Analysis Expert	
Course Code	CAT-en-GPE-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	8 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to use advanced Finite Element Analysis pre-processing techniques and post-processing tools, including the concept of defining virtual parts to avoid excessive geometric modeling. You will learn how to perform frequency analysis on a single part, and how to use adaptive meshing to achieve pre-defined accuracy.
Objectives	Upon completion of this course you will be able to: - Define and customize the material properties of the parts to be analyzed - Apply pressure, acceleration and force density loads - Define virtual parts to simplify the analysis - Apply pivot, ball-joint and user-defined restraints - Compute frequency analysis for a single part - Create planar sections to visualize the internal result values - Compute and refine a mesh using adaptive meshing in order to achieve the pre-defined accuracy
Prerequisites	Students attending this course should have completed the CATIA V5 Fundamentals and Generative Part Structural Analysis Fundamentals courses

Generative Part Structural Analysis Expert	
Available Online	Yes

Generative Part Structural Analysis Fundamentals	
Course Code	CAT-en-GPF-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	8 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you the basic concepts of Finite Element Analysis and the general analysis process. You will learn how to conduct a simple static analysis on a single part using finite elements, and how to produce the final report of the analysis results.
Objectives	Upon completion of this course you will be able to: - Predict why, when, and how to use Finite Element Analysis - Use different element types and shapes to mesh a part - Apply clamp, slider, and iso-static restraints - Apply force, moment, and displacement loads - Compute static analysis for a single part - Visualize the images of the analysis results and produce the analysis reports - Refine existing meshes to produce more accurate results
Prerequisites	Students attending this course should be familiar with the fundamentals of CATIA V5.
Available Online	Yes

CATIA

CATIA Equipment and Systems Engineering V5

CATIA V5 for Electrical Designers	
Course Code	CAT-en-V5VE-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021
Duration	46 hours
Course Material	English
Level	Fundamental
Audience	Automotive Electrical Harness Designers and new CATIA Electrical Designers
Description	This course will introduce you to the fundamental concepts of CATIA V5. You will learn how to design parts and assemblies and create simple drawings. Once you are familiar with the fundamentals, you will be introduced to the Electrical Library products. You will learn how to create the Electrical Harness for an automotive assembly. You will also learn how to map the functional specifications of the Harness system to the digital mock-up created in CATIA V5 and create the harness documentation.
Objectives	Upon completion of this course you will be able to: - Understand the CATIA V5 interface - Design an automotive wire harness - Route the signals and create the wires - Flatten and synchronize the harness - Design and manage parts in the context of an assembly - Generate harness documentation - Produce simple drawings
Prerequisites	Students attending this course should be familiar with Mechanical Design and the Windows Operating System.

CATIA V5 for Electrical Designers

Available Online	Yes

Electrical 3D Design and Documentation	
Course Code	CAT-en-EC1-F-V5R28
Available Releases	V5-6R2017 , V5-6R2018
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Electrical Harness Designers
Description	This course will teach you how to use the Electrical 3D Design Part and Assembly workbenches with a focus on the Consumer Goods industry. You will learn how to create electrical assemblies, route multi-branchables, route wires, and create drawings of the electrical harness assemblies.
Objectives	Upon completion of this course you will be able to: - Create harnesses suitable for consumer goods - Design wire harnesses with appliances - Route signals and create wires - Flatten and synchronize an electrical or a geometrical harness - Generate the harness documentation - Produce simple drawings
Prerequisites	Students attending this course should be familiar with the fundamentals of CATIA V5. They should know how to use the Part Design, the Assembly Design and the Drafting workbenches.
Available Online	Yes

Electrical Harness Flattening	
Course Code	CAT-en-EHF-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	6 hours
Course Material	English
Level	Fundamental
Audience	Electrical Designers
Description	This course will teach you how to use the Electrical Harness Flattening workbench to extract, flatten and synchronize an electrical / geometrical harness. You will learn how to manipulate the flattened harness and how to define and generate a harness flattening report. You will also learn how to use text templates to create an annotated and dimensioned 2D drawing of a 3D harness.
Objectives	Upon completion of this course you will be able to: - Extract, flatten and synchronize electrical and geometrical harnesses - Modify the bundle segments of a harness to fit your drawing - Define and generate reports - Create 2D drawings of a 3D harness - Create and use a Text Templates Catalog
Prerequisites	Students attending this course should be familiar with the CATIA V5 Catalog Editor, Electrical Harness Installation and Assembly, and Wire Routing.
Available Online	Yes

Electrical Librarian and Harness Installation	
Course Code	CAT-en-ELI-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	Electrical Harness Designers
Description	This course will teach you how to create electrical devices and their catalog. You will learn how to connect devices, design harnesses and create bundle segments. You will also learn how to manage the branch points, protections and links, and how to perform knowledge checks.
Objectives	Upon completion of this course you will be able to: - Build and manage an Electrical Components Catalog - Design a harness that is integrated within the Digital Mock-Up - Connect bundle segments to electrical components
Prerequisites	Students attending this course should be familiar with the fundamentals of CATIA V5. They should know how to use the Part Design and the Catalog Editor workbenches.
Available Online	Yes

Electrical Wire Routing	
Course Code	CAT-en-EWR-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	3 hours
Course Material	English
Level	Fundamental
Audience	Electrical Designers
Description	This course will teach you how to use the Electrical Wire Routing workbench to route signals and create wires using a harness and a functional definition. You will also learn how to integrate external tools with CATIA's electrical products.
Objectives	Upon completion of this course you will be able to: - Route signals - Create wires - Integrate external tools with CATIA's electrical products
Prerequisites	Students attending this course should be familiar with the fundamentals of CATIA V5. They should know how to use the Electrical Librarian and the Electrical Harness Installation workbenches.
Available Online	Yes

CATIA

CATIA Infrastructure V5

V5 Administration	
Course Code	CAT-en-ADM-F-V5R28
Available Releases	V5-6R2017 , V5-6R2018
Duration	24 hours
Course Material	English
Level	Fundamental
Audience	Administrators of CATIA V5
Description	This course will teach you how to install CATIA V5 and its service packs. You will learn to use different tools to manage licenses, environments and standards. You will also learn to use tools available in batch mode and how to manage V4 and V5 data.
Objectives	Upon completion of this course you will be able to: - Install CATIA V5 and service packs - Manage CATIA licenses and environments - Manage CATIA settings and standards - Use CATIA V5 data management tools - Manage CATIA V4 data in V5 and CATIA V5 data in V4
Prerequisites	Students attending this course should be familiar with system administration.
Available Online	Yes

CATIA

CATIA Machining V5

Advanced Part Machining	
Course Code	CAT-en-AMG-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	12 hours
Course Material	English
Level	Fundamental
Audience	Students attending this course must be familiar with the NCI, PMG, SMG, and MMG workbenches.
Description	This course teaches you how to generate high quality NC programs for machining complex 3D parts and free-form shapes using advanced machining techniques. You will learn how to perform 2.5 to 5-Axis machining operations and Axial Machining.
Objectives	Upon completion of this course you will be able to: - Define a Multi-Axis Flank Contouring operation - Define a Multi-Axis Helix Machining operation - Define a Cavities Roughing operation
Prerequisites	NC Programmers
Available Online	Yes

Multi-Axis Surface Machining	
Course Code	CAT-en-MMG-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	NC Programmers
Description	This course teaches you how to create high quality NC programs for machining complex 3D parts and free-form shapes using Multi-Axis machining techniques. The course also teaches you to define 5-Axis machining operations.
Objectives	Upon completion of this course you will be able to: - Identify and use the multi-axis surface machining workbench tools - Define various 5-axis machining operations
Prerequisites	Students attending this course should be familiar with CATIA V5 Surface Machining (SMG) Fundamentals
Available Online	Yes

Numerical Control Infrastructure	
Course Code	CAT-en-NCI-F-V5R28
Available Releases	V5-6R2017 , V5-6R2018
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	NC Programmers
Description	This course will teach you how to use various functionalities common across all the Machining workbenches in CATIA. It will teach you the fundamentals of creating and simulating a Manufacturing Program.
Objectives	Upon completion of this course you will be able to: - Identify and use the Manufacturing workbenches' tools - Create a Manufacturing Program - Simulate a Manufacturing Program - Manage Tools and Tool Catalogs - Compute and verify the Tool Path - Generate NC data using an integrated Post Processor - Create shop floor documentation - Manage design changes - Import V4 data
Prerequisites	Students attending this course should be familiar with CATIA V5 fundamentals
Available Online	Yes

Prismatic Machining	
Course Code	CAT-en-PMG-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	NC Programmers
Description	This course will teach you how to define and manage NC programs to machine parts using prismatic machining techniques in the prismatic machining (PMG) workbench. You will learn to create 2.5 axis milling operations. You will also learn to use the PMG functionalities to create prismatic machining and rework areas.
Objectives	Upon completion of this course you will be able to: - Define prismatic machining operations - Create a prismatic machining area and a rework area - Define and modify NC macros
Prerequisites	Students attending this course should have completed the CATIA V5 Fundamentals course and the Numerical Control Infrastructure course.
Available Online	Yes

Surface Machining	
Course Code	CAT-en-SMG-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	NC Programmers
Description	This course will teach you how to define and manage NC programs dedicated to machining parts that are designed with Surface or Solid geometry. You will learn how to define 3-Axis Roughing, Semi-finishing and Finishing operations. The course will also help you to improve productivity in mould and die machining using various functionalities of 3-Axis Surface Machining.
Objectives	Upon completion of this course you will be able to: - Define 3-axis surface machining operations - Define probing operations - Create a machining area before performing the operations - Define a rework area - Analyze and modify the tool path
Prerequisites	Students attending this course should be familiar with the CATIA V5 Fundamentals course and the Numerical Control Infrastructure workbench
Available Online	Yes

CATIA

CATIA Mechanical Design V5

2D Layout for 3D Design (LO1)	
Course Code	CAT-en-LO1-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create 2D layout views in a 3D model and use them to design the part in 3D environment.
Objectives	Upon completion of this course you will be able to: - Create 2D layout views in a 3D environment - Export 2D geometry into a 3D environment - Create drawings using the 2D layout views
Prerequisites	Students attending this course should be familiar with CATIA V5 fundamentals
Available Online	Yes

3D Functional Tolerancing and Annotation	
Course Code	CAT-en-FTA-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	12 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to annotate a 3D part. You will learn how to create annotation planes and how to add and manage 3D annotations on these planes. You will also learn how to create 3D views and use them to create 2D drawing views.
Objectives	Upon completion of this course you will be able to: - Create and manage annotation planes and views - Manage and position annotations - Manage 3D geometry associated with the 3D annotations
Prerequisites	Students attending this course should be familiar with basic solid and surface creation functions and Knowledgeware.
Available Online	Yes

CATIA Composites Laser Projection Fundamentals	
Course Code	CAT-en-CLJ-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	3.5 hours
Course Material	English
Level	Fundamental
Audience	Composite Laser Projection Operators
Description	This course will teach you how to create laser projectors, specify the laser projection parameters and simulate the laser projection behavior. You will learn how to compute and export the laser projection data. You will also learn how to import and read the laser projection files which are exported earlier.
Objectives	Upon completion of this course you will be able to: - Define a laser projector - Compute and export laser projection data - Create additional geometries and stacking texts for export - Read the laser projection files
Prerequisites	Students attending this course should have basic Composite Design and Manufacturing skills.
Available Online	Yes

CATIA Detail Drafting	
Course Code	CAT-en-DDR-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	16 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Draftsmen
Description	This course will teach you how to use the Drafting workbench tools to create interactive product views. You will also learn how to use advanced tools to dress-up and annotate the views. Additionally, you will learn how to customize the Drafting workbench to suit your needs.
Objectives	Upon completion of this course, you will be able to: - Create an interactive view and draw a sketch on it - Add annotations to dress-up the view - Use advanced dimensioning tools - Customize the Drafting workbench in accordance with your requirements
Prerequisites	Students attending this course should know how to create 2D views in CATIA V5
Available Online	Yes

CATIA Generative Drafting Fundamentals (ANSI)	
Course Code	CAT-en-GDRA-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	16 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Draftsmen
Description	This course will teach you how to use the Drafting workbench of CATIA V5 to create drawings. You will learn how to produce a drawing of a 3D model by creating projection and section views, and how to add dimensions to it.
Objectives	Upon completion of this course you will be able to: - Create simple projection views and section views of 3D parts - Position the views on a drawing sheet - Add dimensions to the views - Manage the graphic properties of the drawing sheet - Finalize the drawing sheet by adding a title block
Prerequisites	Students attending this course should be familiar with the basics of CATIA V5.
Available Online	Yes

CATIA Generative Drafting Fundamentals (ISO)	
Course Code	CAT-en-GDRI-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	8 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Draftsmen
Description	This course will teach you how to use the Drafting workbench of CATIA V5 to create drawings. You will learn how to produce a drawing of a 3D model by creating projection and section views, and how to add dimensions to it.
Objectives	Upon completion of this course you will be able to: - Create simple projection and section views of 3D parts - Position the views on a drawing sheet - Add dimensions to the views - Finalize the drawing sheet by adding a title block
Prerequisites	Students attending this course should be familiar with the basics of CATIA V5.
Available Online	Yes

CATIA Generative Sheetmetal Design	
Course Code	CAT-en-SMD-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	16 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Sheetmetal Designers
Description	This course will teach you how to create a sheet metal part using the standard wall, bend and stamping features. You will view how user features can be incorporated into a design and how you can make use of both standard and user-defined materials. Finally you will learn how to create a flat pattern and produce a detailed, annotated drawing.
Objectives	Upon completion of this course you will be able to: - Relate to the terminology and the design process for creating a sheetmetal part - Define and manage the sheetmetal part parameters - Design walls, bends and flanges - Add features such as cutouts, holes, corners and chamfers - Create standard and user-defined stamped features - Manage folded and unfolded views and export a finished flat pattern
Prerequisites	Students attending this course should be familiar with CATIA V5 Fundamentals.
Available Online	Yes

CATIA Part Design	
Course Code	CAT-en-PDG-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	12 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to use the CATIA Part Design workbench to design 3D mechanical parts from 2D sketches. You will learn how to create and modify solid features in order to prepare 3D parts for manufacturing.
Objectives	Upon completion of this course you will be able to: - Design 3D mechanical parts using basic features - Create 3D solid features based on 2D sketches - Apply Dress-Up features to the 3D parts - Duplicate and move the 3D features - Modify a 3D part
Prerequisites	Students attending this course must have completed the CATIA V5 Fundamentals and CATIA Sketcher courses.
Available Online	Yes

CATIA Part Design Added Exercises	
Course Code	CAT-en-PDG-X-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	13 hours
Course Materials	English , French , German , Japanese
Level	Exercise
Audience	Mechanical Designers
Description	This course provides you with an exercise database for additional practice on CATIA Part Design. The exercises have been arranged in increasing order of difficulty. The fundamental exercises will check and refresh your basic Part Design skills before you move on to more complex topics. The advanced exercises will make you practice recommended design methodologies using realistic parts.
Objectives	Apply your Mechanical skills in selected scenarios. - Employ the recommended methodology in various situations and efficiently use the Mechanical workbenches.
Prerequisites	Students attending this course must have completed the CATIA Part Design and CATIA Knowledge Fundamentals courses.
Available Online	Yes

CATIA Part Design Expert	
Course Code	CAT-en-PDG-A-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	13 hours
Course Materials	English , French , German , Japanese
Level	Advanced
Audience	Mechanical Designers
Description	This course will teach you how to design complex 3D mechanical parts using the Boolean approach. You will learn how to work in a Multi-Model Environment and maintain links between 3D models. You will also learn to analyze designs in order to optimize them.
Objectives	Upon completion of this course you will be able to: - Create a part using 3D reference elements - Create advanced Sketch-Based Features - Apply advanced Dress-Up Features - Design 3D parts using Boolean operations - Work in a Multi-Model Environment and share your designs with others - Analyze parts and optimize them - Annotate the parts for review
Prerequisites	Students attending this course should have completed the CATIA V5 Fundamentals, Getting started with CATIA V5, CATIA Sketcher, and CATIA Part Design Fundamentals courses.
Available Online	Yes

CATIA Product Design	
Course Code	CAT-en-ASM-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	12 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create a simple product structure, add existing components and position them correctly. You will learn how to add new parts and design them in the context of a product. You will also learn how to analyze assemblies and ensure design coherence.
Objectives	Upon completion of this course you will be able to: - Create a new product and add components to it - Move the components within a product by positioning them using assembly constraints - Modify an existing product structure - Design new parts in the context of a product - Check the mechanical properties of a product and analyze its degrees of freedom - Analyze interferences between parts and measure parts or products
Prerequisites	Students attending this course should be familiar with CATIA Part Design
Available Online	Yes

CATIA Product Design Added Exercises	
Course Code	CAT-en-ASM-X-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	7 hours
Course Materials	English , French , German , Japanese
Level	Exercise
Audience	Mechanical Designers
Description	This course provides you with additional exercises to practice the concepts that you have learnt in the CATIA Product Design course. These exercises represent typical industrial scenarios and demonstrate how CATIA Product Design helps you to achieve your design objectives.
Objectives	Upon completion of this course, you will be able to: - Examine your mechanical skills and exercise on selected scenarios - Apply the recommended methodology in various situations - Use the mechanical workbenches
Prerequisites	Students attending this course should be familiar with Part and Assembly design in CATIA.
Available Online	Yes

CATIA Product Design Expert	
Course Code	CAT-en-ASM-A-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	17 hours
Course Materials	English , French , German , Japanese
Level	Advanced
Audience	Mechanical Designers
Description	This course will teach you how to design parts in the context of a complex product structure using collaborative engineering methods. You will learn how to optimally use CATIA when working with large and complex designs. You will also learn how to generate annotations and bills of material for your assembly drawings.
Objectives	Upon completion of this course you will be able to: - Optimize performance of large and complex designs - Manage contextual links between product documents using publications - Create and use parameters to drive a product design - Create sections to visualize the internal product structure - Create scenes and explode views of a product - Generate annotations and bills of material for assembly drawings
Prerequisites	Students attending this course should be familiar with CATIA Assembly Design and CATIA Part Design.
Available Online	Yes

CATIA Sketcher	
Course Code	CAT-en-SKE-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	8 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to use the CATIA Sketcher workbench. You will learn how to create two-dimensional sketches by drawing and constraining the various geometric elements. You will also learn how to analyze the sketches and edit them.
Objectives	Upon completion of this course you will be able to: - Work in the CATIA Sketcher environment - Create a 2D sketch geometry - Analyze the sketched geometry - Edit existing 2D profiles - Dimension the sketch and modify it using constraints - Manage sketches within a 3D environment
Prerequisites	Students attending this course must have completed the CATIA V5 Fundamentals course
Available Online	Yes

CATIA Surface Design	
Course Code	CAT-en-GS1-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	17 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Surface Designers
Description	This course will teach you how to use the Generative Shape Design tools. You will learn how to create wireframes and surfaces. You will also learn about the concept of hybrid design and how to use it while creating wireframes and surfaces. This course covers only those Generative Shape Design tools that are available with a MD2 license.
Objectives	Upon completion of this course you will be able to: - Create a clean topology from a set of surfaces and smooth sharp edges - Detect and correct the discontinuities on curves and surfaces - Create solids from surfaces
Prerequisites	Students attending this course should be familiar with CATIA V5 Fundamentals.
Available Online	Yes

CATIA Surface Design Added Exercises	
Course Code	CAT-en-GS1-X-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	8 hours
Course Materials	English , French , German , Japanese
Level	Exercise
Audience	Mechanical Surface Designers
Description	This course provides you with an exercise database for additional practice on CATIA Surface Design. The exercises have been created based on Industry practices. You will get to practice skills such as creating wireframes and surfaces, creating surfacic shells and solid parts, and working with multiple parts that are referencing a common part.
Objectives	These exercises will allow you to put your Shape skills into practice on selected scenarios. - You will apply the recommended methodology in various situations - You will enhance your understanding and usage of the Shape workbenches.
Prerequisites	Students attending this course should be familiar with CATIA V5 Surface Design.
Available Online	Yes

CATIA Tools For Proficient Users	
Course Code	CAT-en-PRO-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	7 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Advanced CATIA V5 Users
Description	This course will teach you how to use advanced CATIA functions such as Catalog Edition, Powercopy Feature Management, and User Defined Feature Management.
Objectives	Upon completion of this course you will be able to: - Create advanced replication features like Power Copies - Store components and Power Copies into a catalog and reuse them in a new context - Analyze and migrate CATIA V4 models to CATIA V5
Prerequisites	Students attending this course should be familiar with CATIA Fundamentals and CATIA Part Design
Available Online	Yes

CATIA V5-6R2017 Update for Mechanical Designers (UMD27)	
Course Code	CAT-en-UMD27-U-V5R27
Available Release	V5-6R2017
Duration	2 hours
Course Materials	English , French , German , Japanese
Level	Update
Audience	Mechanical Designers
Description	Upon completion of this course you will be able to effectively use the new and enhanced tools in CATIA V5-6R2017 for the Sketcher, Part Design, Drafting and Generative Shape Design workbenches.
Objectives	Upon completion of this course you will be able to effectively use the new and enhanced tools in CATIA V5-6R2017 for the following workbenches. - Sketcher - Part Design - Drafting - Generative Shape Design
Prerequisites	Students attending this course should be familiar with the V5-6R2016 CATIA Mechanical Design workbenches.
Available Online	Yes

CATIA V5-6R2018 Update for Designers	
Course Code	CAT-en-UMSD28-U-V5R28
Available Release	V5-6R2018
Duration	2 hours
Course Materials	English , French , German , Japanese
Level	Update
Audience	Mechanical Designers
Description	This course will teach you how to use the enhanced functionalities in CATIA V5-6R2018. You will learn to use the Boolean operations to modify the sketch in the Sketcher workbench and create a chamfer with a hold curve in the Part Design workbench. You will also learn how to add a plane between two reference elements in the Generative Shape Design workbench and add various information about the welding in the Drafting workbench.
Objectives	Upon completion of this course you will be able to effectively use the new and enhanced tools in CATIA V5-6R2018 for the following workbenches: - Sketcher - Part Design - Generative Shape Design - Drafting
Prerequisites	Students attending this course should be familiar with the V5-6R2017 CATIA Mechanical Design workbenches.
Available Online	Yes

CATIA V5-6R2019 Update for Designers	
Course Code	CAT-en-UMSD29-U-V5R29
Available Release	V5-6R2019
Duration	3.5 hours
Course Materials	English , French , German , Japanese
Level	Update
Audience	Mechanical Designers
Description	This course will teach you how to use the enhanced functionalities in CATIA V5-6R2019. You will learn how to create two tangent arc corners with different radius in the Sketcher workbench and create a blend corner in the Part Design workbench. You will also learn how to heal gaps between elements while joining them in the Generative Shape Design workbench and fill the text frames and balloons with the required color in the Drafting workbench.
Objectives	Upon completion of this course you will be able to effectively use the new and enhanced tools in CATIA V5-6R2019 for the following workbenches: - Sketcher - Part Design - Generative Shape Design - Drafting
Prerequisites	Students attending this course should be familiar with the V5-6R2018 CATIA Mechanical Design workbenches.
Available Online	Yes

CATIA V5-6R2020 Update for Designers	
Course Code	CAT-en-UMSD30-U-V5R31
Available Release	V5-6R2020
Duration	1.5 hours
Course Materials	English , French , German , Japanese
Level	Update
Audience	Mechanical Designers
Description	This course will teach you how to use the enhanced functionalities in CATIA V5-6R2020. You will learn how to create dimensional constraints on a profile automatically, in the Sketcher workbench and export edge fillet tracks in the Part Design workbench. You will also learn how to extrapolate parallel curves, while creating them in the Generative Shape Design workbench and invert the section view direction in the Drafting workbench.
Objectives	Upon completion of this course you will be able to effectively use the new and enhanced tools in CATIA V5-6R2020 for the following workbenches: - Sketcher - Part Design - Generative Shape Design - Drafting
Prerequisites	Students attending this course should be familiar with the V5-6R2019 CATIA Mechanical Design workbenches.
Available Online	Yes

CATIA V5-6R2021 Update for Mechanical and Shape Designers	
Course Code	CAT-en-UMSD31-U-V5R31
Available Release	V5-6R2021
Duration	1.5 hours
Course Materials	English , French , German , Japanese
Level	Update
Audience	Mechanical Designers
Description	This course will teach you how to use the enhanced functionalities in CATIA V5-6R2021. You will learn how to edit output features in the Sketcher workbench. You will also learn how to modify Explicit Point to Point on Curve in the Generative Shape Design workbench.
Objectives	Upon completion of this course you will be able to effectively use the new and enhanced tools in CATIA V5-6R2020 for the following workbenches: - Sketcher - Generative Shape Design
Prerequisites	Students attending this course should be familiar with the V5-6R2020 CATIA Mechanical Design workbenches.
Available Online	Yes

CATIA V5-6R2022 Update for Mechanical Designers	
Course Code	CAT-en-UMSD32-U-V5R32
Available Release	V5-6R2022
Duration	1 hours
Course Material	
Level	Update
Audience	
Description	This module will teach you how to use the enhanced functionalities in CATIA V5-6R2022. You will learn how to effectively hide/show the sketcher output elements in the Sketcher workbench. You will also learn about enhancements in pattern analysis, hole analysis, chamfer and remove face commands in the Part Design workbench.
Objectives	Upon completion of this module, you will be able to effectively use the new and enhanced tools in CATIA V5-6R2022 for the following workbenches: - Sketcher - Part Design
Prerequisites	Students attending this module should be familiar with the V5-6R2021 CATIA Mechanical Design workbenches.
Available Online	Yes

CATIA V5 Design Essentials	
Course Code	CAT-en-SV5-F-V5R27
Available Release	V5-6R2017
Duration	44 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers
Description	Welcome to the CATIA V5 Part Design Essentials course. This course will teach you how to create simple parts, assemblies and drawings. You will learn how to use different feature-based tools to build, review and modify a model. You will also learn how to create and analyze assemblies and how to produce a drawing with different views. Finally, you will learn how to dimension the drawing and annotate the views.
Objectives	Upon completion of this course you will be able to: - - Create a new part - - Create and constrain 2D sketches - - Complete a 3D model using features - - Review and edit the features - - Create parameters and formulas in the 3D model - - Create a new product and add components to it - - Move the components within a product by positioning them using assembly constraints - - Create simple projection views and section views of 3D parts - - Position the views on a drawing sheet - - Add dimensions and annotations to the views - - Finalize the drawing sheet by adding borders and title blocks
Prerequisites	

CATIA V5 Design Essentials	
Available Online	Yes

CATIA V5 Foundations for Aerospace Assembly Designers	
Course Code	CAT-en-V5AeA-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	24 hours
Course Material	English
Level	Fundamental
Audience	Aerospace Structure Designers
Description	This course will introduce you to CATIA V5 assembly design. It will teach you how to manage assembly configurations and how to design and position components within the assembly. You will learn how to create a structured assembly in order to best design parts in an assembly context. You will also learn how to control and manage the links created between the assembly components.
Objectives	Upon completion of this course you will be able to: - Understand the terminology used in assembly design - Design structural parts in the context of an assembly - Constrain assembly components - Analyze an assembly - Annotate an assembly
Prerequisites	Students attending this course should have completed the V5 Foundations for Aerospace Part Designers course.
Available Online	Yes

CATIA V5 Foundations for Aerospace Part Designers	
Course Code	CAT-en-V5AeD-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	36 hours
Course Material	English
Level	Fundamental
Audience	Aerospace Part Designers
Description	This course will introduce you to CATIA V5. It will first teach you how to create simple models from 2D sketches, and then the correct techniques for the creation and annotation of complex solid models. It will also introduce you to surface design and the concepts of part design in the context of an assembly.
Objectives	Upon completion of this course you will be able to: - Identify the appropriate CATIA V5 tools used for part design - Plan the construction of a complex part in order to properly convey its visual and functional aspects - Annotate parts - Design simple surface parts - Modify a part within the context of an assembly
Prerequisites	Students attending this course should be familiar with Mechanical Design and the Windows Operating System.
Available Online	Yes

CATIA V5 Foundations for Aerospace Part Reviewers	
Course Code	CAT-en-V5AeR-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	Aerospace Part Reviewers
Description	This course will first explain how to use the CATIA V5 workbenches. It will then teach you how to review an existing part by verifying its properties, coordinates and measurements. You will also learn how to add annotations to the parts.
Objectives	Upon completion of this course you will be able to: - Measure a part with respect to a pre-defined axis system - Annotate an existing part - Differentiate between parts and assemblies
Prerequisites	Students attending this course should be familiar with Mechanical Design and the Windows Operating System.
Available Online	Yes

CATIA V5 Foundations for Body Designers	
Course Code	CAT-en-V5VB-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	56 hours
Course Material	English
Level	Fundamental
Audience	Automotive Body Designers
Description	This course will teach you how to use the fundamental concepts in CATIA V5 to build simple automotive parts and assemblies, and make simple drawings of those parts and assemblies. You will also learn the correct solid and surface modeling methodology necessary for body design.
Objectives	Upon completion of this course you will be able to: - Describe the CATIA V5 interface - Apply the correct solid and surface modeling methodology for body design - Create an automobile part in order to satisfy its design intent - Design and manage parts in the context of an assembly - Produce simple drawings and assembly layouts
Prerequisites	Students attending this course should be familiar with the fundamentals of Mechanical and Surface Design
Available Online	Yes

CATIA V5 Foundations for Chassis Designers	
Course Code	CAT-en-V5VC-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	61 hours
Course Material	English
Level	Fundamental
Audience	Automotive Chassis Designers
Description	This course will introduce the fundamental concepts in CATIA V5 that are required to build simple automotive parts and assemblies in CATIA, and to make simple drawings of those parts and assemblies. It will introduce you to the correct solid and surface modeling methodology necessary for chassis design.
Objectives	Upon completion of this course you will be able to: - Describe the CATIA V5 interface - Apply the correct solid and surface modeling methodology for Chassis design - Create an automobile part in order to satisfy its design intent - Apply advanced solid modeling technique necessary for Chassis design methodology - Design and manage parts in the context of an assembly - Produce simple drawings and assembly layouts
Prerequisites	Students attending this course should know the basics of Mechanical and Surface Design
Available Online	Yes

CATIA V5 Foundations for Powertrain Designers	
Course Code	CAT-en-V5VP-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	56 hours
Course Material	English
Level	Fundamental
Audience	Automotive Powertrain Designers
Description	This course will teach you to use the fundamental concepts in CATIA V5 to build simple automotive parts and assemblies, and make simple drawings of those parts and assemblies. You will also learn how to use the advanced solid modeling techniques necessary for Powertrain design methodology.
Objectives	Upon completion of this course you will be able to: - Describe the CATIA V5 interface - Apply the correct solid and surface modeling methodology for Powertrain Design - Create an automobile part in order to satisfy its design intent - Apply advanced solid modeling technique necessary for Powertrain design methodology - Design and manage parts in the context of an assembly - Produce simple drawings and assembly layouts
Prerequisites	Students attending this course should know the fundamentals of Mechanical Design
Available Online	Yes

CATIA V5 Fundamentals	
Course Code	CAT-en-V5F-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	40 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers with no CATIA V5 experience
Description	This course will teach you about CATIA V5. You will learn how to build simple parts and assemblies in CATIA, and how to make simple drawings of those parts and assemblies.
Objectives	Upon completion of this course you will be able to: - Understand and use the CATIA V5 interface - Plan the construction of a part in order to convey its visual and functional aspects - Create simple parts in CATIA V5 - Construct an assembly using the parts - Produce simple drawings and assembly layouts
Prerequisites	Students attending this course should be familiar with Mechanical Design and the Windows Operating System.
Available Online	Yes

CATIA V5 Mechanical Design Expert	
Course Code	CAT-en-V5E-A-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	40 hours
Course Materials	English , French , German , Japanese
Level	Advanced
Audience	Mechanical Designers
Description	This course will teach you how to start a complex design project from its specifications (top down approach) and complete it by reusing existing data. It will focus on advanced skills and concepts that enable you to create and analyze complex parts and assemblies.
Objectives	Upon completion of this course you will be able to: - Create a complex model in CATIA V5 - Create and manage a structured model - Design parts in the context of an assembly - Re-use existing data to complete assemblies - Manage relationships between assembled parts - Analyze and annotate your design
Prerequisites	Students attending this course should be familiar with the basics of CATIA V5 Mechanical Design
Available Online	Yes

Composites Grid Approach	
Course Code	CAT-en-CPG-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	Composites Designers for Aerospace
Description	This course will introduce you to the Grid approach. You will learn how to generate plies, modify geometry, and create a solid or a top surface using the ply geometry. By the end of this course you will be able to create and modify a composite part using the Composites Grid Design approach.
Objectives	Upon completion of this course you will be able to: - Understand the concept of Grid approach in Composites Design - Generate plies using the Grid approach - Modify the ply geometry - Create a solid or a top surface using the ply geometry - Create and modify a composite part using the Composites Grid Design approach
Prerequisites	Students attending this course should be familiar with wireframe and surface design, drafting, and composites part design.
Available Online	Yes

Composites Part Engineering	
Course Code	CAT-en-CPE-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	24 hours
Course Material	English
Level	Fundamental
Audience	Composites Designers
Description	This course will first teach you how to design simple Composites Parts using a Manual approach. You will then learn how to use a Zone-based approach to complete the preliminary design and then the detailed design. You will also learn how to generate plies automatically, use the analysis tools and simulate fiber behavior. Finally, you will learn how to generate exact solids and to create composites drawings.
Objectives	Upon completion of this course you will be able to: - Define the composites parameters - Design a composite part using the manual approach - Design a composite part using the classical and solid zone approach - Perform and inspect the producibility analysis - Export and import the ply design data - Create a ply book
Prerequisites	Students attending this course should be familiar with wireframe and surface design and drafting.
Available Online	Yes

Composites Part Manufacturing	
Course Code	CAT-en-CPM-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	20 hours
Course Material	English
Level	Fundamental
Audience	Composites Manufacturing Designers
Description	This course will teach you how to create a manufacturing document from a Composites Engineering design document. You will learn how to modify the Manufacturing Data structure and synchronize the link between the engineering and the manufacturing data. You will also learn how to apply the manufacturing and producibility constraints in the Composites Design process.
Objectives	Upon completion of this course you will be able to: - Design a Composite Part using the Manual Approach - Generate a Manufacturing Stacking from an Engineering Stacking - Synchronize the link between the Manufacturing and Engineering parts - Perform and inspect the Producibility Analysis - Compute and optimize a Flattening - Export the Ply Data - Create a Ply Book
Prerequisites	Students attending this course must have knowledge of part design, assembly design, surface design and drafting.

Composites Part Manufacturing	
Available Online	Yes

Functional Molded Parts	
Course Code	CAT-en-FMP-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Molded Part Designers
Description	This course will teach you how to use the Functional Molded Part workbench to create molded parts using basic features and to finalize the part using additional dress-up features. You will also be taught the multi-body approach and will finally learn how to extract the cores and cavity from the final part.
Objectives	Upon completion of this course you will be able to: - Create the main shapes of a molded part - Add functional features to the main part - Finalize the molded part using feature modifiers - Use the multi-body approach - Extract cores and cavities from the final part
Prerequisites	CATIA V5 Fundamentals
Available Online	Yes

Getting Started with CATIA V5	
Course Code	CAT-en-COM-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	7 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	New CATIA V5 Users
Description	This course will teach you how to start working in CATIA V5. You will learn how to perform basic operations using the standard user interface elements and tools. You will use the basic visualization techniques to view objects in CATIA V5.
Objectives	Upon completion of this course you will be able to: - Open CATIA V5 documents and use basic tools to modify them - Use the specification tree to browse and understand the structure of an object - Use the Compass to manipulate the viewpoint - View and modify the graphic properties of an object
Prerequisites	None
Available Online	Yes

CATIA

CATIA PLM Express V5

CATIA PLM Express Fundamentals	
Course Code	CAT-en-CTP-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	40 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers with no CATIA V5 experience.
Description	This course will teach you how to use CATIA Team PLM configuration workbenches to build simple parts and assemblies. You will learn how to make simple drawings of those parts and assemblies. You will also learn about basic Wireframe and Surface creation.
Objectives	Upon completion of this course you will be able to: - Understand and use the CATIA V5 interface. - Plan the construction of a part in order to convey its visual and functional aspects. - Create simple parts in CATIA V5. - Construct an assembly managing the parts. - Produce simple drawings and assembly layouts.
Prerequisites	Students attending this course should be familiar with Mechanical Design and the Windows operating system
Available Online	Yes

CATIA PLM Express Fundamentals - Basic Surface	
Course Code	CAT-en-CTPB-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	44 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers with no CATIA V5 experience.
Description	This course will teach you how to use the CATIA Team PLM configuration workbench to build simple parts and assemblies in CATIA, and make simple drawings of those parts and assemblies. You will also learn how to create the basic wireframe and surface.
Objectives	Upon completion of this course you will be able to: - Understand and use the CATIA V5 interface - Plan the construction of a part in order to properly convey its visual and functional aspects - Create simple parts in CATIA V5 including basic surface geometry - Construct an assembly managing the parts - Produce simple drawings and assembly layouts
Prerequisites	Students attending this course should be familiar with Mechanical Design and the Windows operating system
Available Online	Yes

CATIA PLM Express Fundamentals - Surfaces	
Course Code	CAT-en-CTPS-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	44 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers with no CATIA V5 experience.
Description	This course will teach you how to use the CATIA Team PLM configuration workbench to build simple parts and assemblies in CATIA, and make simple drawings of those parts and assemblies. You will also learn how to create the basic wireframe and surface.
Objectives	Upon completion of this course you will be able to: - Understand and use the CATIA V5 interface - Plan the construction of a part in order to properly convey its visual and functional aspects - Create simple parts in CATIA V5 including basic surface geometry - Construct an assembly managing the parts - Produce simple drawings and assembly layouts
Prerequisites	Students attending this course should have knowledge of Mechanical Design and Windows operating system.
Available Online	Yes

CATIA

CATIA Product Synthesis V5

CATIA Knowledge Fundamentals	
Course Code	CAT-en-KWF-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	8 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	CATIA V5 Users
Description	This course will teach you how to embed knowledge within design and leverage it to automate modifications. You will learn how to create and use parametric parts and assemblies.
Objectives	Upon completion of this course you will be able to: - Use and manage the Knowledgeware working environment - Understand how collaborative work affects knowledge features - Use parameters, formulas and design tables - Create parametric parts and assemblies - Share parameters and reuse relations
Prerequisites	Students attending this course should be familiar with CATIA V5 Part Design and Assembly Design
Available Online	Yes

Knowledge Advisor	
Course Code	CAT-en-KWA-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	6 hours
Course Material	English
Level	Fundamental
Audience	Mechanical and Electrical Design Engineers
Description	This course will teach you how to embed knowledge in your designs using Knowledge Advisor tools. You will also learn how to leverage the knowledge to reduce errors and automate the design modifications.
Objectives	Upon completion of this course you will be able to: - Create and use User Parameters and Formulas - Create Rules, Checks and Reactions to control the design - Create and use Design Tables to automate the design modifications - Use miscellaneous Knowledge Advisor tools
Prerequisites	Students attending this course should be familiar with the basics of CATIA V5.
Available Online	Yes

Knowledge Expert	
Course Code	CAT-en-KWE-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	4 hours
Course Material	English
Level	Fundamental
Audience	Mechanical and Electrical Design Engineers
Description	This course will show you how to build up and share corporate knowledge stored in rule bases and leverage it across the company to ensure design compliance with established standards.
Objectives	Upon completion of this course you will be able to: - Embed the complex design knowledge in a parametric part using Knowledgeware Expert. - Automate design modifications using the specific Knowledge Expert tools
Prerequisites	Students attending this course should be familiar with the basics of CATIA V5 and knowledgeware.
Available Online	Yes

Product Engineering Optimizer (PEO)	
Course Code	CAT-en-PEO-F-V5R29
Available Release	V5-6R2019
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	CAD Engineers, Analysts
Description	This course will teach you how to use the Product Engineering Optimization workbench to optimize your designs by formulating and solving an optimization problem, considering the constraints and conditions involved in the problem.
Objectives	Upon completion of this course you will be able to: - Formulate an optimization problem - Select the appropriate algorithms to solve an optimization problem - Analyze the results of optimization
Prerequisites	Students attending this course should be familiar with the basics of CATIA V5.
Available Online	Yes

Product Knowledge Template	
Course Code	CAT-en-PKT-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Engineers and Knowledgeware Engineers
Description	This course will teach you how to create and store interactive features like power copies, user defined features, document templates, knowledge patterns etc. Also you will learn how to reuse and adapt them to a new context.
Objectives	Upon completion of this course you will be able to: - Create and reuse PowerCopy and User Defined Features - Create and reuse advanced instantiation features like Knowledge Patterns - Create Part and Assembly Templates and reuse them in a new context
Prerequisites	Students attending this course should be familiar with the basics of CATIA V5 and knowledgeware.
Available Online	Yes

CATIA

CATIA Shape Design and Styling V5

CATIA ICEM Shape Design Expert	
Course Code	CAT-en-IEX5-A-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	11 hours
Course Material	English
Level	Advanced
Audience	Surface Designers who are required to create high-quality surfaces
Description	This course will teach you how to use the advanced surface creation options, the advanced analysis tools, and the expert tools of CATIA V5 ICEM Shape Design. You will learn how to create high-quality surfaces, and analyze and improve the quality of the surfaces.
Objectives	Upon completion of this course you will be able to: - Create high quality surfaces - Analyze surface quality - Correct surface defects
Prerequisites	- Students attending this course should be familiar with CATIA V5 Fundamentals and CATIA Icem Shape Design Fundamentals. - CATIA V5 for Surfaces is also recommended.
Available Online	Yes

CATIA ICEM Shape Design Fundamentals	
Course Code	CAT-en-ICM-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	28 hours
Course Material	English
Level	Fundamental
Audience	High quality surface designers
Description	This course will teach you how to use the ISD workbench to create good quality curves and Class A surfaces. You will learn how to analyze the wireframe and surface quality and interpret the results in order to correct visual defects.
Objectives	Upon completion of this course you will be able to: - Create robust class A surface models - Create good quality curves - Assemble, re-limit and connect the surfaces - Analyze surface quality - Correct surface defects - Manage surface models
Prerequisites	- CATIA V5 Fundamentals - Knowledge of Mechanical Surface Design is advisable
Available Online	Yes

CATIA Imagine and Shape	
Course Code	CAT-en-IMA-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	12 hours
Course Material	English
Level	Fundamental
Audience	Product Stylists, Industrial Designers
Description	This course will teach you how to use the Imagine and Shape workbench in CATIA to create new product shapes. You will also learn how to improve product styles.
Objectives	Upon completion of this course you will be able to: - Create and modify curves - Create subdivision surfaces using tools specific to the Imagine and Shape workbench - Modify product style surfaces
Prerequisites	Students attending this course should know the CATIA Generative Shape Design workbench.
Available Online	Yes

CATIA Surface Design Expert	
Course Code	CAT-en-GSD-A-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	16 hours
Course Materials	English , French , German , Japanese
Level	Advanced
Audience	Mechanical Designers and Surface Designers
Description	This course will first recall and summarize the tools taught in the Surface Design course. It will then capitalize on this knowledge and teach you advanced surface creation tools, quality checking and correction techniques, and surface creation in a multi-model environment. This course covers only those Generative Shape Design tools that are specific to the HD2 license.
Objectives	Upon completion of this course you will be able to: - Create wireframe features using existing curves and surfaces - Create advanced and parameterized swept surfaces - Analyze advanced surfaces and fill gaps - Create advanced blend features - Improve the quality and stability of existing geometries
Prerequisites	Students attending this course should have completed the CATIA Surface Design course
Available Online	Yes

CATIA Surface Design Expert Added Exercises	
Course Code	CAT-en-GSD-X-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	14 hours
Course Materials	English , French , German , Japanese
Level	Exercise
Audience	Mechanical Designers and Surface Designers
Description	This course provides you with an extensive database of exercises for additional practice on advanced topics of CATIA Surface Design. The exercises have been created based on Industry practices.
Objectives	Upon completion of this course you will be able to: - Create wireframe features using existing curves and surfaces - Create advanced and parameterized swept surfaces - Perform advanced surface analysis and gap correction - Create advanced blend features - Improve the quality and stability of create geometries
Prerequisites	Students attending this course should have attended the CATIA Surface Design Expert course
Available Online	Yes

CATIA V5-6R2017 Update for Shape Designers (UHD27)	
Course Code	CAT-en-UHD27-U-V5R27
Available Release	V5-6R2017
Duration	2 hours
Course Materials	English , French , German , Japanese
Level	Update
Audience	Surface Designers
Description	Upon completion of this course, you will be able to effectively use the new and enhanced tools in CATIA V5-6R2017 for the Generative Shape Design workbench.
Objectives	Upon completion of this course, you will be able to effectively use the new and enhanced tools in CATIA V5-6R2017 for the following workbenches. - Reference Geometry Creation - Surface Creation - Generative Shape Design
Prerequisites	Students attending this course should be familiar with the CATIA Generative Shape Design V5-6R2016 workbench.
Available Online	Yes

CATIA V5 for Surfaces	
Course Code	CAT-en-V5S-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	50 hours
Course Material	English
Level	Fundamental
Audience	Surface Designers
Description	This course will teach you how to create curves and surfaces using the Generative Shape Design workbench. You will learn how to analyze the wireframe and surface quality and rectify the defects. You will also learn how to work in a multi-model environment with published surfaces.
Objectives	Upon completion of this course you will be able to: - Use the tools of the Generative Shape Design workbench - Create good quality curves based on a sound and improved wireframe geometry - Assemble, relimit and connect the surfaces to get a topology - Analyze the quality of surfaces and rectify the defects - Manage the surfaces in a multi-model environment
Prerequisites	Students attending this course should be familiar with the fundamentals of CATIA V5.
Available Online	Yes

Developed Shapes	
Course Code	CAT-en-DL1-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	4 hours
Course Material	English
Level	Fundamental
Audience	Surface Designers
Description	This course will teach you how to use CATIA Developed Shape functionalities to create unfolded surfaces from a ruled surface. You will learn how to develop wires and points onto a revolution surface.
Objectives	Upon completion of this course you will be able to: - Create unfolded surfaces from a ruled surface using the CATIA Developed Shapes functionalities. - Develop wires and points onto a revolution surface.
Prerequisites	Students attending this course should be familiar with the fundamentals of CATIA and Generative Surface Design.
Available Online	Yes

FreeStyle Shaper, Optimizer and Profiler (FSS)	
Course Code	CAT-en-FSS-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	12 hours
Course Material	English
Level	Fundamental
Audience	Surface Designers
Description	This course will teach you how to create flawless, styled shapes from scratch using three-dimensional free-form curves and surfaces or using digitized data. You will also learn how to analyze and improve the quality of existing curves and surfaces.
Objectives	Upon completion of this course you will be able to: - Create styled shapes using digitized data - Create surfaces using a curve-based approach - Create surfaces using a surface-based approach - Analyze and correct the curve quality - Analyze and correct the surface quality
Prerequisites	Students attending this course should know Surface Design in CATIA V5.
Available Online	Yes

FreeStyle Sketch Tracer	
Course Code	CAT-en-FSK-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	Shape Designers
Description	This course will teach you how to import images in the CATIA V5 environment and use them as a background or a basis for your design.
Objectives	Upon completion of this course you will be able to: - Import an image into CATIA V5 - Position the image in the CATIA V5 environment - Use the image as a background or as a basis for the design
Prerequisites	Students attending this course should know the basics of CATIA V5.
Available Online	Yes

Realistic Shape Optimizer	
Course Code	CAT-en-RSO-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	4 hours
Course Material	English
Level	Fundamental
Audience	Surface designers, Tooling designers
Description	This course addresses the needs of Reverse Shape Optimizers. It will teach you how to create a deformation law. You will learn how to use the deformation law in Digitized Morphing for Curve and Solids. It will teach you about optimization of a vector field and also how to filter a vector field to check quality of vectors.
Objectives	Upon completion of this course you will be able to: - Morph surfaces with a computed deformation field - Optimize vectors field from deviation analysis - Filter vectors field to check the quality of the vectors
Prerequisites	Students attending this course should be familiar with the basics of wireframe and surfaces creation.
Available Online	Yes

DELMIA

DELMIA Assembly V5

Assembly Process Planner	
Course Code	DEL-en-APN-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Engineers, Industrial Engineers and Assembly Planners
Description	This course will teach you to create manufacturing assembly process plans quickly with easy-to-use tools. You will learn how to use the engineering Bill of Materials or a manufacturing assembly template to create the initial process and resulting manufacturing assembly structure. You will also learn to use Assembly Spec Tree editor to visualize the manufacturing assembly structure that can be refined with the intuitive drag-and-drop capabilities for parts.
Objectives	Upon completion of this course you will be able to: - Author assembly operations and resulting manufacturing assemblies - Balance the part and the assembly distribution between assembly operations
Prerequisites	Students attending this course should be familiar with the DELMIA V5 fundamentals and the DELMIA E5 Process Engineer.
Available Online	Yes

DPM Assembly	
Course Code	DEL-en-ASY-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	Simulation, Industrial, Mechanical Engineers
Description	This course will teach you how to create simulations for an Assembly Project used in a stand alone mode using a task-based approach. You will learn the commands, options and menus within the context of completing a design task with the help of case studies illustrating these processes.
Objectives	Upon completion of this course you will be able to: - Create the process plan - Create and enhance the simulation - Analyze the simulation - Create output files - Conduct tool validation
Prerequisites	Students attending this course should be familiar with V5 fundamentals and Mechanical Engineering in general.
Available Online	Yes

DELMIA

DELMIA D5 QUEST V5

QUEST	
Course Code	DEL-en-QST-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	18 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Engineers, Simulation Engineers, and Industrial Engineers
Description	This course will teach you how to create a discrete event simulation that will enable you to design and analyze complex systems. You will learn how to create the basic elements (such as Parts, Source, and Sink) of a Production System and the various Material Handling Systems (MHS) that facilitate in the movement of Parts. You will also learn how to create the Kinematics Parts and Devices and simulate the model by defining the Shifts and Failures.
Objectives	Upon completion of this course you will be able to: - Create the basic elements that form the Queuing Event Simulation Tool (QUEST) model - Build the elements of material handling systems that are specific to the QUEST model - Create and manipulate kinematics devices - Define shifts and failures - Simulate the model
Prerequisites	Students attending this course should be familiar with the fundamentals of Mechanical Design and Discrete Event Simulation.
Available Online	Yes

DELMIA

DELMIA Manufacturing Hub V5

Basic Process Engineer	
Course Code	DEL-en-DPE-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Engineers, Industrial Engineers
Description	This course will teach you how to implement DELMIA Process Engineer in your environment. You will learn how to recognize process risks, reuse proven processes, trace changes and decisions, and access scattered process knowledge. You will also learn how to use DELMIA Process Engineer during the development of a new project.
Objectives	Upon completion of this course you will be able to: - Organize, evaluate and manage the Product, Process and Resource (PPR) data - Manage relationships between the products, processes and resources - Integrate the PPR Hub with QUEST and DPM - Import the data from the PPR Hub into QUEST and DPM
Prerequisites	Students attending this course must be familiar with Mechanical Engineering and the fundamentals of DELMIA V5 in general.
Available Online	Yes

DELMIA

DELMIA Robotics V5

V5 Robotics	
Course Code	DEL-en-ROB-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	10 hours
Course Material	English
Level	Fundamental
Audience	Simulation, Industrial, Mechanical Engineers
Description	This course will teach you how to create, program, simulate and validate an entire robot workcell for any manufacturing industry. You will learn how to create a tag and robot task. You will also learn to create Input/ Output (IOs) connections and validate them in context with the organizational resource. Finally, you will learn to create robot controller profiles.
Objectives	Upon completion of this course you will be able to: - Prepare the working environment - Build the layout - Create tags and robot tasks - Optimize the simulation
Prerequisites	Students attending this course should be familiar with DELMIA V5 Fundamentals and Mechanical Engineering in general.
Available Online	Yes

ENOVIA

Digital Mock-Up V5

Digital Mock-Up Basics	
Course Code	ENOV-en-DMB-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	12 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers, Industrial Designers, Managers
Description	This course will explain the features of all CATIA V5 Digital Mock-up workbenches. It will help you to analyze and choose an appropriate workbench as per the requirement. You will learn to view and inspect a complex assembly in order to investigate the problem areas and highlight critical points.
Objectives	Upon completion of this course you will be able to: - Use various features and functionalities of the Digital Mock-up workbenches - Manage assembly components and explore their mock-up details - Manipulate view points - Measure elements - Highlight critical areas using 2D and 3D annotations - Link information to external files
Prerequisites	Students attending this course must be familiar with CATIA V5 basics
Available Online	Yes

Digital Mock-Up Navigator	
Course Code	ENOV-en-DMN-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	8 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers, Managers
Description	This course will teach you how to manipulate a Digital Mock-Up in the context of an engineering review. You will also learn how to create simulations for review presentations.
Objectives	Upon completion of this course you will be able to: - Use the basic and advanced functionalities of the DMU Navigator workbench - Modify the properties of components and position them - Create movies using the simulations - Manage the mock-up configurations using scenes - Save specific mock-up configurations for analysis - Create annotated views of a mock-up for sharing
Prerequisites	Students attending this course should have attended the DMU Basics course.
Available Online	Yes

Digital Mock-Up Optimizer	
Course Code	ENOV-en-DMO-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	4 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers, Engineering Managers
Description	This course will teach you how to improve productivity by computing an optimized data geometric representation for rapid mock-up verification in the context of a collaborative design review environment.
Objectives	Upon completion of this course you will be able to: - Identify the DMU settings and features that are used to manage simplified representations - Select and use a simplified representation - Compute thickness and offset representations - Compute swept and vibration volumes - Compute Free Space and 3D Cut representations for performing measurements
Prerequisites	Students attending this course should have attended the DMU Basics and DMU Space Analysis courses
Available Online	Yes

Digital Mock-Up Space Analysis	
Course Code	ENOV-en-SPA-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	5 hours
Course Materials	English , French , German , Japanese
Level	Fundamental
Audience	Mechanical Designers, Engineering Managers
Description	This course will teach you how to review and validate designs throughout the product lifecycle, from design in context to maintenance review. You will also learn how to highlight interference problems and verify internal component clearances.
Objectives	Upon completion of this course you will be able to: - Measure elements in the context of a digital mock-up - Create views to observe the details of a digital mock-up - Analyze interferences to identify clashes, contacts, and component clearances - Compare different versions of a digital mock-up
Prerequisites	Students attending this course should have attended the DMU Basics course
Available Online	Yes

DMU Engineering Analysis Review	
Course Code	ENOV-en-ANR-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	1.5 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to analyze and review the results of analyses performed by the CATIA Analysis and Simulation workbench or by any third party application. You will also learn how to use the functionalities like Animation, Extrema Detection, Images Layout, and Cut Plane Analysis to manage your results.
Objectives	Upon completion of this course you will be able to: - Review the analysis using the CATIA Analysis and Simulation workbench - Generate result images and analysis reports - Animate the results - Analyze the results using vExtrema Detection, Images Layout, and Cut Plane Analysis
Prerequisites	Students attending this course should be familiar with DMU Basics, DMU Navigator and DMU Space Analysis.
Available Online	Yes

DMU Fitting Simulator (FIT)	
Course Code	ENOV-en-FIT-F-V5R27
Available Release	V5-6R2017
Duration	4 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to define the process of mounting and dismounting parts of your assemblies. You will learn how to optimize the process for ease of assembly and maintenance.
Objectives	Upon completion of this course you will be able to: - Use the capabilities of the Fitting Simulator workbench - Create tracks to define the motion path of assembly components - Create sequences to define the order in which the tracks will take place - Play the motion sequences - Analyze clashes during sequence replays
Prerequisites	Students attending this course should be familiar with DMU Basics and DMU Space Analysis.
Available Online	Yes

DMU Kinematics Simulator	
Course Code	ENOV-en-KIN-F-V5R32
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2020 , V5-6R2021 , V5-6R2022
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Design Engineers
Description	This course will teach you how to design mechanisms using an existing assembly. You will also learn how to simulate and analyze the mechanisms for clashes and perform kinematic analysis.
Objectives	Upon the completion of this course, you will be able to: - Apply the general processes in the DMU Kinematics workbench - Define a mechanism using an existing assembly - Simulate the mechanism - Analyze the mechanism for clashes - Perform kinematic analysis - Sequence multiple mechanisms
Prerequisites	Students attending this course should be familiar with DMU Basics and DMU Space Analysis.
Available Online	Yes

ENOVIA

ENOVIA PLM Express V5

ENOVIA Smarteam - CATIA PLM Express Fundamentals	
Course Code	ENOV-en-CTPE-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	40 hours
Course Material	English
Level	Fundamental
Audience	Mechanical Designers with no CATIA V5 experience.
Description	This course will teach you how to use the CATIA Team PLM configuration workbench to build simple parts and assemblies and convey their visual and functional aspects in CATIA. You will also make simple drawings of those parts and assemblies. The course will also cover how to work with databases and vaults instead of folders and manage the data using ENOVIA SmarTeam.
Objectives	Upon completion of this course you will be able to: - Understand and use the CATIA V5 interface - Make a connection with ENOVIA SmarTeam - Work with database and vaults instead of local folders - Plan the construction of a part in order to properly convey its visual and functional aspects - Construct an assembly managing the parts - Produce simple drawings and assembly layouts - Manage the data through ENOVIA SmarTeam
Prerequisites	Students attending this course should have basic knowledge of mechanical design.
Available Online	Yes

ENOVIA

ENOVIA SmarTeam V5

ENOVIA SmarTeam Administration for Foundation, Editor and Web Editor	
Course Code	ENOV-en-STA-F-V5R28
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	24 hours
Course Material	English
Level	Fundamental
Audience	New ENOVIA SmarTeam Administrators
Description	This course will teach you how to perform administrative tasks in ENOVIA SmarTeam. You will learn how to create and manage user profiles, data model structures, lifecycle rules, and workflows. You will also learn how to add and modify user-defined commands and menus.
Objectives	Upon completion of this course you will be able to: - Perform basic and advanced configuration tasks for SmarTeam Foundation, Editor, and Web Editor - Create and modify data model structures - Create user profiles and assign authorizations - Add and modify user-defined commands and menus - Create and modify workflows - Manage the lifecycle rules
Prerequisites	Students attending this course should have attended the ENOVIA SmarTeam Fundamentals course and the ENOVIA SmarTeam Editor course
Available Online	Yes

ENOVIA SmarTeam - CATIA Integration	
Course Code	ENOV-en-TPU-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Engineers, CAD Designers, Suppliers, and Team Leaders involved in product development
Description	This course will teach you how to manage CATIA Parts and Assemblies, and maintain the dependencies and data integrity while performing lifecycle operations using ENOVIA SmarTeam. You will also learn the concepts of Collaborative Design and Relational Design, and how to apply these concepts using ENOVIA SmarTeam.
Objectives	Upon completion of this course you will be able to: - Manage CATIA products using ENOVIA SmarTeam - Manage the various CATIA links and lifecycles associated with CATIA products - Understand how the concepts of Relational Design and Collaborative Design are implemented - Use Properties Mapping - Use Standard CATIA Parts and Catalogs
Prerequisites	Students attending this course should have attended the ENOVIA SmarTeam Fundamentals course and the ENOVIA SmarTeam Editor course
Available Online	Yes

ENOVIA SmarTeam - CATIA Supply Chain Engineering Exchange	
Course Code	ENOV-en-SEE-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Design Managers and Design Engineers who are working in a collaborative environment
Description	This course will teach you how to use the ENOVIA SmarTeam - CATIA Supply Chain Engineering Exchange product to exchange data. You will learn to perform two types of data exchanges: - ENOVIA SmarTeam file-based exchange - Exchange between two independent ENOVIA SmarTeam installations
Objectives	Upon completion of this course you will be able to: - Build upon your knowledge of ENOVIA SmarTeam - CATIA Integration and use the ENOVIA SmarTeam - CATIA Supply Chain Engineering Exchange product proficiently - Perform file-based data exchanges in ENOVIA SmarTeam - Exchange data between two independent ENOVIA SmarTeam installations
Prerequisites	Students attending this course should have attended the ENOVIA SmarTeam - CATIA Integration course
Available Online	Yes

ENOVIA SmarTeam - Editor	
Course Code	ENOV-en-SED-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	Reviewers, Engineers, Designers, Sales & Support Staff, and Managers
Description	This course will teach you how to use the ENOVIA SmarTeam - Editor and Workflow products. You will learn how to create data and manage its lifecycle and workflow using ENOVIA SmarTeam. To complement the theory a detailed PLM-based Master Exercise, split into short steps, allows you to practice working with ENOVIA SmarTeam in an industrial context.
Objectives	Upon completion of this course you will be able to: - Build upon your knowledge of ENOVIA SmarTeam Fundamentals and use the ENOVIA SmarTeam - Editor and Workflow products proficiently - Create, search, view, and manage your Product Data - Use the various Workflow modules to create, work with, manage, and customize your Business Processes
Prerequisites	Students attending this course should have attended the ENOVIA SmarTeam Fundamentals course
Available Online	Yes

ENOVIA SmarTeam Fundamentals	
Course Code	ENOV-en-SFF-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	4 hours
Course Material	English
Level	Fundamental
Audience	Users who are new to PLM, and more specifically to ENOVIA SmarTeam. And users who want to test their knowledge on ENOVIA SmarTeam fundamentals.
Description	This course will introduce you to the concept of PLM and show how it is implemented by ENOVIA SmarTeam. You will become conversant with the terminology used in ENOVIA SmarTeam and learn the basic concepts of ENOVIA SmarTeam Data Management, Lifecycle Mechanism, and Workflow.
Objectives	Upon completion of this course you will be able to: - Outline the basics of PLM and ENOVIA SmarTeam. - Describe how ENOVIA SmarTeam stores and manages different types of Product information. - Explain the basic concepts of Lifecycle Management and Workflow.
Prerequisites	None
Available Online	Yes

ENOVIA SmarTeam Installation for Foundation, Editor and Web Editor	
Course Code	ENOV-en-STI-F-V5R28
Available Releases	V5-6R2017 , V5-6R2018
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	New ENOVIA SmarTeam Administrators
Description	This course will teach you about the architecture and the installation process of ENOVIA SmarTeam. It will provide you with step-by-step guidance of how to install the Foundation, the Editor, and the Web Editor products of SmarTeam.
Objectives	Upon completion of this course you will be able to: - Describe the SmarTeam Architecture - Install SmarTeam Foundation, Editor, Web Editor products
Prerequisites	None
Available Online	Yes

ENOVIA SmarTeam - Web Editor	
Course Code	ENOV-en-WED-F-V5R29
Available Releases	V5-6R2017 , V5-6R2018 , V5-6R2019
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Engineers, Designers, Managers, Sales & Support Staff, and Suppliers
Description	This course will teach you how to work with ENOVIA SmarTeam - Web Editor. You will learn how to view projects and documents, manage their lifecycle, and use the various search functions to retrieve data. You will also learn about Workflow functions in brief. The course also contains a scenario-based Master Exercise to allow you to practice what you have learnt.
Objectives	Upon completion of this course you will be able to: - Create and manage Projects and their related data using ENOVIA SmarTeam - Web Editor - Search for different types of product data - Use the Viewer to view CAD data - Manage the lifecycle of your product data - Use the integrated Workflow functionality to work with processes in a collaborative environment
Prerequisites	Students attending this course should have attended the ENOVIA SmarTeam Fundamentals course
Available Online	Yes

ENOVIA

ENOVIA V5 VPLM

ENOVIA V5 VPM for Engineering Collaboration (LEH)	
Course Code	ENOV-en-LEH-F-V5R26
Available Release	V5-6R2017
Duration	12 hours
Course Material	English
Level	Fundamental
Audience	CAD Designers, Engineers in charge of product development
Description	This course addresses the functionalities dedicated to manage CATIA data and the Digital Mock-Up (DMU) through interoperability between the ENOVIA V5 VPM Client and CATIA V5 sessions. The same processes will be addressed with VPM Navigator
Objectives	Work in context - Understand Concurrent Engineering projects - Understand and use Relational Design - Use the interoperability between the ENOVIA V5 VPM Client and CATIA V5 - Use the interoperability between VPM Navigator and CATIA V5
Prerequisites	Students attending this course should be familiar with ENOVIA V5 VPM Fundamentals & CATIA V5 Fundamentals
Available Online	Yes

ENOVIA V5 VPM for Lifecycle Collaboration (LCN)	
Course Code	ENOV-en-LCN-F-V5R26
Available Release	V5-6R2017
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	Non-CAD Users, Engineers, Managers, Suppliers and Team leaders involved in product development
Description	This course is dedicated to engineers and team leaders involved in business and industrial processes that drive engineering development in ENOVIA V5 VPM. You will become conversant with advanced ENOVIA V5 VPM concepts. These include Document Management as well as Variant and Configuration Management. The course also focuses on Engineering Changes Management throughout the product lifecycle. Additionally, the course features exercises for both ENOVIA V5 VPM Client and ENOVIA VPM Lifecycle, so you can immediately practice what you have learnt.
Objectives	Manage the processes that drive engineering development using ENOVIA V5 VPM Client functionalities and ENOVIA VPM lifecycle - Use Content Management advanced functionalities to manage products and processes documentation - Manage complex product configurations - Drive engineering changes in complex development phases
Prerequisites	Students attending this course should be familiar with ENOVIA V5 VPM User Fundamentals.

ENOVIA V5 VPM for Lifecycle Collaboration (LCN)

Available Online	Yes

ENOVIA V5 VPM for Supply Chain Collaboration (WPE)	
Course Code	ENOV-en-WPE-F-V5R26
Available Release	V5-6R2017
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	Design Managers and Design Engineers
Description	In the context of expanding production networks, fast and reliable product data exchange between Original Equipment Manufacturers and their partners is a key element in Product Life Cycle Management. This course focuses on the bidirectional exchange of engineering packages between CATIA and ENOVIA. More specifically you will learn how to perform generic reconciliation operations, export data, and define reconciliation rules.
Objectives	Perform generic operations on the reconciliator - Perform queries and Apply reconciliator rules- Perform generic operations on the reconciliator - Reconcile data and perform operations on this data - Perform queries and Apply reconciliator rules - Reconcile data and perform operations on this data
Prerequisites	Students attending this course should be familiar with ENOVIA V5 VPM Fundamentals and Engineering Collaboration.
Available Online	Yes

ENOVIA V5 VPM Fundamentals (LUF)	
Course Code	ENOV-en-LUF-F-V5R26
Available Release	V5-6R2017
Duration	16 hours
Course Material	English
Level	Fundamental
Audience	Engineers, Managers, CAD Designers, Suppliers and Team Leaders involved in product development
Description	This course introduces you to the concept of Product Lifecycle Management and further explains how business and industrial processes are implemented in the context of ENOVIA V5 VPM.
Objectives	Understand the concept of Product Lifecycle Management - Understand how business and industrial processes are implemented in the context of ENOVIA V5 VPM. - Understand the ENOVIA V5 VPM concepts and functionalities in domains of Product Structure Management and Content Management. - Understand Change Management and Variant Management.
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

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BIOVIA Materials Studio

Training Course Catalog

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MATERIALS STUDIO COURSE CATALOG

TABLE OF CONTENTS

SUMMARY 1

Materials Studio Courses 1

- Introduction to Materials Studio 1
- Adsorption Locator 2
- Amorphous Cell 2
- Blends 2
- CASTEP Introduction 3
- CASTEP Advanced 3
- Conformers 4
- DFTB+ 4
- DMol^3 Introduction 5
- DMol^3 Advanced 5
- ForcitePlus 6
- GULP 6
- Materials Studio Collection in Pipeline Pilot (MSC in PP) 7
- Mesocite (DPD) 7
- Mesodyn 8
- Morphology 8
- ONETEP 8
- Polymorph 9
- QMERA 9
- QSAR 10
- Reflex, Reflex-Plus, X-Cell, and Reflex QPA 10
- Scripting in Materials Studio 11
- Sorption 11
- Synthia 12
- VAMP 12

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SUMMARY

We are proud to offer a variety of courses to meet your organization's needs. Customized courses can be designed to meet your team's specific needs; please contact your Account Manager for more information.

Delivery Methods:

- **Instructor-Led Training**: Facilitated by an instructor, this training takes place at your location or through a virtual classroom. Onsite courses offer hands-on exercises to enhance the learning experience. In remote classes, hands-on exercises are assigned as homework, rather than during class time.

MATERIALS STUDIO COURSES

INTRODUCTION TO MATERIALS STUDIO

This workshop provides an introduction to the tools and functionality available in Materials Visualizer, the core modules in the Materials Studio suite of software.

Topics	Course Duration and Prerequisites
• Materials Studio – Interface and sketching – Builders: polymer, crystal, nano, meso – Tools • Materials Modeling – Multiscale, quantum, MM, meso, Crystal, QSAR • Scripting in Materials Studio • Using the client-server architecture • Problem-solving approaches	**Location:** Onsite or Virtual Classroom **Duration:** 1 Day **Prerequisites:** None

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ADSORPTION LOCATOR

BIOVIA Materials Studio Adsorption Locator helps students find the most stable adsorption sites for a broad range of materials, including zeolites, carbon nanotubes, silica gel, and activated carbon – to name just a few – by carrying out Monte Carlo searches of the configurational space of the substrate-adsorbate system.

Topics	Course Duration and Prerequisites
• Theory in Adsorption Locator • Computational Tasks in Adsorption Locator • Results from Adsorption Locator • Scripting • Comparison with Sorption	**Location:** Onsite or Virtual Classroom **Duration:** 2 Hours **Prerequisites:** Introduction to Materials Studio

AMORPHOUS CELL

BIOVIA Materials Studio Amorphous Cell is a comprehensive model building tool for creating a wide range of amorphous materials. The behavior of amorphous materials is critical to products such as plastics, glasses, foods, and chemicals.

Topics	Course Duration and Prerequisites
• Introduction • The Construction Task • How It Works • The Packing and Confined Layer Tasks • Scripting with Amorphous Cell • Tips and Case Studies	**Location:** Onsite or Virtual Classroom **Duration:** ½ Day **Prerequisites:** Introduction to Materials Studio

BLENDS

BIOVIA Materials Studio Blends is used to predict phase diagrams and interaction parameters for liquid-liquid, polymer-polymer, and polymer-additive mixtures in order to study the structural factors affecting the behavior of blends and formulations.

Topics	Course Duration and Prerequisites
• Theory in Blends • Tasks and Analysis in Blends • Phase Diagrams • Applications and Limitations	**Location:** Onsite or Virtual Classroom **Duration:** 2 Hours **Prerequisites:** Introduction to Materials Studio

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CASTEP INTRODUCTION

BIOVIA Materials Studio CASTEP is an ab initio quantum mechanical program employing Density Functional Theory (DFT) to simulate the properties of solids, interfaces, and surfaces for a wide range of materials classes such as ceramics, semiconductors, and metals. First principle calculations allow researchers to investigate the nature and origin of the electronic, optical, and structural properties of a system without the need for any experimental input.

Topics	Course Duration and Prerequisites
• Introduction to Solid-State Theory and Density Functional Theory (DFT) • Technical aspects of DFT calculations • Computational tasks in CASTEP • Chemical reactions with CASTEP: Transition state search • Properties calculations in CASTEP	**Location:** Onsite or Virtual Classroom **Duration:** ½ Day **Prerequisites:** Introduction to Materials Studio

CASTEP ADVANCED

The CASTEP advanced course offers detailed introduction to accurate prediction of electronic properties, NMR, STM, phonon spectra, core-level spectra, and optical properties.

Topics	Course Duration and Prerequisites
• Introduction • Electronic Properties – Band structure – Density of states – Electron density difference – Wave Functions – Fermi surfaces • Experimental Properties – NMR – STM – Phonons, IR and Raman spectroscopy – Optical Spectroscopy – Core-level Spectroscopy – Work Function	**Location:** Onsite or Virtual Classroom **Duration:** ½ Day **Prerequisites:** Introduction to Materials Studio, CASTEP Introduction

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CONFORMERS

BIOVIA Materials Studio Conformers provides access to a comprehensive collection of conformational searching and analysis techniques to characterize molecular conformation and flexibility, to gain insight into geometric and energetic properties, and to probe geometry-property relationships, which have application in many fields including crystallization, catalysis, and polymer studies.

Topics	Course Duration and Prerequisites
• Conformers Search Methods – Systematic Grid Scan – Random Sampling Search – Boltzmann Jump Search • Calculation Setting Up and Output – Preparing the Structure – Conformers Calculation – Filter – Output	**Location:** Onsite or Virtual Classroom **Duration:** 2 Hours **Prerequisites:** Introduction to Materials Studio

DFTB+

BIOVIA Materials Studio DFTB+ is an improved implementation of the Density Functional-based Tight Binding (DFTB) quantum simulation method for the study of electronic properties of materials. DFTB+ offers unique capabilities to study and understand systems containing hundreds of atoms. Problems that took more time or compute power than most researchers have available, such as defects in semi-conductors, and interactions between organic and inorganic surfaces, are now practical to study using DFTB+.

Topics	Course Duration and Prerequisites
• Introduction to DFTB+ • Derivation of the DFTB+ Method • Computational Tasks in DFTB+ • Properties Calculation • Creating Slater-Koster Parameters with the Parameterization Tool • Electron Transport Calculations • Case Studies	**Location:** Onsite or Virtual Classroom **Duration:** 1 Day **Prerequisites:** Introduction to Materials Studio

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DMOL^3 INTRODUCTION

BIOVIA Materials Studio DMoL^3 combines computational speed with the accuracy of quantum mechanical methods to predict materials properties reliably and quickly. It can predict processes in gas phase, solution, and solid environments. It is broadly applicable to research problems in chemistry, pharmaceuticals, materials science, and chemical engineering, as well as solid state physics.

Topics	Course Duration and Prerequisites
• Introduction To Solid State Theory and Density Functional Theory (DFT) • Technical Aspects Of DFT Calculations • Computational Tasks In Dmol^3 • Properties Calculations In Dmol^3	**Location:** Onsite or Virtual Classroom **Duration:** ½ Day **Prerequisites:** Introduction to Materials Studio

DMOL^3 ADVANCED

The DMol^3 advanced course offers detailed introduction to accurate prediction of electronic properties, chemical reactions, IR and Raman spectra, optical properties, and electron transport properties.

Topics	Course Duration and Prerequisites
• Properties calculations in DMol3 – Band structure – Density of states (DOS) – Electron densities – Electrostatics – Molecular orbitals – Atomic populations • Experimental Properties – Chemical reactions – Vibrations and vibration spectroscopy – Optical excitations and optical spectroscopy – Electron transport	**Location:** Onsite or Virtual Classroom **Duration:** ½ Day **Prerequisites:** Introduction to Materials Studio, DMol^3 Introduction

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FORCITEPLUS

BIOVIA Materials Studio ForcitePlus is an advanced classical molecular mechanics tool that allows fast energy calculations and reliable geometry optimization of molecules and periodic systems. ForcitePlus provides the user with great flexibility, offering a range of forcefields and charging methods.

Topics	Course Duration and Prerequisites
• Introduction to Forcefield – Forcefield types – Nonbond interactions – Forcefield typing and change assignment • Computational tasks in Forcite • Forcefield analysis • Forcefield editing • Scripting in Forcite	**Location:** Onsite or Virtual Classroo **Duration:** 1 Day **Prerequisites:** Introduction to Materials Studio

GULP

The General Utility Lattice Program, or BIOVIA Materials Studio GULP, is a classical simulations code for performing a wide range of calculations on 3D periodic solids, 2D surfaces, gas phase clusters, and isolated defects in a bulk material. In particular, GULP has a large number of materials-specific forcefields, such as the shell model for simulating ionic materials.

Topics	Course Duration and Prerequisites
• Theory in GULP • Computational Tasks in GULP • Forcefield Fitting • Surface Properties • Properties Calculation • Applications	**Onsite Training:** 1 Day **Remote Training:** ½ Day **Prerequisites:** Introduction to Materials Studio

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MATERIALS STUDIO COLLECTION IN PIPELINE PILOT (MSC IN PP)

The BIOVIA Pipeline Pilot Materials Studio Collection is a new software solution that allows access and utilization of Materials Studio's premier modeling capabilities within the Pipeline Pilot™ scientific authoring application. Now you can integrate predictive analytics for materials properties seamlessly into your scientific workflows. This allows for a more streamlined approach to materials discovery and improves productivity so that you can spend more time on innovation and less on costly laboratory experimentation.

Topics	Course Duration and Prerequisites
• Readers, Writers, Viewer, and Reporting Components • Manipulation • Property Calculators • Quantum Mechanics • Classical Simulation • Crystallization • Using the Materials Toolkit • The Pipeline Pilot Connector for Materials Studio • Parallel Processing	**Location:** Onsite or Virtual Classroom **Duration:** 1 Day **Prerequisites:** Introduction to Materials Studio

MESOCITE (DPD)

BIOVIA Materials Studio Mesocite is a state-of-the-art coarse-grained simulation module for the study of materials at length scales ranging from nanometers to micrometers and time scale from nanoseconds to microseconds. Such materials pervade industrial research in areas such as composites, coatings, cosmetics, and controlled release. Mesocite can provide structural and dynamic properties of fluids in equilibrium, under shear or in confined geometries

Topics	Course Duration and Prerequisites
• Introduction to Mesocite • Building Meso-Structures • Introduction to Dissipative Particle Dynamics • Mesoscale Parameter Generation (DPD) • Mesocite DPD Setup • Mesocite Task Setup • Mesocite Analysis & Scripting	**Location:** Onsite or Virtual Classroom **Duration:** ½ Day **Prerequisites:** Introduction to Materials Studio

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MESODYN

MesoDyn is a dynamic simulation method for studying the long length and time behavior of complex fluid systems, including polymer melts and blends. MesoDyn takes a coarse-grained description of a complex fluid and performs time-evolution dynamics of the density and potential fields of the system.

Topics	Course Duration and Prerequisites
• Introduction to Mesoscale Simulations • Density Functional Theory in MesoDyn • Set Up of MesoDyn Calculations • Analysis of MesoDyn Calculations • Applications	**Location:** Onsite or Virtual Classroom **Duration:** ½ Day **Prerequisites:** Introduction to Materials Studio

MORPHOLOGY

BIOVIA Materials Studio Morphology allows you to predict crystal morphology from the atomic structure of a crystal. The application areas include pharmaceuticals, agrochemicals, food sciences, petrochemicals, cements, and commodity and specialty chemicals.

Topics	Course Duration and Prerequisites
• Theory in Morphology – Predicting Morphologies • Bravais-Friedel Donnay-Harker (BFDH) method • Growth morphology method • Equilibrium morphology method – Crystal Graphs • Tasks and Analysis in Morphology • Problems in Surface Chemistry	**Location:** Onsite or Virtual Classroom **Duration:** 2 Hours **Prerequisites:** Introduction to Materials Studio

ONETEP

BIOVIA Materials Studio ONETEP is a linear scaling method, meaning the time required for a calculation increases linearly with the number of atoms. This linear scaling approach is a vast improvement over conventional DFT methods, where the time needed for computation increases at a rate of as much as N3 (where N is the total number of atoms). As a result, the program can be used to model systems larger than possible by using conventional DFT.

Topics	Course Duration and Prerequisites
• ONETEP Theory • Setup of ONETEP Calculations • ONETEP Properties and Analysis • Case Studies	**Location:** Onsite or Virtual Classroo **Duration:** 1 Day **Prerequisites:** Introduction to Materials Studio

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POLYMORPH

BIOVIA Materials Studio Polymorph is used to predict potential polymorphs of a given compound directly from the molecular structure. It explores and ranks polymorphs of fairly rigid, non-ionic or ionic molecules. The approach is based on the generation of possible packing arrangements in all reasonable space groups to search for the low lying minima in lattice energy.

Topics	Course Duration and Prerequisites
• Determination of Crystal Structures • Theory Behind Polymorph Prediction • Setting Up Polymorph Calculations • Analyzing the Results • Scripting with the Polymorph Module • Applications	**Location:** Onsite or Virtual Classroom **Duration:** ½ Day **Prerequisites:** Introduction to Materials Studio

QMERA

The BIOVIA Materials Studio QMERA module in BIOVIA Materials Studio performs simulations by combining DFT methods from DMol^3 and force field methods from GULP. QMERA can be used to model either molecular or periodic systems and can handle hundreds or even thousands of atoms. It is particularly well-suited for modeling problems in chemical reactivity, where an active site is chemically localized. Researchers can use the method to study problems in nanotubes, nanoclusters, and amorphous material.

Topics	Course Duration and Prerequisites
• Overview of QM/MM • The QM/MM Embedding Schemes • Handling of the QM/MM Boundary • General Consideration for Simulations • QMERA Tasks & Analysis • QMERA Servers: DMol^3 and GULP • Applications	**Location:** Onsite or Virtual Classroom **Duration:** 1 Day **Prerequisites:** Introduction to Materials Studio

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QSAR

The QSAR module is a comprehensive set of tools for creating statistical regression models between experimental information ('activity') and molecular level characteristics ('descriptors'). The descriptors that can be calculated include a wide range of properties. These can be supplemented by characteristics calculable with other modules: Forcite, VAMP, fast descriptors.

Topics	Course Duration and Prerequisites
• Introduction to QSAR • Initial Data Analysis • Descriptors • Model Building • Genetic Function Approximation • Model Validation and Prediction	**Location:** Onsite or Virtual Classroom **Duration:** 1 Day **Prerequisites:** Introduction to Materials Studio

REFLEX, REFLEX-PLUS, X-CELL, AND REFLEX QPA

BIOVIA Materials Studio Reflex simulates X-ray, neutron, and electron powder diffraction patterns based on models of crystalline materials. Reflex aids the determination of crystal structure, assists the interpretation of diffraction data, and is applied to validate the results of experiment and computation.

Topics	Course Duration and Prerequisites
• Introduction to Reflex Tools – Pattern Processing Tool – Powder Indexing Tool – Powder Refinement Tool – Powder Solve Tool - Separately licensed modules – Powder QPA (Quantitative Phase Analysis) Tool - Separately licensed modules – Powder Crystallinity Tool	**Location:** Onsite or Virtual Classroom **Duration:** 1 Day **Prerequisites:** Introduction to Materials Studio

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SCRIPTING IN MATERIALS STUDIO

This workshop provides an introduction into the Perl-based scripting language that allows access to some of the Visualizer Tools, the Properties Explorer, a range of 3D Atomistic Documents, Study Tables and the Forcite Module (Calculations and Analysis). Students write scripts to draw molecules from scratch; to get information from collection documents, information from trajectory documents, information from study tables; to move molecules (in a zeolite and over a surface), to set up Forcite calculations, and to retrieve selected results along with additional examples

Topics	Course Duration and Prerequisites
• Introduction to Scripting in Materials Studio • Scripting for Documents • Scripting for Tools • Scripting for Modules	**Location:** Onsite or Virtual Classroom **Duration:** 1 Day **Prerequisites:** Introduction to Materials Studio

SORPTION

Molecular adsorption into microporous structures such as zeolites, aluminophosphates, or polymers is crucial in numerous applications including air separation, hydrocarbon cracking, gas sensors, and ion exchange. BIOVIA Materials Studio Sorption provides a means of predicting fundamental properties, such as sorption isotherms (or loading curves) and Henry's constants, needed for investigating separations phenomena. In addition, modeling can be used to rationalize sorption properties in terms of molecular level processes.

Topics	Course Duration and Prerequisites
• Tasks – Fixed Pressure, Fixed Loading, Henry Constant, Adsorption Isotherm, Sorbate Location • Configuration Sampling – Monte Carlo Methods • Other DialogTabs: – Energy, Constraints, Properties • Simulation Tips • Scripting • Adsorption Locator vs. Sorption	**Location:** Onsite or Virtual Classroom **Duration:** 2 Hours **Prerequisites:** Introduction to Materials Studio

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SYNTHIA

BIOVIA Materials Studio Synthia calculates polymer properties using advanced Quantitative Structure-Property Relationships (QSPRs). It allows researchers to rapidly screen candidate polymers for a wide range of properties, and allows the property prediction of copolymer blends.

Topics	Course Duration and Prerequisites
• Introduction • Quantitative Structure Property Relationship (QSPR) • Synthia - Connectivity Indices Methods • Random Copolymers • Simulation Tips	**Location:** Onsite or Virtual Classroom **Duration:** 2 Hours **Prerequisites:** Introduction to Materials Studio

VAMP

BIOVIA Materials Studio VAMP is a semi-empirical molecular orbital package for molecular organic and inorganic systems. VAMP is an ideal intermediate module between forcefield and first principles methods and is capable of rapidly calculating many physical and chemical molecular properties.

Topics	Course Duration and Prerequisites
• Theory in VAMP – NDDO: MNDO/C, MNDO, AM1, PM3, AM1*, MNDO/d, and PM6 – ZINDO: CNDO/1, CNDO/2, INDO/1, and INDO/2 • Calculation Setting Up • Properties Calculations and Analysis • Case Study – Carbon Nanodots (CNDs): Supramolecular Electron Donor–Acceptor Hybrids Featuring Perylenediimides	**Location:** Onsite or Virtual Classroom **Duration:** 2 Hours **Prerequisites:** Introduction to Materials Studio

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DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

Course Catalog

CILX-OC 19x-21x

14 January 2021

3DEXPERIENCE®

Learning Experience | Course Catalog

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Learning Experience | Course Catalog

Learning Experiences for 3DEXPERIENCE Collaborative Innovation - CILX-OC	1
3DEXPERIENCE Business Innovation Essentials	2
Explore the 3D Innovator Role	3
Explore the 3D Sculptor Role	4
Explore the Lean Team Player Role for Team Meeting Animation	5
Explore the Lean Team Player Role for Transformation	6
Lean Management at the Heart of the Industry Renaissance	7
Perform as Project Planner	8
Understand Lean Fundamentals	9
Understand Lean Transformation Methodology	10

Learning Experiences for 3DEXPERIENCE Collaborative Innovation - CILX-OC

3DEXPERIENCE Business Innovation Essentials	
Course Code	CRB-en-IFW-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Understand the 3DEXPERIENCE interface - Connect to the 3DEXPERIENCE platform - Access your Dashboard - Use the 6WTags for searching content - Share various documents with other users through - Collaborate using capabilities of the 3DEXPERIENCE platform
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

Explore the 3D Innovator Role	
Course Code	CAT-en-CXD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	3.58 hours
Course Material	
Level	Fundamental
Audience	
Description	3D Innovator is a role on the 3DEXPERIENCE platform that contains the xDesign app for 3D modeling. You can quickly get started with creating a new physical product, sketching, adding features, creating reference geometry, using patterns, editing models, and creating assemblies. In addition, you can learn about the flexibility of super features, working with multibody parts, and using direct editing tools.
Objectives	The objectives of the course include: - Get familiar with the basics of xDesign. - Save and access content on the 3DEXPERIENCE Platform. - Create sketches and features in xDesign. - Use direct editing and Design Guidance to enhance your models. - Mate parts together to create assemblies.
Prerequisites	
Available Online	Yes

Explore the 3D Sculptor Role	
Course Code	SDW-en-XFO-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	11 hours
Course Material	
Level	Fundamental
Audience	
Description	It is strongly recommended to provide a detailed description. It will appear on the details page.
Objectives	It is strongly recommended to provide a detailed description. It will appear on the details page.
Prerequisites	
Available Online	Yes

Explore the Lean Team Player Role for Team Meeting Animation	
Course Code	DEL-en-LTR-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.92 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn how to use 3DLean to establish team routines and boost cross-team collaboration.
Objectives	Upon completion of this learning module, you will be able to: - Create and manage 3DLean Board - Prepare and organize Leangets - Create and manage actions - Create and manage problems - Prepare and launch a Flash 5' Meeting
Prerequisites	
Available Online	Yes

Explore the Lean Team Player Role for Transformation	
Course Code	DEL-en-LTRT-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.58 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn how to lead and implement a Digital Lean Transformation with 3D Lean.
Objectives	Upon completion of this learning module, you will be able to: - Lead end to end Digital Lean Transformation - Apply transformation methodology and project management tools - Apply DMAIC (Define, Measure, Analyze, Improve, Control) method using the 3DLean app
Prerequisites	
Available Online	Yes

Lean Management at the Heart of the Industry Renaissance	
Available Release	3DEXPERIENCE R2021x
Duration	0.17 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will discover the future stakes of lean and how the digital lean is a key enabler for the industry renaissance.
Objectives	Raise questions on Industry challenges considering our Planet, People and Profit. See how the combination of Lean and digitization can offer answers.
Prerequisites	
Available Online	Yes

Perform as Project Planner	
Course Code	CRB-en-XPP-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	Users of the 3DEXPERIENCE platform
Description	Learn how to improve collaboration in a simple and assisted iterative planning, execution and monitoring.
Objectives	Upon completion of this course, you will be able to: - Create and manage projects - Create, manage and schedule project tasks - Create and manage sub-projects
Prerequisites	Students attending this learning module should be familiar with Collaborative Business Innovator role.
Available Online	Yes

Understand Lean Fundamentals	
Available Release	3DEXPERIENCE R2021x
Duration	3.50 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the fundamentals of lean concepts to achieve operational practices transformation.
Objectives	Learn Lean fundamentals and how to successfully articulate Lean tools.
Prerequisites	
Available Online	Yes

Understand Lean Transformation Methodology	
Available Release	3DEXPERIENCE R2021x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the DMAIC (Define, Measure, Analyze, Improve, Control) lean transformation methodology.
Objectives	Upon completion of this learning module, you will understand how to lead and deploy DMAIC methodology.
Prerequisites	
Available Online	Yes

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Course Catalog

DELX-OC V19x - 21x

13 January 2021

3DEXPERIENCE®

Learning Experience | Course Catalog

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Learning Experience | Course Catalog

Learning Experiences for Design and Engineering - DELX-OC	1
3D Alignment Creation	2
3DEXCITE Marketing Experience Artist Essentials	3
3DEXCITE Marketing Experience Scripter	4
3DEXPERIENCE Business Innovation Essentials	6
3DEXPERIENCE Business Innovation Essentials for CAD Users	7
3DEXPERIENCE Generative Shape Design Essentials	9
3D Generative Innovator	10
CATIA 2D Layout for 3D Design Essentials	12
CATIA 3D Tolerancing and Annotation Essentials	13
CATIA Assembly Design Expert	14
CATIA Bent Part Design Essentials	15
CATIA Electrical 3D Design Essentials	16
CATIA Engineering Rules Capture Essentials	18
CATIA Engineering Templates Reuse Essentials	19
CATIA Functional Plastic Parts Essentials	20
CATIA Generative Shape Develop Essentials	21
CATIA Generative Wireframe and Surface Essentials	22
CATIA Mechanical Design Expert	23
CATIA Mechanical Design Fundamentals	25
CATIA Mechanical Systems Design Essentials	27
CATIA Mechanical Systems Experience	28
CATIA Mold Tooling Design Essentials (MTG)	29
CATIA Natural Shape Essentials	30
CATIA Part Design Expert	31
CATIA Part Design Fundamentals	33
CATIA Shape Healing Essentials	34
CATIA Sheet Metal Design Essentials	35
CATIA Weld Design Essentials	36
Collaborate from Design to Manufacturing in Additive Manufacturing	37
Collaborate from Design to Manufacturing in Composites	38
Discover Composite Materials	40

Discover Enterprise Knowledge Language	41
Discover the Modelica Libraries	42
ENOVIA Classify and Reuse Essentials	43
ENOVIA Collaboration and Approvals Essentials	44
ENOVIA Collaboration for Microsoft Essentials	46
ENOVIA Collaborative Lifecycle Management Essentials	47
ENOVIA Design Review Essentials	48
ENOVIA Exchanges Management Essentials	49
ENOVIA On-The-Go Essentials	50
Explore the 3DEXPERIENCE DraftSight Role	51
Explore the 3DEXPERIENCE SOLIDWORKS (PLM) Role	52
Explore the 3D Innovator Role	53
Explore the 3D Pattern Shape Creator Role	54
Explore the 3D Render Role	55
Explore the 3D Sculptor Role	56
Explore the 3D SheetMetal Creator Role	57
Explore the Composites Designer Role	58
Explore the Drafter Role	59
Explore the Dynamic Systems Engineer Role	60
Explore the Electrical 3D Systems Designer Role	61
Explore the Fluid 3D Systems Designer Role	62
Explore the Mechanical and Shape Designer Role	63
Explore the Mold and Tooling Designer Role	65
Explore the Product Industrial Designer Role	66
Explore the SheetMetal Designer Role	68
Explore the Templates and Rules Designer Role	69
Introduction to Enterprise Knowledge Language	70
Master CATIA Assembly Design	71
Master CATIA Drafting	72
Master CATIA Dymola Behavior Modeling	73
Master CATIA Part Design	75
Perform as Digital Mockup Review Engineer	76
Practice CATIA 2D Layout for 3D Design	77
Practice CATIA 3D Annotation Insight	78
Practice CATIA 3D Tolerancing and Annotation	80
Practice CATIA Assembly Design - Added Exercises	81

Practice CATIA Bent Part Design	82
Practice CATIA Composites Design	83
Practice CATIA Digitized Shape Preparation	84
Practice CATIA Dymola Behavior Modeling	85
Practice CATIA Electrical 3D Design	87
Practice CATIA Engineering Rules Capture	88
Practice CATIA Engineering Templates Capture	89
Practice CATIA Engineering Templates Reuse	90
Practice CATIA Flow Driven Generative Design	91
Practice CATIA FreeStyle Shape Design	93
Practice CATIA Functional Plastic Parts	94
Practice CATIA Generative Shape Design	95
Practice CATIA Generative Shape Design - Added Exercises	96
Practice CATIA Generative Wireframe and Surface	97
Practice CATIA Imagine and Shape (IMA)	98
Practice CATIA Live Rendering	99
Practice CATIA Natural Assembly	100
Practice CATIA Natural Shape	102
Practice CATIA Natural Sketch	103
Practice CATIA Part Design	104
Practice CATIA Part Design - Added Exercises	105
Practice CATIA Piping and Tubing 3D Design	106
Practice CATIA Piping and Tubing Setup	107
Practice CATIA Piping and Tubing Systems Design	108
Practice CATIA Quality Rules Capture	109
Practice CATIA Quality Rules Reuse	110
Practice CATIA Sheet Metal Design	111
Practice CATIA Surface Design - Added Exercises	112
Practice CATIA Virtual to Real Shape Morphing	113
Practice CATIA Weld Design	114
Practice ENOVIA Collaborative Lifecycle Management	115
Practice ENOVIA Design Review	116
Practice ENOVIA Exchanges Management	117
Practice ENOVIA On-The-Go	118
Practice ENOVIA Project Execution	119
Practice ENOVIA Traceable Requirements Management	120

Practice ENOVIA Traceable Requirements Management – Added Exercise	122
Practice SIMULIA Physics Results Explorer	123
Practice SIMULIA Structural Model Creation	124
Practice SIMULIA Structural Scenario Creation	125
SIMULIA Composites Simulation Engineer Essentials	126
SIMULIA Physics Results Explorer Essentials	127
SIMULIA Plastic Part Filling Essentials	128
SIMULIA Static Study Essentials	129
SIMULIA Structural Model Creation Essentials	130
SIMULIA Structural Scenario Creation Essentials	131
Structural Professional Engineer for SOLIDWORKS Users	132
Systems Engineering at the Heart of the Industry Renaissance	133
Transition to the 3DEXPERIENCE platform for Mechanical Designers	134
Transition to the 3DEXPERIENCE platform for Mechanical Designers	136
Transition to the 3DEXPERIENCE platform for Surface Designers	138
Transition to the 3DEXPERIENCE platform for Surface Designers	139
Understand Composite Design	140
Understand Systems Thinking and Model-Based Systems Engineering Approach	141
What's New for Function Driven Generative Designers	143
What's New for Industry Innovation	144
What's New for Mechanical and Shape Designers	145
What's New for Mechanical Designers	146
What's New for Mechanical Part Designers	147
What's New for Product Enclosure Designers	148
What's New for Shape Designers	149
What's New for Sheet Metal Designers	150

Learning Experiences for Design and Engineering - DELX-OC

3D Alignment Creation	
Available Release	3DEXPERIENCE R2019x
Duration	2.75 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will create horizontal alignment, vertical alignment, excavation and filling and generate 3D alignment.
Objectives	Upon completion of the course, you will be able to: - Create horizontal alignment and import the Start data and map images. - Create vertical alignment, alignment points and excavation and filling. - Generate 3D alignment in the combination of horizontal and vertical alignments
Prerequisites	
Available Online	Yes

3DEXCITE Marketing Experience Artist Essentials	
Course Code	3DX-en-XAR-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	All users who want to create Marketing Experiences like BT Client base & their agencies. The direct users are professionals like 3D Artists, Software Developer, Engineers, Designers and Marketing Manager.
Description	This course will teach you the basics of the Marketing Experience Artist Role and the involved Application Creative Experience.
Objectives	Upon completion of this course you will be able to: - Know the purpose, basics and dependencies of the Marketing Experience Artist Role - Stage and properly highlight the product and its values with Lights, Ambiances and other elements - Animate the product with Behaviors and Natural Language - Build a user interface and interact with the product and scene
Prerequisites	Students attending this course should have taken the Gateway to the 3DEXPERIENCE Platform course and should be familiar with the Windows Operating System.
Available Online	Yes

3DEXCITE Marketing Experience Scripter	
Course Code	3DX-en-VRS-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	5.7 hours
Course Material	
Level	Fundamental
Audience	Scripters
Description	This Course will introduce the reader to the usage of the Marketing Experience Scripter role (an extension to the Marketing Experience Artist role.) The course consists of reading material and exercises to learn and train the usage of the Creative Experience app scripting possiblities and explain the behaviour editor to add behaviour and interactivity into your experiences.
Objectives	Upon completion of this course you will be able to: - Create custom behaviors with custom parameters using the JavaScript API, - Insert 3D UI Actors with JavaScript scripts included, - Interconnect UI and experience behavior for a perfect user interaction experience, - Output a marketing experience with custom behaviors, - Present the product and environment in an immersive scenario, - Introduce behaviors and interactions to expand the immersive experience of the product and scenario in VR, - Output a marketing VR experience
Prerequisites	Students attending this course should have taken 3DEXCITE Marketing Experience Artist Essentials

3DEXCITE Marketing Experience Scripter	
	course and should be familiar with JavaScript language basic knowledge.
Available Online	Yes

3DEXPERIENCE Business Innovation Essentials	
Course Code	CRB-en-IFW-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Understand the 3DEXPERIENCE interface - Connect to the 3DEXPERIENCE platform - Access your Dashboard - Use the 6WTags for searching content - Share various documents with other users through - Collaborate using capabilities of the 3DEXPERIENCE platform
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Course Code	CRB-en-IFWC-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	5.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform. You will also learn how to design a model using CATIA V5 or SOLIDWORKS launched from the 3DEXPERIENCE platform. In addition, you will learn about configuring the 3DEXPERIENCE Platform Management dashboard.
Objectives	Upon completion of this course you will be able to: - - Access the 3DEXPERIENCE Platform Management dashboard - - Configure the 3DEXPERIENCE Platform Management dashboard - - Understand the 3DEXPERIENCE interface - - Connect to the 3DEXPERIENCE platform - - Access your Dashboard - - Access your social communities on 3DSwym - - Share various documents with other users - - Collaborate using capabilities of 3DEXPERIENCE platform - - Design using CATIA V5 Connector or SOLIDWORKS Connector

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

3DEXPERIENCE Generative Shape Design Essentials	
Course Code	CAT-en-GSD-F-15-201
Available Releases	3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This course will teach you how to use the Generative Shape Design app to create curves and surfaces. You will learn how to assemble, re-limit and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this course you will be able to: - - Create curves and improve the quality of the imported wireframes - - Create surfaces based on the wireframe geometries - - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - - Analyze the surface quality and heal the defects
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

3D Generative Innovator	
Course Code	CAT-en-XGG-F-15-201
Available Release	3DEXPERIENCE R2020x
Duration	10 hours
Course Material	
Level	Fundamental
Audience	Architects, Engineers or BIM/VDC consultant
Description	This course explains the essentials of the application xGenerative Design through a series of exercises. Each one of them focuses on a specific aspect of the application, beginning with a quick description of the exercise, the strategy to achieve it and a video explaining all the steps. The combination of all of them should bring you the keys to start working on xGenerative Design, from simple small scale design to more complex models.
Objectives	Upon completion of this course you will be able to: - Get how both interfaces work with each other - Get fundamentals of visual scripting - Create a fully parametric model - Create and manage collections of objects and values - Re-use xGenerative Design in other contexts - Understand how it may be applicable to your business or your client's - How can it be mixed with current workflows - Develop your own logics that can be re-used within your company - Share knowledge inside your organization - Share feedbacks with Dassault Systemes on your experience

3D Generative Innovator	
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform.
Available Online	Yes

CATIA 2D Layout for 3D Design Essentials	
Course Code	CAT-en-LO1-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course you will learn how to create 2D layout views in a 3D model and use them to design the part in the 3D environment.
Objectives	Upon completion of this course you will be able to: - Create 2D layout views in a 3D environment - Export 2D geometry into a 3D environment - Create drawings using the 2D layout views
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with CATIA Part and Assembly Design.
Available Online	Yes

CATIA 3D Tolerancing and Annotation Essentials	
Course Code	CAT-en-FTA-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	3D Master Designers
Description	This course will teach you how to annotate a 3D part. You will learn how to create annotation planes and how to add and manage 3D annotations on these planes. You will also learn how to create 3D views and use them to create 2D drawing views. You will also be able to create annotations on assemblies.
Objectives	Upon completion of this course you will be able to: - - Add 3D annotations to a part - - Manage and position the annotations - - Manage the 3D geometry associated to the annotations
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with CATIA Knowledgeware and basic CATIA Solid and Surface Design.
Available Online	Yes

CATIA Assembly Design Expert	
Course Code	CAT-en-ASD-A-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	11.5 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will introduce you to complex assembly modeling techniques. You will learn how to design a product architecture and manage complex assembly structures. You will also learn how to use advanced features to design parts within an assembly environment and how to analyze interferences.
Objectives	Upon completion of this course you will be able to: - Analyze interferences - Analyze component links and relations - Design complex products - Design new parts within a product - Manage complex product structures
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and be familiar with CATIA Part Design and Assembly Design fundamentals.
Available Online	Yes

CATIA Bent Part Design Essentials	
Course Code	CAT-en-SMB-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designer and Sheetmetal Designer
Description	This course will teach you how to use the Bent Part Design app to create and modify a sheetmetal part. You will learn how to define the sheetmetal parameters and create features such as walls, bends, cutouts and corners. You will also learn different techniques for multi-selecting the objects and constraining the parts.
Objectives	Upon completion of this course you will be able to: - Define and modify the sheetmetal parameters - Create a sheetmetal part using the wall and bend features - Manage the folded and unfolded views of parts - Create cutouts, chamfers and corners - Constrain the parts
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Electrical 3D Design Essentials	
Course Code	CAT-en-EHI-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2020x
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Electrical Engineers new to Electrical Physical System Design using the 3DEXPERIENCE platform.
Description	This course will teach you how to create electrical geometry in the 3DEXPERIENCE platform and thereby help you in designing the electrical physical systems. You will work with electrical catalogs to place the components from electrical libraries. You will learn the routing of branches for creating electrical branch geometries, managing the electrical geometry content, and routing conductors through the electrical geometry. You will also learn the 3D Master Approach of annotating the electrical physical system.
Objectives	Upon completion of this course you will be able to: - Create and use an Electrical Library using Data Setup - Create an Electrical Geometry - Route Conductors through the Electrical Geometry - Annotate the Electrical Physical System using the 3D Master Approach
Prerequisites	- Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. - They should also be familiar with Part Design and should know how to use an electrical catalog.

CATIA Electrical 3D Design Essentials	
Available Online	Yes

CATIA Engineering Rules Capture Essentials	
Course Code	CAT-en-KWA-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	10 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create knowledgeware objects in order to embed parameters and design rules within your models. You will also learn how to check the models, reduce errors and automate the modifications.
Objectives	Upon completion of this course you will be able to: - Customize the tree to display knowledgeware features - Create parametric models - Embed your design knowledge in the models - Automate the design and modification processes - Create design configurations using design tables
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with the Enterprise Knowledge Language (EKL) and Part Design.
Available Online	Yes

CATIA Engineering Templates Reuse Essentials	
Course Code	CAT-en-KT1-F-15-201
Available Releases	3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	0.50 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course, you will learn how to create customized features by reusing the power copy and user feature.
Objectives	Upon completion of this course you will be able to: - Create customized features using templates.
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Functional Plastic Parts Essentials	
Course Code	CAT-en-FMP-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Plastic Part Designers and Molded Part Designers
Description	This course will teach you how to use the Functional Plastic Parts app to create molded parts. You will also learn how to create a core and a cavity using styling data. You will be able to create a detailed design by adding holes, stiffening ribs, bosses and additional fixtures. You will also be able to modify the design and complete the final part with additional draft and fillet features.
Objectives	Upon completion of this course you will be able to: - Create a molded plastic part - Add holes and protected areas - Add ribs and bosses
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with the Part Design app.
Available Online	Yes

CATIA Generative Shape Develop Essentials	
Course Code	CAT-en-DL1-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This course will teach you how to use CATIA Generative Shape Develop app functionalities to create unfolded surfaces from a ruled surface. You will learn how to develop wires and points onto a revolution surface.
Objectives	Upon completion of this course, you will be able to: - Create unfolded surfaces from a ruled surface using the CATIA Generative Shape Develop app functionalities - Develop wires and points onto a revolution surface
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. They should also be familiar with Surface Design in CATIA.
Available Online	Yes

CATIA Generative Wireframe and Surface Essentials	
Course Code	CAT-en-GS1-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	20 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This course will teach you how to use the Generative Wireframe and Surface app to create curves and surfaces. You will learn how to assemble, re-limit and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this course you will be able to: - Create curves and improve the quality of the imported wireframes - Create surfaces based on the wireframe geometries - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - Analyze the surface quality and heal the defects
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course.
Available Online	Yes

CATIA Mechanical Design Expert	
Course Code	CAT-en-3DE-A-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	32 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will introduce you to complex modeling techniques. You will use advanced sketch-based and surface-based features to design parts and learn how to improve productivity by reusing existing features. You will also see how to design a product architecture and manage complex assembly structures, using advanced features to design parts within an assembly environment. Finally, you will learn how to analyze interferences and then create an assembly layout using advanced tools to dress-up and annotate the final drawing.
Objectives	Upon completion of this course you will be able to: - Create and manage complex parts - Create fully parameterized models - Create re-usable features - Analyze interferences, component links and relations - Manage complex product structures - Design new parts within a product - Create large assembly layouts with tables and bill of materials
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course

CATIA Mechanical Design Expert	
	and in addition, they should be familiar with the Mechanical Design Fundamentals.
Available Online	Yes

CATIA Mechanical Design Fundamentals	
Course Code	CAT-en-3DF-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	32 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This course will teach you how to create simple parts, assemblies and drawings. You will learn how to use different feature-based tools to build, review and modify a model. You will also learn how to create and analyze assemblies and how to produce a drawing with different views. Finally, you will learn how to dimension the drawing and annotate the views.
Objectives	Upon completion of this course you will be able to: - Create a new PLM object - Create and constrain 2D sketches - Complete a 3D model using features - Review and edit the features - Create parameters and formulas in the 3D model - Create a new product and add components to it - Move the components within a product by positioning them using assembly constraints - Create simple projection views and section views of 3D parts - Position the views on a drawing sheet - Add dimensions and annotations to the views - Finalize the drawing sheet by adding borders and title blocks

CATIA Mechanical Design Fundamentals	
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Mechanical Systems Design Essentials	
Course Code	CAT-en-KIM-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create the architecture of a mechanism using simple wireframe elements and then complete the mechanism by adding 3D representations. You will also learn how to create a more complex mechanism using existing mechanisms, and finally how to animate the result.
Objectives	Upon completion of this course you will be able to: - Create a new mechanism - Manage the mechanism behavior - Include alternative representations to complete the mechanism - Create a new macro mechanism from existing sub-mechanisms - Animate the mechanism
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with the Assembly Design app.
Available Online	Yes

CATIA Mechanical Systems Experience	
Course Code	CAT-en-KIN-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	9 hours
Course Material	
Level	Fundamental
Audience	Mechanical Design Engineers
Description	This course will teach you how to define a behavior by manually recording an animation and by using laws. You will also learn how to include the analysis of measurements and accelerations. Furthermore, you will learn how to generate traces, swept volumes and snapshots which can be used while reviewing the simulation results.
Objectives	Upon completion of this course you will be able to: - Create a scenario manually or by using laws - Include measurement and interference analyses - Generate results - Create snapshots for a review - Export the final simulation
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Mechanical Systems Design in CATIA.
Available Online	Yes

CATIA Mold Tooling Design Essentials (MTG)	
Course Code	CAT-en-MTG-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Mold Tooling Designers
Description	In this course, you will learn how to import design data and prepare a Mold project. You will create Molded Part from the design part and also create the Mold Tools. Finally, you will learn how to add additional components from the catalog.
Objectives	Upon completion of this course, you will be able to: - Import Components from the Catalog and Design Data - Prepare a Molded Part - Explain Conceptual Mold Design - Describe Detailed Core Cavity Design - Understand Detailed Mold Design
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with the Part Design app.
Available Online	Yes

CATIA Natural Shape Essentials	
Course Code	CAT-en-LSP-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Conceptual Designers, Stylists, Simulation and Manufacturing Engineers
Description	This course will introduce you to the CATIA Natural Shape app and its unique working environment. You will learn how to use the app to conceptualize, create and modify mechanical parts and shapes. The course features short-duration demos followed by exercises which will allow you to practice. You will also learn the related theory, tips and recommendations while performing the exercises.
Objectives	Upon completion of this course you will be able to: - Create a conceptual design directly in 3D - Use the hybrid design environment to conceptualize your designs - Work on the structure to create the 3D parts - Navigate through the structure and position the parts - Reuse the existing designs in the 3D models
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Part Design Expert	
Course Code	CAT-en-PDG-A-V5R31
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , V5-6R2012 , V5-6R2013 , V5-6R2014 , V5-6R2015 , V5-6R2016 , V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2021 , V5R19 , V5R20 , V5R21
Duration	12.17 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will teach you how to design complex 3D mechanical parts using the Boolean approach. You will learn how to work in a Multi-Model Environment and maintain links between 3D models. You will also learn to analyze designs in order to optimize them.
Objectives	Upon completion of this course you will be able to: - Create a part using 3D reference elements - Create advanced Sketch-Based Features - Apply advanced Dress-Up Features - Design 3D parts using Boolean operations - Work in a Multi-Model Environment and share your designs with others - Analyze parts and optimize them - Annotate the parts for review
Prerequisites	Student attending this course must be familiar with CATIA V5 fundamentals and must have completed the CATIA Sketcher and CATIA Part Design Fundamentals courses.

CATIA Part Design Expert	
Available Online	Yes

CATIA Part Design Fundamentals	
Course Code	CAT-en-PDG-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This course will teach you how to create a 3D model using the CATIA Part Design app. You will learn how to use different feature-based tools to build a 3D model. You will also learn how to add parameters, then review, measure and modify a model.
Objectives	Upon completion of this course you will be able to: - Create new parts - Create and constrain 2D sketches - Complete a 3D model using basic features - Parameterize a model - Review and measure a model - Reuse existing features
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Shape Healing Essentials	
Course Code	CAT-en-HA1-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Tooling Designers, Mechanical Designers and Surface Designers.
Description	This course introduces you to the user interface and basic tools of CATIA Shape Healing app. You will learn to analyze and repair the imported data (IGES 3D or CATIA V4 files). You will also learn how to compare two versions of a part and to customize the workbench, in order to suit your needs.
Objectives	Upon completion of this course, you will be able to: - Analyze the imported data - Repair the imported data - Compare two versions of a part - Customize the app
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with CATIA Surface Design.
Available Online	Yes

CATIA Sheet Metal Design Essentials	
Course Code	CAT-en-SMD-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Sheet Metal Designer
Description	This course will teach you how to create a sheet metal part using standard wall, bend and stamping features. You will see how user features can be incorporated into the design and how to use both standard and user-defined materials. Finally you will learn how to create a flat pattern and produce a detailed, annotated drawing.
Objectives	Upon completion of this course you will be able to: - Create a sheet metal part using wall and bend features - Manage folded and unfolded views - Use pre-defined sheet metal parameters - Create stamped features - Create duplicating features and use the multi-body methodology - Creating drawings of sheet metal parts - Export a finished flat pattern
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Part Design app.
Available Online	Yes

CATIA Weld Design Essentials	
Course Code	CAT-en-WDG-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers and Structural Designers
Description	This course will teach you how to create a welded assembly. You will learn how to join parts using appropriate weld features and how to generate associative weld drawings and weld reports. This course will teach you how to define the welding resource in the Data Setup app and use it to create welds.
Objectives	Upon completion of this course you will be able to: - Define the welding resource - Create and manage welded assemblies - Generate weld reports - Create welding drawings
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Assembly Design.
Available Online	Yes

Collaborate from Design to Manufacturing in Additive Manufacturing	
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	2.75 hours
Course Material	
Level	Fundamental
Audience	Additive Manufacturing Designer, Additive Manufacturing Programmer,Mechanical Designers
Description	In this module, you will learn how to apply the end-to-end process from the design optimization through to the virtual print of the part.
Objectives	Upon completion of this module, you will be able to: - Design a part for additive manufacturing - Setup the manufacturing built for additive manufacturing process - Simulate the manufacturing setup for virtual printing
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They must be familiar with the CATIA Part Design, and the CATIA Imagine and Shape apps. - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Functional Driven Generative Designer, Powder Bed Programmer, Additive Manufacturing Researcher and Reverse Shape Optimizer.
Available Online	Yes

Collaborate from Design to Manufacturing in Composites	
Course Code	CAT-en-CDMC-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2.50 hours
Course Material	
Level	Fundamental
Audience	Composites Designers, Composites Engineers, Composites Manufacturers and Simulation Engineers
Description	In this module, you will discover the end-to-end process from design to manufacturing a composite part using the Dassault Systemes' integrated solutions in the 3DEXPERIENCE Platform for composites engineering. You will also discover how composites designers, simulation engineers and composites manufacturers collaborate using the 3DEXPERIENCE platform.
Objectives	Upon completion of this module, you will be able to: - Design a composite part - Simulate the composites design - Prepare the composite part for manufacturing and laser projection
Prerequisites	- Knowledge: Students attending this module must be familiar with the fundamentals of composites design and must have completed the Explore the Collaborative Business Innovator Role module. - Essential 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Airframe Composites Designer, Composites Structures Analysis Engineer and Airframe Composites Manufacturing Engineer

Collaborate from Design to Manufacturing in Composites	
Available Online	Yes

Discover Composite Materials	
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module , you will discover the basics of composites -Defining the term 'Composite' -The Properties of fibres and resins -Different types of resin system and reinforcements -Room and elevated temperature resin systems -Identifying and comparing weave styles -The benefits of using composites to build components -Types of manufacturing processes -Fibre orientation and core materials
Objectives	Define the term composite - State 2 properties of fibre and resin - Compare 4 resin systems - Compare 4 fibre reinforcements - Explain the difference between room and elevated temperature resin systems - Identify and compare 3 weave styles - Explain the terms warp and weft - List 4 benefits of using composites to build components - Identify 3 composite manufacturing processes - Explain the terms Thermoplastic and Thermoset
Prerequisites	
Available Online	Yes

Discover Enterprise Knowledge Language	
Course Code	CAT-en-EKL-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Templates and Rules Designer
Description	This module will introduce you to the Enterprise Knowledge Language (EKL), used in different knowledgeware apps, which allows you to construct smart-models and automate design for maximum productivity.
Objectives	Upon completion of this module you will be able to: - Describe the EKL syntax and its usage - Manipulate CATIA objects through EKL scripts directly - Embed design logic in CATIA models using EKL - Create Parameters, Formulae, Rules, Checks and Actions
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They should also be familiar with engineering design fundamentals.
Available Online	Yes

Discover the Modelica Libraries	
Course Code	CAT-en-MSL-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1 hours
Course Material	
Level	Fundamental
Audience	Dynamic Systems Engineers
Description	This module will introduce you to the basics of Modelica libraries and dynamic modeling concepts. You will also explore different Modelica libraries used for dynamic modeling as a source of ready-to-use components.
Objectives	Upon completion of this module, you will learn about: - Equation-based modeling - Component-based modeling - Different Modelica libraries
Prerequisites	Students attending this learning module should have basic knowledge of mathematical modeling.
Available Online	Yes

ENOVIA Classify and Reuse Essentials	
Course Code	ENOV-en-CLRE-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE Platform Users
Description	This course will teach you how to use the ENOVIA Classify and Reuse App to search and view different types of libraries as well as an objects' hierarchy. You will also learn how to manage the objects using these libraries. Based on a combination of videos, theory and simulations, you can take this course in a self-paced learning mode and is self-sufficient. However, if you want to practice, you will find a master exercise at the end of the course.
Objectives	Upon completion of this course, you will be able to: - Search and view different types of Libraries and their related hierarchy. - Search and view General Classes and Folders.
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Collaboration and Approvals Essentials	
Course Code	ENOV-en-BUPS-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	10 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course will teach you the common functionalities used across all ENOVIA apps, which enable you to manage your content as well as collaborate with other members in a team. You will learn how to create workspaces for managing your business related components, such as folders, members and tasks. You will also learn how to create various workflows using routes, subscribe to your task related events, and report issues for objects. Further, you will learn to create documents and version them, while maintaining a record for all its revisions.
Objectives	Upon completion of this course, you will be able to: - Illustrate the structure of ENOVIA Business Process Services - Create and manage your folders - Create workflows - Identify and manage your assigned tasks - Subscribe to various objects and events - Report and resolve issues in objects - Create, track and organize your documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.

ENOVIA Collaboration and Approvals Essentials

Available Online	Yes

ENOVIA Collaboration for Microsoft Essentials	
Course Code	ENOV-en-COMI-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Project Managers, Design Engineers, Reviewers and Technical Writers.
Description	In this course, you will learn how to use the ENOVIA Collaboration for Microsoft app to access and manage the documents in the ENOVIA database using the Microsoft applications.
Objectives	Upon completion of this course you will be able to: - Access documents from the ENOVIA database using Microsoft applications - Create, manage and synchronize documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Collaborative Lifecycle Management Essentials	
Course Code	ENOV-en-LIIN-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	CAD designers, engineers in charge of product development
Description	In this course, you will learn how to use the ENOVIA Collaborative Lifecycle Management app to manage the complete lifecycle of an object in order to achieve concurrent engineering. You will also learn to manage the access and ownership of objects for collaboration of members on the same platform.
Objectives	Upon completion of this course you will be able to: - Create a new product structure - Use different sections of the Action bar effectively - Manage the changes in a product structure - Save the product structure in the database
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course
Available Online	Yes

ENOVIA Design Review Essentials	
Course Code	ENOV-en-REEV-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	6.5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create different slides for various positions of an assembly to create exploded views. You will also learn how to create sections and measures, and export them as parts or drawings.You will also learn how to compare 3D objects and how to create multi-context reviews.
Objectives	Upon completion of this course you will be able to: - Create a design review and add markups to it - Create slides and add markers - Create and export sections and measures - Compare 3D Objects and 2D Drawings - Create multi-context reviews
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

ENOVIA Exchanges Management Essentials	
Course Code	ENOV-en-EXCH-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	CAD Designers and Platform Contributors
Description	This course will teach you how to use the import / export tools in 3DEXPERIENCE. You will also manage the mastership between V5 files and 3DEXPERIENCE files.
Objectives	Upon completion of this course, you will be able to: - Import and export 3DXML files - Import and export CATIA V5 files - Manage the Mastership of imported objects
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

ENOVIA On-The-Go Essentials	
Course Code	ENOV-en-ONGO-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	1 hours
Course Material	
Level	Fundamental
Audience	Users of the 3DEXPERIENCE platform
Description	This course will teach you how you can work in the offline mode in the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Work in the offline mode - Return to the online mode - Restore the last session - Create the offline content in the online mode
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

Explore the 3DEXPERIENCE DraftSight Role	
Course Code	SDW-en-DRA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.75 hours
Course Material	
Level	Fundamental
Audience	
Description	Learn how the 3DEXPERIENCE DraftSight role can make drawings and project information accessible to the entire team anytime and anywhere. Turn 2D CAD design and document management from isolated activities to transparent collaboration and success with the 3DEXPERIENCE platform.
Objectives	Upon completion of the module you will be able to: - Learn how to securely connect the DraftSight Connected app to the 3DEXPERIENCE platform. - Open and save DraftSight objects on the 3DEXPERIENCE platform. - Create and assign a change action. - Work under a change action and modify the proposed drawing. - Learn how to replace revisions and review properties of objects saved on the platform.
Prerequisites	
Available Online	Yes

Explore the 3DEXPERIENCE SOLIDWORKS (PLM) Role	
Course Code	SDW-en-XWC-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.67 hours
Course Material	
Level	Fundamental
Audience	
Description	This learning path provides you a guided and systematic approach to learn about the 3DEXPERIENCE SOLIDWORKS role.
Objectives	Learn how to securely connect the SOLIDWORKS Connected app to the 3DEXPERIENCE platform. - Open and save SOLIDWORKS objects on the 3DEXPERIENCE platform. - Create and assign a change action. - Work under a change action and modify the proposed object. - Learn how to replace revisions and review properties of objects saved on the platform.
Prerequisites	
Available Online	Yes

Explore the 3D Innovator Role	
Course Code	CAT-en-CXD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	3.58 hours
Course Material	
Level	Fundamental
Audience	
Description	3D Innovator is a role on the 3DEXPERIENCE platform that contains the xDesign app for 3D modeling. You can quickly get started with creating a new physical product, sketching, adding features, creating reference geometry, using patterns, editing models, and creating assemblies. In addition, you can learn about the flexibility of super features, working with multibody parts, and using direct editing tools.
Objectives	The objectives of the course include: - Get familiar with the basics of xDesign. - Save and access content on the 3DEXPERIENCE Platform. - Create sketches and features in xDesign. - Use direct editing and Design Guidance to enhance your models. - Mate parts together to create assemblies.
Prerequisites	
Available Online	Yes

Explore the 3D Pattern Shape Creator Role	
Course Code	CAT-en-XGG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.20 hours
Course Material	
Level	Fundamental
Audience	Mechanical designers, Architects, Engineers or BIM/ VDC consultants
Description	3D Pattern Shape Creator lets you design shapes and patterns through interactive panel by using parametric modeling.
Objectives	Upon completion of this course you will be able to: - Get how both interfaces (Graph & 3D Model) work with each other - Get fundamentals of visual scripting - Create a fully parametric model - Understand how it may be applicable to your business or your client's - Develop your own logics that can be re-used within your company - Share knowledge inside your organization - Build user interface and explore design variation using monitor
Prerequisites	
Available Online	Yes

Explore the 3D Render Role	
Course Code	3DX-en-DPA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.58 hours
Course Material	
Level	Fundamental
Audience	
Description	Discover how to use xStudio to create photo-realistic rendered images from your designs in the 3DEXPERIENCE platform.
Objectives	Objectives of the course include: - Create xStudio experiences from physical products on the 3DEXPERIENCE Platform. - Apply materials to make your designs feel lifelike. - Use ambiences to envision how your products will look and behave in the real world. - Capture the moment with scenes. - Render images on server computers to free up your time and resources.
Prerequisites	N/A
Available Online	Yes

Explore the 3D Sculptor Role	
Course Code	SDW-en-XFO-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	11 hours
Course Material	
Level	Fundamental
Audience	
Description	It is strongly recommended to provide a detailed description. It will appear on the details page.
Objectives	It is strongly recommended to provide a detailed description. It will appear on the details page.
Prerequisites	
Available Online	Yes

Explore the 3D SheetMetal Creator Role	
Course Code	SDW-en-XBT-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.17 hours
Course Material	
Level	Fundamental
Audience	
Description	Learn about working in the 3D SheetMetal Creator role and the xSheetMetal app.
Objectives	The objectives of this course include: - Discover how to access the 3D SheetMetal Creator Dashboard. - Explore aspects of the xSheetMetal User Interface. - Explore how to use common workflows for sheet metal design. - Learn about the features and options available in the xSheetMetal app.
Prerequisites	
Available Online	Yes

Explore the Composites Designer Role	
Course Code	CAT-en-CDE-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4.50 hours
Course Material	
Level	Fundamental
Audience	Composites Designers
Description	In this module, you will discover the Composites Designer role with a complete set of process-oriented features to engineer composites parts. This learning module lets you explore and practice the key capabilities of the Composites Designer role. You will also learn how to design composites parts using the Manual and Grid Approach.
Objectives	Upon completion of this module, you will be able to: - Define Composites Parameters - Create Manual Plies - Analyze and Modify Plies - Create a Solid from Plies - Analyze Composites Parts for Producibility - Generate a Ply Book - Create Preliminary and Detailed Grid Design
Prerequisites	Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They should be familiar with the basics of composites design. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Composites Designer
Available Online	Yes

Explore the Drafter Role	
Course Code	SDW-en-WDR-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	
Description	Drafter enables you to quickly create and detail 2D drawings, and communicate how your design must be manufactured. Whenever a change occurs in your 3D model, all drawing views are automatically updated. Using Drafter's comprehensive dimension, tolerancing and annotation toolset accelerates the product development process by significantly reducing design-to-manufacturing time, while decreasing costs.
Objectives	In this lesson, you use the SOLIDWORKS Drawings app of the Drafter role on the 3DEXPERIENCE platform to create a part drawing and an assembly drawing. You learn how to: - Create drawing views and drawing sheets. - Add dimensions, annotations, and a bill of materials.
Prerequisites	N/A
Available Online	Yes

Explore the Dynamic Systems Engineer Role	
Course Code	CAT-en-SNK-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Dynamic Systems Engineers
Description	In this module, you will explore the key capabilities of the Dynamic Systems Engineer Role. You will learn about the complete process of modeling dynamic behavior, simulating model and analyzing results. You will also learn how to use the behavior model in the component architecture.
Objectives	Upon completion of this module, you will be able to: - Define the component architecture - Create a new requirement - Create the dynamic model using Modelica libraries - Simulate the model and analyze the results
Prerequisites	- Knowledge: Students attending this learning module should have completed the Explore the Business Innovator Role module. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Dynamic Systems Engineer, Systems Battery Library and Systems Electrified Power Train Library
Available Online	Yes

Explore the Electrical 3D Systems Designer Role	
Course Code	CAT-en-ELG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.50 hours
Course Material	
Level	Fundamental
Audience	Electrical 3D Systems Designers
Description	This learning module provides you with a guided and systematic approach to learn about the use of the Electrical 3D Systems Designer role. It will teach you how to synchronize and place electrical components using logical design. It will also teach you how to route branch geometries and wires through them.
Objectives	Upon the completion of this module, you will be able to: - Place Electrical components in the Physical design using Logical to Physical capabilities - Create and manage branch geometries to connect the electrical devices and equipment - Check network connectivity between the branches and connectors - Route wires through the branch geometries and assign electrical properties to them
Prerequisites	Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Electrical 3D Systems Designer
Available Online	Yes

Explore the Fluid 3D Systems Designer Role	
Course Code	CAT-en-FLG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Fluid 3D System Designers, Piping & Tubing Designers and Fluid Designers
Description	Fluid 3D Systems Designer role provides an integrated 3D environment for the physical design of tubing, piping and HVAC systems in the context of the Digital Mockup. Users can take advantage of generative and specification driven design and automated part placement capabilities to ensure compliance with industry standards. In addition, its tools make it possible to quickly query design information and generate reports based on any component parameters.
Objectives	Upon completion of this module you will be able to - Create and manage the fluidic system - Place the parts manually and automatically - Validate the fluidic design using various tools - Prepare the data for manufacturing
Prerequisites	Knowledge: Students attending this learning module should have completed the Explore the Business Innovator Role module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Fluid 3D Systems Designer
Available Online	Yes

Explore the Mechanical and Shape Designer Role	
Course Code	CAT-en-MES-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Shape Designers
Description	In this learning module, you will learn the key capabilities of the Mechanical & Shape Designer Role to create and manage a complete mechanical project.
Objectives	Upon the completion of this module, you will be able to: - Leverage the 3DEXPERIENCE platform collaboration capabilities - Create parts using various methods - Design surface geometries - Build sheet metal parts - Import and modify external CAD models - Construct and modify assemblies - Animate and validate kinematic simulations - Validate the manufacturability of parts - Generate part and assembly drawings
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They must be familiar with the basic mechanical engineering concepts. - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Mechanical and Shape Designer

Explore the Mechanical and Shape Designer Role	
Available Online	Yes

Explore the Mold and Tooling Designer Role	
Course Code	CAT-en-MTG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Mold & Tooling Designers
Description	This learning module provides you with a guided and systematic approach to learn about the Mold & Tooling Design role. You will learn how to import design data and prepare a mold project. You will create molded part from the design part and also create the mold tools. Finally, you will learn how to add additional components from the catalog.
Objectives	Upon completion of this module, you will be able to: - Import components from the catalog - Prepare a molded part - Create conceptual mold design - Create detailed core cavity design - Create detailed mold design - Create the cooling circuits - Analyze the design
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They must be familiar with the basic mold tool design concepts. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Mold & Tooling Designer
Available Online	Yes

Explore the Product Industrial Designer Role	
Course Code	CAT-en-CDD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	3 hours
Course Material	
Level	Fundamental
Audience	Product Industrial Designers
Description	This learning module provides you with a guided and systematic approach to learn about the Product Industrial Designer role. It will teach you how to import the 2D sketch and explore ideas by sketching in 3D. It will also teach you, how to sculpt in 3D with ultra-fast virtual clay modelling using the subdivision surface technology. It will also teach you how to create precise shapes with NURBS surface modeling and direct solid modeling.
Objectives	Upon the completion of this module, you will be able to: - Create 3D sketches for conceptual design - Sculpt the concept shapes using the subdivision surface technology - Add technical details on the concept designs - Assemble and modify parts using direct modeling methods - Create high quality rendering images for life like experience
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Product Industrial Designer

Explore the Product Industrial Designer Role	
Available Online	Yes

Explore the SheetMetal Designer Role	
Course Code	CAT-en-SMW-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	3 hours
Course Material	
Level	Fundamental
Audience	Sheet Metal Designer
Description	In this module, you will explore the key capabilities of the Sheet Metal Designer Role. You will learn complete process of sheet metal design from conceptual design to detailed design. You will also learn how to prepare the sheet metal part for manufacturing.
Objectives	Upon completion of this module, you will be able to: - Explore and Modify the product structure - Design a sheet metal part - Create conceptual design of a sheet metal part - Create detailed design of the sheet metal part - Prepare the sheet metal part for manufacturing
Prerequisites	- Knowledge: Students attending this learning module should have completed the Explore the Business Innovator Role module. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and SheetMetal Designer
Available Online	Yes

Explore the Templates and Rules Designer Role	
Course Code	CAT-en-TER-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Templates and Rules Designers
Description	This learning module provides you a guided and systematic approach to learn about the Templates and Rules Designer role. It will teach you how to automate the repetitive design process. It will also teach you how to validate the design specifications.
Objectives	Upon the completion of this module, you will be able to: - Create User Defined Features and Engineering Templates to automate the repetitive design process - Create and manage reusable functions to write complex scripts easily - Create Expert Checks to validate the design specifications
Prerequisites	Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Mechanical Designer and Templates and Rules Designer
Available Online	Yes

Introduction to Enterprise Knowledge Language	
Course Code	CAT-en-EKL-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2020x , V6R2013 , V6R2013x
Duration	4.3 hours
Course Material	
Level	Fundamental
Audience	Mechanical Engineers, Electrical Engineers and Piping Engineers
Description	This course will introduce you to the Enterprise Knowledge Language, used in different knowledgeware apps, which allows you to construct smart-models and automate design for maximum productivity.
Objectives	Upon completion of this course you will be able to: - Describe the EKL syntax and its usage - Manipulate CATIA objects through EKL scripts directly - Embed design logic in CATIA models using EKL
Prerequisites	Students attending this course should be familiar with the 3DEXPERIENCE platform. They should also be familiar with Mechanical Design fundamentals.
Available Online	Yes

Master CATIA Assembly Design	
Course Code	CAT-en-ASD-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This module will introduce you to complex assembly modeling techniques. You will learn how to design a product architecture and manage complex assembly structures. You will also learn how to use advanced features to design parts within an assembly environment and how to analyze interferences.
Objectives	Upon completion of this module you will be able to: - Analyze interferences - Analyze component links and relations - Design complex products - Design new parts within a product - Manage complex product structures
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with the CATIA Part Design and Assembly Design fundamentals.
Available Online	Yes

Master CATIA Drafting	
Course Code	CAT-en-GDR-A-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Advanced
Audience	Draftsmen
Description	This module will teach you how to manage drawing sheets and views in the Drafting app. You will also learn how to use advanced tools to dress-up, annotate views and customize the Drafting app.
Objectives	Upon completion of this module you will be able to: - Finalize the drawing sheet - Work with large assemblies - Customize the drafting app - Perform administrative tasks - Add Bill of Material
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with Part Design and Assembly Design in CATIA.
Available Online	Yes

Master CATIA Dymola Behavior Modeling	
Course Code	CAT-en-DBD-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1 hours
Course Material	
Level	Advanced
Audience	Dynamic Systems Engineers
Description	This module teaches you about the data exchange capabilities of the Dymola Behavior Modeling app. It also teaches you how to automate the simulations of behavior models and do the trade-off study for selecting the most appropriate product design.
Objectives	Upon completion of this module, you will be able to: - Generate behavior models from the piping system - Use the knowledgeware objects with the Dymola Behavior Modeling app - Optimize the simulation of behavior models using the Optimization Process Composer app - Trade-off the optimized simulation results - Access the traceability of behavior models using the Systems Traceability app - Export behavior models for use in other simulation environments - Export a behavior model as a Functional Mock-up Unit - Automate simulations of behavior model using Python and Javascript interfaces
Prerequisites	- Knowledge: Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and the Practice CATIA Dymola Behavior Modeling module.

Master CATIA Dymola Behavior Modeling	
	- Students should also be familiar with the apps that can be collaborated with the Dymola Behavior Modeling app. - - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Dynamic Systems Engineer
Available Online	Yes

Master CATIA Part Design	
Course Code	CAT-en-PDG-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	7 hours
Course Material	
Level	Advanced
Audience	Mechanical and Sheet Metal Designers
Description	This module will introduce you to complex 3D modeling techniques, using advanced sketch-based and surface-based features. You will learn how to manage complex part structures and how to improve productivity by reusing existing features. Finally, you will learn how to use parameters and tables to drive the design of a model.
Objectives	Upon completion of this module you will be able to: - Design parts with complex geometries - Create and manage robust part structures - Create fully parameterized models - Create re-usable features
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with CATIA Part Design fundamentals.
Available Online	Yes

Perform as Digital Mockup Review Engineer	
Course Code	CAT-en-DWP-F-15-201
Available Release	3DEXPERIENCE R2020x
Duration	3 hours
Course Material	
Level	Fundamental
Audience	Design Reviewer, Design Review Manager
Description	Design verification and validation is an important phase in the lifecycle of product development. Design Reviewer helps analyze and communicate issues as well as resolution ideas with full traceability of how the development decisions were made. In this module, you will learn the key capabilities of the Design Review & Preparation Role. You will learn how to create and manage reviews on the virtual prototype.
Objectives	Upon completion of this module you will be able to: - Explore Product Structures - Create Reference Geometries - Create Reviews - Manage Interferences - Validate Reviews - Analyze Technical Attributes
Prerequisites	- Knowledge: Students attending this module should have completed the Perform as Business Innovator module. - 3DEXPERIENCE Roles: Collaborative Business Innovator and Collaborative Industry Innovator.
Available Online	Yes

Practice CATIA 2D Layout for 3D Design	
Course Code	CAT-en-LO1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this module you will learn how to create 2D layout views in a 3D model and use them to design the part in the 3D environment.
Objectives	Upon completion of this module you will be able to: - Create 2D layout views in a 3D environment - Export 2D geometry into a 3D environment - Create drawings using the 2D layout views
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with CATIA Part and Assembly Design.
Available Online	Yes

Practice CATIA 3D Annotation Insight	
Course Code	CAT-en-LFT-F-15-211
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Design, Quality and other such departments where interrogating and annotating the 3D model is a frequent or occasional requirement.
Description	This module teaches how to use the 3D Annotation Insight app to review and filter 3D annotations information contained within part and assembly documents. Students will learn how to hide / show annotations and captures, use the dimensioning and tolerancing annotations to enhance understanding and improve the decision making.
Objectives	Upon completion of this module you will be able to: - Access and visualize the view, capture and annotation review features - Query and filter 3D annotations - Show/Hide individual as well as all annotations of a given type - Display FTA captures - Remove the FTA clipping plane of a capture - Filter 3D annotations
Prerequisites	Students attending this learning module should have taken the Explore the Collaborative Business Innovator Role module and should be familiar with the Windows Operating System.

Practice CATIA 3D Annotation Insight	
Available Online	Yes

Practice CATIA 3D Tolerancing and Annotation	
Course Code	CAT-en-FTA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	3D Master Designers
Description	This module will teach you how to annotate a 3D part. You will learn how to create annotation planes and how to add and manage 3D annotations on these planes. You will also learn how to create 3D views and use them to create 2D drawing views. You will also be able to create annotations on assemblies.
Objectives	Upon completion of this module you will be able to: - - Add 3D annotations to a part - - Manage and position the annotations - - Manage the 3D geometry associated to the annotations
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with CATIA Knowledgeware and basic CATIA Solid and Surface Design.
Available Online	Yes

Practice CATIA Assembly Design - Added Exercises	
Course Code	CAT-en-ASD-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Exercise
Audience	Mechanical Designers
Description	This module provides you with exercises for additional practice on the 3DEXPERIENCE Assembly Design app. The exercises have been created based on Industry practices. You will practice creating assembly structure, positioning components, constraining components using engineering connections and modifying parts in assembly context.
Objectives	Upon completion of this module you will be able to: - Practice your Assembly Design skills using selected scenarios - Apply the recommended methodology in various scenarios
Prerequisites	Students attending this learning module should be familiar with Part Design and Assembly Design.
Available Online	Yes

Practice CATIA Bent Part Design	
Course Code	CAT-en-SMB-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designer and Sheetmetal Designer
Description	This module will teach you how to use the Bent Part Design app to create and modify a sheetmetal part. You will learn how to define the sheetmetal parameters and create features such as walls, bends, cutouts and corners. You will also learn different techniques for multi-selecting the objects and constraining the parts.
Objectives	Upon completion of this module you will be able to: - Define and modify the sheetmetal parameters - Create a sheetmetal part using the wall and bend features - Manage the folded and unfolded views of parts - Create cutouts, chamfers and corners - Constrain the parts
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Composites Design	
Course Code	CAT-en-CPE-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Composites Designers
Description	The CATIA Composites Design app offers composites design engineers with a complete set of process-oriented features to engineer composites parts. This learning module lets you practice the various approaches used to design a composites part. You will also learn how to analyze composites design and generate production documents.
Objectives	Upon the completion of this module, you will be able to: - Define Composites Parameters - Import Composites Design Directly from an Excel File - Design a Composite Part using the Grid Approach - Design a Composite Part using the Zone Approach with Solid Slicing - Perform and inspect the Producibility Analysis - Export and import the Ply Design Data - Create a Ply Book
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with CATIA Drafting.
Available Online	Yes

Practice CATIA Digitized Shape Preparation	
Course Code	CAT-en-DSE-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Transportation Designers
Description	This course will teach you how to create a cloud of points and then process those points. You will also learn how to mesh the clouds, improve the mesh characteristics, align the cloud of points and perform deviation analysis.
Objectives	Upon completion of this course, you will be able to: - Create a cloud of points - Process the points of a cloud - Mesh the clouds - Improve the mesh characteristics - Align the cloud of points - Perform deviation analysis
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course
Available Online	Yes

Practice CATIA Dymola Behavior Modeling	
Course Code	CAT-en-DBD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	11 hours
Course Material	
Level	Fundamental
Audience	Dynamic Systems Designers
Description	This module will teach you how to model and simulate the dynamic behavior of a multi-engineering system. You will learn how to search, open and manage the Dymola Behavior libraries. You will also learn how to manage the link between a logical component and a Dymola model.
Objectives	Upon completion of this module you will be able to: - Search and open the Dymola behavior library - Edit and simulate an existing dynamic behavior model - Create a new dynamic model - Insert the model into a functional or logical component - Generate the Dymola model from the mechanism - Simulate the logical component with a behavior in the Functional & Logical Design app
Prerequisites	- Knowledge: Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with Functional & Logical Design fundamentals. - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Dynamic Systems Designer

Practice CATIA Dymola Behavior Modeling	
Available Online	Yes

Practice CATIA Electrical 3D Design	
Course Code	CAT-en-EHI-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Electrical Engineers new to Electrical Physical System Design using the 3DEXPERIENCE platform.
Description	This module will teach you how to create electrical geometry in the 3DEXPERIENCE platform and thereby help you in designing the electrical physical systems. You will work with electrical catalogs to place the components from electrical libraries. You will learn the routing of branches for creating electrical branch geometries, managing the electrical geometry content, and routing conductors through the electrical geometry.
Objectives	Upon completion of this module you will be able to: - Create and use an Electrical Library using Data Setup - Create an Electrical Geometry - Route Conductors through the Electrical Geometry
Prerequisites	- Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. - They should also be familiar with Part Design and should know how to use an electrical catalog.
Available Online	Yes

Practice CATIA Engineering Rules Capture	
Course Code	CAT-en-KWA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	10 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will teach you how to create knowledgeware objects in order to embed parameters and design rules within your models. You will also learn how to check the models, reduce design errors and automate the modifications.
Objectives	Upon completion of this module you will be able to: - Create parametric models - Embed your design knowledge in the models - Automate the design and modification processes - Create design configurations using design tables - Customize the specification tree to display knowledgeware features
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with the Enterprise Knowledge Language (EKL) and Part Design.
Available Online	Yes

Practice CATIA Engineering Templates Capture	
Course Code	CAT-en-PKT-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will teach you how to create and store engineering templates and then reuse and adapt them in a new context.
Objectives	Upon completion of this module you will be able to: - Create engineering templates - Reuse the templates in a new context
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They should also be familiar with Part Design and Engineering Rules Capture.
Available Online	Yes

Practice CATIA Engineering Templates Reuse	
Course Code	CAT-en-KT1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.50 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course, you will learn how to create customized features by reusing the power copy and user feature.
Objectives	Upon completion of this course you will be able to: - Create customized features using templates.
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Flow Driven Generative Design	
Course Code	CAT-en-GDF-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	11 hours
Course Material	
Level	Fundamental
Audience	- Powertrain engineers/ designers - HVAC designers - Jet Propulsion engineers - Injection Molding specialists (Mold designers) - Valve and piping designers
Description	The CATIA Flow Driven Generative Design app provides an integrated design environment where the Flow simulation (From SIMULA), topology optimization (using TOSCA) and shape modeling are combined together in the same solution. The various capabilities of the 3DEXPERIENCE Platform allow you to comprehensively refine concept shapes, validate them and reconstruct them in a collaborative manner for additive manufacturing. This course will teach you to define Functional volumes (inlet, outlet and volumes to optimize) and the analysis setup for the optimization. You will also learn how to generate organic concept shapes automatically and validate their Fluid Flow Performances through dedicated KPIs.
Objectives	Explore and Generate shapes for internal fluid flows that minimize pressure drops and preserve the mass flow rate (HVAC, cabin comfort systems, etc.) - Generate automatically flow-driven shapes, validated with an easily set-up Navier-Stokes CFD simulations - Promote a seamless collaboration between Design and Simulation departments“

Practice CATIA Flow Driven Generative Design	
Prerequisites	
Available Online	Yes

Practice CATIA FreeStyle Shape Design	
Course Code	CAT-en-FSS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Industrial Designers and Creative Designers
Description	This module will teach you how to create flawless, styled shapes from scratch using 3D free-form curves and surfaces or using digitized data. You will also learn how to analyze and enhance the quality of existing curves and surfaces.
Objectives	Upon completion of this module you will be able to: - - Create styled shapes using digitized data - Create surfaces using the curve-based and the surface-based approaches - Analyze and enhance the quality of curves and surfaces
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with Generative Surface Design in CATIA.
Available Online	Yes

Practice CATIA Functional Plastic Parts	
Course Code	CAT-en-FMP-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Plastic Part Designers and Molded Part Designers
Description	This module will teach you how to use the Functional Plastic Parts app to create molded parts. You will also learn how to create a core and a cavity using styling data. You will be able to create a detailed design by adding holes, stiffening ribs, bosses and additional fixtures. You will also be able to modify the design and complete the final part with additional draft and fillet features.
Objectives	Upon completion of this module you will be able to: - Create a molded plastic part - Add holes and protected areas - Add ribs and bosses
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with the Part Design app.
Available Online	Yes

Practice CATIA Generative Shape Design	
Course Code	CAT-en-GSD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This module will teach you how to use the Generative Shape Design app to create curves and surfaces. You will learn how to assemble, re-limit, and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this module, you will be able to: - - Create curves and improve the quality of the imported wireframes - - Create surfaces based on the wireframe geometries - - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - - Analyze the surface quality and heal the defects
Prerequisites	- Knowledge: Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module. - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Mechanical and Shape Designer
Available Online	Yes

Practice CATIA Generative Shape Design - Added Exercises	
Course Code	CAT-en-GSD-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Exercise
Audience	Mechanical Designers and Surface Designers
Description	This module provides you with an extensive database of exercises for additional practice on advanced topics of Surface Design. The exercises have been created based on the Industry practices.
Objectives	Upon completion of this module you will be able to: - Create wireframe features using the existing curves and surfaces - Create advanced and parameterized swept surfaces - Perform advanced surface analysis and gap correction - Create advanced blend features - Improve the quality and stability of created geometries
Prerequisites	Students attending this module should know the basic and advanced features of Surface Design.
Available Online	Yes

Practice CATIA Generative Wireframe and Surface	
Course Code	CAT-en-GS1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	20 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This module will teach you how to use the Generative Wireframe and Surface app to create curves and surfaces. You will learn how to assemble, re-limit and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this module, you will be able to: - Create curves and improve the quality of the imported wireframes - Create surfaces based on the wireframe geometries - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - Analyze the surface quality and heal the defects
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Imagine and Shape (IMA)	
Course Code	CAT-en-IMA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Shape Designers, Product Stylists and Industrial Designers
Description	This module will teach you how to use the CATIA Imagine & Shape app to create, modify and improve product shapes and styles. You will learn how to use the Sketch Tracer app to import stylist's images in the 3DEXPERIENCE platform. You will also learn how to create an environment for a designed model and render it.
Objectives	Upon completion of this module you will be able to: - Create subdivision surfaces using tools specific to the Imagine and Shape app - Modify the style surfaces using Generative Shape Design tools - Create the required environment around a model - Apply materials to the created models
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with the fundamentals of CATIA Mechanical and Shape Design.
Available Online	Yes

Practice CATIA Live Rendering	
Course Code	CAT-en-LRE-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Visual Experience Designers
Description	This module will introduce you to the CATIA Live Rendering app and its working environment. You will learn how to create highly realistic renderings and visualizations by application of customized materials, ambiences, cameras and lights. You will also learn about various other tools and options that you can use for creating rendered images and videos.
Objectives	Upon completion of this module, you will be able to: - Create and apply materials and stickers to 3D models. - Enhance a 3D Scene by adding dome ambiences and HDRi lights. - Create Cameras and animations for realistic visualizations and renderings - Render batches of images and animations - Export rendered images and generate videos - Add 3D environment and visualize the model
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Natural Assembly	
Course Code	CAT-en-LCP-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Engineers and Designers, and Design Architects
Description	This module will teach you how to create and manage product structures. You will explore a product and modify its structure by adding new products and exploding existing products. You will then scan the structure to activate a working product level, search for and add existing parts and use constraints to position the parts. Finally, you will create a new sub-product from a components list and use it to complete the product.
Objectives	Upon completion of this module you will be able to: - Explore a product and modify its structure using Natural Assembly - Select the product levels using the Ladder functionality - Search for a product and insert it in an existing assembly - Position the parts using constraints - Create a new sub-product from a component's list and use it to complete the product
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.

Practice CATIA Natural Assembly	
Available Online	Yes

Practice CATIA Natural Shape	
Course Code	CAT-en-LSP-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Conceptual Designers, Stylists, Simulation and Manufacturing Engineers
Description	This module will introduce you to the CATIA Natural Shape app and its unique working environment. You will learn how to use the app to conceptualize, create and modify mechanical parts and shapes. The course features short-duration demos followed by exercises which will allow you to practice. You will also learn the related theory, tips and recommendations while performing the exercises.
Objectives	Upon completion of this module you will be able to: - Create a conceptual design directly in 3D - Use the hybrid design environment to conceptualize your designs - Work on the structure to create the 3D parts - Navigate through the structure and position the parts - Reuse the existing designs in the 3D models
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Natural Sketch	
Course Code	CAT-en-NTS-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Creative Designers
Description	This module contains both videos and exercises. After a short introduction to the app and the user interface, videos will be used to demonstrate the sketching techniques and the use of the sketch tools. You will use the exercises that follow the videos to practice what you have learned and familiarize yourself with the available tools.
Objectives	Upon completion of this module you will be able to: - Sketch curves or primitives in 2D and 3D - Trace and refine vector or primitive curves - Sketch on a surface - Import and edit images - Transform curves and images
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module. They should also be familiar with basic sketching techniques.
Available Online	Yes

Practice CATIA Part Design	
Course Code	CAT-en-PDG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This module will teach you how to create a 3D model using the CATIA Part Design app. You will learn how to use different feature-based tools to build a 3D model. You will also learn how to add parameters, then review, measure and modify a model.
Objectives	Upon completion of this module you will be able to: - Create new parts - Create and constrain 2D sketches - Complete a 3D model using basic features - Parameterize a model - Review and measure a model - Reuse existing features
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Part Design - Added Exercises	
Course Code	CAT-en-PDG-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	13 hours
Course Material	
Level	Exercise
Audience	Mechanical Designers
Description	This module provides you with an exercise database for additional practice on the3DEXPERIENCE Part Design app. The exercises have been arranged in increasing order of difficulty. The fundamental exercises will check and refresh your basic Part Design skills before you move on to more complex topics. The advanced exercises will make you practice the recommended design methodologies using realistic parts.
Objectives	Upon completion of this module you will be able to: - Apply your Mechanical skills in selected scenarios. - Employ the recommended methodology in various situations and efficiently use the Mechanical workbenches.
Prerequisites	Students attending this learning module should be familiar with CATIA Part Design.
Available Online	Yes

Practice CATIA Piping and Tubing 3D Design	
Course Code	CAT-en-PIP-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Piping or Tubing Designers
Description	This module will teach you how to route a pipe or a tube, and place the piping components. You will learn how to detail the design and modify the network. You will also learn how to validate the design and prepare it for manufacturing. The module also features exercises that enable you to practice creating a piping system design.
Objectives	Upon completion of this module you will be able to: - Route straight pipes or tubes - Position piping or tubing parts - Adjust the design of a piping or a tubing network - Validate the piping and tubing design - Prepare the piping and tubing design for manufacturing
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Piping and Tubing Setup	
Course Code	CAT-en-PTS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Fluid Systems Solution Administrators
Description	This module will teach you how to set up fluid systems resources and create piping components. You will learn how to manage component catalogs, design validation rules, and global naming conventions. You will also learn how to customize the generative view style file for drawings and standards for P&ID.
Objectives	Upon completion of this module you will be able to: - Create and manage resources for fluid systems design - Build equipment, supports, and components - Reuse the piping standard data for design setup - Create and manage component catalogs - Define the global naming conventions - Create the checks and rules for design validation - Create templates for generating reports - Customize the drafting standards and settings - Define symbols and annotations for piping and instrumentation diagrams
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Piping and Tubing Systems Design	
Course Code	CAT-en-PLE-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Piping or Tubing Schematic Designers
Description	This course will teach you how to create piping and instrumentation diagrams (P&ID). You will learn how to place an equipment in the diagram with multiple graphic representations. You will also learn how to connect them and place in-line components. Finally, you will learn how to add annotations, review the design and make the necessary modification.
Objectives	Upon completion of this course you will be able to: - Route pipe or tube lines - Position piping or tubing parts and equipment - Adjust the design of a piping or a tubing network - Validate the piping and tubing design - Prepare the piping and tubing design for manufacturing
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. They should also be familiar with Drafting.
Available Online	Yes

Practice CATIA Quality Rules Capture	
Course Code	CAT-en-KWE-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Design Engineers
Description	This module will teach you how to create PLM knowledge objects in the 3DEXPERIENCE platform. You will work with PLM rules and check. You will learn how to create reusable functions using EKL. You will also learn how to store and manage the libraries of reusable functions.
Objectives	Upon completion of this module you will be able to: - Create Rule Sets - Create PLM Rules and Checks - Create Reusable Functions - Create and Manage Libraries of Reusable Functions
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with the fundamentals of Enterprise Knowledge Language (EKL).
Available Online	Yes

Practice CATIA Quality Rules Reuse	
Course Code	CAT-en-KE1-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will show you how to share corporate knowledge stored in the rule bases and leverage it across the company to ensure design compliance with the established standards. You will also learn to create reports and manage their template.
Objectives	Upon completion of this module you will be able to: - Automate the design modifications - Analyze and create reports
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Sheet Metal Design	
Course Code	CAT-en-SMD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Sheet Metal Designer
Description	This module will teach you how to create a sheet metal part using standard wall, bend and stamping features. You will see how user features can be incorporated into the design and how to use both standard and user-defined materials. Finally you will learn how to create a flat pattern and produce a detailed, annotated drawing.
Objectives	Upon completion of this module you will be able to: - Create a sheet metal part using wall and bend features - Manage folded and unfolded views - Use pre-defined sheet metal parameters - Create stamped features - Create duplicating features and use the multi-body methodology - Creating drawings of sheet metal parts - Export a finished flat pattern
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with the CATIA Part Design app.
Available Online	Yes

Practice CATIA Surface Design - Added Exercises	
Course Code	CAT-en-GS1-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Exercise
Audience	Mechanical Surface Designers
Description	This module provides you with an exercise database for additional practice on 3DEXPERIENCE Surface Design. The exercises have been created based on Industry practices. You will get to practice skills such as creating wireframes and surfaces, creating surfacic shells and solid parts, and working with multiple parts that are referencing a common part.
Objectives	These exercises will allow you to put your Shape skills into practice on selected scenarios. - You will apply the recommended methodology in various situations. - You will enhance your understanding and usage of the Shape apps.
Prerequisites	Students attending this course should be familiar with Surface Design.
Available Online	Yes

Practice CATIA Virtual to Real Shape Morphing	
Course Code	CAT-en-RSO-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Reverse Shape Optimizers
Description	This course will teach you how to create a deformation law with the 3DEXPERIENCE platform. You will learn how to use the deformation law in Digitized Morphing for curve and solids. You will learn about optimization of a vector field and also how to filter a vector field to check quality of vectors.
Objectives	Upon completion of this course you will be able to: - Morph surfaces with a computed deformation field - Optimize vectors field from deviation analysis - Filter vectors field to check the quality of the vectors
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. They should be familiar with the fundamentals of CATIA surface design.
Available Online	Yes

Practice CATIA Weld Design	
Course Code	CAT-en-WDG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers and Structural Designers
Description	This module will teach you how to create a welded assembly. You will learn how to join parts using appropriate weld features and how to generate associative weld drawings and weld reports. This course will teach you how to define the welding resource in the Data Setup app and use it to create welds.
Objectives	Upon completion of this module, you will be able to: - Define the welding resource - Create and manage welded assemblies - Generate weld reports - Create welding drawings
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with Assembly Design.
Available Online	Yes

Practice ENOVIA Collaborative Lifecycle Management	
Course Code	ENOV-en-LIIN-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	CAD designers, engineers in charge of product development
Description	In this module, you will learn how to use the ENOVIA Collaborative Lifecycle Management app to manage the complete lifecycle of an object in order to achieve concurrent engineering. You will also learn to manage the access and ownership of objects for collaboration of members on the same platform.
Objectives	Upon completion of this module you will be able to: - Create a new product structure - Use different sections of the Action bar effectively - Manage the changes in a product structure - Save the product structure in the database
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Design Review	
Course Code	ENOV-en-REEV-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6.5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will teach you how to create different slides for various positions of an assembly to create exploded views. You will also learn how to create sections and measures, and export them as parts or drawings.You will also learn how to compare 3D objects and how to create multi-context reviews.
Objectives	Upon completion of this module you will be able to: - Create a design review and add markups to it - Create slides and add markers - Create and export sections and measures - Compare 3D Objects and 2D Drawings - Create multi-context reviews
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Exchanges Management	
Course Code	ENOV-en-EXCH-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	CAD Designers and Platform Contributors
Description	This module will teach you how to use the import / export tools in 3DEXPERIENCE. You will also manage the mastership between V5 files and 3DEXPERIENCE files.
Objectives	Upon completion of this module, you will be able to: - Import and export 3DXML files - Import and export CATIA V5 files - Manage the Mastership of imported objects
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA On-The-Go	
Course Code	ENOV-en-ONGO-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1 hours
Course Material	
Level	Fundamental
Audience	Users of the 3DEXPERIENCE platform
Description	This module will teach you how you can work in the offline mode in the 3DEXPERIENCE platform.
Objectives	Upon completion of this module you will be able to: - Work in the offline mode - Return to the online mode - Restore the last session - Create the offline content in the online mode
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Project Execution	
Course Code	ENOV-en-PREX-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2.50 hours
Course Material	
Level	Fundamental
Audience	
Description	This module will teach you how to use the Project Execution app to manage your assigned tasks. You will be able to manage the project schedule, modify the tasks, record the risks and create timesheets.
Objectives	Upon completion of this module, you will be able to: - Manage the project schedule - Record risks for tasks - Create and submit timesheets
Prerequisites	Knowledge: Students attending this course should have completed the Explore the Business Innovator and Explore the Industry Innovator module. Additionally, they should be familiar with the Practice the Project Management module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Project Team Member.
Available Online	Yes

Practice ENOVIA Traceable Requirements Management	
Course Code	ENOV-en-RERE-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	5 hours
Course Material	
Level	Fundamental
Audience	Requirement Managers, Product Managers, Product Architects and Product Engineers.
Description	This is a process-based course, which uses an industrial scenario to teach you how to use ENOVIA Traceable Requirements Management App for capturing, creating and managing the requirements. You will learn how to derive and decompose the requirements, create requirement specifications, associate requirements with models and products and validate the allocation status. You will also learn how to track the requirements using various traceability reports.
Objectives	Upon completion of this course you will be able to: - Capture requirements from MS Word and MS Excel documents - Create requirements and requirement specifications - Allocate requirements to products and models - Create test cases and use cases - Create revision and multiple versions of requirements - Generate traceability reports
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform

Practice ENOVIA Traceable Requirements Management	
	course and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

Practice ENOVIA Traceable Requirements Management – Added Exercise	
Course Code	ENOV-en-RERE-X-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4.50 hours
Course Material	
Level	Exercise
Audience	Requirements Engineer
Description	This module provides you with exercises for additional practice on the ENOVIA Traceable Requirements Management app. The exercises have been created based on Industry practices. You will practice creating requirements and specification structures. You will also learn how to allocate requirements to products and models and generate traceability reports for them.
Objectives	Upon completion of this module you will be able to: - Capture requirements from MS Word and MS Excel documents - Create requirements and requirement specifications - Allocate requirements to products and models - Create test cases and use cases - Create revision and multiple versions of requirements - Generate traceability reports
Prerequisites	Students attending this learning module should be familiar with ENOVIA Traceable Requirements Management.
Available Online	Yes

Practice SIMULIA Physics Results Explorer	
Course Code	SIM-en-PHYR-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Fluid Dynamics Engineer - Structural Engineer - Structural Mechanics Engineer - Structural Performance Engineer
Description	The 3DEXPERIENCE Platform offers a rich variety of simulation tools and provides a new paradigm in results visualization. This course is an introduction to the high-performance visualization tool in the 3DEXPERIENCE Platform that allows simulation analysts and engineers to view and evaluate simulation results.
Objectives	Upon completion of this course you will be able to: - View and evaluate simulation results
Prerequisites	None
Available Online	Yes

Practice SIMULIA Structural Model Creation	
Course Code	SIM-en-MECM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Engineer - Structural Mechanics Engineer - Structural Performance Engineer
Description	This course is an introduction to finite element modeling in the 3DEXPERIENCE platform. It teaches you how to prepare finite element models for simulation.
Objectives	Upon completion of this course you will be able to: - Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

Practice SIMULIA Structural Scenario Creation	
Course Code	SIM-en-EMCS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Performance Engineer
Description	This course is an introduction to structural and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static problems and basic linear dynamics problems.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA Composites Simulation Engineer Essentials	
Course Code	SIM-en-SCI-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Composites Simulation Engineer
Description	Composite materials are used in many design applications because of their high stiffness-to-weight ratios. The 3DEXPERIENCE Platform offers a variety of tools for their design and analysis in the context of a single integrated work environment. This enables greater productivity and efficiency.
Objectives	Upon completion of this course you will be able to: - Perform simulations of composite materials
Prerequisites	Any one of the following courses is required prior to taking this one: Mechanical Scenario Creation Essentials Structural Scenario Creation Essentials Linear Dynamics Scenario Creation Essentials
Available Online	Yes

SIMULIA Physics Results Explorer Essentials	
Course Code	SIM-en-PHYR-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Simulation Results Analyst Mechanical Analyst Structural Vibration Analyst Noise & Vibration Analyst Fluid Mechanics Analyst Multiphysics Simulation Researcher Structural Analysis Engineer Steel Ship Structural Analysis Engineer
Description	The 3DEXPERIENCE Platform offers a rich variety of simulation tools and provides a new paradigm in results visualization. This course is an introduction to the high-performance visualization tool in the 3DEXPERIENCE Platform that allows simulation analysts and engineers to view and evaluate simulation results.
Objectives	Upon completion of this course you will be able to: - View and evaluate simulation results
Prerequisites	None
Available Online	Yes

SIMULIA Plastic Part Filling Essentials	
Course Code	SIM-en-PPF-F-15-201
Available Releases	3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Plastic Mechanical Designer Interior Designer Mold & Tooling Designer
Description	This course is an introduction to performing basic injection molding simulation to spur product and design innovation in the 3DEXPERIENCE platform. The 3DEXPERIENCE platform enables realistic plastic injection molding simulation of the filling manufacturing process early in the design cycle, when the cost of design change is low and opportunity is high.
Objectives	Upon completion of this course you will be able to: - Perform Mold Filling simulations - View and evaluate simulation results
Prerequisites	None
Available Online	Yes

SIMULIA Static Study Essentials	
Course Code	SIM-en-STDY-F-15-201
Available Releases	3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following role: Mechanism Simulation Designer
Description	This course is an introduction to performing linear static simulations in the 3DEXPERIENCE Platform. The Static Study app enables designers to perform strength and deflection calculations under static conditions to validate product performance to guide design modifications. Designers can experience product performance virtually so that they can make better-informed design decisions early in the design cycle, when the cost of design change is low and opportunity is high.
Objectives	Upon completion of this course you will be able to: - Search for simulation data in the database - Open the simulation for modification - Perform a simulation using the Static Study app - Review simulations stored in a database and generate reports
Prerequisites	None
Available Online	Yes

SIMULIA Structural Model Creation Essentials	
Course Code	SIM-en-MECM-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Finite Element Modeling & Assembly Specialist - Mechanical Analyst - Multiphysics Simulation Researcher - Structural Engineer - Structural Mechanics Engineer - Structural Professional Engineer - Structural Functional Analysis Engineer
Description	This course is an introduction to finite element modeling in the 3DEXPERIENCE platform. It teaches you how to prepare finite element models for simulation.
Objectives	Upon completion of this course you will be able to: - Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

SIMULIA Structural Scenario Creation Essentials	
Course Code	SIM-en-EMCS-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Performance Engineer - Structure Functional Analysis Engineer
Description	This course is an introduction to structural and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static problems and basic linear dynamics problems.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

Structural Professional Engineer for SOLIDWORKS Users	
Course Code	SIM-en-DRDW-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Structural Simulation Engineer
Description	This course is an introduction to the Structural Simulation Engineer role, which is an offering to expand the simulation capabilities for SOLIDWORKS users.
Objectives	Upon completion of this course you will be able to: - Access and use the SOLIDWORKS Simulation Connector - Understand which entities are transferred into the 3DEXPERIENCE simulation apps - Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

Systems Engineering at the Heart of the Industry Renaissance	
Available Release	3DEXPERIENCE R2021x
Duration	0.25 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the future stakes of cyber-physical systems and the role of Model-Based Systems Engineering in supporting organizations digital transformation.
Objectives	Upon completion of this learning module, you will be able to comprehend : - The need of systems in the Industry Renaissance - The enterprises and cyber-physical systems challenges imposed by Industry Renaissance - How can the Dassault Systèmes helps companies with a Model-Based Systems Engineering approach.
Prerequisites	
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Course Code	CAT-en-3DMT-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2020x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Designers who need to work with mechanical parts
Description	This course addresses the needs of Mechanical Designers. It will first teach you how to design a new part with the 3DEXPERIENCE platform, insert the part in a product then position and constrain it. You will learn how to assign material properties and compute weight, then complete a simple drawing. Finally, you will learn how to create a new part version, replace the original part and update the product. More advanced topics will also be covered: they will teach you how to manage complex product structures, create product features, manage catalogs and analyze assemblies.
Objectives	Upon completion of this course, you will be able to: - Create new products and parts - Insert a part in a product and position it - Apply materials to parts - Calculate the weight of a product - Insert and complete a drawing - Create a new part version - Replace a part and update a product - Design parts in context - Create assembly features and catalogs - Analyze the assemblies

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. They should also be familiar with CATIA V5 Mechanical Design.
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Course Code	CAT-en-3DMTVS-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module addresses the needs of Mechanical Designers working on cloud. It will first teach you how to design a new part with the 3DEXPERIENCE platform, insert the part in a product then position and constrain it. You will learn how to assign material properties and compute weight, then complete a simple drawing. Finally, you will learn how to create a new part version, replace the original part and update the product. More advanced topics will also be covered: they will teach you how to manage complex product structures, create product features, manage catalogs and analyze assemblies.
Objectives	Upon completion of this module, you will be able to: - Create new products and parts - Insert a part in a product and position it - Apply materials to parts - Calculate the weight of a product - Insert and complete a drawing - Create a new part version - Replace a part and update a product
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
	Innovator Role module. They should also be familiar with CATIA V5 Mechanical Design.
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Surface Designers	
Course Code	CAT-en-3DST-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Designers who need to work with styled parts.
Description	This course addresses the needs of Surface Designers. It will first teach you how to design a new part with the 3DEXPERIENCE platform. You will also learn how to create a new part version, replace the original part and update the product.
Objectives	Upon completion of this course you will be able to: - Create new products and parts - Create a new part version - Replace a part and update a product
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. They should also be familiar with CATIA V5 Mechanical Design and Surface Design.
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Surface Designers	
Course Code	CAT-en-3DSTVS-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Designers who need to work with styled parts.
Description	This course addresses the needs of Surface Designers working on cloud. It will first teach you how to design a new part with the 3DEXPERIENCE platform. You will also learn how to create a new part version, replace the original part and update the product.
Objectives	Upon completion of this course you will be able to: - Create new products and parts - Create a new part version - Replace a part and update a product - Replay master exercise based on shape functionalities
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. They should also be familiar with CATIA V5 Mechanical Design and Surface Design.
Available Online	Yes

Understand Composite Design	
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module , you will discover how to design a part taken account the specificities of the materials composites
Objectives	Identify some of the key requirements to capture for composite design and manufacture - Understand the process of selection the correct materials and processes - Appreciate the principles of Classical Laminate Analysis - Be able to create a laminate stacking sequence - Identify some common composite design guidelines - Understand the effects of defects on the design process
Prerequisites	
Available Online	Yes

Understand Systems Thinking and Model-Based Systems Engineering Approach	
Available Release	3DEXPERIENCE R2021x
Duration	2.67 hours
Course Material	
Level	Fundamental
Audience	Systems Engineer, Systems Architect, Mechatronic Systems Designer, Project Manager, Quality Assurance, Requirements Manager, Software Developer and Student
Description	In this module, you will learn the concepts of Systems Engineering and Model-Based Systems Engineering including how to articulate the Cyber MagicGrid methodology in a Process-Methods-Tools approach.
Objectives	Upon the completion of this learning module, you will be able to: - Discover what is Systems Engineering and learn about its key concepts and the benefits - Realize the importance of Model-Based Systems Engineering (MBSE) in successful implementation of projects - Discover critical industrial challenges and the value proposition of the 3DEXPERIENCE platform to overcome them - Learn about the Cyber MagicGrid methodology and explore the Cyber Systems Portfolio on 3DEXPERIENCE platform - Articulate the value of a tooled-up Systems Engineering approach within the framework of Cyber MagicGrid methodology
Prerequisites	

Understand Systems Thinking and Model-Based Systems Engineering Approach

Available Online	Yes

What's New for Function Driven Generative Designers	
Course Code	CAT-en-WGDE-U-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	16 hours
Course Material	
Level	Update
Audience	Function Driven Generative Designers
Description	This course introduces you to the enhancements and new functionalities in the Function Driven Generative Designer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Function Driven Generative Designer role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Function Driven Generative Designer's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Industry Innovation	
Course Code	ENOV-en-WCSV-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	1.5 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the enhancements and new functionalities in the Industry Innovation role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Industry Innovation role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Industry Innovation role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Mechanical and Shape Designers	
Course Code	CAT-en-WMES-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	14.5 hours
Course Material	
Level	Update
Audience	Mechanical and Shape Designers
Description	This course introduces you to the enhancements and new functionalities in the Mechanical and Shape Designer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Mechanical and Shape Designer role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Mechanical and Shape Designer's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Mechanical Designers	
Course Code	CAT-en-WMDG-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	12.5 hours
Course Material	
Level	Update
Audience	Mechanical Designers
Description	This course introduces you to the enhancements and new functionalities in the Mechanical Designer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Mechanical Designer role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Mechanical Designer role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Mechanical Part Designers	
Course Code	CAT-en-WMDD-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Update
Audience	Mechanical Part Designers
Description	This course introduces you to the enhancements and new functionalities in the Mechanical Part Designer role. It is self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Mechanical Part Designer role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Mechanical Part Designer's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Product Enclosure Designers	
Course Code	CAT-en-WPED-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	12.5 hours
Course Material	
Level	Update
Audience	Product Enclosure Designers
Description	This course introduces you to the enhancements and new functionalities in the Product Enclosure Designer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Product Enclosure Designer role - Use the enhancements that you have learnt
Prerequisites	Students attending this course must be familiar with the Product Enclosure Designer's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Shape Designers	
Course Code	CAT-en-WSUA-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	4.5 hours
Course Material	
Level	Update
Audience	Shape Designers
Description	This course introduces you to the enhancements and new functionalities in the Shape Designer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Shape Designer role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Shape Designer's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Sheet Metal Designers	
Course Code	CAT-en-WSMW-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	12.5 hours
Course Material	
Level	Update
Audience	Sheet Metal Designers
Description	This course introduces you to the enhancements and new functionalities in the Sheet Metal Designer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - - Describe the impact of the new capabilities on the Sheet Metal Designer role. - - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Sheet Metal Designer role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

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DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

Course Catalog

GVLX-OC 19x-21x

14 January 2021

3DEXPERIENCE®

Learning Experience | Course Catalog

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Learning Experience | Course Catalog

Learning Experiences for Governance and Lifecycle - GVLX-OC	1
3DEXPERIENCE 3D Component Designer for PLM Services Essentials	2
3DEXPERIENCE 3D Markup Engineer Essentials	4
3DEXPERIENCE 3D Product Architect Essentials	5
3DEXPERIENCE Business Innovation Essentials	7
3DEXPERIENCE Business Innovation Essentials for CAD Users	8
ENOVIA Classify and Reuse Essentials	10
ENOVIA Collaboration and Approvals Essentials	11
ENOVIA Collaboration for Microsoft Essentials	13
ENOVIA Design Review Essentials	14
ENOVIA Engineering BOM Management Essentials	15
ENOVIA Engineering Release Management Essentials	16
ENOVIA Project Execution Essentials	17
ENOVIA Project Management Advanced	18
ENOVIA Project Management Fundamentals	20
ENOVIA Variant Management Essentials : Product Architect	21
ENOVIA Variant Management Essentials: Product Manager	22
ENOVIA X-CAD Design Management Essentials	23
ENOVIA X-CAD Design Management for SolidWorks Essentials	25
Explore the Classification Manager Role	27
Explore the Lean Team Player Role for Team Meeting Animation	28
Explore the Lean Team Player Role for Transformation	29
Explore the PartSupply Optimized Components Consumer Role	30
Explore the PartSupply Standard Components Manager Role	31
Explore the Product Manager Role	32
Explore the Project Manager Role	33
Explore the Requirements Engineer Role	34
Lean Management at the Heart of the Industry Renaissance	36
Master ENOVIA Project Management	37
Perform as Classification Manager	39
Perform as Project Manager	41
Perform as Project Planner	42

Perform as Requirements Manager	43
Portfolio and Product Planning	44
Practice CATIA 3D Annotation Insight	45
Practice ENOVIA Artwork Connector	47
Practice ENOVIA Change Action Management	49
Practice ENOVIA Design Review	50
Practice ENOVIA Engineering Release	51
Practice ENOVIA IP Classification	52
Practice ENOVIA IP Classification	53
Practice ENOVIA Project Execution	54
Practice ENOVIA Project Management	55
Practice ENOVIA Traceable Requirements Management	57
Practice ENOVIA Traceable Requirements Management – Added Exercise	59
Practice ENOVIA Variant Management: Product Manager	60
Stimulate open innovation across your ecosystem	61
Understand 3DEXPERIENCE Platform for your business transformation	62
Understand Lean Fundamentals	63
Understand Lean Transformation Methodology	64
What's New for Classification Managers	65
What's New for Industry Innovation	66
What's New for Product Architects	67
What's New for Product Engineers	68
What's New for Product Managers	69
What's New for Project Managers	70
What's New for Project Team Members	71
What's New for Requirements Managers	72

Learning Experiences for Governance and Lifecycle - GVLX-OC

3DEXPERIENCE 3D Component Designer for PLM Services Essentials	
Course Code	ENOV-EN-XCD-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	3 hours
Course Material	
Level	Fundamental
Audience	Component Designers, Mechanical Designers, CAD users
Description	This course is based on the Power By approach, whereby Designers on all versions and solutions (CATIA V5, V6) or SOLIDWORKS learn how to leverage the power of the 3DEXPERIENCE platform for their projects and daily work. More specifically, in this course you will learn the various functionalities available with the 3D Component Designer role of the 3DEXPERIENCE platform. The 3D Component Designer connects CATIA V5 and SOLIDWORKS file-based CAD users to the 3DEXPERIENCE platform, enabling you to manage product designs and documents directly from the desktop authoring application. Moreover, you can leverage the platform's web-based apps to manage, annotate and visualize designs anywhere, anytime and on any device.
Objectives	Upon completion of this course you will be able to: - Review the Change Action - Connect to CATIA V5 and modify the design - Connect to SOLIDWORKS and modify the design - Create slides and markups - Create and browse annotations

3DEXPERIENCE 3D Component Designer for PLM Services Essentials	
Prerequisites	Students attending this course must be familiar with the fundamentals of CATIA V5, SOLIDWORKS and should have completed the Gateway to the 3DEXPERIENCE platform and the 3DEXPERIENCE Business Innovation Essentials courses.
Available Online	Yes

3DEXPERIENCE 3D Markup Engineer Essentials	
Course Code	ENOV-en-DRU-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	1.4 hours
Course Material	
Level	Fundamental
Audience	Design Reviewers
Description	The course will teach you the various functionalities available with the 3D Markup Engineer role of the 3DEXPERIENCE platform. You will learn how to create digital mockup reviews that can be shared with and viewed by designers in real-time. You will learn how to critically analyze a 3D model, highlight issues and communicate solutions using different slides and markups. The course also provides insights on how to access the crucial design information like functional tolerances & annotations
Objectives	Upon completion of this course you will be able to: - Create a review for design validation - Create slides and markups - Measure various geometrical items - Browse and filter annotations
Prerequisites	Students attending this course must be familiar with the fundamentals of CATIA V5 and should have completed the Gateway to the 3DEXPERIENCE platform and the 3DEXPERIENCE Business Innovation Essentials courses.
Available Online	Yes

3DEXPERIENCE 3D Product Architect Essentials	
Course Code	ENOV-en-PAU-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users, CAD users
Description	This course is based on the Power By approach, whereby users on all versions and solutions (V5 and V6) learn how to leverage the power of the 3DEXPERIENCE platform for their projects and daily work. More specifically, in this course you will learn the various functionalities available with the 3D Product Architect role of the 3DEXPERIENCE platform. You will also learn how to create and modify a product structure and validate the modifications after reviewing them. The course offers an insight into the functionalities that help you collaborate with your team members using the various web-based applications available with the Product Architect role.
Objectives	In this course, you will learn how to: - Assign tasks to your team members - Explore and visualize products within a web-browser - Create and modify product structure of various components under governance of a change process - Create revisions and manage the lifecycle of the products - Modify the design - Review 3D models - Create and share design reviews

3DEXPERIENCE 3D Product Architect Essentials	
Prerequisites	Students attending this course must be familiar with the fundamentals of CATIA V5 and should have completed the Gateway to the 3DEXPERIENCE platform and the 3DEXPERIENCE Business Innovation Essentials for CAD Users courses.
Available Online	Yes

3DEXPERIENCE Business Innovation Essentials	
Course Code	CRB-en-IFW-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Understand the 3DEXPERIENCE interface - Connect to the 3DEXPERIENCE platform - Access your Dashboard - Use the 6WTags for searching content - Share various documents with other users through - Collaborate using capabilities of the 3DEXPERIENCE platform
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Course Code	CRB-en-IFWC-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	5.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform. You will also learn how to design a model using CATIA V5 or SOLIDWORKS launched from the 3DEXPERIENCE platform. In addition, you will learn about configuring the 3DEXPERIENCE Platform Management dashboard.
Objectives	Upon completion of this course you will be able to: - - Access the 3DEXPERIENCE Platform Management dashboard - - Configure the 3DEXPERIENCE Platform Management dashboard - - Understand the 3DEXPERIENCE interface - - Connect to the 3DEXPERIENCE platform - - Access your Dashboard - - Access your social communities on 3DSwym - - Share various documents with other users - - Collaborate using capabilities of 3DEXPERIENCE platform - - Design using CATIA V5 Connector or SOLIDWORKS Connector

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

ENOVIA Classify and Reuse Essentials	
Course Code	ENOV-en-CLRE-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE Platform Users
Description	This course will teach you how to use the ENOVIA Classify and Reuse App to search and view different types of libraries as well as an objects' hierarchy. You will also learn how to manage the objects using these libraries. Based on a combination of videos, theory and simulations, you can take this course in a self-paced learning mode and is self-sufficient. However, if you want to practice, you will find a master exercise at the end of the course.
Objectives	Upon completion of this course, you will be able to: - Search and view different types of Libraries and their related hierarchy. - Search and view General Classes and Folders.
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Collaboration and Approvals Essentials	
Course Code	ENOV-en-BUPS-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	10 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course will teach you the common functionalities used across all ENOVIA apps, which enable you to manage your content as well as collaborate with other members in a team. You will learn how to create workspaces for managing your business related components, such as folders, members and tasks. You will also learn how to create various workflows using routes, subscribe to your task related events, and report issues for objects. Further, you will learn to create documents and version them, while maintaining a record for all its revisions.
Objectives	Upon completion of this course, you will be able to: - Illustrate the structure of ENOVIA Business Process Services - Create and manage your folders - Create workflows - Identify and manage your assigned tasks - Subscribe to various objects and events - Report and resolve issues in objects - Create, track and organize your documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.

ENOVIA Collaboration and Approvals Essentials	
Available Online	Yes

ENOVIA Collaboration for Microsoft Essentials	
Course Code	ENOV-en-COMI-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Project Managers, Design Engineers, Reviewers and Technical Writers.
Description	In this course, you will learn how to use the ENOVIA Collaboration for Microsoft app to access and manage the documents in the ENOVIA database using the Microsoft applications.
Objectives	Upon completion of this course you will be able to: - Access documents from the ENOVIA database using Microsoft applications - Create, manage and synchronize documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Design Review Essentials	
Course Code	ENOV-en-REEV-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	6.5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create different slides for various positions of an assembly to create exploded views. You will also learn how to create sections and measures, and export them as parts or drawings.You will also learn how to compare 3D objects and how to create multi-context reviews.
Objectives	Upon completion of this course you will be able to: - Create a design review and add markups to it - Create slides and add markers - Create and export sections and measures - Compare 3D Objects and 2D Drawings - Create multi-context reviews
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

ENOVIA Engineering BOM Management Essentials	
Course Code	ENOV-en-ENBO-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Design Engineers and Manufacturing Engineers
Description	This course will teach you how to use ENOVIA Engineering BOM Management to manage the engineering change process. You will learn how to create parts and specifications and raise Change Requests for the parts and specifications. You will also learn to create Change Orders to address the design modifications raised in Change Requests. Further, you will learn how to generate various types of reports.
Objectives	Upon completion of this course, you will be able to: - Create parts and specifications - Create and edit Bill of Materials - Create a Change Request to make the changes in a part or a specification - Complete Change Orders and Change Actions to implement the changes - Review and release the parts
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Engineering Release Management Essentials	
Course Code	ENOV-en-XEN-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Release Engineers
Description	This course will teach you to analyze the engineering items and create a new engineering definition using the ENOVIA Engineering Release widget. You will play the role of a Product Release Engineer in building a new engineering definition from early definition to final validation in collaboration with engineering ecosystem.
Objectives	Upon completion of this course, you will be able to: - View and Open Engineering Items - Use 6WTags to filter the data - Evaluate the geometry in 3DPlay - Explore revision history - Create a new Engineering definition - Set the re-use and duplicate components - Set the Part Number and update its quantity - Add and review the design specification document - Assign the design responsibilities - Release the Engineering definition
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. Additionally, they should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Project Execution Essentials	
Course Code	ENOV-en-PREX-F-15-191
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	0 hours
Course Material	
Level	Fundamental
Audience	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course and should be familiar with Collaboration and Approvals in ENOVIA.
Description	This course will teach you how to use the ENOVIA Project Execution app to manage your assigned tasks. You will be able to manage the project schedule, modify the tasks, record the risks and create timesheets.
Objectives	Upon completion of this course you will be able to: - Manage the project schedule - Record risks for tasks - Create and submit timesheets
Prerequisites	
Available Online	Yes

ENOVIA Project Management Advanced	
Course Code	ENOV-en-PRPR-A-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	8 hours
Course Material	
Level	Advanced
Audience	Project Managers, Project Members and Reviewers
Description	This course focuses on the advanced functionalities of the ENOVIA Project Management app. You will learn how to manage risks associated with a project, assign people to meet the project's resource requirements and track quality metrics. You will also learn how to create budgets and benefits for a project, work with time sheets and generate labor reports.
Objectives	Upon completion of this course you will be able to: - Document the various risk areas of a project and track them - Create and manage the resource requirements for a project - Create budgets and benefits to monitor the financials of a project - Track the time spent on a project using time sheets - Create calendars for the projects - Identify the quality factors of a project and monitor them - Create an assessment to measure the project's health - Use dashboards to monitor the status of your projects
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and

ENOVIA Project Management Advanced	
	should be familiar with ENOVIA Project Management Fundamentals.
Available Online	Yes

ENOVIA Project Management Fundamentals	
Course Code	ENOV-en-PRPR-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Project Managers, Project Members and Reviewers.
Description	This course will teach you how to create and manage projects, assign project members, create tasks, create folder structures and define access rights for managing the documents related to the projects. You will also learn how to create the process flows for the review and approval of tasks, and how to monitor the status of different projects. Additionally, you will learn how to use the Microsoft Project Integration functionality to exchange and view a project's data.
Objectives	Upon completion of this course you will be able to: - Create programs and projects - Assign members to a project - Add tasks and assign project members to the tasks - Create folders for managing project documents - Create process flow for tasks - Review the status of programs and projects - Exchange and view projects' data using Microsoft Project Integration
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course. Additionally, they should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Variant Management Essentials : Product Architect	
Course Code	ENOV-en-VAMAPDA-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2019x
Duration	6.5 hours
Course Material	
Level	Fundamental
Audience	Product Managers, Product Architects, System Engineers, Design Engineers and Marketing Managers
Description	This course will teach you how to use the ENOVIA Variant Management app for creating and managing product configurations. You will learn how to create product portfolios and manage the product variability using various configuration features and rules. You will also learn how to generate a Bill of Materials and associate its parts with the features of a product.
Objectives	Upon completion of this course you will be able to: - Create the product structure - Define product architecture - Create and manage product configurations and design variants - Use Enterprise Changes to track and release features - Generate BOMs
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Variant Management Essentials: Product Manager	
Course Code	ENOV-en-VAMAPDM-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Product Managers and Marketing Managers
Description	This course will teach you how to use the ENOVIA Variant Management app for creating and managing product configurations. You will learn how to create product portfolios and manage the product variability using various configuration features and rules.
Objectives	Upon completion of this course you will be able to: - Create the product structure - Define product portfolios based on product roadmaps - Create features and rules - Create product configurations
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA X-CAD Design Management Essentials	
Course Code	ENOV-en-XCAD-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	13.5 hours
Course Material	
Level	Fundamental
Audience	Product Engineers and Design Engineers - Business Administrators and System Administrators
Description	This course will teach you how to use the XCAD Design Management app for the CATIA V5 Connector. You will learn how to share and manage information related to engineering design and engineering change from CATIA V5 and ENOVIA. You will also learn how to view the details of CAD objects, search for data, perform lifecycle operations, create and synchronize the engineering bill of materials.
Objectives	Upon completion of this course, you will be able to: - Explore the ENOVIA X-CAD Design app - Initialize Design Templates - Store and retrieve the CATIA V5 files in ENOVIA - Create new components, drawings and Bill of Materials (BOM) - Review and release the CAD models - Purge old data, create and compare baselines
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course and should be familiar with Collaboration and Approvals in ENOVIA and CATIA V5 fundamentals.

ENOVIA X-CAD Design Management Essentials	
Available Online	Yes

ENOVIA X-CAD Design Management for SolidWorks Essentials	
Course Code	ENOV-en-XCADS-F-15-191
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Product Engineers and Design Engineers - Business Administrators and System Administrators
Description	This course will teach you how to use the XCAD Design Management app for the SOLIDWORKS Connector. You will learn how to share and manage information related to engineering design and engineering change from SOLIDWORKS and ENOVIA. You will also learn how to view the details of CAD objects, search for data, perform lifecycle operations, create and synchronize the engineering bill of materials.
Objectives	Upon completion of this course you will be able to: - Explore the XCAD Design app - Initialize and work in the Embedded Integration mode - Store and retrieve the SOLIDWORKS files in ENOVIA - Create new components, drawings and Bill of Materials (BOM) - Review and release the CAD models - Modify the existing designs and create new revisions
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform

ENOVIA X-CAD Design Management for SolidWorks Essentials	
	course and should be familiar with Collaboration and Approvals in ENOVIA and SOLIDWORKS fundamentals.
Available Online	Yes

Explore the Classification Manager Role	
Course Code	ENOV-en-CCM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.50 hours
Course Material	
Level	Fundamental
Audience	Classification Managers
Description	In an industrial scenario, it is important for the classification manager to organize and manage libraries efficiently. This learning module will take you through the use of IP Classification app to create libraries and classes. You will learn how to store, manage and access documents and other files within the application in a collaborative work environment.
Objectives	Upon completion of this module, you will be able to: - Manage general libraries and their related hierarchies - Create and manage attribute groups - Classify the library objects in IP Classify and Reuse widget
Prerequisites	Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator module and Explore the Collaborative Industry Innovator module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Classification Manager.
Available Online	Yes

Explore the Lean Team Player Role for Team Meeting Animation	
Course Code	DEL-en-LTR-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.92 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn how to use 3DLean to establish team routines and boost cross-team collaboration.
Objectives	Upon completion of this learning module, you will be able to: - Create and manage 3DLean Board - Prepare and organize Leangets - Create and manage actions - Create and manage problems - Prepare and launch a Flash 5' Meeting
Prerequisites	
Available Online	Yes

Explore the Lean Team Player Role for Transformation	
Course Code	DEL-en-LTRT-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.58 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn how to lead and implement a Digital Lean Transformation with 3D Lean.
Objectives	Upon completion of this learning module, you will be able to: - Lead end to end Digital Lean Transformation - Apply transformation methodology and project management tools - Apply DMAIC (Define, Measure, Analyze, Improve, Control) method using the 3DLean app
Prerequisites	
Available Online	Yes

Explore the PartSupply Optimized Components Consumer Role	
Course Code	EXA-en-EPU-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.17 hours
Course Material	
Level	Fundamental
Audience	
Description	Learn about accessing and using PartSupply Enterprise on the 3DEXPERIENCE Marketplace.
Objectives	You will learn how to open, insert and replace components from the PartSupply catalog from within SOLIDWORKS.
Prerequisites	N/A
Available Online	Yes

Explore the PartSupply Standard Components Manager Role	
Course Code	EXA-en-EPA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.20 hours
Course Material	
Level	Fundamental
Audience	
Description	Learn about selecting components from qualified suppliers, and how to subscribe to a whole supplier catalog.
Objectives	Objectives include learning import your own in-house components, and how to manage requests to add components to your company ecosystem.
Prerequisites	N/A
Available Online	Yes

Explore the Product Manager Role	
Course Code	ENOV-en-PDM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Product Managers
Description	As a Product Manager, you will drive the corporate strategy with collaboration between cross-functional teams to achieve the product's strategic intent. In this module, you will learn to manage the entire definition, planning and development of the product portfolio based on customer needs and market opportunities.
Objectives	Upon the completion of this module, you will be able to: - Create Model Versions - Add Requirements to Model Versions - Create Variants and Options - Frame Model Version Rules - Build Product Configurations
Prerequisites	- Knowledge: Students attending this course should have completed the Explore the Collaborative Business Innovator and Explore the Collaborative Industry Innovator Role modules. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Product Manager.
Available Online	Yes

Explore the Project Manager Role	
Course Code	ENOV-en-DPM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2.5 hours
Course Material	
Level	Fundamental
Audience	Project Managers, Project Team Members and Reviewers
Description	In today's fast-paced, customer-driven environment, products need to be designed and delivered in a timely yet highly efficient manner. You need great project management skills to deliver successful results. This self-paced module will help you to learn and explore the capabilities of the Project Manager.
Objectives	By the end of this module, you will be able to: - Create Project Templates - Define Project Schedule - Submit Weekly Time Sheets - Monitor Project Status
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator module and Explore the Collaborative Industry Innovator module. 3DEXPERIENCE Roles: Collaborative Business Innovator and Collaborative Industry Innovator, Project Manager and Project Team Member.
Available Online	Yes

Explore the Requirements Engineer Role	
Course Code	ENOV-en-TRM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	5 hours
Course Material	
Level	Fundamental
Audience	Requirement Engineers, Product Managers, Product Architects and Product Engineers.
Description	In today's fast-paced customer-driven environment, understanding the customer requirements is a key to deliver high quality products. Requirements Management helps to ensure project success by avoiding misunderstandings about the product expectations from the customer. This self-paced module will help you learn and explore ENOVIA Requirements Management capabilities.
Objectives	Upon completion of this module you will be able to: - Capture requirements from MS Word and MS Excel documents - Create requirements and requirement specifications - Allocate requirements to products and models - Create test cases and use cases - Create revisions and multiple versions of requirements - Generate traceability reports
Prerequisites	Knowledge: Students attending this course should have completed the Explore the Business Innovator Role and Explore the Industry Innovator Role modules. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Requirements Engineer and Systems Architecture Designer

Explore the Requirements Engineer Role	
Available Online	Yes

Lean Management at the Heart of the Industry Renaissance	
Available Release	3DEXPERIENCE R2021x
Duration	0.17 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will discover the future stakes of lean and how the digital lean is a key enabler for the industry renaissance.
Objectives	Raise questions on Industry challenges considering our Planet, People and Profit. See how the combination of Lean and digitization can offer answers.
Prerequisites	
Available Online	Yes

Master ENOVIA Project Management	
Course Code	ENOV-en-PRPR-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Advanced
Audience	Project Managers and Project Members
Description	This module focuses on the advanced functionalities of the Project Management app. You will learn how to manage risks associated with a project, assign people to meet the project's resource requirements and track quality metrics. You will also learn how to create budgets and benefits for a project, work with time sheets and generate labor reports.
Objectives	Upon completion of this module, you will be able to: - Document the various risk areas of a project and track them - Create and manage the resource requirements for a project - Create budgets and benefits to monitor the financials of a project - Track the time spent on a project using time sheets - Create calendars for the projects - Identify the quality factors of a project and monitor them - Create an assessment to measure the project's health - Use dashboards to monitor the status of your projects
Prerequisites	Knowledge: Students attending this module should have completed the Explore the Business Innovator, Explore the Industry Innovator module and Practice

Master ENOVIA Project Management	
	ENOVIA Project Management. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Project Manager.
Available Online	Yes

Perform as Classification Manager	
Course Code	ENOV-en-CCM-F-15-201
Available Release	3DEXPERIENCE R2020x
Duration	2.2 hours
Course Material	
Level	Fundamental
Audience	Classification Managers, Securities Services Managers, Technical Writers, Business Administrators and System Administrators
Description	In an industrial scenario, it is important for the classification manager to organize and manage document libraries efficiently. This learning module will take you through the use of ENOVIA IP Classification app to create document libraries, part libraries and general libraries and use these libraries for organizing the parts and documents. You will learn how to store, manage and access documents and other files within the application in a collaborative work environment.
Objectives	Upon completion of this course, you will be able to: - Create different types of libraries and their related hierarchies - Create and manage documents and parts - Classify the library objects based on their features - Use the classification functionality
Prerequisites	Knowledge: Students attending this course should have completed the Perform as Business Innovator and Perform as Business Industry Innovator modules. Additionally, they should be familiar with Collaboration and Approvals. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Classification Manager and Product Engineer role.

Perform as Classification Manager	
Available Online	Yes

Perform as Project Manager	
Course Code	ENOV-en-DPM-F-15-201
Available Release	3DEXPERIENCE R2020x
Duration	4.5 hours
Course Material	
Level	Fundamental
Audience	Project Managers, Project Members and Reviewers
Description	In today's fast-paced, customer-driven environment, products need to be designed and delivered in a timely yet highly efficient manner. You need great project management skills to deliver successful results. This self-paced course will help you learn and explore ENOVIA Project Management capabilities.
Objectives	By the end of this learning module, you will be able to: - Create Project Template - Define Project Schedule - Allocate Resource - Submit Weekly Time Sheets - Monitor Project Status - Track Project Financials
Prerequisites	- Students attending this module should have completed the Perform as Business Innovator and Perform as Business Industry Innovator modules. Additionally, they should be familiar with Collaboration and Approvals in ENOVIA. - - 3DEXPERIENCE Roles: Collaborative Business Innovator and Collaborative Industry Innovator.
Available Online	Yes

Perform as Project Planner	
Course Code	CRB-en-XPP-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	Users of the 3DEXPERIENCE platform
Description	Learn how to improve collaboration in a simple and assisted iterative planning, execution and monitoring.
Objectives	Upon completion of this course, you will be able to: - Create and manage projects - Create, manage and schedule project tasks - Create and manage sub-projects
Prerequisites	Students attending this learning module should be familiar with Collaborative Business Innovator role.
Available Online	Yes

Perform as Requirements Manager	
Course Code	ENOV-en-TRM-F-15-201
Available Release	3DEXPERIENCE R2020x
Duration	5.3 hours
Course Material	
Level	Fundamental
Audience	Requirement Managers, Product Managers, Product Architects and Product Engineers.
Description	In today's fast-paced customer-driven environment, understanding the customer requirements is a key to deliver high quality products. Requirements Management helps to ensure project success by avoiding misunderstandings about the product expectations from the customer. This self-paced course will help you learn and explore ENOVIA Requirements Management capabilities.
Objectives	Upon completion of this course you will be able to: - Capture requirements from MS Word and MS Excel documents - Create requirements and requirement specifications - Allocate requirements to products and models - Create test cases and use cases - Create revision and multiple versions of requirements - Generate traceability reports
Prerequisites	Students attending this course should have completed the 3DEXPERIENCE platform modules. Additionally, they should also be familiar with the Collaboration and Approvals in ENOVIA.
Available Online	Yes

Portfolio and Product Planning	
Course Code	CRB-en-PPP-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Design Engineers, Product Managers, Change Initiators
Description	This course helps the customers to deploy an efficient and cost killer standardization process, aligned with business policy while increasing product quality.
Objectives	Upon completion of this course you will be able to: - Create Models and Model Versions - Associate Configured context to configured instances - Set Effectivity for Instances - Create Manufacturing Assemblies along with their scope - Use Assembly Assignment Assistant - Create Manufacturing Plans - Create Change Requests - Work Under Change Action to execute a Design Modification
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Variant Management, Engineering BOM Management in ENOVIA.
Available Online	Yes

Practice CATIA 3D Annotation Insight	
Course Code	CAT-en-LFT-F-15-211
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Design, Quality and other such departments where interrogating and annotating the 3D model is a frequent or occasional requirement.
Description	This module teaches how to use the 3D Annotation Insight app to review and filter 3D annotations information contained within part and assembly documents. Students will learn how to hide / show annotations and captures, use the dimensioning and tolerancing annotations to enhance understanding and improve the decision making.
Objectives	Upon completion of this module you will be able to: - Access and visualize the view, capture and annotation review features - Query and filter 3D annotations - Show/Hide individual as well as all annotations of a given type - Display FTA captures - Remove the FTA clipping plane of a capture - Filter 3D annotations
Prerequisites	Students attending this learning module should have taken the Explore the Collaborative Business Innovator Role module and should be familiar with the Windows Operating System.

Practice CATIA 3D Annotation Insight	
Available Online	Yes

Practice ENOVIA Artwork Connector	
Course Code	ENOV-en-ARCO-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2.58 hours
Course Material	
Level	Fundamental
Audience	Graphic Designers and Project Managers
Description	Learn how the Adobe Illustrator plug-in provides capabilities to collaborate, access, and store final artwork to the 3DEXPERIENCE platform. Also, learn how to synchronize in one click the artwork text boxes with the copy content stored in the 3DEXPERIENCE platform with pre-tagged fields in the artwork file.
Objectives	Upon completion of this module, you will be able to: - Install and set-up the connector - List the operating systems supported by the connector - Search for a POA, access the artwork assembly, map, sync , check-in and other critical functions using the Artwork Assembly panel - Create, access and manage templates in the platform using the Artwork Template panel - Assign a GS1 artwork element type to the text areas using the Type Assignment panel
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. Additionally they should possess knowledge of Adobe Illustrator. - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Artwork Coordinator and Copy Author & Graphic Designer.

Practice ENOVIA Artwork Connector	
Available Online	Yes

Practice ENOVIA Change Action Management	
Course Code	ENOV-en-NCHA-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	5.5 hours
Course Material	
Level	Fundamental
Audience	Change Initiators, Design Engineers and Product Managers
Description	This module will teach you how to use the ENOVIA Change Action Management app to manage the engineering change process. You will learn how to create change actions and add Proposed changes to it. You will also learn to work with change actions and view the Realized changes to complete the change process.
Objectives	Upon completion of this module, you will be able to: - Initiate a Change Action - Add Proposed Changes to a Change Action - Work Under Change Action to execute a Design Modification - View the Realized Changes - Review and Approve the Design changes
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator and Explore the Collaborative Industry Innovator modules.
Available Online	Yes

Practice ENOVIA Design Review	
Course Code	ENOV-en-REEV-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6.5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will teach you how to create different slides for various positions of an assembly to create exploded views. You will also learn how to create sections and measures, and export them as parts or drawings.You will also learn how to compare 3D objects and how to create multi-context reviews.
Objectives	Upon completion of this module you will be able to: - Create a design review and add markups to it - Create slides and add markers - Create and export sections and measures - Compare 3D Objects and 2D Drawings - Create multi-context reviews
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Engineering Release	
Course Code	ENOV-en-ENXENG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Release Engineers
Description	This module will teach you to analyze the engineering items and create a new engineering definition using the ENOVIA Engineering Release widget. You will play the role of a Product Release Engineer in building a new engineering definition from early definition to final validation in collaboration with engineering ecosystem.
Objectives	Upon completion of this module, you will be able to: - View and Open Engineering Items - Evaluate the geometry in 3DPlay - Explore revision history - Create a new Engineering definition - Set the re-use and duplicate components - Set the Part Number and update its quantity - Add and review the design specification document - Assign the design responsibilities - Release the Engineering definition
Prerequisites	Knowledge: Students attending this course should have completed the Explore the Business Innovator module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Product Release Engineer and Mechanical Designer.
Available Online	Yes

Practice ENOVIA IP Classification	
Course Code	ENOV-en-PACL-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4.50 hours
Course Material	
Level	Fundamental
Audience	Classification Managers
Description	This module will teach you how to use the IP Classification app to improve reuse and reduce costs through secure content classification during the development process.
Objectives	Upon completion of this module, you will be able to: - Manage general libraries and their related hierarchies - Create and manage attribute groups - Classify the library objects using IP Classify and Reuse widget
Prerequisites	Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role, Explore the Collaborative Industry Innovator Role and Explore the Classification Manager Role modules. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Classification Manager.
Available Online	Yes

Practice ENOVIA IP Classification	
Course Code	ENOV-en-PACL-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	4.50 hours
Course Material	
Level	Fundamental
Audience	Classification Managers
Description	This module will teach you how to use the IP Classification app to improve reuse and reduce costs through secure content classification during the development process.
Objectives	Upon completion of this module, you will be able to: - Manage general libraries and their related hierarchies - Create and manage attribute groups - Classify the library objects using IP Classify and Reuse widget
Prerequisites	Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role, Explore the Collaborative Industry Innovator Role and Explore the Classification Manager Role modules. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Classification Manager.
Available Online	Yes

Practice ENOVIA Project Execution	
Course Code	ENOV-en-PREX-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2.50 hours
Course Material	
Level	Fundamental
Audience	
Description	This module will teach you how to use the Project Execution app to manage your assigned tasks. You will be able to manage the project schedule, modify the tasks, record the risks and create timesheets.
Objectives	Upon completion of this module, you will be able to: - Manage the project schedule - Record risks for tasks - Create and submit timesheets
Prerequisites	Knowledge: Students attending this course should have completed the Explore the Business Innovator and Explore the Industry Innovator module. Additionally, they should be familiar with the Practice the Project Management module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Project Team Member.
Available Online	Yes

Practice ENOVIA Project Management	
Course Code	ENOV-en-PRPR-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	11 hours
Course Material	
Level	Fundamental
Audience	Project Managers and Project Team Members.
Description	This module will teach you how to create and manage projects, assign project members, create tasks, create bookmark structures and define access rights for managing the documents related to the projects. You will also learn how to create the process flows for the review and approval of tasks, and how to monitor the status of different projects. Additionally, you will learn how to use the Microsoft Project Integration functionality to exchange and view a project's data.
Objectives	Upon completion of this module, you will be able to: - Create programs and projects - Assign members to a project - Add tasks and assign project members to the tasks - Create bookmarks for managing project documents - Create process flow for tasks - Review the status of programs and projects - Exchange and view projects' data using Microsoft Project Integration
Prerequisites	Knowledge: Students attending this course should have completed the Explore the Business Innovator and Explore the Industry Innovator module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Project Manager.

Practice ENOVIA Project Management	
Available Online	Yes

Practice ENOVIA Traceable Requirements Management	
Course Code	ENOV-en-RERE-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	5 hours
Course Material	
Level	Fundamental
Audience	Requirement Managers, Product Managers, Product Architects and Product Engineers.
Description	This is a process-based course, which uses an industrial scenario to teach you how to use ENOVIA Traceable Requirements Management App for capturing, creating and managing the requirements. You will learn how to derive and decompose the requirements, create requirement specifications, associate requirements with models and products and validate the allocation status. You will also learn how to track the requirements using various traceability reports.
Objectives	Upon completion of this course you will be able to: - Capture requirements from MS Word and MS Excel documents - Create requirements and requirement specifications - Allocate requirements to products and models - Create test cases and use cases - Create revision and multiple versions of requirements - Generate traceability reports
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform

Practice ENOVIA Traceable Requirements Management	
	course and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

Practice ENOVIA Traceable Requirements Management – Added Exercise	
Course Code	ENOV-en-RERE-X-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4.50 hours
Course Material	
Level	Exercise
Audience	Requirements Engineer
Description	This module provides you with exercises for additional practice on the ENOVIA Traceable Requirements Management app. The exercises have been created based on Industry practices. You will practice creating requirements and specification structures. You will also learn how to allocate requirements to products and models and generate traceability reports for them.
Objectives	Upon completion of this module you will be able to: - Capture requirements from MS Word and MS Excel documents - Create requirements and requirement specifications - Allocate requirements to products and models - Create test cases and use cases - Create revision and multiple versions of requirements - Generate traceability reports
Prerequisites	Students attending this learning module should be familiar with ENOVIA Traceable Requirements Management.
Available Online	Yes

Practice ENOVIA Variant Management: Product Manager	
Course Code	ENOV-en-VAMAPDM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	3.50 hours
Course Material	
Level	Fundamental
Audience	Product Managers
Description	This module will teach you how to use the Variant Management app for creating and managing product configurations.
Objectives	Upon completion of this module, you will be able to: - Create product structures - Define product portfolios - Create features and rules - Create product configurations
Prerequisites	Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role, Explore the Collaborative Industry Innovator Role and Explore the Product Manager Role modules. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Product Manager.
Available Online	Yes

Stimulate open innovation across your ecosystem	
Available Release	3DEXPERIENCE R2021x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will understand the keys points to allow you unleashing open innovation inside your company and ensuring seamless collaboration across all departments
Objectives	Change to cross discipline to cross solution strategy - Master how to gather talents, ideas, solutions and data - Comprehend cross-discipline, end-to-end continuity with 3DEXPERIENCE platform - Managing open innovation inside companies through all departments - Continuous Value Creation Framework - Ideations experiences (My3DEXPERIENCE, 3DSketch, 3DStory)
Prerequisites	
Available Online	Yes

Understand 3DEXPERIENCE Platform for your business transformation	
Course Code	CRB-en-UPBT-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	0.47 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will understand how the Industry Renaissance is shaking all sectors of society with new ways of learning, producing and doing business.
Objectives	Understand 3DEXPERIENCE Platform as a business transformation enabler for all industries - Understand the main challenges organizations are facing in the context of industry renaissance. - Understand how the 3DEXPERIENCE platform tie together products, services and their context of use
Prerequisites	
Available Online	Yes

Understand Lean Fundamentals	
Available Release	3DEXPERIENCE R2021x
Duration	3.50 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the fundamentals of lean concepts to achieve operational practices transformation.
Objectives	Learn Lean fundamentals and how to successfully articulate Lean tools.
Prerequisites	
Available Online	Yes

Understand Lean Transformation Methodology	
Available Release	3DEXPERIENCE R2021x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the DMAIC (Define, Measure, Analyze, Improve, Control) lean transformation methodology.
Objectives	Upon completion of this learning module, you will understand how to lead and deploy DMAIC methodology.
Prerequisites	
Available Online	Yes

What's New for Classification Managers	
Course Code	ENOV-en-WCCM-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	0.50 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the enhancements and new functionalities in the Classification Manager role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Classification Manager role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Classification Manager role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Industry Innovation	
Course Code	ENOV-en-WCSV-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	1.5 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the enhancements and new functionalities in the Industry Innovation role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Industry Innovation role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Industry Innovation role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Product Architects	
Course Code	ENOV-en-WPDA-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE Platform Users
Description	This course introduces you to the enhancements and new functionalities in the Product Architect role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Product Architect role - Put in practice the enhancements that you have learnt to apply them on the operations that you perform under this role.
Prerequisites	Students attending this course must be familiar with the Product Architect's role in the 3DEXPERIENCE platform 2018x release.
Available Online	Yes

What's New for Product Engineers	
Course Code	ENOV-en-WPDE-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the enhancements and new functionalities in the Product Engineer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Product Engineer role - Put in practice the enhancements that you have learnt to apply them on the operations that you perform under this role
Prerequisites	Students attending this course must be familiar with the Product Engineer's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Product Managers	
Course Code	ENOV-en-WPDM-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE Platform Users
Description	This course introduces you to the enhancements and new functionalities in the Product Manager role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Product Manager role - Put in practice the enhancements that you have learnt to apply them on the operations that you perform under this role
Prerequisites	Students attending this course must be familiar with the Product Manager's role in the 3DEXPERIENCE platform 2018x release.
Available Online	Yes

What's New for Project Managers	
Course Code	ENOV-en-WDPM-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	1.5 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE Platform Users
Description	This course introduces you to the enhancements and new functionalities in the Project Manager role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Project Manager role - Put in practice the enhancements that you have learned to apply them to the operations that you perform under this role
Prerequisites	Students attending this course must be familiar with the Project Manager's role in the 3DEXPERIENCE platform 2018x release.
Available Online	Yes

What's New for Project Team Members	
Course Code	ENOV-en-WDPJ-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	1 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the enhancements and new functionalities in the Project Team Member role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Project Team Member role - Put in practice the enhancements that you have learned to apply them on the operations that you perform under this role
Prerequisites	Students attending this course must be familiar with the Project Team Member's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Requirements Managers	
Course Code	ENOV-en-WTRM-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	1 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the enhancements and new functionalities in the Requirements Manager role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Requirements Manager role - Put in practice the enhancements that you have learned to apply them on the operations that you perform under this role
Prerequisites	Students attending this course must be familiar with the Requirements Manager's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

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DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

Course Catalog

MPLX-OC 19x-21x

14 January 2021

3DEXPERIENCE®

Learning Experience | Course Catalog

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Learning Experience | Course Catalog

Learning Experiences for Manufacturing and Production - MPLX-OC	1
3DEXPERIENCE Business Innovation Essentials	2
3DEXPERIENCE Business Innovation Essentials for CAD Users	3
CATIA 2D Layout for 3D Design Essentials	5
CATIA Assembly Design Expert	6
CATIA Engineering Templates Reuse Essentials	7
CATIA Generative Wireframe and Surface Essentials	8
CATIA Mechanical Design Expert	9
CATIA Mechanical Design Fundamentals	11
CATIA Mechanical Systems Design Essentials	13
CATIA Natural Shape Essentials	14
CATIA Part Design Expert	15
CATIA Part Design Fundamentals	17
Collaborate from Design to Manufacturing in Additive Manufacturing	18
DELMIA Equipment Allocation Essentials	19
DELMIA Milling Machining Essentials	20
DELMIA Multi-Axis Machining Essentials	21
DELMIA Plant Layout Design Essentials	23
DELMIA Prismatic Machining Fundamentals	24
DELMIA V5 to 3DEXPERIENCE Machining Transition	25
Discover the Digital Factory	27
ENOVIA Classify and Reuse Essentials	28
ENOVIA Collaboration and Approvals Essentials	29
ENOVIA Collaboration for Microsoft Essentials	31
ENOVIA Design Review Essentials	32
Explore the Factory Simulation Engineer Role	33
Explore the Lean Team Player Role for Team Meeting Animation	34
Explore the Lean Team Player Role for Transformation	35
Explore the Manufacturing Engineer Role	36
Explore the Manufacturing Items Engineer Role	37
Explore the NC Mold and Die Programmer Role	38
Explore the NC Prismatic and Turning Programmer Role	40

Explore the NC Prismatic Machine Programmer Role	42
Explore the Powder Bed Machine Programmer Role (PBF)	43
Explore the Process Engineer Role for Complex Assembly	44
Lean Management at the Heart of the Industry Renaissance	45
Master CATIA Assembly Design	46
Master CATIA Drafting	47
Master CATIA Part Design	48
Orchestrate Process Planning in the Digital Factory	49
Perform as Work Instructions Designer (WKD)	50
Portfolio and Product Planning	52
Practice CATIA 2D Layout for 3D Design	53
Practice CATIA Assembly Design - Added Exercises	54
Practice CATIA Engineering Templates Reuse	55
Practice CATIA Generative Wireframe and Surface	56
Practice CATIA Natural Shape	57
Practice CATIA Part Design	58
Practice CATIA Part Design - Added Exercises	59
Practice CATIA Quality Rules Reuse	60
Practice CATIA Surface Design - Added Exercises	61
Practice DELMIA Machining Validation	62
Practice DELMIA Manufacturing Context Builder	63
Practice DELMIA Milling Machining	64
Practice DELMIA Multi-Axis Machining	65
Practice DELMIA Planning Structure	66
Practice DELMIA Prismatic and Turning Machining	67
Practice DELMIA Prismatic Machining	69
Practice ENOVIA Design Review	70
Practice ENOVIA Project Execution	71
Transition to the 3DEXPERIENCE platform for Mechanical Designers	72
Transition to the 3DEXPERIENCE platform for Mechanical Designers	74
Understand Layout Planning	76
Understand Lean Fundamentals	77
Understand Lean Transformation Methodology	78
Understand Material Flow	79
Understand Process Planning	80
Use DELMIA Equipment Allocation (MLB)	81

Use DELMIA Manufactured Item Definition (PRD)	82
Use DELMIA Process Planning (MSD)	83
What's New for 3D Design Manufacturing Engineers	85
What's New for Industry Innovation	86
What's New for Manufacturing Engineers	87
What's New for Process Planners	88
What's New for Shape Designers	89

Learning Experiences for Manufacturing and Production - MPLX-OC

3DEXPERIENCE Business Innovation Essentials	
Course Code	CRB-en-IFW-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Understand the 3DEXPERIENCE interface - Connect to the 3DEXPERIENCE platform - Access your Dashboard - Use the 6WTags for searching content - Share various documents with other users through - Collaborate using capabilities of the 3DEXPERIENCE platform
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Course Code	CRB-en-IFWC-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	5.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform. You will also learn how to design a model using CATIA V5 or SOLIDWORKS launched from the 3DEXPERIENCE platform. In addition, you will learn about configuring the 3DEXPERIENCE Platform Management dashboard.
Objectives	Upon completion of this course you will be able to: - - Access the 3DEXPERIENCE Platform Management dashboard - - Configure the 3DEXPERIENCE Platform Management dashboard - - Understand the 3DEXPERIENCE interface - - Connect to the 3DEXPERIENCE platform - - Access your Dashboard - - Access your social communities on 3DSwym - - Share various documents with other users - - Collaborate using capabilities of 3DEXPERIENCE platform - - Design using CATIA V5 Connector or SOLIDWORKS Connector

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

CATIA 2D Layout for 3D Design Essentials	
Course Code	CAT-en-LO1-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course you will learn how to create 2D layout views in a 3D model and use them to design the part in the 3D environment.
Objectives	Upon completion of this course you will be able to: - Create 2D layout views in a 3D environment - Export 2D geometry into a 3D environment - Create drawings using the 2D layout views
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with CATIA Part and Assembly Design.
Available Online	Yes

CATIA Assembly Design Expert	
Course Code	CAT-en-ASD-A-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	11.5 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will introduce you to complex assembly modeling techniques. You will learn how to design a product architecture and manage complex assembly structures. You will also learn how to use advanced features to design parts within an assembly environment and how to analyze interferences.
Objectives	Upon completion of this course you will be able to: - Analyze interferences - Analyze component links and relations - Design complex products - Design new parts within a product - Manage complex product structures
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and be familiar with CATIA Part Design and Assembly Design fundamentals.
Available Online	Yes

CATIA Engineering Templates Reuse Essentials	
Course Code	CAT-en-KT1-F-15-201
Available Releases	3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	0.50 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course, you will learn how to create customized features by reusing the power copy and user feature.
Objectives	Upon completion of this course you will be able to: - Create customized features using templates.
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Generative Wireframe and Surface Essentials	
Course Code	CAT-en-GS1-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	20 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This course will teach you how to use the Generative Wireframe and Surface app to create curves and surfaces. You will learn how to assemble, re-limit and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this course you will be able to: - Create curves and improve the quality of the imported wireframes - Create surfaces based on the wireframe geometries - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - Analyze the surface quality and heal the defects
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course.
Available Online	Yes

CATIA Mechanical Design Expert	
Course Code	CAT-en-3DE-A-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	32 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will introduce you to complex modeling techniques. You will use advanced sketch-based and surface-based features to design parts and learn how to improve productivity by reusing existing features. You will also see how to design a product architecture and manage complex assembly structures, using advanced features to design parts within an assembly environment. Finally, you will learn how to analyze interferences and then create an assembly layout using advanced tools to dress-up and annotate the final drawing.
Objectives	Upon completion of this course you will be able to: - Create and manage complex parts - Create fully parameterized models - Create re-usable features - Analyze interferences, component links and relations - Manage complex product structures - Design new parts within a product - Create large assembly layouts with tables and bill of materials
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course

CATIA Mechanical Design Expert	
	and in addition, they should be familiar with the Mechanical Design Fundamentals.
Available Online	Yes

CATIA Mechanical Design Fundamentals	
Course Code	CAT-en-3DF-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	32 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This course will teach you how to create simple parts, assemblies and drawings. You will learn how to use different feature-based tools to build, review and modify a model. You will also learn how to create and analyze assemblies and how to produce a drawing with different views. Finally, you will learn how to dimension the drawing and annotate the views.
Objectives	Upon completion of this course you will be able to: - Create a new PLM object - Create and constrain 2D sketches - Complete a 3D model using features - Review and edit the features - Create parameters and formulas in the 3D model - Create a new product and add components to it - Move the components within a product by positioning them using assembly constraints - Create simple projection views and section views of 3D parts - Position the views on a drawing sheet - Add dimensions and annotations to the views - Finalize the drawing sheet by adding borders and title blocks

CATIA Mechanical Design Fundamentals	
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Mechanical Systems Design Essentials	
Course Code	CAT-en-KIM-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create the architecture of a mechanism using simple wireframe elements and then complete the mechanism by adding 3D representations. You will also learn how to create a more complex mechanism using existing mechanisms, and finally how to animate the result.
Objectives	Upon completion of this course you will be able to: - Create a new mechanism - Manage the mechanism behavior - Include alternative representations to complete the mechanism - Create a new macro mechanism from existing sub-mechanisms - Animate the mechanism
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with the Assembly Design app.
Available Online	Yes

CATIA Natural Shape Essentials	
Course Code	CAT-en-LSP-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Conceptual Designers, Stylists, Simulation and Manufacturing Engineers
Description	This course will introduce you to the CATIA Natural Shape app and its unique working environment. You will learn how to use the app to conceptualize, create and modify mechanical parts and shapes. The course features short-duration demos followed by exercises which will allow you to practice. You will also learn the related theory, tips and recommendations while performing the exercises.
Objectives	Upon completion of this course you will be able to: - Create a conceptual design directly in 3D - Use the hybrid design environment to conceptualize your designs - Work on the structure to create the 3D parts - Navigate through the structure and position the parts - Reuse the existing designs in the 3D models
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Part Design Expert	
Course Code	CAT-en-PDG-A-V5R31
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , V5-6R2012 , V5-6R2013 , V5-6R2014 , V5-6R2015 , V5-6R2016 , V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2021 , V5R19 , V5R20 , V5R21
Duration	12.17 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will teach you how to design complex 3D mechanical parts using the Boolean approach. You will learn how to work in a Multi-Model Environment and maintain links between 3D models. You will also learn to analyze designs in order to optimize them.
Objectives	Upon completion of this course you will be able to: - Create a part using 3D reference elements - Create advanced Sketch-Based Features - Apply advanced Dress-Up Features - Design 3D parts using Boolean operations - Work in a Multi-Model Environment and share your designs with others - Analyze parts and optimize them - Annotate the parts for review
Prerequisites	Student attending this course must be familiar with CATIA V5 fundamentals and must have completed the CATIA Sketcher and CATIA Part Design Fundamentals courses.

CATIA Part Design Expert	
Available Online	Yes

CATIA Part Design Fundamentals	
Course Code	CAT-en-PDG-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This course will teach you how to create a 3D model using the CATIA Part Design app. You will learn how to use different feature-based tools to build a 3D model. You will also learn how to add parameters, then review, measure and modify a model.
Objectives	Upon completion of this course you will be able to: - Create new parts - Create and constrain 2D sketches - Complete a 3D model using basic features - Parameterize a model - Review and measure a model - Reuse existing features
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

Collaborate from Design to Manufacturing in Additive Manufacturing	
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	2.75 hours
Course Material	
Level	Fundamental
Audience	Additive Manufacturing Designer, Additive Manufacturing Programmer,Mechanical Designers
Description	In this module, you will learn how to apply the end-to-end process from the design optimization through to the virtual print of the part.
Objectives	Upon completion of this module, you will be able to: - Design a part for additive manufacturing - Setup the manufacturing built for additive manufacturing process - Simulate the manufacturing setup for virtual printing
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They must be familiar with the CATIA Part Design, and the CATIA Imagine and Shape apps. - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Functional Driven Generative Designer, Powder Bed Programmer, Additive Manufacturing Researcher and Reverse Shape Optimizer.
Available Online	Yes

DELMIA Equipment Allocation Essentials	
Course Code	DEL-en-MLB-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Process Planners, Resource Planners
Description	This course will teach you how to create and manage resource structure. You will learn how to assign an operation to a resource by using different assignment techniques. You will also learn how to balance operations between two or more working resources. Finally, you will learn how to simulate a plant to verify its feasibility.
Objectives	Upon completion of this course you will be able to: - Manage the scope between the resources and the systems - Assign resources to operations - Plan for capacity using the resource utilization Gantt chart - Define the working position - Validate the resource plant
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. Additionally, they should be familiar with defining process planning in DELMIA.
Available Online	Yes

DELMIA Milling Machining Essentials	
Course Code	DEL-en-SMG-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , V6R2012 , V6R2012x , V6R2013 , V6R2013x
Duration	10.7 hours
Course Material	
Level	Fundamental
Audience	Numerical Control (NC) Programmers
Description	This course will teach you how to define and manage NC programs dedicated to machining parts that are designed with surface or solid geometry. You will learn how to define the 3-Axis Roughing, Semi-finishing and Finishing operations. You will also learn how to improve productivity in mould and die machining using the various functionalities of 3-Axis Surface Machining.
Objectives	Upon completion of this course you will be able to: - Define 3-Axis Surface Machining operations - Define a Rework Area - Create Machining Features - Analyze and modify the Tool path
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course. Additionally, they should be familiar with the fundamentals of machining.
Available Online	Yes

DELMIA Multi-Axis Machining Essentials	
Course Code	DEL-en-MMG-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	8.7 hours
Course Material	
Level	Fundamental
Audience	Numerical Control (NC) Programmers
Description	This course will teach you how to use the common functionalities available in the machining apps of DELMIA. You will learn how to define and manage NC programs dedicated to machining parts that are designed with surface or solid geometry. This course also teaches you how to generate high quality NC programs for machining complex 3D parts and free-form shapes using advanced machining techniques. You will learn how to perform 2.5 to 5-Axis machining operations.
Objectives	Upon completion of this course you will be able to: - Define the infrastructure required for machining - Define 3-Axis surface machining operations - Define multi-axis finishing and contouring operations - Define multi-pockets machining operations - Define multi-axis helix machining operation
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course. Additionally, they should be familiar with the fundamentals of machining

DELMIA Multi-Axis Machining Essentials	
Available Online	Yes

DELMIA Plant Layout Design Essentials	
Course Code	DEL-en-MRL-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	5.5 hours
Course Material	
Level	Fundamental
Audience	Plant Layout Designer
Description	In this course you will learn how to use a 2D drawing to quickly realize a 3D layout. You will learn how to select a resource from a catalog of parametric resources. You will also learn how to position the resources in the 3D layout. You will also learn how to move, snap and align the resources.
Objectives	Upon completion of this course you will be able to: - Create a layout design for a manufacturing plant - Define the resource structure - Use the parametric resources from a catalog - Position and manipulate resources in the 3D environment - Define and validate the shop floor layouts
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

DELMIA Prismatic Machining Fundamentals	
Course Code	DEL-en-PMG-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , V6R2012 , V6R2012x , V6R2013 , V6R2013x
Duration	12.8 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This course will teach you how to use the common functionalities available in the machining apps of DELMIA. It will also teach you the fundamentals of creating and simulating a tool path. You will learn how to create tool paths for 2 and 2.5-axis machining operations. You will also learn how to create probes in the simulation object and how to simulate the machines, detect clashes and analyze them.
Objectives	Upon completion of this course you will be able to: - Define the infrastructure required for machining - Create tools and tool assemblies - Define prismatic machining operations - Replay and simulate tool paths - Generate the Numerical Control (NC) output"
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. Additionally, they should be familiar with the fundamentals of machining.
Available Online	Yes

DELMIA V5 to 3DEXPERIENCE Machining Transition	
Course Code	DEL-en-PMGT-F-15-211
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2021x
Duration	12.2 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module will teach you what are the differences between the Machining PPR Structure of CATIA V5 and DELMIA 3DEXPERIENCE and how to migrate the CATIA V5 Machining data to DELMIA 3DEXPERIENCE. You will also learn how to create a PPRContext, assign an NC Machine, insert and mount an NC Machine accessory, and then mount the workpiece. This module will also teach you how to define a tool assembly and its advanced parameters. You will learn how to define a Prismatic Machining Operation, replay the toolpath, and generate the NC Output.
Objectives	Upon completion of this module you will be able to: - Use the DELMIA 3DEXPERIENCE Machining product to define a Machining Process - Create Tools, Holders and Tool Assemblies - Define a Machining Operation - Generate a Numerical Control (NC) Output - Store and retrieve a Machining Process from the 3DEXPERIENCE database - Migrate CATIA V5 Machining objects to DELMIA 3DEXPERIENCE

DELMIA V5 to 3DEXPERIENCE Machining Transition	
Prerequisites	Students attending this course should have completed the Explore the Business Innovator module. Additionally, they must be experienced users of the DELMIA V5 Machining product.
Available Online	Yes

Discover the Digital Factory	
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	0.67 hours
Course Material	
Level	Fundamental
Audience	Manufacturing Engineers
Description	In this module, you will discover why the digital factory is key to coping with the global scale of planning and production that we see in the modern experience economy.
Objectives	Upon completion of this learning module, you will learn: - What digital factory is - How the digital factory works - How digital factory can help keep all stakeholders involved on the same page - How digital factory enables digital continuity to overcome companies challenges
Prerequisites	
Available Online	Yes

ENOVIA Classify and Reuse Essentials	
Course Code	ENOV-en-CLRE-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE Platform Users
Description	This course will teach you how to use the ENOVIA Classify and Reuse App to search and view different types of libraries as well as an objects' hierarchy. You will also learn how to manage the objects using these libraries. Based on a combination of videos, theory and simulations, you can take this course in a self-paced learning mode and is self-sufficient. However, if you want to practice, you will find a master exercise at the end of the course.
Objectives	Upon completion of this course, you will be able to: - Search and view different types of Libraries and their related hierarchy. - Search and view General Classes and Folders.
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Collaboration and Approvals Essentials	
Course Code	ENOV-en-BUPS-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	10 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course will teach you the common functionalities used across all ENOVIA apps, which enable you to manage your content as well as collaborate with other members in a team. You will learn how to create workspaces for managing your business related components, such as folders, members and tasks. You will also learn how to create various workflows using routes, subscribe to your task related events, and report issues for objects. Further, you will learn to create documents and version them, while maintaining a record for all its revisions.
Objectives	Upon completion of this course, you will be able to: - Illustrate the structure of ENOVIA Business Process Services - Create and manage your folders - Create workflows - Identify and manage your assigned tasks - Subscribe to various objects and events - Report and resolve issues in objects - Create, track and organize your documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.

ENOVIA Collaboration and Approvals Essentials	
Available Online	Yes

ENOVIA Collaboration for Microsoft Essentials	
Course Code	ENOV-en-COMI-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Project Managers, Design Engineers, Reviewers and Technical Writers.
Description	In this course, you will learn how to use the ENOVIA Collaboration for Microsoft app to access and manage the documents in the ENOVIA database using the Microsoft applications.
Objectives	Upon completion of this course you will be able to: - Access documents from the ENOVIA database using Microsoft applications - Create, manage and synchronize documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Design Review Essentials	
Course Code	ENOV-en-REEV-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	6.5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create different slides for various positions of an assembly to create exploded views. You will also learn how to create sections and measures, and export them as parts or drawings.You will also learn how to compare 3D objects and how to create multi-context reviews.
Objectives	Upon completion of this course you will be able to: - Create a design review and add markups to it - Create slides and add markers - Create and export sections and measures - Compare 3D Objects and 2D Drawings - Create multi-context reviews
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

Explore the Factory Simulation Engineer Role	
Course Code	DEL-en-EFS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Plant Layout Designers, Manufacturing Engineers, Factory Simulation Engineers.
Description	In this module, you will learn how to validate the behavior of a working station, a production line and a complete plant. You will also simulate production flow with rework and repair configuration. Also, you will learn how to identify and eliminate bottlenecks.
Objectives	Upon completion of this module, you will be able to: - generate a Material flow and resource simulation with discrete event simulation - manage resource pool and walk pathway for workers - define rework, failure and repair model - manage product routing and buffer capacities - analyze performance statistics - generate and publish reports - identify and remove bottlenecks
Prerequisites	- Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Factory Simulation Engineer.
Available Online	Yes

Explore the Lean Team Player Role for Team Meeting Animation	
Course Code	DEL-en-LTR-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.92 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn how to use 3DLean to establish team routines and boost cross-team collaboration.
Objectives	Upon completion of this learning module, you will be able to: - Create and manage 3DLean Board - Prepare and organize Leangets - Create and manage actions - Create and manage problems - Prepare and launch a Flash 5' Meeting
Prerequisites	
Available Online	Yes

Explore the Lean Team Player Role for Transformation	
Course Code	DEL-en-LTRT-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.58 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn how to lead and implement a Digital Lean Transformation with 3D Lean.
Objectives	Upon completion of this learning module, you will be able to: - Lead end to end Digital Lean Transformation - Apply transformation methodology and project management tools - Apply DMAIC (Define, Measure, Analyze, Improve, Control) method using the 3DLean app
Prerequisites	
Available Online	Yes

Explore the Manufacturing Engineer Role	
Course Code	DEL-en-PST-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.50 hours
Course Material	
Level	Fundamental
Audience	Process Engineer, Manufacturing Engineer
Description	This module will teach you how to define and manage the manufacturing item structure, routings and capable resource structure using DELMIA Manufacturing Engineer Role.
Objectives	Upon completion of this module, you will be able to: - Manage the manufacturing item structure - Define the operations in process plan - Associate MBOM items to operations - Manage the capable resource structure
Prerequisites	Students attending this module needs to be familiar with
Available Online	Yes

Explore the Manufacturing Items Engineer Role	
Course Code	DEL-en-MFN-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.75 hours
Course Material	
Level	Fundamental
Audience	Manufacturing Engineers
Description	This learning module provides you a guided and systematic approach to learn about the functionalities available in the Manufacturing Items Engineer role of the 3DEXPERIENCE platform. You will also learn how to create, modify and update a manufacturing items structure using the web-based application.
Objectives	In this learning module, you will learn how to: - Explore and visualize products within a web-browser - Create and modify manufacturing items structures - Create revisions - Create change actions - Track changes and update manufacturing bill of materials
Prerequisites	
Available Online	Yes

Explore the NC Mold and Die Programmer Role	
Course Code	DEL-en-NMD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.50 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module gives you an overview of the 3DEXPERIENCE NC Milling Machining Programmer role that enables you to create milling operations to machine molds and die parts. You will learn to use various 3-axis machining strategies to produce a part. It will also teach you to compute remaining material on a machined part and define required rework operations to complete the machining of the part.
Objectives	Upon completion of this module, you will be able to: - Define the roughing operation - Compute rework areas and define semi-finishing operations - Convert 3 axis tool path into 5 axis - Define finishing operations
Prerequisites	- Knowledge: Students attending this course should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with the fundamentals of machining products using the 3DEXPERIENCE platform. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, NC Milling Machining Programmer and NC Prismatic Programmer.

Explore the NC Mold and Die Programmer Role	
Available Online	Yes

Explore the NC Prismatic and Turning Programmer Role	
Course Code	DEL-en-NPT-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module gives you an overview of the 3DEXPERIENCE NC Prismatic & Mill-Turn Machine Programmer role that enables you to create a mill-turn machining operation and simulate the tool path. You will learn how to simulate the machines, detect clashes and analyze them. It will also teach you to generate the NC output for an NC program.
Objectives	Upon completion of this module, you will be able to: - Define the infrastructure required for machining - Create tools and tool assemblies - Define turning operations - Replay and simulate tool paths - Simulate a machine using a simulation object - Generate the Numerical Control (NC) output
Prerequisites	- Knowledge: Students attending this course should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with the fundamentals of machining. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and NC Prismatic & Mill-Turn Programmer.

Explore the NC Prismatic and Turning Programmer Role	
Available Online	Yes

Explore the NC Prismatic Machine Programmer Role	
Course Code	DEL-en-NPM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	3 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	In this module gives you an overview of the 3DEXPERIENCE NC Prismatic Machine Programmer Role that enables you to create a machining operation and simulate the tool path. You will learn how to simulate the machines, detect clashes and analyze them. It will also teach you to generate the NC output for an NC program.
Objectives	Upon completion of this module, you will be able to: - Define the infrastructure required for machining - Create tools and tool assemblies - Define prismatic machining operations - Replay and simulate tool paths - Simulate a machine using a simulation object - Generate the Numerical Control (NC) output
Prerequisites	- Knowledge: Students attending this course should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and NC Prismatic Machine Programmer.
Available Online	Yes

Explore the Powder Bed Machine Programmer Role (PBF)	
Course Code	DEL-en-PBF-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	3D Printer Programmers. Product Designers
Description	In this module, you will learn to optimize powder bed fusion manufacturing techniques (infrastructure , scan path , output)
Objectives	Upon completion of this module, you will be able to: - Set up and manage the infrastructure to produce a part - Define and manage the build layout - Generate the support structures - Define and validate the scan path for the part - Export the output
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Powder Bed Programmer.
Available Online	Yes

Explore the Process Engineer Role for Complex Assembly	
Course Code	DEL-en-PPL-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.25 hours
Course Material	
Level	Fundamental
Audience	Process planners, Manufacturing Engineers
Description	In this module, you will learn how to create and manage with 3DEXPERIENCE platform the complete process planning from EBOM to resource allocation of a product in 3D context.
Objectives	Upon completion of this learning module, you will be able to: - Create and manage a MBOM structure - Create and manage a process planning - Assign manufacturing items to operations - Create product flows - Create and manage resources - Assign resources to operations - Position operations on a 3D model - Preview an assembly
Prerequisites	
Available Online	Yes

Lean Management at the Heart of the Industry Renaissance	
Available Release	3DEXPERIENCE R2021x
Duration	0.17 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will discover the future stakes of lean and how the digital lean is a key enabler for the industry renaissance.
Objectives	Raise questions on Industry challenges considering our Planet, People and Profit. See how the combination of Lean and digitization can offer answers.
Prerequisites	
Available Online	Yes

Master CATIA Assembly Design	
Course Code	CAT-en-ASD-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This module will introduce you to complex assembly modeling techniques. You will learn how to design a product architecture and manage complex assembly structures. You will also learn how to use advanced features to design parts within an assembly environment and how to analyze interferences.
Objectives	Upon completion of this module you will be able to: - Analyze interferences - Analyze component links and relations - Design complex products - Design new parts within a product - Manage complex product structures
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with the CATIA Part Design and Assembly Design fundamentals.
Available Online	Yes

Master CATIA Drafting	
Course Code	CAT-en-GDR-A-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Advanced
Audience	Draftsmen
Description	This module will teach you how to manage drawing sheets and views in the Drafting app. You will also learn how to use advanced tools to dress-up, annotate views and customize the Drafting app.
Objectives	Upon completion of this module you will be able to: - Finalize the drawing sheet - Work with large assemblies - Customize the drafting app - Perform administrative tasks - Add Bill of Material
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with Part Design and Assembly Design in CATIA.
Available Online	Yes

Master CATIA Part Design	
Course Code	CAT-en-PDG-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	7 hours
Course Material	
Level	Advanced
Audience	Mechanical and Sheet Metal Designers
Description	This module will introduce you to complex 3D modeling techniques, using advanced sketch-based and surface-based features. You will learn how to manage complex part structures and how to improve productivity by reusing existing features. Finally, you will learn how to use parameters and tables to drive the design of a model.
Objectives	Upon completion of this module you will be able to: - Design parts with complex geometries - Create and manage robust part structures - Create fully parameterized models - Create re-usable features
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with CATIA Part Design fundamentals.
Available Online	Yes

Orchestrate Process Planning in the Digital Factory	
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	0.83 hours
Course Material	
Level	Fundamental
Audience	Process Planners, Manufacturing Planners
Description	In this case study, you will learn how to update an existing process plan, when the design is modified with addition or deletion of a part from the assembly structure. You will also learn, how to modify the work instructions based on the modification of the process plan.
Objectives	In this case study, we will learn how to incorporate the design changes of a product on an existing process plan. We will learn how to update a process when a design part is removed from the product structure.
Prerequisites	Students attending this course should have completed the Perform as Business Innovator and the Perform as Collaborative Industry Innovator courses. Additionally, they should be familiar with defining process planning in DELMIA, the concepts of EBOM, MBOM structure and resources.
Available Online	Yes

Perform as Work Instructions Designer (WKD)	
Course Code	DEL-EN-WKD-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Simulation Engineers, Process Planners and Manufacturing Engineers
Description	The DELMIA Work Instructions app provides a 3D immersive environment that allows us to detail and document any process, from simple assembly prototyping scenarios to complex manufacturing or maintenance processes. In this module, you will validate the product build up and review the stack up of components in operations. You will learn to create textual instructions and 3D annotations to describe a process and steps involved in it. You will learn to complement the textual instructions with electronic documents and images. You will also learn how to review and deliver the work instructions to the team members on the shop floor through a manufacturing execution system, HTML or printed material.
Objectives	After completing this module, you will be able to: - validate the product build up - build the work instructions - create the 3D work instructions - review and enhance the work instructions
Prerequisites	- Knowledge: Students attending this course should have completed the Perform as Business Innovator and the Perform as Collaborative Industry Innovator

Perform as Work Instructions Designer (WKD)	
	modules. Additionally, they should be familiar with defining process planning in DELMIA. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Work Instructions Designer
Available Online	Yes

Portfolio and Product Planning	
Course Code	CRB-en-PPP-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Design Engineers, Product Managers, Change Initiators
Description	This course helps the customers to deploy an efficient and cost killer standardization process, aligned with business policy while increasing product quality.
Objectives	Upon completion of this course you will be able to: - Create Models and Model Versions - Associate Configured context to configured instances - Set Effectivity for Instances - Create Manufacturing Assemblies along with their scope - Use Assembly Assignment Assistant - Create Manufacturing Plans - Create Change Requests - Work Under Change Action to execute a Design Modification
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Variant Management, Engineering BOM Management in ENOVIA.
Available Online	Yes

Practice CATIA 2D Layout for 3D Design	
Course Code	CAT-en-LO1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this module you will learn how to create 2D layout views in a 3D model and use them to design the part in the 3D environment.
Objectives	Upon completion of this module you will be able to: - Create 2D layout views in a 3D environment - Export 2D geometry into a 3D environment - Create drawings using the 2D layout views
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with CATIA Part and Assembly Design.
Available Online	Yes

Practice CATIA Assembly Design - Added Exercises	
Course Code	CAT-en-ASD-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Exercise
Audience	Mechanical Designers
Description	This module provides you with exercises for additional practice on the 3DEXPERIENCE Assembly Design app. The exercises have been created based on Industry practices. You will practice creating assembly structure, positioning components, constraining components using engineering connections and modifying parts in assembly context.
Objectives	Upon completion of this module you will be able to: - Practice your Assembly Design skills using selected scenarios - Apply the recommended methodology in various scenarios
Prerequisites	Students attending this learning module should be familiar with Part Design and Assembly Design.
Available Online	Yes

Practice CATIA Engineering Templates Reuse	
Course Code	CAT-en-KT1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.50 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course, you will learn how to create customized features by reusing the power copy and user feature.
Objectives	Upon completion of this course you will be able to: - Create customized features using templates.
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Generative Wireframe and Surface	
Course Code	CAT-en-GS1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	20 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This module will teach you how to use the Generative Wireframe and Surface app to create curves and surfaces. You will learn how to assemble, re-limit and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this module, you will be able to: - Create curves and improve the quality of the imported wireframes - Create surfaces based on the wireframe geometries - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - Analyze the surface quality and heal the defects
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Natural Shape	
Course Code	CAT-en-LSP-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Conceptual Designers, Stylists, Simulation and Manufacturing Engineers
Description	This module will introduce you to the CATIA Natural Shape app and its unique working environment. You will learn how to use the app to conceptualize, create and modify mechanical parts and shapes. The course features short-duration demos followed by exercises which will allow you to practice. You will also learn the related theory, tips and recommendations while performing the exercises.
Objectives	Upon completion of this module you will be able to: - Create a conceptual design directly in 3D - Use the hybrid design environment to conceptualize your designs - Work on the structure to create the 3D parts - Navigate through the structure and position the parts - Reuse the existing designs in the 3D models
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Part Design	
Course Code	CAT-en-PDG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This module will teach you how to create a 3D model using the CATIA Part Design app. You will learn how to use different feature-based tools to build a 3D model. You will also learn how to add parameters, then review, measure and modify a model.
Objectives	Upon completion of this module you will be able to: - Create new parts - Create and constrain 2D sketches - Complete a 3D model using basic features - Parameterize a model - Review and measure a model - Reuse existing features
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Part Design - Added Exercises	
Course Code	CAT-en-PDG-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	13 hours
Course Material	
Level	Exercise
Audience	Mechanical Designers
Description	This module provides you with an exercise database for additional practice on the3DEXPERIENCE Part Design app. The exercises have been arranged in increasing order of difficulty. The fundamental exercises will check and refresh your basic Part Design skills before you move on to more complex topics. The advanced exercises will make you practice the recommended design methodologies using realistic parts.
Objectives	Upon completion of this module you will be able to: - Apply your Mechanical skills in selected scenarios. - Employ the recommended methodology in various situations and efficiently use the Mechanical workbenches.
Prerequisites	Students attending this learning module should be familiar with CATIA Part Design.
Available Online	Yes

Practice CATIA Quality Rules Reuse	
Course Code	CAT-en-KE1-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will show you how to share corporate knowledge stored in the rule bases and leverage it across the company to ensure design compliance with the established standards. You will also learn to create reports and manage their template.
Objectives	Upon completion of this module you will be able to: - Automate the design modifications - Analyze and create reports
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Surface Design - Added Exercises	
Course Code	CAT-en-GS1-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Exercise
Audience	Mechanical Surface Designers
Description	This module provides you with an exercise database for additional practice on 3DEXPERIENCE Surface Design. The exercises have been created based on Industry practices. You will get to practice skills such as creating wireframes and surfaces, creating surfacic shells and solid parts, and working with multiple parts that are referencing a common part.
Objectives	These exercises will allow you to put your Shape skills into practice on selected scenarios. - You will apply the recommended methodology in various situations. - You will enhance your understanding and usage of the Shape apps.
Prerequisites	Students attending this course should be familiar with Surface Design.
Available Online	Yes

Practice DELMIA Machining Validation	
Course Code	DEL-en-MSG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module will teach you how to simulate an NC machine using tool path and NC code. You will learn how to create probes in the simulation object environment and use them to detect the clashes that occur during a machine simulation. You will also learn how to perform a fault analysis to detect, analyze and eliminate the clashes.
Objectives	Upon completion of this module you will be able to: - Create a simulation object - Simulate the machine using tool path and NC code - Create Probes to detect clashes during the machine simulation - Analyze and eliminate the clashes
Prerequisites	Students attending this course should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining and the DELMIA Prismatic Machining. ap3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, NC Prismatic Machine Programmer and NC MachineCode Validation Specialist.p.
Available Online	Yes

Practice DELMIA Manufacturing Context Builder	
Course Code	DEL-en-MSB-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	5.80 hours
Course Material	
Level	Fundamental
Audience	Process Planners
Description	In this module, you will learn to explore the PPR context. You will also learn to manage the documents in the spreadsheet view. You will learn to use the Compare command to compare structures of different versions of a PPR object like products, manufactured items, resources, systems or operations.
Objectives	Upon completion of this module you will be able to: - Explore the PPR context - Manage the documents in the spreadsheet view - Manage the PPR Smart Completion - Navigate Relations on a Product - Compare structures of different versions of a PPR object
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of Process Planning. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Process Engineer.
Available Online	Yes

Practice DELMIA Milling Machining	
Course Code	DEL-en-SMG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	10.67 hours
Course Material	
Level	Fundamental
Audience	Numerical Control (NC) Programmers
Description	This course will teach you how to define and manage NC programs dedicated to machining parts that are designed with surface or solid geometry. You will learn how to define the 3-Axis Roughing, Semi-finishing and Finishing operations. You will also learn how to improve productivity in mould and die machining using the various functionalities of 3-Axis Surface Machining.
Objectives	Upon completion of this course you will be able to: - Define 3-Axis Surface Machining operations - Define a Rework Area - Create Machining Features - Analyze and modify the Tool path
Prerequisites	Students attending this course should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining and the DELMIA Prismatic Machining app.
Available Online	Yes

Practice DELMIA Multi-Axis Machining	
Course Code	DEL-en-MMG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8.67 hours
Course Material	
Level	Fundamental
Audience	Numerical Control (NC) Programmers
Description	This module will teach you how to use the common functionalities available in the machining apps of DELMIA. You will learn how to define and manage NC programs dedicated to machining parts that are designed with surface or solid geometry. This module also teaches you how to generate high quality NC programs for machining complex 3D parts and free-form shapes using advanced machining techniques. You will learn how to perform 2.5 to 5-Axis machining operations.
Objectives	Upon completion of this module you will be able to: - Define the infrastructure required for machining - Define 3-Axis surface machining operations - Define multi-axis finishing and contouring operations - Define multi-pockets machining operations - Define multi-axis helix machining operation
Prerequisites	Students attending this module should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining and the DELMIA Prismatic Machining app.
Available Online	Yes

Practice DELMIA Planning Structure	
Course Code	DEL-en-PRR-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8.17 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers and Process Planners
Description	This module will teach you how to define and manage the manufactured product structure, routings and resource allocation in one single and simple interface. You will learn how to perform line balancing across stations and lines. You will also learn how to detect issues early in the process plan using 3D validation.
Objectives	Upon completion of this course you will be able to: - Define a manufacturing bill of materials - Reuse the manufacturing bill of materials template - Associate the manufacturing bill of materials to a product structure - Create assemblies and sub-assemblies - Assign parts to sub-assemblies - Define the operation - Assign resources to operations
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice DELMIA Prismatic and Turning Machining	
Course Code	DEL-en-LMG1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	23.17 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module will teach you how to define various turning operations to machine cylindrical parts. You will learn how to define multi-spindle and multi-turret machines, and use multiple turrets simultaneously to machine a part. You will also learn how to perform the part transfer activity using the multi-spindle machine to complete the machining on both sides of a part without any manual intervention. This module will also teach you how to create milling operations using the mill-turn machine.
Objectives	Upon completion of this module you will be able to: - Define the machining infrastructure - Define the turning operations - Define the milling operations using the multi-slide machine - Define multi-setups and multi-part machining - Replay and simulate the tool paths - Generate the Numerical Control (NC) output
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator role and the Explore the Collaborative Industry Innovator role modules. Additionally, they should be familiar with the fundamentals of machining.

Practice DELMIA Prismatic and Turning Machining	
Available Online	Yes

Practice DELMIA Prismatic Machining	
Course Code	DEL-en-PMG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12.8 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module will teach you how to use the common functionalities available in the machining apps of DELMIA. It will also teach you the fundamentals of creating and simulating a tool path. You will learn how to create tool paths for 2 and 2.5-axis machining operations. You will also learn how to create probes in the simulation object and how to simulate the machines, detect clashes and analyze them.
Objectives	Upon completion of this module you will be able to: - Define the infrastructure required for machining - Create tools and tool assemblies - Define prismatic machining operations - Replay and simulate tool paths - Generate the Numerical Control (NC) output"
Prerequisites	- Knowledge: Students attending this course should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and NC Prismatic Machine Programmer and Mechanical Designer.
Available Online	Yes

Practice ENOVIA Design Review	
Course Code	ENOV-en-REEV-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6.5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will teach you how to create different slides for various positions of an assembly to create exploded views. You will also learn how to create sections and measures, and export them as parts or drawings.You will also learn how to compare 3D objects and how to create multi-context reviews.
Objectives	Upon completion of this module you will be able to: - Create a design review and add markups to it - Create slides and add markers - Create and export sections and measures - Compare 3D Objects and 2D Drawings - Create multi-context reviews
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Project Execution	
Course Code	ENOV-en-PREX-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2.50 hours
Course Material	
Level	Fundamental
Audience	
Description	This module will teach you how to use the Project Execution app to manage your assigned tasks. You will be able to manage the project schedule, modify the tasks, record the risks and create timesheets.
Objectives	Upon completion of this module, you will be able to: - Manage the project schedule - Record risks for tasks - Create and submit timesheets
Prerequisites	Knowledge: Students attending this course should have completed the Explore the Business Innovator and Explore the Industry Innovator module. Additionally, they should be familiar with the Practice the Project Management module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Project Team Member.
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Course Code	CAT-en-3DMT-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2020x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Designers who need to work with mechanical parts
Description	This course addresses the needs of Mechanical Designers. It will first teach you how to design a new part with the 3DEXPERIENCE platform, insert the part in a product then position and constrain it. You will learn how to assign material properties and compute weight, then complete a simple drawing. Finally, you will learn how to create a new part version, replace the original part and update the product. More advanced topics will also be covered: they will teach you how to manage complex product structures, create product features, manage catalogs and analyze assemblies.
Objectives	Upon completion of this course, you will be able to: - Create new products and parts - Insert a part in a product and position it - Apply materials to parts - Calculate the weight of a product - Insert and complete a drawing - Create a new part version - Replace a part and update a product - Design parts in context - Create assembly features and catalogs - Analyze the assemblies

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. They should also be familiar with CATIA V5 Mechanical Design.
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Course Code	CAT-en-3DMTVS-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module addresses the needs of Mechanical Designers working on cloud. It will first teach you how to design a new part with the 3DEXPERIENCE platform, insert the part in a product then position and constrain it. You will learn how to assign material properties and compute weight, then complete a simple drawing. Finally, you will learn how to create a new part version, replace the original part and update the product. More advanced topics will also be covered: they will teach you how to manage complex product structures, create product features, manage catalogs and analyze assemblies.
Objectives	Upon completion of this module, you will be able to: - Create new products and parts - Insert a part in a product and position it - Apply materials to parts - Calculate the weight of a product - Insert and complete a drawing - Create a new part version - Replace a part and update a product
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
	Innovator Role module. They should also be familiar with CATIA V5 Mechanical Design.
Available Online	Yes

Understand Layout Planning	
Available Release	3DEXPERIENCE R2021x
Duration	1 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the basics of layout planning in the digital factory and the potential for use of emerging technologies.
Objectives	Upon completion of this module, you will learn: - What layout planning is - How layout planning is done in the digital factory - What are the advantages and disadvantages of each layout type - What emerging technologies can support layout planning
Prerequisites	
Available Online	Yes

Understand Lean Fundamentals	
Available Release	3DEXPERIENCE R2021x
Duration	3.50 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the fundamentals of lean concepts to achieve operational practices transformation.
Objectives	Learn Lean fundamentals and how to successfully articulate Lean tools.
Prerequisites	
Available Online	Yes

Understand Lean Transformation Methodology	
Available Release	3DEXPERIENCE R2021x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the DMAIC (Define, Measure, Analyze, Improve, Control) lean transformation methodology.
Objectives	Upon completion of this learning module, you will understand how to lead and deploy DMAIC methodology.
Prerequisites	
Available Online	Yes

Understand Material Flow	
Available Release	3DEXPERIENCE R2021x
Duration	1 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the basics of material flow analysis in the digital factory and how to visualize material flow.
Objectives	Upon completion of this module, you will learn: - What material flow is - How material flow is analyzed - What tools and methods are used to visualize material flow - What material flow simulation is and what it models - What inputs and outputs are needed for a simulation - What benefits of material flow simulation are
Prerequisites	
Available Online	Yes

Understand Process Planning	
Available Release	3DEXPERIENCE R2021x
Duration	0.50 hours
Course Material	
Level	Fundamental
Audience	Manufacturing Engineers
Description	In this module, you will learn about the basics of process planning in the digital factory and how it optimize and bring economic benefits.
Objectives	Upon completion of this module, you will learn: - What is process planning - How process planning happens in the digital factory - What are the tools and methods to perform process planning in the digital factory - How process planning can create a basis for optimizations and bring economic benefits - What are the main applications of the digital factory for process planning
Prerequisites	
Available Online	Yes

Use DELMIA Equipment Allocation (MLB)	
Course Code	DEL-en-MLB-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	3 hours
Course Material	
Level	Fundamental
Audience	Process Planners, Resource Planners, Manufacturing Planners
Description	In this module, you will learn how to create a resource structure and insert resources using the catalog. You will also learn how to balance the workload between various resources defined in a process planning.
Objectives	Upon completion of this course you will be able to: - Manage the scope between the resources and the systems - Assign resources to operations - Plan for capacity using the resource utilization Gantt chart - Define the working position - Validate the resource plant
Prerequisites	- Knowledge: Students attending this course should have completed the Perform as Business Innovator and Perform as Business Industry Innovator modules. Additionally, they should be familiar with defining process planning in DELMIA, the concepts of EBOM, MBOM structure and resources. - 3DEXPERIENCE Roles: Collaborative Business Innovator and Collaborative Industry Innovator.
Available Online	Yes

Use DELMIA Manufactured Item Definition (PRD)	
Course Code	DEL-en-PRD-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	2.7 hours
Course Material	
Level	Fundamental
Audience	Process Planners, Manufacturing Planners
Description	In this module, you will learn how to define a manufacturing item structure or an MBOM structure for a product assembly. You will also learn to define a relation between the physical product and the MBOM structure. Further, you will assign the physical parts to MBOM objects and build the 3D representation of MBOM structure.
Objectives	By the end of this module, you will be able to: - Define a manufacturing bill of materials - Reuse the manufacturing bill of materials template - Associate the manufacturing bill of materials to a product structure using scope links - Create assemblies and sub-assemblies
Prerequisites	Students attending this course should have completed the Perform as Business Innovator and the Perform as Collaborative Industry Innovator courses. Additionally, they should be familiar with defining process planning in DELMIA , the concepts of EBOM, MBOM structure and resources.
Available Online	Yes

Use DELMIA Process Planning (MSD)	
Course Code	DEL-en-MSD-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	2.5 hours
Course Material	
Level	Fundamental
Audience	Process Planners, Manufacturing Planners
Description	In this module, you will learn how to create and manage a process plan for an MBOM structure. You will learn how to create the scope between the MBOM and the respective system. You will also learn how to workload line balancing between various systems or stations of an assembly line.
Objectives	Upon completion of this course you will be able to: - Author system structures and create product flows - Manage system structures and operations - Manage the scope between the MBOM and the system - Assign MBOM to operations - Generate a system structure from the manufacturing item structure - Author operations and add constraints between operations - Assign MBOMs to operations - Analyze the workload and line balancing
Prerequisites	- Knowledge: Students attending this course should have completed the Perform as Business Innovator and the Perform as Collaborative Industry Innovator courses. Additionally, they should be familiar with defining process planning in DELMIA, the concepts of EBOM, MBOM structure and resources.

Use DELMIA Process Planning (MSD)	
	- 3DEXPERIENCE Roles: Collaborative Business Innovator and Collaborative Industry Innovator.
Available Online	Yes

What's New for 3D Design Manufacturing Engineers	
Course Code	DEL-en-WDME-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	10.5 hours
Course Material	
Level	Update
Audience	3D Design Manufacturing Engineers
Description	This course introduces you to the enhancements and new functionalities in the 3D Design Manufacturing Engineer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the 3D Design Manufacturing Engineer role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the 3D Design Manufacturing Engineer's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Industry Innovation	
Course Code	ENOV-en-WCSV-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	1.5 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the enhancements and new functionalities in the Industry Innovation role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Industry Innovation role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Industry Innovation role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Manufacturing Engineers	
Course Code	DEL-en-WPST-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	1.5 hours
Course Material	
Level	Update
Audience	Process Planners, Manufacturing Engineers
Description	In this module, you will learn to display the process assembly in the 3D View Panel. You will learn to quickly navigating in the Assignment Manager. You will also learn to split general operation for fine balancing.
Objectives	Upon completion of this module, you will be able to - Describe the impact of the new capabilities on the Process Planner role - Put into practice the enhancements that you have learnt to apply and use them on the operations that you perform under this role
Prerequisites	Students attending this module must be familiar with the basics of the 3DEXPERIENCE platform and EBOM/MBOM concepts.
Available Online	Yes

What's New for Process Planners	
Course Code	DEL-en-WPPL-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Update
Audience	Process Planners, Manufacturing Engineers
Description	This course introduces you to the new and enhanced functionalities of the Process Planner role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this module, you will be able to - Describe the impact of the new capabilities on the Process Planner role - Put into practice the enhancements that you have learnt to apply and use them on the operations that you perform under this role
Prerequisites	Students attending this module must be familiar with the basics of the 3DEXPERIENCE platform and EBOM/MBOM concepts.
Available Online	Yes

What's New for Shape Designers	
Course Code	CAT-en-WSUA-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	4.5 hours
Course Material	
Level	Update
Audience	Shape Designers
Description	This course introduces you to the enhancements and new functionalities in the Shape Designer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Shape Designer role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Shape Designer's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

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DASSAULT SYSTEMES | The 3DEXPERIENCE® Company

Course Catalog

SMLX-OC 19x-21x

14 January 2021

3DEXPERIENCE®

Learning Experience | Course Catalog

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Learning Experience | Course Catalog

Learning Experiences for Simulation - SMLX-OC	1
3DEXPERIENCE Business Innovation Essentials	2
3DEXPERIENCE Business Innovation Essentials for CAD Users	3
CATIA Assembly Design Expert	5
CATIA Engineering Templates Reuse Essentials	6
CATIA Generative Wireframe and Surface Essentials	7
CATIA Natural Shape Essentials	8
CATIA Part Design Expert	9
CATIA Part Design Fundamentals	11
Collaborate from Design to Manufacturing in Additive Manufacturing	12
ENOVIA Classify and Reuse Essentials	13
ENOVIA Collaboration and Approvals Essentials	14
ENOVIA Collaboration for Microsoft Essentials	16
ENOVIA Collaborative Lifecycle Management Essentials	17
ENOVIA Exchanges Management Essentials	18
ENOVIA On-The-Go Essentials	19
Explore the Fluid Dynamics Engineer Role	20
Master CATIA Assembly Design	21
Master CATIA Dymola Behavior Modeling	22
Master CATIA Part Design	24
Practice CATIA Assembly Design - Added Exercises	25
Practice CATIA Dymola Behavior Modeling	26
Practice CATIA Engineering Templates Reuse	28
Practice CATIA Generative Wireframe and Surface	29
Practice CATIA Natural Shape	30
Practice CATIA Part Design	31
Practice CATIA Part Design - Added Exercises	32
Practice CATIA Quality Rules Reuse	33
Practice CATIA Surface Design - Added Exercises	34
Practice ENOVIA Collaborative Lifecycle Management	35
Practice ENOVIA Exchanges Management	36
Practice ENOVIA On-The-Go	37

Practice ENOVIA Project Execution	38
Practice SIMULIA Additive Manufacturing Scenario	39
Practice SIMULIA Connector for Simpack	40
Practice SIMULIA Linear Structural Scenario Creation	41
Practice SIMULIA Linear Structural Validation	42
Practice SIMULIA Material Calibration	43
Practice SIMULIA Mechanical Scenario Creation	45
Practice SIMULIA Mechanical Scenario Creation: Linear Dynamics	46
Practice SIMULIA Model Assembly Design	47
Practice SIMULIA Performance Trade-off	48
Practice SIMULIA Physics Results Explorer	49
Practice SIMULIA Physics Simulation Review	50
Practice SIMULIA Plastic Injection	51
Practice SIMULIA Structural Model Creation	52
Practice SIMULIA Structural Model Creation : Geometry and Meshing	53
Practice SIMULIA Structural Scenario Creation	54
SIMULIA 3DPlay Simulation Experience Essentials	55
SIMULIA Abaqus Study Essentials	56
SIMULIA Composites Simulation Engineer Essentials	58
SIMULIA Durability Engineer Essentials	59
SIMULIA Durability Validation Essentials	61
SIMULIA Linear Dynamics Scenario Creation Essentials	62
SIMULIA Mechanical Scenario Creation Essentials	63
SIMULIA Model Assembly Design Essentials	64
SIMULIA Multiscale Experiment Creation Essentials	65
SIMULIA Performance Study Essentials	67
SIMULIA Physics Results Explorer Essentials	68
SIMULIA Plastic Part Injection Essentials	69
SIMULIA Process Composer Essentials	70
SIMULIA Process Experience Studio Essentials	71
SIMULIA Results Analytics Essentials	72
SIMULIA Simulation Companion Essentials	73
SIMULIA Simulation Model Design Essentials	74
SIMULIA Simulation Scripting Essentials	75
SIMULIA Structural Model Creation : Geometry and Meshing	77
SIMULIA Structural Model Creation Essentials	78

SIMULIA Structural Scenario Creation Essentials	79
SIMULIA Structural Validation Essentials	80
Structural Mechanics Engineer for SOLIDWORKS Users	81
Structural Professional Engineer for SOLIDWORKS Users	83
Transition to the 3DEXPERIENCE platform for Mechanical Designers	84
Transition to the 3DEXPERIENCE platform for Mechanical Designers	86
What's New for Industry Innovation	88

Learning Experiences for Simulation - SMLX-OC

3DEXPERIENCE Business Innovation Essentials	
Course Code	CRB-en-IFW-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Understand the 3DEXPERIENCE interface - Connect to the 3DEXPERIENCE platform - Access your Dashboard - Use the 6WTags for searching content - Share various documents with other users through - Collaborate using capabilities of the 3DEXPERIENCE platform
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Course Code	CRB-en-IFWC-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	5.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform. You will also learn how to design a model using CATIA V5 or SOLIDWORKS launched from the 3DEXPERIENCE platform. In addition, you will learn about configuring the 3DEXPERIENCE Platform Management dashboard.
Objectives	Upon completion of this course you will be able to: - - Access the 3DEXPERIENCE Platform Management dashboard - - Configure the 3DEXPERIENCE Platform Management dashboard - - Understand the 3DEXPERIENCE interface - - Connect to the 3DEXPERIENCE platform - - Access your Dashboard - - Access your social communities on 3DSwym - - Share various documents with other users - - Collaborate using capabilities of 3DEXPERIENCE platform - - Design using CATIA V5 Connector or SOLIDWORKS Connector

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

CATIA Assembly Design Expert	
Course Code	CAT-en-ASD-A-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	11.5 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will introduce you to complex assembly modeling techniques. You will learn how to design a product architecture and manage complex assembly structures. You will also learn how to use advanced features to design parts within an assembly environment and how to analyze interferences.
Objectives	Upon completion of this course you will be able to: - Analyze interferences - Analyze component links and relations - Design complex products - Design new parts within a product - Manage complex product structures
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and be familiar with CATIA Part Design and Assembly Design fundamentals.
Available Online	Yes

CATIA Engineering Templates Reuse Essentials	
Course Code	CAT-en-KT1-F-15-201
Available Releases	3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	0.50 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course, you will learn how to create customized features by reusing the power copy and user feature.
Objectives	Upon completion of this course you will be able to: - Create customized features using templates.
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Generative Wireframe and Surface Essentials	
Course Code	CAT-en-GS1-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	20 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This course will teach you how to use the Generative Wireframe and Surface app to create curves and surfaces. You will learn how to assemble, re-limit and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this course you will be able to: - Create curves and improve the quality of the imported wireframes - Create surfaces based on the wireframe geometries - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - Analyze the surface quality and heal the defects
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course.
Available Online	Yes

CATIA Natural Shape Essentials	
Course Code	CAT-en-LSP-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Conceptual Designers, Stylists, Simulation and Manufacturing Engineers
Description	This course will introduce you to the CATIA Natural Shape app and its unique working environment. You will learn how to use the app to conceptualize, create and modify mechanical parts and shapes. The course features short-duration demos followed by exercises which will allow you to practice. You will also learn the related theory, tips and recommendations while performing the exercises.
Objectives	Upon completion of this course you will be able to: - Create a conceptual design directly in 3D - Use the hybrid design environment to conceptualize your designs - Work on the structure to create the 3D parts - Navigate through the structure and position the parts - Reuse the existing designs in the 3D models
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Part Design Expert	
Course Code	CAT-en-PDG-A-V5R31
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , V5-6R2012 , V5-6R2013 , V5-6R2014 , V5-6R2015 , V5-6R2016 , V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2021 , V5R19 , V5R20 , V5R21
Duration	12.17 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will teach you how to design complex 3D mechanical parts using the Boolean approach. You will learn how to work in a Multi-Model Environment and maintain links between 3D models. You will also learn to analyze designs in order to optimize them.
Objectives	Upon completion of this course you will be able to: - Create a part using 3D reference elements - Create advanced Sketch-Based Features - Apply advanced Dress-Up Features - Design 3D parts using Boolean operations - Work in a Multi-Model Environment and share your designs with others - Analyze parts and optimize them - Annotate the parts for review
Prerequisites	Student attending this course must be familiar with CATIA V5 fundamentals and must have completed the CATIA Sketcher and CATIA Part Design Fundamentals courses.

CATIA Part Design Expert	
Available Online	Yes

CATIA Part Design Fundamentals	
Course Code	CAT-en-PDG-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This course will teach you how to create a 3D model using the CATIA Part Design app. You will learn how to use different feature-based tools to build a 3D model. You will also learn how to add parameters, then review, measure and modify a model.
Objectives	Upon completion of this course you will be able to: - Create new parts - Create and constrain 2D sketches - Complete a 3D model using basic features - Parameterize a model - Review and measure a model - Reuse existing features
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

Collaborate from Design to Manufacturing in Additive Manufacturing	
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	2.75 hours
Course Material	
Level	Fundamental
Audience	Additive Manufacturing Designer, Additive Manufacturing Programmer,Mechanical Designers
Description	In this module, you will learn how to apply the end-to-end process from the design optimization through to the virtual print of the part.
Objectives	Upon completion of this module, you will be able to: - Design a part for additive manufacturing - Setup the manufacturing built for additive manufacturing process - Simulate the manufacturing setup for virtual printing
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They must be familiar with the CATIA Part Design, and the CATIA Imagine and Shape apps. - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Functional Driven Generative Designer, Powder Bed Programmer, Additive Manufacturing Researcher and Reverse Shape Optimizer.
Available Online	Yes

ENOVIA Classify and Reuse Essentials	
Course Code	ENOV-en-CLRE-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE Platform Users
Description	This course will teach you how to use the ENOVIA Classify and Reuse App to search and view different types of libraries as well as an objects' hierarchy. You will also learn how to manage the objects using these libraries. Based on a combination of videos, theory and simulations, you can take this course in a self-paced learning mode and is self-sufficient. However, if you want to practice, you will find a master exercise at the end of the course.
Objectives	Upon completion of this course, you will be able to: - Search and view different types of Libraries and their related hierarchy. - Search and view General Classes and Folders.
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Collaboration and Approvals Essentials	
Course Code	ENOV-en-BUPS-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	10 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course will teach you the common functionalities used across all ENOVIA apps, which enable you to manage your content as well as collaborate with other members in a team. You will learn how to create workspaces for managing your business related components, such as folders, members and tasks. You will also learn how to create various workflows using routes, subscribe to your task related events, and report issues for objects. Further, you will learn to create documents and version them, while maintaining a record for all its revisions.
Objectives	Upon completion of this course, you will be able to: - Illustrate the structure of ENOVIA Business Process Services - Create and manage your folders - Create workflows - Identify and manage your assigned tasks - Subscribe to various objects and events - Report and resolve issues in objects - Create, track and organize your documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.

ENOVIA Collaboration and Approvals Essentials	
Available Online	Yes

ENOVIA Collaboration for Microsoft Essentials	
Course Code	ENOV-en-COMI-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Project Managers, Design Engineers, Reviewers and Technical Writers.
Description	In this course, you will learn how to use the ENOVIA Collaboration for Microsoft app to access and manage the documents in the ENOVIA database using the Microsoft applications.
Objectives	Upon completion of this course you will be able to: - Access documents from the ENOVIA database using Microsoft applications - Create, manage and synchronize documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Collaborative Lifecycle Management Essentials	
Course Code	ENOV-en-LIIN-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	CAD designers, engineers in charge of product development
Description	In this course, you will learn how to use the ENOVIA Collaborative Lifecycle Management app to manage the complete lifecycle of an object in order to achieve concurrent engineering. You will also learn to manage the access and ownership of objects for collaboration of members on the same platform.
Objectives	Upon completion of this course you will be able to: - Create a new product structure - Use different sections of the Action bar effectively - Manage the changes in a product structure - Save the product structure in the database
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course
Available Online	Yes

ENOVIA Exchanges Management Essentials	
Course Code	ENOV-en-EXCH-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	CAD Designers and Platform Contributors
Description	This course will teach you how to use the import / export tools in 3DEXPERIENCE. You will also manage the mastership between V5 files and 3DEXPERIENCE files.
Objectives	Upon completion of this course, you will be able to: - Import and export 3DXML files - Import and export CATIA V5 files - Manage the Mastership of imported objects
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

ENOVIA On-The-Go Essentials	
Course Code	ENOV-en-ONGO-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	1 hours
Course Material	
Level	Fundamental
Audience	Users of the 3DEXPERIENCE platform
Description	This course will teach you how you can work in the offline mode in the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Work in the offline mode - Return to the online mode - Restore the last session - Create the offline content in the online mode
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

Explore the Fluid Dynamics Engineer Role	
Course Code	SIM-en-FMK-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Fluid Dynamics Engineer
Description	This course is a comprehensive introduction to fluid mechanics simulation in the 3DEXPERIENCE Platform. In this course, you will learn how to solve computational fluid dynamics (CFD) problems.
Objectives	Upon completion of this course you will be able to: - Set up and create CFD simulations in the 3DEXPERIENCE Platform - Perform incompressible and compressible CFD analyses - Perform fully coupled conjugate heat transfer (CHT) analyses - Postprocess results
Prerequisites	None
Available Online	Yes

Master CATIA Assembly Design	
Course Code	CAT-en-ASD-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This module will introduce you to complex assembly modeling techniques. You will learn how to design a product architecture and manage complex assembly structures. You will also learn how to use advanced features to design parts within an assembly environment and how to analyze interferences.
Objectives	Upon completion of this module you will be able to: - Analyze interferences - Analyze component links and relations - Design complex products - Design new parts within a product - Manage complex product structures
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with the CATIA Part Design and Assembly Design fundamentals.
Available Online	Yes

Master CATIA Dymola Behavior Modeling	
Course Code	CAT-en-DBD-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1 hours
Course Material	
Level	Advanced
Audience	Dynamic Systems Engineers
Description	This module teaches you about the data exchange capabilities of the Dymola Behavior Modeling app. It also teaches you how to automate the simulations of behavior models and do the trade-off study for selecting the most appropriate product design.
Objectives	Upon completion of this module, you will be able to: - Generate behavior models from the piping system - Use the knowledgeware objects with the Dymola Behavior Modeling app - Optimize the simulation of behavior models using the Optimization Process Composer app - Trade-off the optimized simulation results - Access the traceability of behavior models using the Systems Traceability app - Export behavior models for use in other simulation environments - Export a behavior model as a Functional Mock-up Unit - Automate simulations of behavior model using Python and Javascript interfaces
Prerequisites	- Knowledge: Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and the Practice CATIA Dymola Behavior Modeling module.

Master CATIA Dymola Behavior Modeling	
	- Students should also be familiar with the apps that can be collaborated with the Dymola Behavior Modeling app. - - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Dynamic Systems Engineer
Available Online	Yes

Master CATIA Part Design	
Course Code	CAT-en-PDG-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	7 hours
Course Material	
Level	Advanced
Audience	Mechanical and Sheet Metal Designers
Description	This module will introduce you to complex 3D modeling techniques, using advanced sketch-based and surface-based features. You will learn how to manage complex part structures and how to improve productivity by reusing existing features. Finally, you will learn how to use parameters and tables to drive the design of a model.
Objectives	Upon completion of this module you will be able to: - Design parts with complex geometries - Create and manage robust part structures - Create fully parameterized models - Create re-usable features
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with CATIA Part Design fundamentals.
Available Online	Yes

Practice CATIA Assembly Design - Added Exercises	
Course Code	CAT-en-ASD-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Exercise
Audience	Mechanical Designers
Description	This module provides you with exercises for additional practice on the 3DEXPERIENCE Assembly Design app. The exercises have been created based on Industry practices. You will practice creating assembly structure, positioning components, constraining components using engineering connections and modifying parts in assembly context.
Objectives	Upon completion of this module you will be able to: - Practice your Assembly Design skills using selected scenarios - Apply the recommended methodology in various scenarios
Prerequisites	Students attending this learning module should be familiar with Part Design and Assembly Design.
Available Online	Yes

Practice CATIA Dymola Behavior Modeling	
Course Code	CAT-en-DBD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	11 hours
Course Material	
Level	Fundamental
Audience	Dynamic Systems Designers
Description	This module will teach you how to model and simulate the dynamic behavior of a multi-engineering system. You will learn how to search, open and manage the Dymola Behavior libraries. You will also learn how to manage the link between a logical component and a Dymola model.
Objectives	Upon completion of this module you will be able to: - Search and open the Dymola behavior library - Edit and simulate an existing dynamic behavior model - Create a new dynamic model - Insert the model into a functional or logical component - Generate the Dymola model from the mechanism - Simulate the logical component with a behavior in the Functional & Logical Design app
Prerequisites	- Knowledge: Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with Functional & Logical Design fundamentals. - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Dynamic Systems Designer

Practice CATIA Dymola Behavior Modeling	
Available Online	Yes

Practice CATIA Engineering Templates Reuse	
Course Code	CAT-en-KT1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.50 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course, you will learn how to create customized features by reusing the power copy and user feature.
Objectives	Upon completion of this course you will be able to: - Create customized features using templates.
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Generative Wireframe and Surface	
Course Code	CAT-en-GS1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	20 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This module will teach you how to use the Generative Wireframe and Surface app to create curves and surfaces. You will learn how to assemble, re-limit and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this module, you will be able to: - Create curves and improve the quality of the imported wireframes - Create surfaces based on the wireframe geometries - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - Analyze the surface quality and heal the defects
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Natural Shape	
Course Code	CAT-en-LSP-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Conceptual Designers, Stylists, Simulation and Manufacturing Engineers
Description	This module will introduce you to the CATIA Natural Shape app and its unique working environment. You will learn how to use the app to conceptualize, create and modify mechanical parts and shapes. The course features short-duration demos followed by exercises which will allow you to practice. You will also learn the related theory, tips and recommendations while performing the exercises.
Objectives	Upon completion of this module you will be able to: - Create a conceptual design directly in 3D - Use the hybrid design environment to conceptualize your designs - Work on the structure to create the 3D parts - Navigate through the structure and position the parts - Reuse the existing designs in the 3D models
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Part Design	
Course Code	CAT-en-PDG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This module will teach you how to create a 3D model using the CATIA Part Design app. You will learn how to use different feature-based tools to build a 3D model. You will also learn how to add parameters, then review, measure and modify a model.
Objectives	Upon completion of this module you will be able to: - Create new parts - Create and constrain 2D sketches - Complete a 3D model using basic features - Parameterize a model - Review and measure a model - Reuse existing features
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Part Design - Added Exercises	
Course Code	CAT-en-PDG-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	13 hours
Course Material	
Level	Exercise
Audience	Mechanical Designers
Description	This module provides you with an exercise database for additional practice on the3DEXPERIENCE Part Design app. The exercises have been arranged in increasing order of difficulty. The fundamental exercises will check and refresh your basic Part Design skills before you move on to more complex topics. The advanced exercises will make you practice the recommended design methodologies using realistic parts.
Objectives	Upon completion of this module you will be able to: - Apply your Mechanical skills in selected scenarios. - Employ the recommended methodology in various situations and efficiently use the Mechanical workbenches.
Prerequisites	Students attending this learning module should be familiar with CATIA Part Design.
Available Online	Yes

Practice CATIA Quality Rules Reuse	
Course Code	CAT-en-KE1-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will show you how to share corporate knowledge stored in the rule bases and leverage it across the company to ensure design compliance with the established standards. You will also learn to create reports and manage their template.
Objectives	Upon completion of this module you will be able to: - Automate the design modifications - Analyze and create reports
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Surface Design - Added Exercises	
Course Code	CAT-en-GS1-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Exercise
Audience	Mechanical Surface Designers
Description	This module provides you with an exercise database for additional practice on 3DEXPERIENCE Surface Design. The exercises have been created based on Industry practices. You will get to practice skills such as creating wireframes and surfaces, creating surfacic shells and solid parts, and working with multiple parts that are referencing a common part.
Objectives	These exercises will allow you to put your Shape skills into practice on selected scenarios. - You will apply the recommended methodology in various situations. - You will enhance your understanding and usage of the Shape apps.
Prerequisites	Students attending this course should be familiar with Surface Design.
Available Online	Yes

Practice ENOVIA Collaborative Lifecycle Management	
Course Code	ENOV-en-LIIN-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	CAD designers, engineers in charge of product development
Description	In this module, you will learn how to use the ENOVIA Collaborative Lifecycle Management app to manage the complete lifecycle of an object in order to achieve concurrent engineering. You will also learn to manage the access and ownership of objects for collaboration of members on the same platform.
Objectives	Upon completion of this module you will be able to: - Create a new product structure - Use different sections of the Action bar effectively - Manage the changes in a product structure - Save the product structure in the database
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Exchanges Management	
Course Code	ENOV-en-EXCH-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	CAD Designers and Platform Contributors
Description	This module will teach you how to use the import / export tools in 3DEXPERIENCE. You will also manage the mastership between V5 files and 3DEXPERIENCE files.
Objectives	Upon completion of this module, you will be able to: - Import and export 3DXML files - Import and export CATIA V5 files - Manage the Mastership of imported objects
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA On-The-Go	
Course Code	ENOV-en-ONGO-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1 hours
Course Material	
Level	Fundamental
Audience	Users of the 3DEXPERIENCE platform
Description	This module will teach you how you can work in the offline mode in the 3DEXPERIENCE platform.
Objectives	Upon completion of this module you will be able to: - Work in the offline mode - Return to the online mode - Restore the last session - Create the offline content in the online mode
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Project Execution	
Course Code	ENOV-en-PREX-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2.50 hours
Course Material	
Level	Fundamental
Audience	
Description	This module will teach you how to use the Project Execution app to manage your assigned tasks. You will be able to manage the project schedule, modify the tasks, record the risks and create timesheets.
Objectives	Upon completion of this module, you will be able to: - Manage the project schedule - Record risks for tasks - Create and submit timesheets
Prerequisites	Knowledge: Students attending this course should have completed the Explore the Business Innovator and Explore the Industry Innovator module. Additionally, they should be familiar with the Practice the Project Management module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Project Team Member.
Available Online	Yes

Practice SIMULIA Additive Manufacturing Scenario	
Course Code	SIM-en-MDA-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following roles: Additive Manufacturing Researcher, Additive Manufacturing Programmer
Description	This course is a comprehensive introduction to defining and performing additive manufacturing process simulations. It teaches you how to add material to the part, define laser paths, and model cooling effects during the build process in the context of thermal and thermal-stress simulations.
Objectives	Upon completion of this course you will be able to: - Generate machine build environment, support structures and scan path using the Powder Bed Fabrication application - Perform sequential thermal-structural simulations using the Additive Manufacturing Scenario application - View and evaluate simulation results
Prerequisites	Mechanical Scenario Creation Essentials
Available Online	Yes

Practice SIMULIA Connector for Simpack	
Course Code	SIM-en-SMPKPB-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.25 hours
Course Material	
Level	Fundamental
Audience	Simpack users who want to leverage the power of the 3DEXPERIENCE platform to update Simpack models based on an existing product structure, collaborate across their organization, and view the results of an analysis with high-performance visualization apps.
Description	This course is an introduction to the interactive connector between Simpack and the 3DEXPERIENCE platform.
Objectives	Upon completion of this course, you will be able to: - • Save Product Structure from the 3DEXPERIENCE platform to Simpack - • Save results to the 3DEXPERIENCE platform - • Open/download results from 3DEXPERIENCE platform - • Preview simulation results in 3DPlay - • View/analyze the results using Physics Simulation Review
Prerequisites	Before undertaking this course, you should have completed the Introduction to Simpack training and the Physics Simulation Review Essentials course.
Available Online	Yes

Practice SIMULIA Linear Structural Scenario Creation	
Course Code	SIM-en-LNCS-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Engineer
Description	This course is an introduction to linear, frequency and thermal simulations, and to the evaluation of simulation results.
Objectives	Upon completion of this course you will be able to: - Perform linear and frequency simulations - Perform thermal simulations - View and evaluate simulation results
Prerequisites	- The following course is required prior to taking this one: - Structural Model Creation Essentials
Available Online	Yes

Practice SIMULIA Linear Structural Validation	
Course Code	SIM-en-LSDY-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- The course is intended for the following audience: - Structural Designer
Description	This course is an introduction to performing structural simulation for designers using the 3DEXPERIENCE Platform, including product performance assessment under linear static conditions. The 3DEXPERIENCE Platform provides seamless integration between CAD, lifecycle and simulation so that your simulation automatically reacts when you update the design.
Objectives	The course covers the following topics: - Searching and managing simulation data. - Performing a structural simulation using the Linear Structural Validation app, including: Linear statics, Natural frequency extraction, Thermal (steady-state). - Review the results of the simulation using contour plots, animations and other visualization features.
Prerequisites	None
Available Online	Yes

Practice SIMULIA Material Calibration	
Course Code	SIM-en-MCAL-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Material Calibration Specialist - Structural Mechanics Engineer
Description	It is important to calibrate advanced material models for simulation, so that the response of the mathematical model used during simulation matches the material's tested physical behavior. This course is an introduction to the optimization methods embedded in the Material Calibration app. Test data can be imported, edited, and a math model optimized to fit the data. Plotting and other outputs help the user to determine the goodness of fit. Afterwards, a core material can be created for use in the 3DEXPERIENCE platform structural simulation apps, and/or an *.inp file can be exported for use in Abaqus.
Objectives	Upon completion of this course you will be able to: - Import and plot material test data - Configure and calibrate material models - Use optimization settings - Generate additional outputs - Create a core material in the 3DEXPERIENCE platform - Export materials for use in an Abaqus input file
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials

Practice SIMULIA Material Calibration	
Available Online	Yes

Practice SIMULIA Mechanical Scenario Creation	
Course Code	SIM-en-MECS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Mechanics Engineer
Description	This course is an introduction to mechanical and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static and dynamics problems and view simulation results.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

Practice SIMULIA Mechanical Scenario Creation: Linear Dynamics	
Course Code	SIM-en-MECS2-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Advanced
Audience	- This course is intended for the following roles: - Structural Mechanics Engineer
Description	This course is an introduction to linear dynamics simulation in the 3DEXPERIENCE Platform. It teaches you how to solve linear dynamics problems, including natural frequency, harmonic response, and model dynamic applications. It also provides an introduction to solving interior structural-acoustic problems and conduct complex eigenvalue analyses. .
Objectives	Upon completion of this course you will be able to: - Perform linear dynamics simulations - Perform coupled structural-acoustic simulations - Perform complex eigenvalue simulations - View and evaluate simulation results
Prerequisites	- The following course is required prior to taking this one: - Mechanical Scenario Creation Essentials
Available Online	Yes

Practice SIMULIA Model Assembly Design	
Course Code	SIM-en-MSAM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Performance Engineer - Structural Mechanics Engineer
Description	This course in an introduction to creating large and complex finite element assemblies using the Batch Modeling technology in the 3DEXPERIENCE Platform. The course also discusses managing the product structure for large assemblies of parts and meshes created either in the 3DEXPERIENCE Platform or in 3rd-party tools.
Objectives	Upon completion of this course you will be able to: - Create external simulation representations. - Perform automated modeling
Prerequisites	Structural Model Creation: Geometry and Meshing
Available Online	Yes

Practice SIMULIA Performance Trade-off	
Course Code	SIM-en-PTO-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - - Simulation Collaborator - Simulation Process Engineer - Multidisciplinary Optimization Engineer
Description	This course is an introduction to the integrated web-based tool in the 3DEXPERIENCE platform that allows decision makers to select the best option among the competing objectives by providing trade-off and collaborative decision-support capability.
Objectives	Upon completion of this course you will be able to: - - Visualize and compare simulation data - Conduct trade-off analyses - Select the best alternative
Prerequisites	none
Available Online	Yes

Practice SIMULIA Physics Results Explorer	
Course Code	SIM-en-PHYR-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Fluid Dynamics Engineer - Structural Engineer - Structural Mechanics Engineer - Structural Performance Engineer
Description	The 3DEXPERIENCE Platform offers a rich variety of simulation tools and provides a new paradigm in results visualization. This course is an introduction to the high-performance visualization tool in the 3DEXPERIENCE Platform that allows simulation analysts and engineers to view and evaluate simulation results.
Objectives	Upon completion of this course you will be able to: - View and evaluate simulation results
Prerequisites	None
Available Online	Yes

Practice SIMULIA Physics Simulation Review	
Course Code	SIM-en-PSR-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	2.17 hours
Course Material	
Level	Fundamental
Audience	This course is intended for all simulation roles.
Description	This course teaches you how to view simulation experience content in the Physics Simulation Review app, providing lightweight results visualization.
Objectives	Upon completion of this course you will be able to: - - • Replay simulation experiences in Physics Simulation Review for both native simulations and externally generated simulation results. - - • Perform lightweight visualization through web browsers
Prerequisites	None
Available Online	Yes

Practice SIMULIA Plastic Injection	
Course Code	SIM-en-PPM-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Simulation Analysts
Description	This course is an introduction to performing injection molding simulation to spur product and design innovation in the 3DEXPERIENCE Platform. The 3DEXPERIENCE Platform enables realistic plastic injection molding simulation of the mold cooling, filling and packing manufacturing processes early in the design cycle, when the cost of design change is low and opportunity is high.
Objectives	Upon completion of this course you will be able to: - Performa plastic injection molding simulation of the mold cooling, filling and packing processes using the Plastic Mold Injection app · Understand simulation results from the molding process through to part warpage to produce highly efficient designs and/or optimize their performance
Prerequisites	None
Available Online	Yes

Practice SIMULIA Structural Model Creation	
Course Code	SIM-en-MECM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Engineer - Structural Mechanics Engineer - Structural Performance Engineer
Description	This course is an introduction to finite element modeling in the 3DEXPERIENCE platform. It teaches you how to prepare finite element models for simulation.
Objectives	Upon completion of this course you will be able to: - Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

Practice SIMULIA Structural Model Creation : Geometry and Meshing	
Course Code	SIM-en-MECM2-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Advanced
Audience	- This course is intended for the following roles: - - Structural Mechanics Engineer - Structural Performance Engineer
Description	This course provides an in-depth look at cleaning/ repairing geometry for the purpose of generating high quality meshes. It also offers a comprehensive discussion on meshing techniques. The focus is on techniques relevant to simulation.
Objectives	Upon completion of this course you will be able to: - Clean and repair native and imported geometry. - Use advanced meshing techniques.
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

Practice SIMULIA Structural Scenario Creation	
Course Code	SIM-en-EMCS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Performance Engineer
Description	This course is an introduction to structural and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static problems and basic linear dynamics problems.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA 3DPlay Simulation Experience Essentials	
Course Code	SIM-en-3DP-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	2.17 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following roles: Mechanical Analyst Structural Vibration Analyst Noise & Vibration Analyst Fluid Mechanics Analyst Finite Element Modeling & Assembly Specialist Structural Analysis Engineer Steel Ship Structural Analysis Engineer Stress Engineer Fluid Dynamics Engineer
Description	This course teaches you how to replay simulation experiences in 3DPlay leveraging lightweight results visualization.
Objectives	Upon completion of this course you will be able to: - Replay simulation experiences in 3DPlay - Perform lightweight visualization through web browsers
Prerequisites	None
Available Online	Yes

SIMULIA Abaqus Study Essentials	
Course Code	SIM-en-ABQX-F-15-201
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Experienced Abaqus users who need to be able to run and manage their simulations in the 3DEXPERIENCE Platform will benefit from attending this class.
Description	The course covers the following topics: • Creating and configuring jobs • Managing files and data • Common Abaqus simulation use cases, including submodeling, making use of user subroutines, restart and import simulations. The course is divided into lectures and workshops. The course's workshops are integral to the training. They are designed to reinforce concepts presented during the lectures. They are intended to provide users with the experience of running and trouble-shooting actual simulation processes.
Objectives	This course is an introduction to running existing Abaqus simulations in the 3DEXPERIENCE Platform. The Abaqus Study app can be used to configure and run an Abaqus/Standard or an Abaqus/Explicit analysis while still providing the full functionality of Abaqus, such as the ability to use include files and to run user subroutines. Abaqus Study helps Abaqus users leverage the power of the 3DEXPERIENCE platform to manage their simulation data, collaborate across their organization, and view the results of an analysis with high-performance visualization apps.
Prerequisites	

SIMULIA Abaqus Study Essentials	
Available Online	Yes

SIMULIA Composites Simulation Engineer Essentials	
Course Code	SIM-en-SCI-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Composites Simulation Engineer
Description	Composite materials are used in many design applications because of their high stiffness-to-weight ratios. The 3DEXPERIENCE Platform offers a variety of tools for their design and analysis in the context of a single integrated work environment. This enables greater productivity and efficiency.
Objectives	Upon completion of this course you will be able to: - Perform simulations of composite materials
Prerequisites	Any one of the following courses is required prior to taking this one: Mechanical Scenario Creation Essentials Structural Scenario Creation Essentials Linear Dynamics Scenario Creation Essentials
Available Online	Yes

SIMULIA Durability Engineer Essentials	
Course Code	SIM-en-FGA-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	The course is intended for users with the Durability Engineer role
Description	Durability of metals is a physics simulation discipline used across industries by many companies designing products made from steel, aluminum, and other metals. Using the simulation you have run in Structural Scenario or Mechanical Scenario, the fields that were solved can then be directed to be used in a complex fatigue loading history, to calculate either stress-life, strain-life or infinite life FRF values. These are used for redesign instead of the stresses or strains.
Objectives	Upon completion of this course you will be able to: - Perform fatigue simulations - Understand the fatigue loading most applicable to simulation procedures - Use fatigue materials and simulate surface roughness - View and evaluate fatigue simulation results
Prerequisites	- Any one of the following courses is required prior to taking this course: - - Mechanical Scenario Creation Essentials - Structural Scenario Creation Essentials

SIMULIA Durability Engineer Essentials	
Available Online	Yes

SIMULIA Durability Validation Essentials	
Course Code	SIM-en-DURV-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Stress Engineer
Description	This course is an introduction to performing durability simulation to spur product and design innovation in the 3DEXPERIENCE Platform. The 3DEXPERIENCE Platform enables realistic durability simulation of parts/ assemblies under cyclic loading conditions early in the design cycle, when the cost of design change is low and opportunity is high.
Objectives	Upon completion of this course you will be able to: - Search and open simulations in the database - Understand the class of durability loads that can be applied - Perform a durability simulation - Apply loading history to represent real-world usage - Understand when surface finish can be applied - Review simulations stored in a database and generate reports
Prerequisites	The following course is required prior to taking this one: Structural Validation Essentials
Available Online	Yes

SIMULIA Linear Dynamics Scenario Creation Essentials	
Course Code	SIM-en-DYNS-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following roles: Structural Vibration Analyst Noise & Vibration Analys
Description	This course is an introduction to linear dynamics simulation in the 3DEXPERIENCE Platform. It teaches you how to solve linear dynamics problems, including natural frequency, harmonic response, and model dynamic applications. It also provides an introduction to solving interior structural-acoustic problems.
Objectives	Upon completion of this course you will be able to: - Perform linear dynamics simulations - Perform coupled structural-acoustic simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA Mechanical Scenario Creation Essentials	
Course Code	SIM-en-MECS-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following roles: Mechanical Analyst Multiphysics Simulation Researcher
Description	This course is an introduction to mechanical and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static and dynamics problems and view simulation results.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA Model Assembly Design Essentials	
Course Code	SIM-en-MSAM-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Assembly Modeling Specialist - Finite Element Modeling & Assembly Specialist - Mechanical Analyst - Structural Mechanics Engineer
Description	This course in an introduction to creating large and complex finite element assemblies using the Batch Modeling technology in the 3DEXPERIENCE Platform. The course also discusses managing the product structure for large assemblies of parts and meshes created either in the 3DEXPERIENCE Platform or in 3rd-party tools.
Objectives	Upon completion of this course you will be able to: - Create external simulation representations. - Perform automated modeling
Prerequisites	Structural Model Creation: Geometry and Meshing
Available Online	Yes

SIMULIA Multiscale Experiment Creation Essentials	
Course Code	SIM-en-MSEC-F-15-201
Available Releases	3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following roles: Multiscale Systems Specialist Multiphysics Experiment Creator Multiscale System Analyst
Description	This course is an introduction to performing multiscale and multiphysics simulations in the 3DEXPERIENCE platform. Multiscale experiments can combine 3D physics simulations with logical system simulations that are highly abstracted approximations of real-world physical behavior (usually packaged in the form of a functional mockup unit or FMU). Multiphysics experiments involve high-precision 3D simulations such as mechanical finite element analyses, computational fluid dynamics (CFD) flow simulations, and electromagnetic simulations. You can combine two different physics domains to create a co-simulation such as a fluid-structure interaction (FSI) and conjugate heat transfer (CHT).
Objectives	Upon completion of this course you will be able to: - Set up and create models for co-simulation analysis in the 3DEXPERIENCE platform - Perform co-simulation analyses - Postprocess co-simulation analyses
Prerequisites	The following courses are required prior to taking this one: Mechanical Scenario Creation Essentials Fluid Mechanics Analyst Essentials

SIMULIA Multiscale Experiment Creation Essentials

Available Online	Yes

SIMULIA Performance Study Essentials	
Course Code	SIM-en-DISB-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Analyst Structural Vibration Analyst Noise & Vibration Analyst Fluid Mechanics Analyst Finite Element Modeling & Assembly Specialist Structural Analysis Engineer Steel Ship Structural Analysis Engineer Stress Engineer Fluid Dynamics Engineer Simulation Process Method Developer Results Data Analyst
Description	This course is an introduction to the lightweight web-based tool in the 3DEXPERIENCE Platform that allows simulation analysts and engineers to run predefined Simulation Processes. The tool enables one to quickly search, run, and monitor existing Simulation Processes.
Objectives	Upon completion of this course you will be able to: - Instantiate Simulation Processes from Simulation Experiences - Run and monitor Simulation Processes - Manage Simulation Processes
Prerequisites	None
Available Online	Yes

SIMULIA Physics Results Explorer Essentials	
Course Code	SIM-en-PHYR-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Simulation Results Analyst Mechanical Analyst Structural Vibration Analyst Noise & Vibration Analyst Fluid Mechanics Analyst Multiphysics Simulation Researcher Structural Analysis Engineer Steel Ship Structural Analysis Engineer
Description	The 3DEXPERIENCE Platform offers a rich variety of simulation tools and provides a new paradigm in results visualization. This course is an introduction to the high-performance visualization tool in the 3DEXPERIENCE Platform that allows simulation analysts and engineers to view and evaluate simulation results.
Objectives	Upon completion of this course you will be able to: - View and evaluate simulation results
Prerequisites	None
Available Online	Yes

SIMULIA Plastic Part Injection Essentials	
Course Code	SIM-en-PPI-F-15-191
Available Releases	3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Plastic Injection Analysis Engineer
Description	This course is an introduction to performing injection molding simulation to spur product and design innovation in the 3DEXPERIENCE platform. The 3DEXPERIENCE platform enables realistic plastic injection molding simulation of both the filling and packing manufacturing processes early in the design cycle, when the cost of design change is low and opportunity is high.
Objectives	Upon completion of this course you will be able to: - Perform Injection Molding simulations - View and evaluate simulation results
Prerequisites	None
Available Online	Yes

SIMULIA Process Composer Essentials	
Course Code	SIM-en-PRCW-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Mechanical Analyst - Structural Vibration Analyst - Noise and Vibration Analyst - Fluid Mechanics Analyst - Finite Element Modeling and Assembly Specialist - Simulation Process Method Developer
Description	The 3DEXPERIENCE Platform offers a rich variety of tools enabling methods developers to capture processes and incorporate best practices within their organization. This enables automation and ensures that all within the organization follow best practices. This course provides an introduction to integrating the various tools (simulation, CAD, etc.) that might be available within an organization to create a Simulation Process.
Objectives	Upon completion of this course you will be able to: - Compose Simulation Processes - Produce Simulation Experiences
Prerequisites	None
Available Online	Yes

SIMULIA Process Experience Studio Essentials	
Course Code	SIM-en-EXPS-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the Simulation Process Method Developer role.
Description	This course is an introduction to the web-based tool in the 3DEXPERIENCE Platform that allows methods developers to create customized interfaces for the Simulation Experiences. This app is similar to a form builder which lets the methods developer quickly develop the customized interface.
Objectives	Upon completion of this course you will be able to: - Produce simulation experiences - Create experience user interfaces
Prerequisites	The Process Composer Essentials course is required prior to taking this one.
Available Online	Yes

SIMULIA Results Analytics Essentials	
Course Code	SIM-en-REII-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following roles: Simulation Process Method Developer Results Data Analyst
Description	This course is an introduction to the integrated web-based tool in the 3DEXPERIENCE platform that allows decision makers to collaboratively choose the best design from a large pool of data. This tool allows one to view and conduct trade-off analyses.
Objectives	Upon completion of this course you will be able to: - Initialize an analytics case - Conduct trade-off analyses - Select the best alternative
Prerequisites	None
Available Online	Yes

SIMULIA Simulation Companion Essentials	
Course Code	SIM-en-COMP-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the Simulation Asset Management role.
Description	This course is an introduction to the light weight web-based tool in the 3DEXPERIENCE Platform that allows methods developers and engineers to quickly test and create ad-hoc simulation processes. This app provides tools and infrastructure to run a program and manage both the input and output data.
Objectives	Upon completion of this course you will be able to: - Complete basic ad-hoc simulation workflows using Simulation Companion - Set up a 3DDashboard experience for conducting ad-hoc simulation workflows - Initialize and manage a new ad-hoc simulation workflow - Configure and run simulation tools - Manage Simulation Companion processes
Prerequisites	None
Available Online	Yes

SIMULIA Simulation Model Design Essentials	
Course Code	SIM-en-SML-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Mechanical Analyst Structural Vibration Analyst Noise & Vibration Analyst Fluid Mechanics Analyst Multiphysics Simulation Researcher Finite Element Modeling & Assembly Specialist
Description	This course is an introduction to creating and assembling geometry in the 3DEXPERIENCE Platform. The focus is on techniques relevant to simulation.
Objectives	Upon completion of this course you will be able to: - Create basic native solid geometry. - Create basic native shell geometry. - Create assemblies of parts.
Prerequisites	None
Available Online	Yes

SIMULIA Simulation Scripting Essentials	
Course Code	SIM-en-VBAUTO-F-15-201
Available Release	3DEXPERIENCE R2020x
Duration	40 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Mechanics Engineer - Structural Performance Engineer
Description	Automation in the 3DEXPERIENCE platform is a powerful solution available for various domains and provides a complete set of dedicated APIs which allows users to create, model and execute the multiphysics simulations. The objective of modelling and simulation automation is to reduce the time required for re-execution of multiple finite element simulation cases with/without minor changes. 3DEXPERIENCE uses VBA as the tool for automation which can readily be integrated with other Microsoft Windows software tools empowering its functionality further. This course is intended for Simulation Analysts, Tech Support Engineers, Simulation Consultants, and Field Engineers who want to learn automation in the simulation domain. The training session starts with the basics of VB programming and then cover automation for basic 3DEXPERIENCE platform operations, geometric modelling, materials, mesh, simulation scenarios, simulation execution and post-processing. The goal is to introduce users to VBA and basic 3DX platform methods and services first before delving deep into the simulation aspects of the VB API. Users will get a good insight into the map between the 3DX specification tree, the interactive GUI and the VB API after attending this training. This will enable users to navigate through the API efficiently. The course will

SIMULIA Simulation Scripting Essentials	
	also include GUI customization using VB for building the graphical user interface and the SIM Python API for reading/writing the SIM files. The training material will involve workshops to give hands-on experience to the end users.
Objectives	Upon completion of this course you will be able to: - Understand the 3DEXPERIENCE platform VB API concepts - Use the 3DEXPERIENCE Physics apps automation environment and documentation - Automate 3DEXPERIENCE Physics applications using Visual Basic - Read and Write SIM files using the SIM Python API
Prerequisites	- The following courses are required prior to taking this one: - Structural Model Creation Essentials, Structural Scenario Creation Essentials and Physics Results Explorer Essentials. - - Note that scripting in the 3DEXPERIENCE platform also requires a concurrent license of the Simulation Scripting role.
Available Online	Yes

SIMULIA Structural Model Creation : Geometry and Meshing	
Course Code	SIM-en-MECM2-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Mechanical Analyst - Multiphysics Simulation Researcher - Finite Element Modeling & Assembly Specialist - Structural Engineer - Structural Mechanics Engineer - Structural Professional Engineer
Description	This course provides an in-depth look at cleaning/ repairing geometry for the purpose of generating high quality meshes. It also offers a comprehensive discussion on meshing techniques. The focus is on techniques relevant to simulation.
Objectives	Upon completion of this course you will be able to: - Clean and repair native and imported geometry. - Use advanced meshing techniques.
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA Structural Model Creation Essentials	
Course Code	SIM-en-MECM-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Finite Element Modeling & Assembly Specialist - Mechanical Analyst - Multiphysics Simulation Researcher - Structural Engineer - Structural Mechanics Engineer - Structural Professional Engineer - Structural Functional Analysis Engineer
Description	This course is an introduction to finite element modeling in the 3DEXPERIENCE platform. It teaches you how to prepare finite element models for simulation.
Objectives	Upon completion of this course you will be able to: - Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

SIMULIA Structural Scenario Creation Essentials	
Course Code	SIM-en-EMCS-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Performance Engineer - Structure Functional Analysis Engineer
Description	This course is an introduction to structural and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static problems and basic linear dynamics problems.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA Structural Validation Essentials	
Course Code	SIM-en-STRV-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following role: Stress Engineer
Description	This course is an introduction to performing structural simulation to spur product and design innovation in the 3DEXPERIENCE Platform. The 3DEXPERIENCE Platform enables realistic structural simulation of parts/ assemblies under mechanical loading conditions early in the design cycle, when the cost of design change is low and opportunity is high.
Objectives	Upon completion of this course you will be able to: - Search for simulation data in the database - Open the simulation for modification - Perform a structural/frequency simulation using the Structural Validation app - Perform thermal and thermal-structural simulations the Structural Validation app - Review simulations stored in a database and generate reports
Prerequisites	None
Available Online	Yes

Structural Mechanics Engineer for SOLIDWORKS Users	
Course Code	SIM-en-SSUW-F-15-201
Available Release	3DEXPERIENCE R2020x
Duration	32 hours
Course Material	
Level	Fundamental
Audience	- SOLIDWORKS users who have reached the limits of the SOLIDWORKS simulation tools or those who wish to benefit from the power of cloud-based simulation and the collaboration tools on the 3DEXPERIENCE Platform will benefit from attending this class. - - This course is intended for the following role: - Structural Mechanics Engineer
Description	This course is an introduction to the Structural Mechanics Engineer role, which is an offering to expand the simulation capabilities for SOLIDWORKS users, beyond the capabilities offered with the Structural Professional Engineer role. The 3DEXPERIENCE PLM Services connector automatically transfers study data into the simulation apps on the 3DEXPERIENCE platform. The Structural Mechanics Engineer role offers a wide range of element types and meshing tools, including an app to prepare geometry for simulation. The simulation apps on the 3DEXPERIENCE platform provide reliable solutions to multi-step simulations with combinations of non-linearities, including simple and robust contact setup and solution using General Contact for both static and dynamic problems. This role enables the explicit dynamic solver allowing for simulation of highly nonlinear impact or quasi-static problems. The

Structural Mechanics Engineer for SOLIDWORKS Users	
	3DEXPERIENCE Platform provides apps and tools for easy sharing of data and knowledge enabling collaboration.
Objectives	The course covers the following topics: - • Access and use of the 3DEXPERIENCE PLM Services connector - • Understand which entities are transferred into the 3DEXPERIENCE simulation apps - • Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

Structural Professional Engineer for SOLIDWORKS Users	
Course Code	SIM-en-DRDW-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Structural Simulation Engineer
Description	This course is an introduction to the Structural Simulation Engineer role, which is an offering to expand the simulation capabilities for SOLIDWORKS users.
Objectives	Upon completion of this course you will be able to: - Access and use the SOLIDWORKS Simulation Connector - Understand which entities are transferred into the 3DEXPERIENCE simulation apps - Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Course Code	CAT-en-3DMTVS-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module addresses the needs of Mechanical Designers working on cloud. It will first teach you how to design a new part with the 3DEXPERIENCE platform, insert the part in a product then position and constrain it. You will learn how to assign material properties and compute weight, then complete a simple drawing. Finally, you will learn how to create a new part version, replace the original part and update the product. More advanced topics will also be covered: they will teach you how to manage complex product structures, create product features, manage catalogs and analyze assemblies.
Objectives	Upon completion of this module, you will be able to: - Create new products and parts - Insert a part in a product and position it - Apply materials to parts - Calculate the weight of a product - Insert and complete a drawing - Create a new part version - Replace a part and update a product
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
	Innovator Role module. They should also be familiar with CATIA V5 Mechanical Design.
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Course Code	CAT-en-3DMT-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2020x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Designers who need to work with mechanical parts
Description	This course addresses the needs of Mechanical Designers. It will first teach you how to design a new part with the 3DEXPERIENCE platform, insert the part in a product then position and constrain it. You will learn how to assign material properties and compute weight, then complete a simple drawing. Finally, you will learn how to create a new part version, replace the original part and update the product. More advanced topics will also be covered: they will teach you how to manage complex product structures, create product features, manage catalogs and analyze assemblies.
Objectives	Upon completion of this course, you will be able to: - Create new products and parts - Insert a part in a product and position it - Apply materials to parts - Calculate the weight of a product - Insert and complete a drawing - Create a new part version - Replace a part and update a product - Design parts in context - Create assembly features and catalogs - Analyze the assemblies

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. They should also be familiar with CATIA V5 Mechanical Design.
Available Online	Yes

What's New for Industry Innovation	
Course Code	ENOV-en-WCSV-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	1.5 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the enhancements and new functionalities in the Industry Innovation role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Industry Innovation role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Industry Innovation role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

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3DEXPERIENCE®

Learning Experience | Course Catalog

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Learning Experience | Course Catalog

Learning Experiences for 3DEXPERIENCE WORKS - WKLX-OC	1
3DEXPERIENCE 3D Product Architect Essentials	2
3DEXPERIENCE Business Innovation Essentials	4
3DEXPERIENCE Business Innovation Essentials for CAD Users	5
3D Generative Innovator	7
CATIA 2D Layout for 3D Design Essentials	9
CATIA Assembly Design Expert	10
CATIA Bent Part Design Essentials	11
CATIA Electrical 3D Design Essentials	12
CATIA Engineering Templates Reuse Essentials	14
CATIA Functional Plastic Parts Essentials	15
CATIA Generative Wireframe and Surface Essentials	16
CATIA Mechanical Design Expert	17
CATIA Mechanical Design Fundamentals	19
CATIA Mechanical Systems Design Essentials	21
CATIA Mold Tooling Design Essentials (MTG)	22
CATIA Natural Shape Essentials	23
CATIA Part Design Expert	24
CATIA Part Design Fundamentals	26
CATIA Shape Healing Essentials	27
CATIA Sheet Metal Design Essentials	28
CATIA Weld Design Essentials	29
Collaborate from Design to Manufacturing in Additive Manufacturing	30
DELMIA Milling Machining Essentials	31
DELMIA Multi-Axis Machining Essentials	32
DELMIA Prismatic Machining Fundamentals	34
DELMIA V5 to 3DEXPERIENCE Machining Transition	35
ENOVIA Classify and Reuse Essentials	37
ENOVIA Collaboration and Approvals Essentials	38
ENOVIA Collaboration for Microsoft Essentials	40
ENOVIA Collaborative Lifecycle Management Essentials	41
ENOVIA Design Review Essentials	42

ENOVIA Engineering Release Management Essentials	43
ENOVIA Exchanges Management Essentials	44
ENOVIA On-The-Go Essentials	45
Explore the 3DEXPERIENCE DraftSight Role	46
Explore the 3DEXPERIENCE SOLIDWORKS (PLM) Role	47
Explore the 3D Innovator Role	48
Explore the 3D Pattern Shape Creator Role	49
Explore the 3D Render Role	50
Explore the 3D Sculptor Role	51
Explore the 3D SheetMetal Creator Role	52
Explore the Classification Intelligence Analyst Role	53
Explore the Drafter Role	54
Explore the Electrical 3D Systems Designer Role	55
Explore the Fluid 3D Systems Designer Role	56
Explore the Fluid Dynamics Engineer Role	57
Explore the Lean Team Player Role for Team Meeting Animation	58
Explore the Lean Team Player Role for Transformation	59
Explore the Manufacturing Items Engineer Role	60
Explore the Mold and Tooling Designer Role	61
Explore the NC Mold and Die Programmer Role	62
Explore the NC Prismatic and Turning Programmer Role	64
Explore the NC Prismatic Machine Programmer Role	66
Explore the PartSupply Optimized Components Consumer Role	67
Explore the PartSupply Standard Components Manager Role	68
Explore the Product Communicator Role	69
Explore the Social Business Analyst Role	70
Lean Management at the Heart of the Industry Renaissance	71
Master CATIA Assembly Design	72
Master CATIA Drafting	73
Master CATIA Part Design	74
Perform as Project Planner	75
Portfolio and Product Planning	76
Practice CATIA 2D Layout for 3D Design	77
Practice CATIA 3D Annotation Insight	78
Practice CATIA 3D Tolerancing and Annotation	80
Practice CATIA Assembly Design - Added Exercises	81

Practice CATIA Bent Part Design	82
Practice CATIA Electrical 3D Design	83
Practice CATIA Engineering Templates Reuse	84
Practice CATIA FreeStyle Shape Design	85
Practice CATIA Functional Plastic Parts	86
Practice CATIA Generative Wireframe and Surface	87
Practice CATIA Imagine and Shape (IMA)	88
Practice CATIA Live Rendering	89
Practice CATIA Natural Assembly	90
Practice CATIA Natural Shape	92
Practice CATIA Natural Sketch	93
Practice CATIA Part Design	94
Practice CATIA Part Design - Added Exercises	95
Practice CATIA Piping and Tubing 3D Design	96
Practice CATIA Piping and Tubing Setup	97
Practice CATIA Quality Rules Reuse	98
Practice CATIA Sheet Metal Design	99
Practice CATIA Surface Design - Added Exercises	100
Practice CATIA Weld Design	101
Practice DELMIA Machining Validation	102
Practice DELMIA Manufacturing Context Builder	103
Practice DELMIA Milling Machining	104
Practice DELMIA Multi-Axis Machining	105
Practice DELMIA Prismatic and Turning Machining	106
Practice DELMIA Prismatic Machining	108
Practice ENOVIA Change Action Management	109
Practice ENOVIA Collaborative Lifecycle Management	110
Practice ENOVIA Design Review	111
Practice ENOVIA Engineering Release	112
Practice ENOVIA Exchanges Management	113
Practice ENOVIA On-The-Go	114
Practice ENOVIA Project Execution	115
Practice SIMULIA Linear Structural Scenario Creation	116
Practice SIMULIA Linear Structural Validation	117
Practice SIMULIA Material Calibration	118
Practice SIMULIA Mechanical Scenario Creation	120

Practice SIMULIA Mechanical Scenario Creation: Linear Dynamics	121
Practice SIMULIA Model Assembly Design	122
Practice SIMULIA Performance Trade-off	123
Practice SIMULIA Physics Results Explorer	124
Practice SIMULIA Physics Simulation Review	125
Practice SIMULIA Plastic Injection	126
Practice SIMULIA Structural Model Creation	127
Practice SIMULIA Structural Model Creation : Geometry and Meshing	128
Practice SIMULIA Structural Scenario Creation	129
SIMULIA 3DPlay Simulation Experience Essentials	130
SIMULIA Durability Engineer Essentials	131
SIMULIA Mechanical Scenario Creation Essentials	133
SIMULIA Model Assembly Design Essentials	134
SIMULIA Physics Results Explorer Essentials	135
SIMULIA Structural Model Creation : Geometry and Meshing	136
SIMULIA Structural Model Creation Essentials	137
SIMULIA Structural Scenario Creation Essentials	138
SIMULIA Structural Validation Essentials	139
Structural Mechanics Engineer for SOLIDWORKS Users	140
Structural Professional Engineer for SOLIDWORKS Users	142
Transition to the 3DEXPERIENCE platform for Mechanical Designers	143
Transition to the 3DEXPERIENCE platform for Mechanical Designers	145
Understand Lean Fundamentals	147
Understand Lean Transformation Methodology	148
What's New for Function Driven Generative Designers	149
What's New for Industry Innovation	150
What's New for Mechanical Designers	151

Learning Experiences for 3DEXPERIENCE WORKS - WKLX-OC

3DEXPERIENCE 3D Product Architect Essentials	
Course Code	ENOV-en-PAU-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users, CAD users
Description	This course is based on the Power By approach, whereby users on all versions and solutions (V5 and V6) learn how to leverage the power of the 3DEXPERIENCE platform for their projects and daily work. More specifically, in this course you will learn the various functionalities available with the 3D Product Architect role of the 3DEXPERIENCE platform. You will also learn how to create and modify a product structure and validate the modifications after reviewing them. The course offers an insight into the functionalities that help you collaborate with your team members using the various web-based applications available with the Product Architect role.
Objectives	In this course, you will learn how to: - Assign tasks to your team members - Explore and visualize products within a web-browser - Create and modify product structure of various components under governance of a change process - Create revisions and manage the lifecycle of the products - Modify the design - Review 3D models - Create and share design reviews

3DEXPERIENCE 3D Product Architect Essentials	
Prerequisites	Students attending this course must be familiar with the fundamentals of CATIA V5 and should have completed the Gateway to the 3DEXPERIENCE platform and the 3DEXPERIENCE Business Innovation Essentials for CAD Users courses.
Available Online	Yes

3DEXPERIENCE Business Innovation Essentials	
Course Code	CRB-en-IFW-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Understand the 3DEXPERIENCE interface - Connect to the 3DEXPERIENCE platform - Access your Dashboard - Use the 6WTags for searching content - Share various documents with other users through - Collaborate using capabilities of the 3DEXPERIENCE platform
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Course Code	CRB-en-IFWC-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	5.5 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the various functionalities available for the Business Innovation role on the 3DEXPERIENCE platform. You will learn how to collaborate and innovate effectively using the 3DEXPERIENCE platform. You will also learn how to design a model using CATIA V5 or SOLIDWORKS launched from the 3DEXPERIENCE platform. In addition, you will learn about configuring the 3DEXPERIENCE Platform Management dashboard.
Objectives	Upon completion of this course you will be able to: - - Access the 3DEXPERIENCE Platform Management dashboard - - Configure the 3DEXPERIENCE Platform Management dashboard - - Understand the 3DEXPERIENCE interface - - Connect to the 3DEXPERIENCE platform - - Access your Dashboard - - Access your social communities on 3DSwym - - Share various documents with other users - - Collaborate using capabilities of 3DEXPERIENCE platform - - Design using CATIA V5 Connector or SOLIDWORKS Connector

3DEXPERIENCE Business Innovation Essentials for CAD Users	
Prerequisites	There is no pre-requisite for this course.
Available Online	Yes

3D Generative Innovator	
Course Code	CAT-en-XGG-F-15-201
Available Release	3DEXPERIENCE R2020x
Duration	10 hours
Course Material	
Level	Fundamental
Audience	Architects, Engineers or BIM/VDC consultant
Description	This course explains the essentials of the application xGenerative Design through a series of exercises. Each one of them focuses on a specific aspect of the application, beginning with a quick description of the exercise, the strategy to achieve it and a video explaining all the steps. The combination of all of them should bring you the keys to start working on xGenerative Design, from simple small scale design to more complex models.
Objectives	Upon completion of this course you will be able to: - Get how both interfaces work with each other - Get fundamentals of visual scripting - Create a fully parametric model - Create and manage collections of objects and values - Re-use xGenerative Design in other contexts - Understand how it may be applicable to your business or your client's - How can it be mixed with current workflows - Develop your own logics that can be re-used within your company - Share knowledge inside your organization - Share feedbacks with Dassault Systemes on your experience

3D Generative Innovator	
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform.
Available Online	Yes

CATIA 2D Layout for 3D Design Essentials	
Course Code	CAT-en-LO1-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course you will learn how to create 2D layout views in a 3D model and use them to design the part in the 3D environment.
Objectives	Upon completion of this course you will be able to: - Create 2D layout views in a 3D environment - Export 2D geometry into a 3D environment - Create drawings using the 2D layout views
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with CATIA Part and Assembly Design.
Available Online	Yes

CATIA Assembly Design Expert	
Course Code	CAT-en-ASD-A-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	11.5 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will introduce you to complex assembly modeling techniques. You will learn how to design a product architecture and manage complex assembly structures. You will also learn how to use advanced features to design parts within an assembly environment and how to analyze interferences.
Objectives	Upon completion of this course you will be able to: - Analyze interferences - Analyze component links and relations - Design complex products - Design new parts within a product - Manage complex product structures
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and be familiar with CATIA Part Design and Assembly Design fundamentals.
Available Online	Yes

CATIA Bent Part Design Essentials	
Course Code	CAT-en-SMB-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designer and Sheetmetal Designer
Description	This course will teach you how to use the Bent Part Design app to create and modify a sheetmetal part. You will learn how to define the sheetmetal parameters and create features such as walls, bends, cutouts and corners. You will also learn different techniques for multi-selecting the objects and constraining the parts.
Objectives	Upon completion of this course you will be able to: - Define and modify the sheetmetal parameters - Create a sheetmetal part using the wall and bend features - Manage the folded and unfolded views of parts - Create cutouts, chamfers and corners - Constrain the parts
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Electrical 3D Design Essentials	
Course Code	CAT-en-EHI-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2020x
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Electrical Engineers new to Electrical Physical System Design using the 3DEXPERIENCE platform.
Description	This course will teach you how to create electrical geometry in the 3DEXPERIENCE platform and thereby help you in designing the electrical physical systems. You will work with electrical catalogs to place the components from electrical libraries. You will learn the routing of branches for creating electrical branch geometries, managing the electrical geometry content, and routing conductors through the electrical geometry. You will also learn the 3D Master Approach of annotating the electrical physical system.
Objectives	Upon completion of this course you will be able to: - Create and use an Electrical Library using Data Setup - Create an Electrical Geometry - Route Conductors through the Electrical Geometry - Annotate the Electrical Physical System using the 3D Master Approach
Prerequisites	- Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. - They should also be familiar with Part Design and should know how to use an electrical catalog.

CATIA Electrical 3D Design Essentials	
Available Online	Yes

CATIA Engineering Templates Reuse Essentials	
Course Code	CAT-en-KT1-F-15-201
Available Releases	3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	0.50 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course, you will learn how to create customized features by reusing the power copy and user feature.
Objectives	Upon completion of this course you will be able to: - Create customized features using templates.
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Functional Plastic Parts Essentials	
Course Code	CAT-en-FMP-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Plastic Part Designers and Molded Part Designers
Description	This course will teach you how to use the Functional Plastic Parts app to create molded parts. You will also learn how to create a core and a cavity using styling data. You will be able to create a detailed design by adding holes, stiffening ribs, bosses and additional fixtures. You will also be able to modify the design and complete the final part with additional draft and fillet features.
Objectives	Upon completion of this course you will be able to: - Create a molded plastic part - Add holes and protected areas - Add ribs and bosses
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with the Part Design app.
Available Online	Yes

CATIA Generative Wireframe and Surface Essentials	
Course Code	CAT-en-GS1-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	20 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This course will teach you how to use the Generative Wireframe and Surface app to create curves and surfaces. You will learn how to assemble, re-limit and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this course you will be able to: - Create curves and improve the quality of the imported wireframes - Create surfaces based on the wireframe geometries - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - Analyze the surface quality and heal the defects
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course.
Available Online	Yes

CATIA Mechanical Design Expert	
Course Code	CAT-en-3DE-A-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	32 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will introduce you to complex modeling techniques. You will use advanced sketch-based and surface-based features to design parts and learn how to improve productivity by reusing existing features. You will also see how to design a product architecture and manage complex assembly structures, using advanced features to design parts within an assembly environment. Finally, you will learn how to analyze interferences and then create an assembly layout using advanced tools to dress-up and annotate the final drawing.
Objectives	Upon completion of this course you will be able to: - Create and manage complex parts - Create fully parameterized models - Create re-usable features - Analyze interferences, component links and relations - Manage complex product structures - Design new parts within a product - Create large assembly layouts with tables and bill of materials
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course

CATIA Mechanical Design Expert	
	and in addition, they should be familiar with the Mechanical Design Fundamentals.
Available Online	Yes

CATIA Mechanical Design Fundamentals	
Course Code	CAT-en-3DF-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	32 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This course will teach you how to create simple parts, assemblies and drawings. You will learn how to use different feature-based tools to build, review and modify a model. You will also learn how to create and analyze assemblies and how to produce a drawing with different views. Finally, you will learn how to dimension the drawing and annotate the views.
Objectives	Upon completion of this course you will be able to: - Create a new PLM object - Create and constrain 2D sketches - Complete a 3D model using features - Review and edit the features - Create parameters and formulas in the 3D model - Create a new product and add components to it - Move the components within a product by positioning them using assembly constraints - Create simple projection views and section views of 3D parts - Position the views on a drawing sheet - Add dimensions and annotations to the views - Finalize the drawing sheet by adding borders and title blocks

CATIA Mechanical Design Fundamentals	
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Mechanical Systems Design Essentials	
Course Code	CAT-en-KIM-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create the architecture of a mechanism using simple wireframe elements and then complete the mechanism by adding 3D representations. You will also learn how to create a more complex mechanism using existing mechanisms, and finally how to animate the result.
Objectives	Upon completion of this course you will be able to: - Create a new mechanism - Manage the mechanism behavior - Include alternative representations to complete the mechanism - Create a new macro mechanism from existing sub-mechanisms - Animate the mechanism
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with the Assembly Design app.
Available Online	Yes

CATIA Mold Tooling Design Essentials (MTG)	
Course Code	CAT-en-MTG-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Mold Tooling Designers
Description	In this course, you will learn how to import design data and prepare a Mold project. You will create Molded Part from the design part and also create the Mold Tools. Finally, you will learn how to add additional components from the catalog.
Objectives	Upon completion of this course, you will be able to: - Import Components from the Catalog and Design Data - Prepare a Molded Part - Explain Conceptual Mold Design - Describe Detailed Core Cavity Design - Understand Detailed Mold Design
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with the Part Design app.
Available Online	Yes

CATIA Natural Shape Essentials	
Course Code	CAT-en-LSP-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Conceptual Designers, Stylists, Simulation and Manufacturing Engineers
Description	This course will introduce you to the CATIA Natural Shape app and its unique working environment. You will learn how to use the app to conceptualize, create and modify mechanical parts and shapes. The course features short-duration demos followed by exercises which will allow you to practice. You will also learn the related theory, tips and recommendations while performing the exercises.
Objectives	Upon completion of this course you will be able to: - Create a conceptual design directly in 3D - Use the hybrid design environment to conceptualize your designs - Work on the structure to create the 3D parts - Navigate through the structure and position the parts - Reuse the existing designs in the 3D models
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Part Design Expert	
Course Code	CAT-en-PDG-A-V5R31
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , V5-6R2012 , V5-6R2013 , V5-6R2014 , V5-6R2015 , V5-6R2016 , V5-6R2017 , V5-6R2018 , V5-6R2019 , V5-6R2021 , V5R19 , V5R20 , V5R21
Duration	12.17 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This course will teach you how to design complex 3D mechanical parts using the Boolean approach. You will learn how to work in a Multi-Model Environment and maintain links between 3D models. You will also learn to analyze designs in order to optimize them.
Objectives	Upon completion of this course you will be able to: - Create a part using 3D reference elements - Create advanced Sketch-Based Features - Apply advanced Dress-Up Features - Design 3D parts using Boolean operations - Work in a Multi-Model Environment and share your designs with others - Analyze parts and optimize them - Annotate the parts for review
Prerequisites	Student attending this course must be familiar with CATIA V5 fundamentals and must have completed the CATIA Sketcher and CATIA Part Design Fundamentals courses.

CATIA Part Design Expert	
Available Online	Yes

CATIA Part Design Fundamentals	
Course Code	CAT-en-PDG-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This course will teach you how to create a 3D model using the CATIA Part Design app. You will learn how to use different feature-based tools to build a 3D model. You will also learn how to add parameters, then review, measure and modify a model.
Objectives	Upon completion of this course you will be able to: - Create new parts - Create and constrain 2D sketches - Complete a 3D model using basic features - Parameterize a model - Review and measure a model - Reuse existing features
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

CATIA Shape Healing Essentials	
Course Code	CAT-en-HA1-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Tooling Designers, Mechanical Designers and Surface Designers.
Description	This course introduces you to the user interface and basic tools of CATIA Shape Healing app. You will learn to analyze and repair the imported data (IGES 3D or CATIA V4 files). You will also learn how to compare two versions of a part and to customize the workbench, in order to suit your needs.
Objectives	Upon completion of this course, you will be able to: - Analyze the imported data - Repair the imported data - Compare two versions of a part - Customize the app
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with CATIA Surface Design.
Available Online	Yes

CATIA Sheet Metal Design Essentials	
Course Code	CAT-en-SMD-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Sheet Metal Designer
Description	This course will teach you how to create a sheet metal part using standard wall, bend and stamping features. You will see how user features can be incorporated into the design and how to use both standard and user-defined materials. Finally you will learn how to create a flat pattern and produce a detailed, annotated drawing.
Objectives	Upon completion of this course you will be able to: - Create a sheet metal part using wall and bend features - Manage folded and unfolded views - Use pre-defined sheet metal parameters - Create stamped features - Create duplicating features and use the multi-body methodology - Creating drawings of sheet metal parts - Export a finished flat pattern
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Part Design app.
Available Online	Yes

CATIA Weld Design Essentials	
Course Code	CAT-en-WDG-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers and Structural Designers
Description	This course will teach you how to create a welded assembly. You will learn how to join parts using appropriate weld features and how to generate associative weld drawings and weld reports. This course will teach you how to define the welding resource in the Data Setup app and use it to create welds.
Objectives	Upon completion of this course you will be able to: - Define the welding resource - Create and manage welded assemblies - Generate weld reports - Create welding drawings
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Assembly Design.
Available Online	Yes

Collaborate from Design to Manufacturing in Additive Manufacturing	
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	2.75 hours
Course Material	
Level	Fundamental
Audience	Additive Manufacturing Designer, Additive Manufacturing Programmer,Mechanical Designers
Description	In this module, you will learn how to apply the end-to-end process from the design optimization through to the virtual print of the part.
Objectives	Upon completion of this module, you will be able to: - Design a part for additive manufacturing - Setup the manufacturing built for additive manufacturing process - Simulate the manufacturing setup for virtual printing
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They must be familiar with the CATIA Part Design, and the CATIA Imagine and Shape apps. - - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Functional Driven Generative Designer, Powder Bed Programmer, Additive Manufacturing Researcher and Reverse Shape Optimizer.
Available Online	Yes

DELMIA Milling Machining Essentials	
Course Code	DEL-en-SMG-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , V6R2012 , V6R2012x , V6R2013 , V6R2013x
Duration	10.7 hours
Course Material	
Level	Fundamental
Audience	Numerical Control (NC) Programmers
Description	This course will teach you how to define and manage NC programs dedicated to machining parts that are designed with surface or solid geometry. You will learn how to define the 3-Axis Roughing, Semi-finishing and Finishing operations. You will also learn how to improve productivity in mould and die machining using the various functionalities of 3-Axis Surface Machining.
Objectives	Upon completion of this course you will be able to: - Define 3-Axis Surface Machining operations - Define a Rework Area - Create Machining Features - Analyze and modify the Tool path
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course. Additionally, they should be familiar with the fundamentals of machining.
Available Online	Yes

DELMIA Multi-Axis Machining Essentials	
Course Code	DEL-en-MMG-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	8.7 hours
Course Material	
Level	Fundamental
Audience	Numerical Control (NC) Programmers
Description	This course will teach you how to use the common functionalities available in the machining apps of DELMIA. You will learn how to define and manage NC programs dedicated to machining parts that are designed with surface or solid geometry. This course also teaches you how to generate high quality NC programs for machining complex 3D parts and free-form shapes using advanced machining techniques. You will learn how to perform 2.5 to 5-Axis machining operations.
Objectives	Upon completion of this course you will be able to: - Define the infrastructure required for machining - Define 3-Axis surface machining operations - Define multi-axis finishing and contouring operations - Define multi-pockets machining operations - Define multi-axis helix machining operation
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE Platform course. Additionally, they should be familiar with the fundamentals of machining

DELMIA Multi-Axis Machining Essentials	
Available Online	Yes

DELMIA Prismatic Machining Fundamentals	
Course Code	DEL-en-PMG-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , V6R2012 , V6R2012x , V6R2013 , V6R2013x
Duration	12.8 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This course will teach you how to use the common functionalities available in the machining apps of DELMIA. It will also teach you the fundamentals of creating and simulating a tool path. You will learn how to create tool paths for 2 and 2.5-axis machining operations. You will also learn how to create probes in the simulation object and how to simulate the machines, detect clashes and analyze them.
Objectives	Upon completion of this course you will be able to: - Define the infrastructure required for machining - Create tools and tool assemblies - Define prismatic machining operations - Replay and simulate tool paths - Generate the Numerical Control (NC) output"
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. Additionally, they should be familiar with the fundamentals of machining.
Available Online	Yes

DELMIA V5 to 3DEXPERIENCE Machining Transition	
Course Code	DEL-en-PMGT-F-15-211
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2021x
Duration	12.2 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module will teach you what are the differences between the Machining PPR Structure of CATIA V5 and DELMIA 3DEXPERIENCE and how to migrate the CATIA V5 Machining data to DELMIA 3DEXPERIENCE. You will also learn how to create a PPRContext, assign an NC Machine, insert and mount an NC Machine accessory, and then mount the workpiece. This module will also teach you how to define a tool assembly and its advanced parameters. You will learn how to define a Prismatic Machining Operation, replay the toolpath, and generate the NC Output.
Objectives	Upon completion of this module you will be able to: - Use the DELMIA 3DEXPERIENCE Machining product to define a Machining Process - Create Tools, Holders and Tool Assemblies - Define a Machining Operation - Generate a Numerical Control (NC) Output - Store and retrieve a Machining Process from the 3DEXPERIENCE database - Migrate CATIA V5 Machining objects to DELMIA 3DEXPERIENCE

DELMIA V5 to 3DEXPERIENCE Machining Transition	
Prerequisites	Students attending this course should have completed the Explore the Business Innovator module. Additionally, they must be experienced users of the DELMIA V5 Machining product.
Available Online	Yes

ENOVIA Classify and Reuse Essentials	
Course Code	ENOV-en-CLRE-F-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE Platform Users
Description	This course will teach you how to use the ENOVIA Classify and Reuse App to search and view different types of libraries as well as an objects' hierarchy. You will also learn how to manage the objects using these libraries. Based on a combination of videos, theory and simulations, you can take this course in a self-paced learning mode and is self-sufficient. However, if you want to practice, you will find a master exercise at the end of the course.
Objectives	Upon completion of this course, you will be able to: - Search and view different types of Libraries and their related hierarchy. - Search and view General Classes and Folders.
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Collaboration and Approvals Essentials	
Course Code	ENOV-en-BUPS-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	10 hours
Course Material	
Level	Fundamental
Audience	3DEXPERIENCE platform users
Description	This course will teach you the common functionalities used across all ENOVIA apps, which enable you to manage your content as well as collaborate with other members in a team. You will learn how to create workspaces for managing your business related components, such as folders, members and tasks. You will also learn how to create various workflows using routes, subscribe to your task related events, and report issues for objects. Further, you will learn to create documents and version them, while maintaining a record for all its revisions.
Objectives	Upon completion of this course, you will be able to: - Illustrate the structure of ENOVIA Business Process Services - Create and manage your folders - Create workflows - Identify and manage your assigned tasks - Subscribe to various objects and events - Report and resolve issues in objects - Create, track and organize your documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.

ENOVIA Collaboration and Approvals Essentials	
Available Online	Yes

ENOVIA Collaboration for Microsoft Essentials	
Course Code	ENOV-en-COMI-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Project Managers, Design Engineers, Reviewers and Technical Writers.
Description	In this course, you will learn how to use the ENOVIA Collaboration for Microsoft app to access and manage the documents in the ENOVIA database using the Microsoft applications.
Objectives	Upon completion of this course you will be able to: - Access documents from the ENOVIA database using Microsoft applications - Create, manage and synchronize documents
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course and should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Collaborative Lifecycle Management Essentials	
Course Code	ENOV-en-LIIN-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	CAD designers, engineers in charge of product development
Description	In this course, you will learn how to use the ENOVIA Collaborative Lifecycle Management app to manage the complete lifecycle of an object in order to achieve concurrent engineering. You will also learn to manage the access and ownership of objects for collaboration of members on the same platform.
Objectives	Upon completion of this course you will be able to: - Create a new product structure - Use different sections of the Action bar effectively - Manage the changes in a product structure - Save the product structure in the database
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course
Available Online	Yes

ENOVIA Design Review Essentials	
Course Code	ENOV-en-REEV-F-15-201
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	6.5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This course will teach you how to create different slides for various positions of an assembly to create exploded views. You will also learn how to create sections and measures, and export them as parts or drawings.You will also learn how to compare 3D objects and how to create multi-context reviews.
Objectives	Upon completion of this course you will be able to: - Create a design review and add markups to it - Create slides and add markers - Create and export sections and measures - Compare 3D Objects and 2D Drawings - Create multi-context reviews
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

ENOVIA Engineering Release Management Essentials	
Course Code	ENOV-en-XEN-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Release Engineers
Description	This course will teach you to analyze the engineering items and create a new engineering definition using the ENOVIA Engineering Release widget. You will play the role of a Product Release Engineer in building a new engineering definition from early definition to final validation in collaboration with engineering ecosystem.
Objectives	Upon completion of this course, you will be able to: - View and Open Engineering Items - Use 6WTags to filter the data - Evaluate the geometry in 3DPlay - Explore revision history - Create a new Engineering definition - Set the re-use and duplicate components - Set the Part Number and update its quantity - Add and review the design specification document - Assign the design responsibilities - Release the Engineering definition
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. Additionally, they should be familiar with Collaboration and Approvals in ENOVIA.
Available Online	Yes

ENOVIA Exchanges Management Essentials	
Course Code	ENOV-en-EXCH-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	CAD Designers and Platform Contributors
Description	This course will teach you how to use the import / export tools in 3DEXPERIENCE. You will also manage the mastership between V5 files and 3DEXPERIENCE files.
Objectives	Upon completion of this course, you will be able to: - Import and export 3DXML files - Import and export CATIA V5 files - Manage the Mastership of imported objects
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

ENOVIA On-The-Go Essentials	
Course Code	ENOV-en-ONGO-F-15-191
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	1 hours
Course Material	
Level	Fundamental
Audience	Users of the 3DEXPERIENCE platform
Description	This course will teach you how you can work in the offline mode in the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Work in the offline mode - Return to the online mode - Restore the last session - Create the offline content in the online mode
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course.
Available Online	Yes

Explore the 3DEXPERIENCE DraftSight Role	
Course Code	SDW-en-DRA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.75 hours
Course Material	
Level	Fundamental
Audience	
Description	Learn how the 3DEXPERIENCE DraftSight role can make drawings and project information accessible to the entire team anytime and anywhere. Turn 2D CAD design and document management from isolated activities to transparent collaboration and success with the 3DEXPERIENCE platform.
Objectives	Upon completion of the module you will be able to: - Learn how to securely connect the DraftSight Connected app to the 3DEXPERIENCE platform. - Open and save DraftSight objects on the 3DEXPERIENCE platform. - Create and assign a change action. - Work under a change action and modify the proposed drawing. - Learn how to replace revisions and review properties of objects saved on the platform.
Prerequisites	
Available Online	Yes

Explore the 3DEXPERIENCE SOLIDWORKS (PLM) Role	
Course Code	SDW-en-XWC-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.67 hours
Course Material	
Level	Fundamental
Audience	
Description	This learning path provides you a guided and systematic approach to learn about the 3DEXPERIENCE SOLIDWORKS role.
Objectives	Learn how to securely connect the SOLIDWORKS Connected app to the 3DEXPERIENCE platform. - Open and save SOLIDWORKS objects on the 3DEXPERIENCE platform. - Create and assign a change action. - Work under a change action and modify the proposed object. - Learn how to replace revisions and review properties of objects saved on the platform.
Prerequisites	
Available Online	Yes

Explore the 3D Innovator Role	
Course Code	CAT-en-CXD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	3.58 hours
Course Material	
Level	Fundamental
Audience	
Description	3D Innovator is a role on the 3DEXPERIENCE platform that contains the xDesign app for 3D modeling. You can quickly get started with creating a new physical product, sketching, adding features, creating reference geometry, using patterns, editing models, and creating assemblies. In addition, you can learn about the flexibility of super features, working with multibody parts, and using direct editing tools.
Objectives	The objectives of the course include: - Get familiar with the basics of xDesign. - Save and access content on the 3DEXPERIENCE Platform. - Create sketches and features in xDesign. - Use direct editing and Design Guidance to enhance your models. - Mate parts together to create assemblies.
Prerequisites	
Available Online	Yes

Explore the 3D Pattern Shape Creator Role	
Course Code	CAT-en-XGG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.20 hours
Course Material	
Level	Fundamental
Audience	Mechanical designers, Architects, Engineers or BIM/ VDC consultants
Description	3D Pattern Shape Creator lets you design shapes and patterns through interactive panel by using parametric modeling.
Objectives	Upon completion of this course you will be able to: - Get how both interfaces (Graph & 3D Model) work with each other - Get fundamentals of visual scripting - Create a fully parametric model - Understand how it may be applicable to your business or your client's - Develop your own logics that can be re-used within your company - Share knowledge inside your organization - Build user interface and explore design variation using monitor
Prerequisites	
Available Online	Yes

Explore the 3D Render Role	
Course Code	3DX-en-DPA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.58 hours
Course Material	
Level	Fundamental
Audience	
Description	Discover how to use xStudio to create photo-realistic rendered images from your designs in the 3DEXPERIENCE platform.
Objectives	Objectives of the course include: - Create xStudio experiences from physical products on the 3DEXPERIENCE Platform. - Apply materials to make your designs feel lifelike. - Use ambiences to envision how your products will look and behave in the real world. - Capture the moment with scenes. - Render images on server computers to free up your time and resources.
Prerequisites	N/A
Available Online	Yes

Explore the 3D Sculptor Role	
Course Code	SDW-en-XFO-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	11 hours
Course Material	
Level	Fundamental
Audience	
Description	It is strongly recommended to provide a detailed description. It will appear on the details page.
Objectives	It is strongly recommended to provide a detailed description. It will appear on the details page.
Prerequisites	
Available Online	Yes

Explore the 3D SheetMetal Creator Role	
Course Code	SDW-en-XBT-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.17 hours
Course Material	
Level	Fundamental
Audience	
Description	Learn about working in the 3D SheetMetal Creator role and the xSheetMetal app.
Objectives	The objectives of this course include: - Discover how to access the 3D SheetMetal Creator Dashboard. - Explore aspects of the xSheetMetal User Interface. - Explore how to use common workflows for sheet metal design. - Learn about the features and options available in the xSheetMetal app.
Prerequisites	
Available Online	Yes

Explore the Classification Intelligence Analyst Role	
Course Code	EXA-en-CLY-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.17 hours
Course Material	
Level	Fundamental
Audience	
Description	The Classification Intelligence Analyst role provides a new step by step process for enabling massive and automated classification thanks to components 3D shape and semantic complete recognition. Once classified, your components are more easily found, reused and can be compared in detail with each other and all market components from PartSupply Community.
Objectives	Objectives include: - Analyzing data to perform clustering and run the classifier. - Classify your components from automated suggestions.
Prerequisites	
Available Online	Yes

Explore the Drafter Role	
Course Code	SDW-en-WDR-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	
Description	Drafter enables you to quickly create and detail 2D drawings, and communicate how your design must be manufactured. Whenever a change occurs in your 3D model, all drawing views are automatically updated. Using Drafter's comprehensive dimension, tolerancing and annotation toolset accelerates the product development process by significantly reducing design-to-manufacturing time, while decreasing costs.
Objectives	In this lesson, you use the SOLIDWORKS Drawings app of the Drafter role on the 3DEXPERIENCE platform to create a part drawing and an assembly drawing. You learn how to: - Create drawing views and drawing sheets. - Add dimensions, annotations, and a bill of materials.
Prerequisites	N/A
Available Online	Yes

Explore the Electrical 3D Systems Designer Role	
Course Code	CAT-en-ELG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.50 hours
Course Material	
Level	Fundamental
Audience	Electrical 3D Systems Designers
Description	This learning module provides you with a guided and systematic approach to learn about the use of the Electrical 3D Systems Designer role. It will teach you how to synchronize and place electrical components using logical design. It will also teach you how to route branch geometries and wires through them.
Objectives	Upon the completion of this module, you will be able to: - Place Electrical components in the Physical design using Logical to Physical capabilities - Create and manage branch geometries to connect the electrical devices and equipment - Check network connectivity between the branches and connectors - Route wires through the branch geometries and assign electrical properties to them
Prerequisites	Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Electrical 3D Systems Designer
Available Online	Yes

Explore the Fluid 3D Systems Designer Role	
Course Code	CAT-en-FLG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	Fluid 3D System Designers, Piping & Tubing Designers and Fluid Designers
Description	Fluid 3D Systems Designer role provides an integrated 3D environment for the physical design of tubing, piping and HVAC systems in the context of the Digital Mockup. Users can take advantage of generative and specification driven design and automated part placement capabilities to ensure compliance with industry standards. In addition, its tools make it possible to quickly query design information and generate reports based on any component parameters.
Objectives	Upon completion of this module you will be able to - Create and manage the fluidic system - Place the parts manually and automatically - Validate the fluidic design using various tools - Prepare the data for manufacturing
Prerequisites	Knowledge: Students attending this learning module should have completed the Explore the Business Innovator Role module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Fluid 3D Systems Designer
Available Online	Yes

Explore the Fluid Dynamics Engineer Role	
Course Code	SIM-en-FMK-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Fluid Dynamics Engineer
Description	This course is a comprehensive introduction to fluid mechanics simulation in the 3DEXPERIENCE Platform. In this course, you will learn how to solve computational fluid dynamics (CFD) problems.
Objectives	Upon completion of this course you will be able to: - Set up and create CFD simulations in the 3DEXPERIENCE Platform - Perform incompressible and compressible CFD analyses - Perform fully coupled conjugate heat transfer (CHT) analyses - Postprocess results
Prerequisites	None
Available Online	Yes

Explore the Lean Team Player Role for Team Meeting Animation	
Course Code	DEL-en-LTR-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.92 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn how to use 3DLean to establish team routines and boost cross-team collaboration.
Objectives	Upon completion of this learning module, you will be able to: - Create and manage 3DLean Board - Prepare and organize Leangets - Create and manage actions - Create and manage problems - Prepare and launch a Flash 5' Meeting
Prerequisites	
Available Online	Yes

Explore the Lean Team Player Role for Transformation	
Course Code	DEL-en-LTRT-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.58 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn how to lead and implement a Digital Lean Transformation with 3D Lean.
Objectives	Upon completion of this learning module, you will be able to: - Lead end to end Digital Lean Transformation - Apply transformation methodology and project management tools - Apply DMAIC (Define, Measure, Analyze, Improve, Control) method using the 3DLean app
Prerequisites	
Available Online	Yes

Explore the Manufacturing Items Engineer Role	
Course Code	DEL-en-MFN-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.75 hours
Course Material	
Level	Fundamental
Audience	Manufacturing Engineers
Description	This learning module provides you a guided and systematic approach to learn about the functionalities available in the Manufacturing Items Engineer role of the 3DEXPERIENCE platform. You will also learn how to create, modify and update a manufacturing items structure using the web-based application.
Objectives	In this learning module, you will learn how to: - Explore and visualize products within a web-browser - Create and modify manufacturing items structures - Create revisions - Create change actions - Track changes and update manufacturing bill of materials
Prerequisites	
Available Online	Yes

Explore the Mold and Tooling Designer Role	
Course Code	CAT-en-MTG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Mold & Tooling Designers
Description	This learning module provides you with a guided and systematic approach to learn about the Mold & Tooling Design role. You will learn how to import design data and prepare a mold project. You will create molded part from the design part and also create the mold tools. Finally, you will learn how to add additional components from the catalog.
Objectives	Upon completion of this module, you will be able to: - Import components from the catalog - Prepare a molded part - Create conceptual mold design - Create detailed core cavity design - Create detailed mold design - Create the cooling circuits - Analyze the design
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. They must be familiar with the basic mold tool design concepts. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Mold & Tooling Designer
Available Online	Yes

Explore the NC Mold and Die Programmer Role	
Course Code	DEL-en-NMD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.50 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module gives you an overview of the 3DEXPERIENCE NC Milling Machining Programmer role that enables you to create milling operations to machine molds and die parts. You will learn to use various 3-axis machining strategies to produce a part. It will also teach you to compute remaining material on a machined part and define required rework operations to complete the machining of the part.
Objectives	Upon completion of this module, you will be able to: - Define the roughing operation - Compute rework areas and define semi-finishing operations - Convert 3 axis tool path into 5 axis - Define finishing operations
Prerequisites	- Knowledge: Students attending this course should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with the fundamentals of machining products using the 3DEXPERIENCE platform. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, NC Milling Machining Programmer and NC Prismatic Programmer.

Explore the NC Mold and Die Programmer Role	
Available Online	Yes

Explore the NC Prismatic and Turning Programmer Role	
Course Code	DEL-en-NPT-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module gives you an overview of the 3DEXPERIENCE NC Prismatic & Mill-Turn Machine Programmer role that enables you to create a mill-turn machining operation and simulate the tool path. You will learn how to simulate the machines, detect clashes and analyze them. It will also teach you to generate the NC output for an NC program.
Objectives	Upon completion of this module, you will be able to: - Define the infrastructure required for machining - Create tools and tool assemblies - Define turning operations - Replay and simulate tool paths - Simulate a machine using a simulation object - Generate the Numerical Control (NC) output
Prerequisites	- Knowledge: Students attending this course should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with the fundamentals of machining. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and NC Prismatic & Mill-Turn Programmer.

Explore the NC Prismatic and Turning Programmer Role	
Available Online	Yes

Explore the NC Prismatic Machine Programmer Role	
Course Code	DEL-en-NPM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	3 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	In this module gives you an overview of the 3DEXPERIENCE NC Prismatic Machine Programmer Role that enables you to create a machining operation and simulate the tool path. You will learn how to simulate the machines, detect clashes and analyze them. It will also teach you to generate the NC output for an NC program.
Objectives	Upon completion of this module, you will be able to: - Define the infrastructure required for machining - Create tools and tool assemblies - Define prismatic machining operations - Replay and simulate tool paths - Simulate a machine using a simulation object - Generate the Numerical Control (NC) output
Prerequisites	- Knowledge: Students attending this course should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and NC Prismatic Machine Programmer.
Available Online	Yes

Explore the PartSupply Optimized Components Consumer Role	
Course Code	EXA-en-EPU-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.17 hours
Course Material	
Level	Fundamental
Audience	
Description	Learn about accessing and using PartSupply Enterprise on the 3DEXPERIENCE Marketplace.
Objectives	You will learn how to open, insert and replace components from the PartSupply catalog from within SOLIDWORKS.
Prerequisites	N/A
Available Online	Yes

Explore the PartSupply Standard Components Manager Role	
Course Code	EXA-en-EPA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.20 hours
Course Material	
Level	Fundamental
Audience	
Description	Learn about selecting components from qualified suppliers, and how to subscribe to a whole supplier catalog.
Objectives	Objectives include learning import your own in-house components, and how to manage requests to add components to your company ecosystem.
Prerequisites	N/A
Available Online	Yes

Explore the Product Communicator Role	
Course Code	3DX-en-XPR-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.42 hours
Course Material	
Level	Fundamental
Audience	
Description	Product Communicator provides you with the xHighlight application for interactive storytelling and technical illustrations as well as the xStudio application to create photorealistic product shots.
Objectives	Objectives include: - Getting started with xStudio and xHighlight - Using materials and ambiences in xStudio - Adding annotations and performing transformations in xHighlight - Publishing media from xHighlight
Prerequisites	
Available Online	Yes

Explore the Social Business Analyst Role	
Course Code	NET-en-NBA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1.17 hours
Course Material	
Level	Fundamental
Audience	
Description	Learn how the 3DEXPERIENCE Platform and it's game changing online content aggregation and analysis apps help companies make better decisions faster.
Objectives	Upon completion of this course, you will be able to: - Build dashboards to leverage your business analysis and make your insights actionable. - Managing sources with the Library App - Monitor specifics sources with the Tracked Topic App - Leverage the Social Analytics app to analyze what matters to you - Enhance your analysis by comparing data with the Metrics Reader App - Make your insights actionable: reporting and sharing via Potions and 3DSwYm
Prerequisites	
Available Online	Yes

Lean Management at the Heart of the Industry Renaissance	
Available Release	3DEXPERIENCE R2021x
Duration	0.17 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will discover the future stakes of lean and how the digital lean is a key enabler for the industry renaissance.
Objectives	Raise questions on Industry challenges considering our Planet, People and Profit. See how the combination of Lean and digitization can offer answers.
Prerequisites	
Available Online	Yes

Master CATIA Assembly Design	
Course Code	CAT-en-ASD-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Advanced
Audience	Mechanical Designers
Description	This module will introduce you to complex assembly modeling techniques. You will learn how to design a product architecture and manage complex assembly structures. You will also learn how to use advanced features to design parts within an assembly environment and how to analyze interferences.
Objectives	Upon completion of this module you will be able to: - Analyze interferences - Analyze component links and relations - Design complex products - Design new parts within a product - Manage complex product structures
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with the CATIA Part Design and Assembly Design fundamentals.
Available Online	Yes

Master CATIA Drafting	
Course Code	CAT-en-GDR-A-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Advanced
Audience	Draftsmen
Description	This module will teach you how to manage drawing sheets and views in the Drafting app. You will also learn how to use advanced tools to dress-up, annotate views and customize the Drafting app.
Objectives	Upon completion of this module you will be able to: - Finalize the drawing sheet - Work with large assemblies - Customize the drafting app - Perform administrative tasks - Add Bill of Material
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with Part Design and Assembly Design in CATIA.
Available Online	Yes

Master CATIA Part Design	
Course Code	CAT-en-PDG-A-15-211
Available Release	3DEXPERIENCE R2021x
Duration	7 hours
Course Material	
Level	Advanced
Audience	Mechanical and Sheet Metal Designers
Description	This module will introduce you to complex 3D modeling techniques, using advanced sketch-based and surface-based features. You will learn how to manage complex part structures and how to improve productivity by reusing existing features. Finally, you will learn how to use parameters and tables to drive the design of a model.
Objectives	Upon completion of this module you will be able to: - Design parts with complex geometries - Create and manage robust part structures - Create fully parameterized models - Create re-usable features
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with CATIA Part Design fundamentals.
Available Online	Yes

Perform as Project Planner	
Course Code	CRB-en-XPP-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	Users of the 3DEXPERIENCE platform
Description	Learn how to improve collaboration in a simple and assisted iterative planning, execution and monitoring.
Objectives	Upon completion of this course, you will be able to: - Create and manage projects - Create, manage and schedule project tasks - Create and manage sub-projects
Prerequisites	Students attending this learning module should be familiar with Collaborative Business Innovator role.
Available Online	Yes

Portfolio and Product Planning	
Course Code	CRB-en-PPP-F-15-191
Available Release	3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Design Engineers, Product Managers, Change Initiators
Description	This course helps the customers to deploy an efficient and cost killer standardization process, aligned with business policy while increasing product quality.
Objectives	Upon completion of this course you will be able to: - Create Models and Model Versions - Associate Configured context to configured instances - Set Effectivity for Instances - Create Manufacturing Assemblies along with their scope - Use Assembly Assignment Assistant - Create Manufacturing Plans - Create Change Requests - Work Under Change Action to execute a Design Modification
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform and should be familiar with Variant Management, Engineering BOM Management in ENOVIA.
Available Online	Yes

Practice CATIA 2D Layout for 3D Design	
Course Code	CAT-en-LO1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this module you will learn how to create 2D layout views in a 3D model and use them to design the part in the 3D environment.
Objectives	Upon completion of this module you will be able to: - Create 2D layout views in a 3D environment - Export 2D geometry into a 3D environment - Create drawings using the 2D layout views
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with CATIA Part and Assembly Design.
Available Online	Yes

Practice CATIA 3D Annotation Insight	
Course Code	CAT-en-LFT-F-15-211
Available Releases	3DEXPERIENCE R2014x , 3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Design, Quality and other such departments where interrogating and annotating the 3D model is a frequent or occasional requirement.
Description	This module teaches how to use the 3D Annotation Insight app to review and filter 3D annotations information contained within part and assembly documents. Students will learn how to hide / show annotations and captures, use the dimensioning and tolerancing annotations to enhance understanding and improve the decision making.
Objectives	Upon completion of this module you will be able to: - Access and visualize the view, capture and annotation review features - Query and filter 3D annotations - Show/Hide individual as well as all annotations of a given type - Display FTA captures - Remove the FTA clipping plane of a capture - Filter 3D annotations
Prerequisites	Students attending this learning module should have taken the Explore the Collaborative Business Innovator Role module and should be familiar with the Windows Operating System.

Practice CATIA 3D Annotation Insight	
Available Online	Yes

Practice CATIA 3D Tolerancing and Annotation	
Course Code	CAT-en-FTA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	3D Master Designers
Description	This module will teach you how to annotate a 3D part. You will learn how to create annotation planes and how to add and manage 3D annotations on these planes. You will also learn how to create 3D views and use them to create 2D drawing views. You will also be able to create annotations on assemblies.
Objectives	Upon completion of this module you will be able to: - - Add 3D annotations to a part - - Manage and position the annotations - - Manage the 3D geometry associated to the annotations
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with CATIA Knowledgeware and basic CATIA Solid and Surface Design.
Available Online	Yes

Practice CATIA Assembly Design - Added Exercises	
Course Code	CAT-en-ASD-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Exercise
Audience	Mechanical Designers
Description	This module provides you with exercises for additional practice on the 3DEXPERIENCE Assembly Design app. The exercises have been created based on Industry practices. You will practice creating assembly structure, positioning components, constraining components using engineering connections and modifying parts in assembly context.
Objectives	Upon completion of this module you will be able to: - Practice your Assembly Design skills using selected scenarios - Apply the recommended methodology in various scenarios
Prerequisites	Students attending this learning module should be familiar with Part Design and Assembly Design.
Available Online	Yes

Practice CATIA Bent Part Design	
Course Code	CAT-en-SMB-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designer and Sheetmetal Designer
Description	This module will teach you how to use the Bent Part Design app to create and modify a sheetmetal part. You will learn how to define the sheetmetal parameters and create features such as walls, bends, cutouts and corners. You will also learn different techniques for multi-selecting the objects and constraining the parts.
Objectives	Upon completion of this module you will be able to: - Define and modify the sheetmetal parameters - Create a sheetmetal part using the wall and bend features - Manage the folded and unfolded views of parts - Create cutouts, chamfers and corners - Constrain the parts
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Electrical 3D Design	
Course Code	CAT-en-EHI-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Electrical Engineers new to Electrical Physical System Design using the 3DEXPERIENCE platform.
Description	This module will teach you how to create electrical geometry in the 3DEXPERIENCE platform and thereby help you in designing the electrical physical systems. You will work with electrical catalogs to place the components from electrical libraries. You will learn the routing of branches for creating electrical branch geometries, managing the electrical geometry content, and routing conductors through the electrical geometry.
Objectives	Upon completion of this module you will be able to: - Create and use an Electrical Library using Data Setup - Create an Electrical Geometry - Route Conductors through the Electrical Geometry
Prerequisites	- Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. - They should also be familiar with Part Design and should know how to use an electrical catalog.
Available Online	Yes

Practice CATIA Engineering Templates Reuse	
Course Code	CAT-en-KT1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	0.50 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	In this course, you will learn how to create customized features by reusing the power copy and user feature.
Objectives	Upon completion of this course you will be able to: - Create customized features using templates.
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA FreeStyle Shape Design	
Course Code	CAT-en-FSS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Industrial Designers and Creative Designers
Description	This module will teach you how to create flawless, styled shapes from scratch using 3D free-form curves and surfaces or using digitized data. You will also learn how to analyze and enhance the quality of existing curves and surfaces.
Objectives	Upon completion of this module you will be able to: - - Create styled shapes using digitized data - Create surfaces using the curve-based and the surface-based approaches - Analyze and enhance the quality of curves and surfaces
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with Generative Surface Design in CATIA.
Available Online	Yes

Practice CATIA Functional Plastic Parts	
Course Code	CAT-en-FMP-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	Plastic Part Designers and Molded Part Designers
Description	This module will teach you how to use the Functional Plastic Parts app to create molded parts. You will also learn how to create a core and a cavity using styling data. You will be able to create a detailed design by adding holes, stiffening ribs, bosses and additional fixtures. You will also be able to modify the design and complete the final part with additional draft and fillet features.
Objectives	Upon completion of this module you will be able to: - Create a molded plastic part - Add holes and protected areas - Add ribs and bosses
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with the Part Design app.
Available Online	Yes

Practice CATIA Generative Wireframe and Surface	
Course Code	CAT-en-GS1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	20 hours
Course Material	
Level	Fundamental
Audience	Surface Designers
Description	This module will teach you how to use the Generative Wireframe and Surface app to create curves and surfaces. You will learn how to assemble, re-limit and connect the geometries smoothly. You will also learn how to analyze the wireframe and the surface quality and rectify the detected defects.
Objectives	Upon completion of this module, you will be able to: - Create curves and improve the quality of the imported wireframes - Create surfaces based on the wireframe geometries - Assemble, re-limit and connect the surfaces smoothly to achieve the topology - Analyze the surface quality and heal the defects
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Imagine and Shape (IMA)	
Course Code	CAT-en-IMA-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Shape Designers, Product Stylists and Industrial Designers
Description	This module will teach you how to use the CATIA Imagine & Shape app to create, modify and improve product shapes and styles. You will learn how to use the Sketch Tracer app to import stylist's images in the 3DEXPERIENCE platform. You will also learn how to create an environment for a designed model and render it.
Objectives	Upon completion of this module you will be able to: - Create subdivision surfaces using tools specific to the Imagine and Shape app - Modify the style surfaces using Generative Shape Design tools - Create the required environment around a model - Apply materials to the created models
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module. Additionally, they should be familiar with the fundamentals of CATIA Mechanical and Shape Design.
Available Online	Yes

Practice CATIA Live Rendering	
Course Code	CAT-en-LRE-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Visual Experience Designers
Description	This module will introduce you to the CATIA Live Rendering app and its working environment. You will learn how to create highly realistic renderings and visualizations by application of customized materials, ambiences, cameras and lights. You will also learn about various other tools and options that you can use for creating rendered images and videos.
Objectives	Upon completion of this module, you will be able to: - Create and apply materials and stickers to 3D models. - Enhance a 3D Scene by adding dome ambiences and HDRi lights. - Create Cameras and animations for realistic visualizations and renderings - Render batches of images and animations - Export rendered images and generate videos - Add 3D environment and visualize the model
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Natural Assembly	
Course Code	CAT-en-LCP-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Engineers and Designers, and Design Architects
Description	This module will teach you how to create and manage product structures. You will explore a product and modify its structure by adding new products and exploding existing products. You will then scan the structure to activate a working product level, search for and add existing parts and use constraints to position the parts. Finally, you will create a new sub-product from a components list and use it to complete the product.
Objectives	Upon completion of this module you will be able to: - Explore a product and modify its structure using Natural Assembly - Select the product levels using the Ladder functionality - Search for a product and insert it in an existing assembly - Position the parts using constraints - Create a new sub-product from a component's list and use it to complete the product
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.

Practice CATIA Natural Assembly	
Available Online	Yes

Practice CATIA Natural Shape	
Course Code	CAT-en-LSP-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	7 hours
Course Material	
Level	Fundamental
Audience	Conceptual Designers, Stylists, Simulation and Manufacturing Engineers
Description	This module will introduce you to the CATIA Natural Shape app and its unique working environment. You will learn how to use the app to conceptualize, create and modify mechanical parts and shapes. The course features short-duration demos followed by exercises which will allow you to practice. You will also learn the related theory, tips and recommendations while performing the exercises.
Objectives	Upon completion of this module you will be able to: - Create a conceptual design directly in 3D - Use the hybrid design environment to conceptualize your designs - Work on the structure to create the 3D parts - Navigate through the structure and position the parts - Reuse the existing designs in the 3D models
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Natural Sketch	
Course Code	CAT-en-NTS-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Creative Designers
Description	This module contains both videos and exercises. After a short introduction to the app and the user interface, videos will be used to demonstrate the sketching techniques and the use of the sketch tools. You will use the exercises that follow the videos to practice what you have learned and familiarize yourself with the available tools.
Objectives	Upon completion of this module you will be able to: - Sketch curves or primitives in 2D and 3D - Trace and refine vector or primitive curves - Sketch on a surface - Import and edit images - Transform curves and images
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module. They should also be familiar with basic sketching techniques.
Available Online	Yes

Practice CATIA Part Design	
Course Code	CAT-en-PDG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Mechanical and Sheet Metal Designers
Description	This module will teach you how to create a 3D model using the CATIA Part Design app. You will learn how to use different feature-based tools to build a 3D model. You will also learn how to add parameters, then review, measure and modify a model.
Objectives	Upon completion of this module you will be able to: - Create new parts - Create and constrain 2D sketches - Complete a 3D model using basic features - Parameterize a model - Review and measure a model - Reuse existing features
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Part Design - Added Exercises	
Course Code	CAT-en-PDG-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	13 hours
Course Material	
Level	Exercise
Audience	Mechanical Designers
Description	This module provides you with an exercise database for additional practice on the3DEXPERIENCE Part Design app. The exercises have been arranged in increasing order of difficulty. The fundamental exercises will check and refresh your basic Part Design skills before you move on to more complex topics. The advanced exercises will make you practice the recommended design methodologies using realistic parts.
Objectives	Upon completion of this module you will be able to: - Apply your Mechanical skills in selected scenarios. - Employ the recommended methodology in various situations and efficiently use the Mechanical workbenches.
Prerequisites	Students attending this learning module should be familiar with CATIA Part Design.
Available Online	Yes

Practice CATIA Piping and Tubing 3D Design	
Course Code	CAT-en-PIP-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Piping or Tubing Designers
Description	This module will teach you how to route a pipe or a tube, and place the piping components. You will learn how to detail the design and modify the network. You will also learn how to validate the design and prepare it for manufacturing. The module also features exercises that enable you to practice creating a piping system design.
Objectives	Upon completion of this module you will be able to: - Route straight pipes or tubes - Position piping or tubing parts - Adjust the design of a piping or a tubing network - Validate the piping and tubing design - Prepare the piping and tubing design for manufacturing
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Piping and Tubing Setup	
Course Code	CAT-en-PTS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Fluid Systems Solution Administrators
Description	This module will teach you how to set up fluid systems resources and create piping components. You will learn how to manage component catalogs, design validation rules, and global naming conventions. You will also learn how to customize the generative view style file for drawings and standards for P&ID.
Objectives	Upon completion of this module you will be able to: - Create and manage resources for fluid systems design - Build equipment, supports, and components - Reuse the piping standard data for design setup - Create and manage component catalogs - Define the global naming conventions - Create the checks and rules for design validation - Create templates for generating reports - Customize the drafting standards and settings - Define symbols and annotations for piping and instrumentation diagrams
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Quality Rules Reuse	
Course Code	CAT-en-KE1-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will show you how to share corporate knowledge stored in the rule bases and leverage it across the company to ensure design compliance with the established standards. You will also learn to create reports and manage their template.
Objectives	Upon completion of this module you will be able to: - Automate the design modifications - Analyze and create reports
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice CATIA Sheet Metal Design	
Course Code	CAT-en-SMD-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	Sheet Metal Designer
Description	This module will teach you how to create a sheet metal part using standard wall, bend and stamping features. You will see how user features can be incorporated into the design and how to use both standard and user-defined materials. Finally you will learn how to create a flat pattern and produce a detailed, annotated drawing.
Objectives	Upon completion of this module you will be able to: - Create a sheet metal part using wall and bend features - Manage folded and unfolded views - Use pre-defined sheet metal parameters - Create stamped features - Create duplicating features and use the multi-body methodology - Creating drawings of sheet metal parts - Export a finished flat pattern
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and be familiar with the CATIA Part Design app.
Available Online	Yes

Practice CATIA Surface Design - Added Exercises	
Course Code	CAT-en-GS1-X-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Exercise
Audience	Mechanical Surface Designers
Description	This module provides you with an exercise database for additional practice on 3DEXPERIENCE Surface Design. The exercises have been created based on Industry practices. You will get to practice skills such as creating wireframes and surfaces, creating surfacic shells and solid parts, and working with multiple parts that are referencing a common part.
Objectives	These exercises will allow you to put your Shape skills into practice on selected scenarios. - You will apply the recommended methodology in various situations. - You will enhance your understanding and usage of the Shape apps.
Prerequisites	Students attending this course should be familiar with Surface Design.
Available Online	Yes

Practice CATIA Weld Design	
Course Code	CAT-en-WDG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers and Structural Designers
Description	This module will teach you how to create a welded assembly. You will learn how to join parts using appropriate weld features and how to generate associative weld drawings and weld reports. This course will teach you how to define the welding resource in the Data Setup app and use it to create welds.
Objectives	Upon completion of this module, you will be able to: - Define the welding resource - Create and manage welded assemblies - Generate weld reports - Create welding drawings
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module and should be familiar with Assembly Design.
Available Online	Yes

Practice DELMIA Machining Validation	
Course Code	DEL-en-MSG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module will teach you how to simulate an NC machine using tool path and NC code. You will learn how to create probes in the simulation object environment and use them to detect the clashes that occur during a machine simulation. You will also learn how to perform a fault analysis to detect, analyze and eliminate the clashes.
Objectives	Upon completion of this module you will be able to: - Create a simulation object - Simulate the machine using tool path and NC code - Create Probes to detect clashes during the machine simulation - Analyze and eliminate the clashes
Prerequisites	Students attending this course should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining and the DELMIA Prismatic Machining. ap3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, NC Prismatic Machine Programmer and NC MachineCode Validation Specialist.p.
Available Online	Yes

Practice DELMIA Manufacturing Context Builder	
Course Code	DEL-en-MSB-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	5.80 hours
Course Material	
Level	Fundamental
Audience	Process Planners
Description	In this module, you will learn to explore the PPR context. You will also learn to manage the documents in the spreadsheet view. You will learn to use the Compare command to compare structures of different versions of a PPR object like products, manufactured items, resources, systems or operations.
Objectives	Upon completion of this module you will be able to: - Explore the PPR context - Manage the documents in the spreadsheet view - Manage the PPR Smart Completion - Navigate Relations on a Product - Compare structures of different versions of a PPR object
Prerequisites	- Knowledge: Students attending this module should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of Process Planning. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Process Engineer.
Available Online	Yes

Practice DELMIA Milling Machining	
Course Code	DEL-en-SMG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	10.67 hours
Course Material	
Level	Fundamental
Audience	Numerical Control (NC) Programmers
Description	This course will teach you how to define and manage NC programs dedicated to machining parts that are designed with surface or solid geometry. You will learn how to define the 3-Axis Roughing, Semi-finishing and Finishing operations. You will also learn how to improve productivity in mould and die machining using the various functionalities of 3-Axis Surface Machining.
Objectives	Upon completion of this course you will be able to: - Define 3-Axis Surface Machining operations - Define a Rework Area - Create Machining Features - Analyze and modify the Tool path
Prerequisites	Students attending this course should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining and the DELMIA Prismatic Machining app.
Available Online	Yes

Practice DELMIA Multi-Axis Machining	
Course Code	DEL-en-MMG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8.67 hours
Course Material	
Level	Fundamental
Audience	Numerical Control (NC) Programmers
Description	This module will teach you how to use the common functionalities available in the machining apps of DELMIA. You will learn how to define and manage NC programs dedicated to machining parts that are designed with surface or solid geometry. This module also teaches you how to generate high quality NC programs for machining complex 3D parts and free-form shapes using advanced machining techniques. You will learn how to perform 2.5 to 5-Axis machining operations.
Objectives	Upon completion of this module you will be able to: - Define the infrastructure required for machining - Define 3-Axis surface machining operations - Define multi-axis finishing and contouring operations - Define multi-pockets machining operations - Define multi-axis helix machining operation
Prerequisites	Students attending this module should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining and the DELMIA Prismatic Machining app.
Available Online	Yes

Practice DELMIA Prismatic and Turning Machining	
Course Code	DEL-en-LMG1-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	23.17 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module will teach you how to define various turning operations to machine cylindrical parts. You will learn how to define multi-spindle and multi-turret machines, and use multiple turrets simultaneously to machine a part. You will also learn how to perform the part transfer activity using the multi-spindle machine to complete the machining on both sides of a part without any manual intervention. This module will also teach you how to create milling operations using the mill-turn machine.
Objectives	Upon completion of this module you will be able to: - Define the machining infrastructure - Define the turning operations - Define the milling operations using the multi-slide machine - Define multi-setups and multi-part machining - Replay and simulate the tool paths - Generate the Numerical Control (NC) output
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator role and the Explore the Collaborative Industry Innovator role modules. Additionally, they should be familiar with the fundamentals of machining.

Practice DELMIA Prismatic and Turning Machining

Available Online	Yes

Practice DELMIA Prismatic Machining	
Course Code	DEL-en-PMG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	12.8 hours
Course Material	
Level	Fundamental
Audience	NC Programmers
Description	This module will teach you how to use the common functionalities available in the machining apps of DELMIA. It will also teach you the fundamentals of creating and simulating a tool path. You will learn how to create tool paths for 2 and 2.5-axis machining operations. You will also learn how to create probes in the simulation object and how to simulate the machines, detect clashes and analyze them.
Objectives	Upon completion of this module you will be able to: - Define the infrastructure required for machining - Create tools and tool assemblies - Define prismatic machining operations - Replay and simulate tool paths - Generate the Numerical Control (NC) output"
Prerequisites	- Knowledge: Students attending this course should have completed the Explore the Business Innovator module. Additionally, they should be familiar with the fundamentals of machining. - 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and NC Prismatic Machine Programmer and Mechanical Designer.
Available Online	Yes

Practice ENOVIA Change Action Management	
Course Code	ENOV-en-NCHA-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	5.5 hours
Course Material	
Level	Fundamental
Audience	Change Initiators, Design Engineers and Product Managers
Description	This module will teach you how to use the ENOVIA Change Action Management app to manage the engineering change process. You will learn how to create change actions and add Proposed changes to it. You will also learn to work with change actions and view the Realized changes to complete the change process.
Objectives	Upon completion of this module, you will be able to: - Initiate a Change Action - Add Proposed Changes to a Change Action - Work Under Change Action to execute a Design Modification - View the Realized Changes - Review and Approve the Design changes
Prerequisites	Students attending this module should have completed the Explore the Collaborative Business Innovator and Explore the Collaborative Industry Innovator modules.
Available Online	Yes

Practice ENOVIA Collaborative Lifecycle Management	
Course Code	ENOV-en-LIIN-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	CAD designers, engineers in charge of product development
Description	In this module, you will learn how to use the ENOVIA Collaborative Lifecycle Management app to manage the complete lifecycle of an object in order to achieve concurrent engineering. You will also learn to manage the access and ownership of objects for collaboration of members on the same platform.
Objectives	Upon completion of this module you will be able to: - Create a new product structure - Use different sections of the Action bar effectively - Manage the changes in a product structure - Save the product structure in the database
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Design Review	
Course Code	ENOV-en-REEV-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	6.5 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module will teach you how to create different slides for various positions of an assembly to create exploded views. You will also learn how to create sections and measures, and export them as parts or drawings.You will also learn how to compare 3D objects and how to create multi-context reviews.
Objectives	Upon completion of this module you will be able to: - Create a design review and add markups to it - Create slides and add markers - Create and export sections and measures - Compare 3D Objects and 2D Drawings - Create multi-context reviews
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Engineering Release	
Course Code	ENOV-en-ENXENG-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Release Engineers
Description	This module will teach you to analyze the engineering items and create a new engineering definition using the ENOVIA Engineering Release widget. You will play the role of a Product Release Engineer in building a new engineering definition from early definition to final validation in collaboration with engineering ecosystem.
Objectives	Upon completion of this module, you will be able to: - View and Open Engineering Items - Evaluate the geometry in 3DPlay - Explore revision history - Create a new Engineering definition - Set the re-use and duplicate components - Set the Part Number and update its quantity - Add and review the design specification document - Assign the design responsibilities - Release the Engineering definition
Prerequisites	Knowledge: Students attending this course should have completed the Explore the Business Innovator module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator, Product Release Engineer and Mechanical Designer.
Available Online	Yes

Practice ENOVIA Exchanges Management	
Course Code	ENOV-en-EXCH-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2 hours
Course Material	
Level	Fundamental
Audience	CAD Designers and Platform Contributors
Description	This module will teach you how to use the import / export tools in 3DEXPERIENCE. You will also manage the mastership between V5 files and 3DEXPERIENCE files.
Objectives	Upon completion of this module, you will be able to: - Import and export 3DXML files - Import and export CATIA V5 files - Manage the Mastership of imported objects
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA On-The-Go	
Course Code	ENOV-en-ONGO-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	1 hours
Course Material	
Level	Fundamental
Audience	Users of the 3DEXPERIENCE platform
Description	This module will teach you how you can work in the offline mode in the 3DEXPERIENCE platform.
Objectives	Upon completion of this module you will be able to: - Work in the offline mode - Return to the online mode - Restore the last session - Create the offline content in the online mode
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business Innovator Role module.
Available Online	Yes

Practice ENOVIA Project Execution	
Course Code	ENOV-en-PREX-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	2.50 hours
Course Material	
Level	Fundamental
Audience	
Description	This module will teach you how to use the Project Execution app to manage your assigned tasks. You will be able to manage the project schedule, modify the tasks, record the risks and create timesheets.
Objectives	Upon completion of this module, you will be able to: - Manage the project schedule - Record risks for tasks - Create and submit timesheets
Prerequisites	Knowledge: Students attending this course should have completed the Explore the Business Innovator and Explore the Industry Innovator module. Additionally, they should be familiar with the Practice the Project Management module. 3DEXPERIENCE Roles: Collaborative Business Innovator, Collaborative Industry Innovator and Project Team Member.
Available Online	Yes

Practice SIMULIA Linear Structural Scenario Creation	
Course Code	SIM-en-LNCS-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Engineer
Description	This course is an introduction to linear, frequency and thermal simulations, and to the evaluation of simulation results.
Objectives	Upon completion of this course you will be able to: - Perform linear and frequency simulations - Perform thermal simulations - View and evaluate simulation results
Prerequisites	- The following course is required prior to taking this one: - Structural Model Creation Essentials
Available Online	Yes

Practice SIMULIA Linear Structural Validation	
Course Code	SIM-en-LSDY-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- The course is intended for the following audience: - Structural Designer
Description	This course is an introduction to performing structural simulation for designers using the 3DEXPERIENCE Platform, including product performance assessment under linear static conditions. The 3DEXPERIENCE Platform provides seamless integration between CAD, lifecycle and simulation so that your simulation automatically reacts when you update the design.
Objectives	The course covers the following topics: - Searching and managing simulation data. - Performing a structural simulation using the Linear Structural Validation app, including: Linear statics, Natural frequency extraction, Thermal (steady-state). - Review the results of the simulation using contour plots, animations and other visualization features.
Prerequisites	None
Available Online	Yes

Practice SIMULIA Material Calibration	
Course Code	SIM-en-MCAL-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Material Calibration Specialist - Structural Mechanics Engineer
Description	It is important to calibrate advanced material models for simulation, so that the response of the mathematical model used during simulation matches the material's tested physical behavior. This course is an introduction to the optimization methods embedded in the Material Calibration app. Test data can be imported, edited, and a math model optimized to fit the data. Plotting and other outputs help the user to determine the goodness of fit. Afterwards, a core material can be created for use in the 3DEXPERIENCE platform structural simulation apps, and/or an *.inp file can be exported for use in Abaqus.
Objectives	Upon completion of this course you will be able to: - Import and plot material test data - Configure and calibrate material models - Use optimization settings - Generate additional outputs - Create a core material in the 3DEXPERIENCE platform - Export materials for use in an Abaqus input file
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials

Practice SIMULIA Material Calibration

Available Online	Yes

Practice SIMULIA Mechanical Scenario Creation	
Course Code	SIM-en-MECS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Mechanics Engineer
Description	This course is an introduction to mechanical and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static and dynamics problems and view simulation results.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

Practice SIMULIA Mechanical Scenario Creation: Linear Dynamics	
Course Code	SIM-en-MECS2-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Advanced
Audience	- This course is intended for the following roles: - Structural Mechanics Engineer
Description	This course is an introduction to linear dynamics simulation in the 3DEXPERIENCE Platform. It teaches you how to solve linear dynamics problems, including natural frequency, harmonic response, and model dynamic applications. It also provides an introduction to solving interior structural-acoustic problems and conduct complex eigenvalue analyses. .
Objectives	Upon completion of this course you will be able to: - Perform linear dynamics simulations - Perform coupled structural-acoustic simulations - Perform complex eigenvalue simulations - View and evaluate simulation results
Prerequisites	- The following course is required prior to taking this one: - Mechanical Scenario Creation Essentials
Available Online	Yes

Practice SIMULIA Model Assembly Design	
Course Code	SIM-en-MSAM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Performance Engineer - Structural Mechanics Engineer
Description	This course in an introduction to creating large and complex finite element assemblies using the Batch Modeling technology in the 3DEXPERIENCE Platform. The course also discusses managing the product structure for large assemblies of parts and meshes created either in the 3DEXPERIENCE Platform or in 3rd-party tools.
Objectives	Upon completion of this course you will be able to: - Create external simulation representations. - Perform automated modeling
Prerequisites	Structural Model Creation: Geometry and Meshing
Available Online	Yes

Practice SIMULIA Performance Trade-off	
Course Code	SIM-en-PTO-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - - Simulation Collaborator - Simulation Process Engineer - Multidisciplinary Optimization Engineer
Description	This course is an introduction to the integrated web-based tool in the 3DEXPERIENCE platform that allows decision makers to select the best option among the competing objectives by providing trade-off and collaborative decision-support capability.
Objectives	Upon completion of this course you will be able to: - - Visualize and compare simulation data - Conduct trade-off analyses - Select the best alternative
Prerequisites	none
Available Online	Yes

Practice SIMULIA Physics Results Explorer	
Course Code	SIM-en-PHYR-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Fluid Dynamics Engineer - Structural Engineer - Structural Mechanics Engineer - Structural Performance Engineer
Description	The 3DEXPERIENCE Platform offers a rich variety of simulation tools and provides a new paradigm in results visualization. This course is an introduction to the high-performance visualization tool in the 3DEXPERIENCE Platform that allows simulation analysts and engineers to view and evaluate simulation results.
Objectives	Upon completion of this course you will be able to: - View and evaluate simulation results
Prerequisites	None
Available Online	Yes

Practice SIMULIA Physics Simulation Review	
Course Code	SIM-en-PSR-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	2.17 hours
Course Material	
Level	Fundamental
Audience	This course is intended for all simulation roles.
Description	This course teaches you how to view simulation experience content in the Physics Simulation Review app, providing lightweight results visualization.
Objectives	Upon completion of this course you will be able to: - - • Replay simulation experiences in Physics Simulation Review for both native simulations and externally generated simulation results. - - • Perform lightweight visualization through web browsers
Prerequisites	None
Available Online	Yes

Practice SIMULIA Plastic Injection	
Course Code	SIM-en-PPM-F-15-211
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	Simulation Analysts
Description	This course is an introduction to performing injection molding simulation to spur product and design innovation in the 3DEXPERIENCE Platform. The 3DEXPERIENCE Platform enables realistic plastic injection molding simulation of the mold cooling, filling and packing manufacturing processes early in the design cycle, when the cost of design change is low and opportunity is high.
Objectives	Upon completion of this course you will be able to: - Performa plastic injection molding simulation of the mold cooling, filling and packing processes using the Plastic Mold Injection app · Understand simulation results from the molding process through to part warpage to produce highly efficient designs and/or optimize their performance
Prerequisites	None
Available Online	Yes

Practice SIMULIA Structural Model Creation	
Course Code	SIM-en-MECM-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Engineer - Structural Mechanics Engineer - Structural Performance Engineer
Description	This course is an introduction to finite element modeling in the 3DEXPERIENCE platform. It teaches you how to prepare finite element models for simulation.
Objectives	Upon completion of this course you will be able to: - Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

Practice SIMULIA Structural Model Creation : Geometry and Meshing	
Course Code	SIM-en-MECM2-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	16 hours
Course Material	
Level	Advanced
Audience	- This course is intended for the following roles: - - Structural Mechanics Engineer - Structural Performance Engineer
Description	This course provides an in-depth look at cleaning/ repairing geometry for the purpose of generating high quality meshes. It also offers a comprehensive discussion on meshing techniques. The focus is on techniques relevant to simulation.
Objectives	Upon completion of this course you will be able to: - Clean and repair native and imported geometry. - Use advanced meshing techniques.
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

Practice SIMULIA Structural Scenario Creation	
Course Code	SIM-en-EMCS-F-15-211
Available Release	3DEXPERIENCE R2021x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Performance Engineer
Description	This course is an introduction to structural and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static problems and basic linear dynamics problems.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA 3DPlay Simulation Experience Essentials	
Course Code	SIM-en-3DP-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	2.17 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following roles: Mechanical Analyst Structural Vibration Analyst Noise & Vibration Analyst Fluid Mechanics Analyst Finite Element Modeling & Assembly Specialist Structural Analysis Engineer Steel Ship Structural Analysis Engineer Stress Engineer Fluid Dynamics Engineer
Description	This course teaches you how to replay simulation experiences in 3DPlay leveraging lightweight results visualization.
Objectives	Upon completion of this course you will be able to: - Replay simulation experiences in 3DPlay - Perform lightweight visualization through web browsers
Prerequisites	None
Available Online	Yes

SIMULIA Durability Engineer Essentials	
Course Code	SIM-en-FGA-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	The course is intended for users with the Durability Engineer role
Description	Durability of metals is a physics simulation discipline used across industries by many companies designing products made from steel, aluminum, and other metals. Using the simulation you have run in Structural Scenario or Mechanical Scenario, the fields that were solved can then be directed to be used in a complex fatigue loading history, to calculate either stress-life, strain-life or infinite life FRF values. These are used for redesign instead of the stresses or strains.
Objectives	Upon completion of this course you will be able to: - Perform fatigue simulations - Understand the fatigue loading most applicable to simulation procedures - Use fatigue materials and simulate surface roughness - View and evaluate fatigue simulation results
Prerequisites	- Any one of the following courses is required prior to taking this course: - - Mechanical Scenario Creation Essentials - Structural Scenario Creation Essentials

SIMULIA Durability Engineer Essentials	
Available Online	Yes

SIMULIA Mechanical Scenario Creation Essentials	
Course Code	SIM-en-MECS-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following roles: Mechanical Analyst Multiphysics Simulation Researcher
Description	This course is an introduction to mechanical and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static and dynamics problems and view simulation results.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA Model Assembly Design Essentials	
Course Code	SIM-en-MSAM-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Assembly Modeling Specialist - Finite Element Modeling & Assembly Specialist - Mechanical Analyst - Structural Mechanics Engineer
Description	This course in an introduction to creating large and complex finite element assemblies using the Batch Modeling technology in the 3DEXPERIENCE Platform. The course also discusses managing the product structure for large assemblies of parts and meshes created either in the 3DEXPERIENCE Platform or in 3rd-party tools.
Objectives	Upon completion of this course you will be able to: - Create external simulation representations. - Perform automated modeling
Prerequisites	Structural Model Creation: Geometry and Meshing
Available Online	Yes

SIMULIA Physics Results Explorer Essentials	
Course Code	SIM-en-PHYR-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2020x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	Simulation Results Analyst Mechanical Analyst Structural Vibration Analyst Noise & Vibration Analyst Fluid Mechanics Analyst Multiphysics Simulation Researcher Structural Analysis Engineer Steel Ship Structural Analysis Engineer
Description	The 3DEXPERIENCE Platform offers a rich variety of simulation tools and provides a new paradigm in results visualization. This course is an introduction to the high-performance visualization tool in the 3DEXPERIENCE Platform that allows simulation analysts and engineers to view and evaluate simulation results.
Objectives	Upon completion of this course you will be able to: - View and evaluate simulation results
Prerequisites	None
Available Online	Yes

SIMULIA Structural Model Creation : Geometry and Meshing	
Course Code	SIM-en-MECM2-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	16 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Mechanical Analyst - Multiphysics Simulation Researcher - Finite Element Modeling & Assembly Specialist - Structural Engineer - Structural Mechanics Engineer - Structural Professional Engineer
Description	This course provides an in-depth look at cleaning/ repairing geometry for the purpose of generating high quality meshes. It also offers a comprehensive discussion on meshing techniques. The focus is on techniques relevant to simulation.
Objectives	Upon completion of this course you will be able to: - Clean and repair native and imported geometry. - Use advanced meshing techniques.
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA Structural Model Creation Essentials	
Course Code	SIM-en-MECM-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Finite Element Modeling & Assembly Specialist - Mechanical Analyst - Multiphysics Simulation Researcher - Structural Engineer - Structural Mechanics Engineer - Structural Professional Engineer - Structural Functional Analysis Engineer
Description	This course is an introduction to finite element modeling in the 3DEXPERIENCE platform. It teaches you how to prepare finite element models for simulation.
Objectives	Upon completion of this course you will be able to: - Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

SIMULIA Structural Scenario Creation Essentials	
Course Code	SIM-en-EMCS-F-15-201
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	8 hours
Course Material	
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Performance Engineer - Structure Functional Analysis Engineer
Description	This course is an introduction to structural and thermal simulation in the 3DEXPERIENCE Platform. It teaches you how to solve both linear and nonlinear static problems and basic linear dynamics problems.
Objectives	Upon completion of this course you will be able to: - Perform structural simulations (linear and nonlinear; statics and dynamics) - Perform thermal simulations - View and evaluate simulation results
Prerequisites	The following course is required prior to taking this one: Structural Model Creation Essentials
Available Online	Yes

SIMULIA Structural Validation Essentials	
Course Code	SIM-en-STRV-F-15-191
Available Releases	3DEXPERIENCE R2015x , 3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	4 hours
Course Material	
Level	Fundamental
Audience	This course is intended for the following role: Stress Engineer
Description	This course is an introduction to performing structural simulation to spur product and design innovation in the 3DEXPERIENCE Platform. The 3DEXPERIENCE Platform enables realistic structural simulation of parts/ assemblies under mechanical loading conditions early in the design cycle, when the cost of design change is low and opportunity is high.
Objectives	Upon completion of this course you will be able to: - Search for simulation data in the database - Open the simulation for modification - Perform a structural/frequency simulation using the Structural Validation app - Perform thermal and thermal-structural simulations the Structural Validation app - Review simulations stored in a database and generate reports
Prerequisites	None
Available Online	Yes

Structural Mechanics Engineer for SOLIDWORKS Users	
Course Code	SIM-en-SSUW-F-15-201
Available Release	3DEXPERIENCE R2020x
Duration	32 hours
Course Material	
Level	Fundamental
Audience	- SOLIDWORKS users who have reached the limits of the SOLIDWORKS simulation tools or those who wish to benefit from the power of cloud-based simulation and the collaboration tools on the 3DEXPERIENCE Platform will benefit from attending this class. - - This course is intended for the following role: - Structural Mechanics Engineer
Description	This course is an introduction to the Structural Mechanics Engineer role, which is an offering to expand the simulation capabilities for SOLIDWORKS users, beyond the capabilities offered with the Structural Professional Engineer role. The 3DEXPERIENCE PLM Services connector automatically transfers study data into the simulation apps on the 3DEXPERIENCE platform. The Structural Mechanics Engineer role offers a wide range of element types and meshing tools, including an app to prepare geometry for simulation. The simulation apps on the 3DEXPERIENCE platform provide reliable solutions to multi-step simulations with combinations of non-linearities, including simple and robust contact setup and solution using General Contact for both static and dynamic problems. This role enables the explicit dynamic solver allowing for simulation of highly nonlinear impact or quasi-static problems. The

Structural Mechanics Engineer for SOLIDWORKS Users	
	3DEXPERIENCE Platform provides apps and tools for easy sharing of data and knowledge enabling collaboration.
Objectives	The course covers the following topics: - • Access and use of the 3DEXPERIENCE PLM Services connector - • Understand which entities are transferred into the 3DEXPERIENCE simulation apps - • Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

Structural Professional Engineer for SOLIDWORKS Users	
Course Code	SIM-en-DRDW-F-15-201
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2020x
Duration	24 hours
Course Material	
Level	Fundamental
Audience	Structural Simulation Engineer
Description	This course is an introduction to the Structural Simulation Engineer role, which is an offering to expand the simulation capabilities for SOLIDWORKS users.
Objectives	Upon completion of this course you will be able to: - Access and use the SOLIDWORKS Simulation Connector - Understand which entities are transferred into the 3DEXPERIENCE simulation apps - Create complete Finite Element models for structural and thermal simulations
Prerequisites	None
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Course Code	CAT-en-3DMTVS-F-15-211
Available Releases	3DEXPERIENCE R2019x , 3DEXPERIENCE R2021x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Mechanical Designers
Description	This module addresses the needs of Mechanical Designers working on cloud. It will first teach you how to design a new part with the 3DEXPERIENCE platform, insert the part in a product then position and constrain it. You will learn how to assign material properties and compute weight, then complete a simple drawing. Finally, you will learn how to create a new part version, replace the original part and update the product. More advanced topics will also be covered: they will teach you how to manage complex product structures, create product features, manage catalogs and analyze assemblies.
Objectives	Upon completion of this module, you will be able to: - Create new products and parts - Insert a part in a product and position it - Apply materials to parts - Calculate the weight of a product - Insert and complete a drawing - Create a new part version - Replace a part and update a product
Prerequisites	Students attending this learning module should have completed the Explore the Collaborative Business

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
	Innovator Role module. They should also be familiar with CATIA V5 Mechanical Design.
Available Online	Yes

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Course Code	CAT-en-3DMT-F-15-201
Available Releases	3DEXPERIENCE R2016x , 3DEXPERIENCE R2017x , 3DEXPERIENCE R2020x
Duration	12 hours
Course Material	
Level	Fundamental
Audience	Designers who need to work with mechanical parts
Description	This course addresses the needs of Mechanical Designers. It will first teach you how to design a new part with the 3DEXPERIENCE platform, insert the part in a product then position and constrain it. You will learn how to assign material properties and compute weight, then complete a simple drawing. Finally, you will learn how to create a new part version, replace the original part and update the product. More advanced topics will also be covered: they will teach you how to manage complex product structures, create product features, manage catalogs and analyze assemblies.
Objectives	Upon completion of this course, you will be able to: - Create new products and parts - Insert a part in a product and position it - Apply materials to parts - Calculate the weight of a product - Insert and complete a drawing - Create a new part version - Replace a part and update a product - Design parts in context - Create assembly features and catalogs - Analyze the assemblies

Transition to the 3DEXPERIENCE platform for Mechanical Designers	
Prerequisites	Students attending this course should have completed the Gateway to the 3DEXPERIENCE platform course. They should also be familiar with CATIA V5 Mechanical Design.
Available Online	Yes

Understand Lean Fundamentals	
Available Release	3DEXPERIENCE R2021x
Duration	3.50 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the fundamentals of lean concepts to achieve operational practices transformation.
Objectives	Learn Lean fundamentals and how to successfully articulate Lean tools.
Prerequisites	
Available Online	Yes

Understand Lean Transformation Methodology	
Available Release	3DEXPERIENCE R2021x
Duration	0.33 hours
Course Material	
Level	Fundamental
Audience	
Description	In this module, you will learn about the DMAIC (Define, Measure, Analyze, Improve, Control) lean transformation methodology.
Objectives	Upon completion of this learning module, you will understand how to lead and deploy DMAIC methodology.
Prerequisites	
Available Online	Yes

What's New for Function Driven Generative Designers	
Course Code	CAT-en-WGDE-U-15-191
Available Releases	3DEXPERIENCE R2018x , 3DEXPERIENCE R2019x
Duration	16 hours
Course Material	
Level	Update
Audience	Function Driven Generative Designers
Description	This course introduces you to the enhancements and new functionalities in the Function Driven Generative Designer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Function Driven Generative Designer role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Function Driven Generative Designer's role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Industry Innovation	
Course Code	ENOV-en-WCSV-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	1.5 hours
Course Material	
Level	Update
Audience	3DEXPERIENCE platform users
Description	This course introduces you to the enhancements and new functionalities in the Industry Innovation role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Industry Innovation role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Industry Innovation role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

What's New for Mechanical Designers	
Course Code	CAT-en-WMDG-U-15-191
Available Release	3DEXPERIENCE R2019x
Duration	12.5 hours
Course Material	
Level	Update
Audience	Mechanical Designers
Description	This course introduces you to the enhancements and new functionalities in the Mechanical Designer role. It is a self-paced course and does not require any software installation or additional data.
Objectives	Upon completion of this course, you will be able to: - Describe the impact of the new capabilities on the Mechanical Designer role. - Use the enhancements that you have learnt.
Prerequisites	Students attending this course must be familiar with the Mechanical Designer role in the 3DEXPERIENCE platform R2018x release.
Available Online	Yes

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