Course Catalog

SIMULIA 3DEXPERIENCE

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Additive Manufacturing

Bookshelf: 3DEXPERIENCE Basics for Simulation

Course Code	SIM-en-QBS-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling desktop apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	This course provides a selection of short standalone modules (5-10 min each) on how to install, configure, and start using the 3DEXPERIENCE desktop interface for physics simulation. Choose any module to get the help you need!
Objectives	When you reference a module, you will understand one of the topics: - Installation & Login, Requesting a Role, Where to Find Help, Importing Geometry, Material Databases, Search in the Desktop Interface, View Manipulation, Preferences in the Desktop Interface or Deleting your Data.
Prerequisites	None
Available Online	Yes

Geometry Idealization Basics

Course Code	SIM-en-MUES-F-15-251
Available Release	3DEXPERIENCE R2025x
Duration	7.42 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all roles that include either the Geometry Idealization or the Geometry Idealization Essentials app.
Description	This course provides in-depth treatment of cleaning/ repairing geometry for the purpose of generating high quality meshes on the 3DEXPERIENCE platform. It also introduces geometry creation techniques to address situations where additional geometry is needed for the purpose of the completing the simulation model.
Objectives	Upon completion of this course, you will be able to: - Clean and repair native and imported geometry. - Create simple geometry to meet simulation requirements
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Physics Simulation
Available Online	Yes

Getting Started with Physics Simulation

Course Code	SIM-en-GSPS-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling native apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	Physics simulation on the 3DEXPERIENCE platform can include simulation in disciplines such as Structures, Fluids, Electromagnetics, Vibroacoustics or Motion. Using the apps to run the simulations requires a baseline knowledge of how to log in to the platform, use 3DSearch to find and filter data, how to explore the data and manage the maturity for the purposes of physics simulation. The 3DEXPERIENCE native apps and web interfaces (including dashboards) will be introduced in this course. This course is the prerequisite for other physics simulation courses in the learning paths for the roles shown here.
Objectives	Upon completion of this course you will be able to: - Log in to the 3DEXPERIENCE platform - Search for and explore physical products and simulation objects - Manage maturity of data on the platform, track revisions, and delete example data - Configure preferences and settings including default display units
Prerequisites	None

Getting Started with Physics Simulation

Available Online	Yes

Practice SIMULIA Mechanical Scenario Creation

Course Code	SIM-en-MECS-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	13.42 hours
Course Material	English
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-A-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	8 hours
Course Material	English
Level	Advanced
Audience	- This course is intended for all roles that enable the Mechanical Scenario Creation app, including: - • Structural Mechanics Engineer - • Structural Analysis Engineer
Description	This course is an introduction to linear dynamics simulation in the 3DEXPERIENCE platform. It covers how to solve linear dynamics problems including natural frequency, harmonic response, and model dynamic applications. It provides an introduction to 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	- An understanding of the Mechanical Scenario Creation app is recommended prior to taking this course, for instance by completing: - • Structural Simulation Essentials - • or Mechanical Scenario Creation Essentials

Practice SIMULIA Mechanical Scenario Creation: Linear Dynamics

Available Online	Yes

Practice SIMULIA Physics Results Explorer

Course Code	SIM-en-PHYR-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4 hours
Course Material	English
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

Quickstart: Structural Simulation on the 3DEXPERIENCE platform

Course Code	SIM-en-QST-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all types of learners who are interested in performing structural simulation on the 3DEXPERIENCE platform.
Description	This course provides a hands-on introduction to the structural simulation capabilities on the 3DEXPERIENCE platform. It provides a quick start to simulation model and scenario definition, analysis and postprocessing.
Objectives	After completing this course, you will be able to: Navigate the 3DEXPERIENCE platform; review an existing simulation; explore key components of the user interface; understand the major features of a simulation; define, run and postprocess a structural simulation on your own.
Prerequisites	A basic understanding of Finite Element Analysis is recommended but not required.
Available Online	Yes

Simulation Manager Essentials (On Cloud)

Course Code	SIM-en-SMGE-F-15-251
Available Releases	3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all simulation roles.
Description	This course is an introduction to the Simulation Manager app on the 3DEXPERIENCE platform, enabling analysts to run, monitor, and manage simulations on the cloud, for analyses created using traditional SIMULIA products, such as Abaqus, CST, Simpack, PowerFLOW, XFlow, and Wave6.
Objectives	Upon completion of this course, you will be able to: - View and Manage simulations - Submit a simulation on the cloud - Monitor details as a simulation is running - View and download data associated with the simulation - Access simulation results
Prerequisites	None
Available Online	Yes

SIMULIA
Composites Engineering

Bookshelf: 3DEXPERIENCE Basics for Simulation

Course Code	SIM-en-QBS-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling desktop apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	This course provides a selection of short standalone modules (5-10 min each) on how to install, configure, and start using the 3DEXPERIENCE desktop interface for physics simulation. Choose any module to get the help you need!
Objectives	When you reference a module, you will understand one of the topics: - Installation & Login, Requesting a Role, Where to Find Help, Importing Geometry, Material Databases, Search in the Desktop Interface, View Manipulation, Preferences in the Desktop Interface or Deleting your Data.
Prerequisites	None
Available Online	Yes

Geometry Idealization Basics

Course Code	SIM-en-MUES-F-15-251
Available Release	3DEXPERIENCE R2025x
Duration	7.42 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all roles that include either the Geometry Idealization or the Geometry Idealization Essentials app.
Description	This course provides in-depth treatment of cleaning/ repairing geometry for the purpose of generating high quality meshes on the 3DEXPERIENCE platform. It also introduces geometry creation techniques to address situations where additional geometry is needed for the purpose of the completing the simulation model.
Objectives	Upon completion of this course, you will be able to: - Clean and repair native and imported geometry. - Create simple geometry to meet simulation requirements
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Physics Simulation
Available Online	Yes

Getting Started with Physics Simulation

Course Code	SIM-en-GSPS-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling native apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	Physics simulation on the 3DEXPERIENCE platform can include simulation in disciplines such as Structures, Fluids, Electromagnetics, Vibroacoustics or Motion. Using the apps to run the simulations requires a baseline knowledge of how to log in to the platform, use 3DSearch to find and filter data, how to explore the data and manage the maturity for the purposes of physics simulation. The 3DEXPERIENCE native apps and web interfaces (including dashboards) will be introduced in this course. This course is the prerequisite for other physics simulation courses in the learning paths for the roles shown here.
Objectives	Upon completion of this course you will be able to: - Log in to the 3DEXPERIENCE platform - Search for and explore physical products and simulation objects - Manage maturity of data on the platform, track revisions, and delete example data - Configure preferences and settings including default display units
Prerequisites	None

Getting Started with Physics Simulation

Available Online	Yes

Practice SIMULIA Composite Structures Simulation

Course Code	SIM-en-SCI-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	8.67 hours
Course Material	English
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

Practice SIMULIA Model Assembly Design

Course Code	SIM-en-MSAM-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for all roles that enable the Model Assembly Design app, including: - • Simulation Model Build Engineer - • 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	- The following courses are required prior to taking this one: - Structural Model Creation: Geometry and Meshing
Available Online	Yes

Practice SIMULIA Physics Results Explorer

Course Code	SIM-en-PHYR-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4 hours
Course Material	English
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 Scenario Creation

Course Code	SIM-en-EMCS-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	15.17 hours
Course Material	English
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

Quickstart: Structural Simulation on the 3DEXPERIENCE platform

Course Code	SIM-en-QST-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all types of learners who are interested in performing structural simulation on the 3DEXPERIENCE platform.
Description	This course provides a hands-on introduction to the structural simulation capabilities on the 3DEXPERIENCE platform. It provides a quick start to simulation model and scenario definition, analysis and postprocessing.
Objectives	After completing this course, you will be able to: Navigate the 3DEXPERIENCE platform; review an existing simulation; explore key components of the user interface; understand the major features of a simulation; define, run and postprocess a structural simulation on your own.
Prerequisites	A basic understanding of Finite Element Analysis is recommended but not required.
Available Online	Yes

SIMULIA
Design Exploration & Optimization

Bookshelf: 3DEXPERIENCE Basics for Simulation

Course Code	SIM-en-QBS-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling desktop apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	This course provides a selection of short standalone modules (5-10 min each) on how to install, configure, and start using the 3DEXPERIENCE desktop interface for physics simulation. Choose any module to get the help you need!
Objectives	When you reference a module, you will understand one of the topics: - Installation & Login, Requesting a Role, Where to Find Help, Importing Geometry, Material Databases, Search in the Desktop Interface, View Manipulation, Preferences in the Desktop Interface or Deleting your Data.
Prerequisites	None
Available Online	Yes

Design Exploration Essentials

Course Code	SIM-en-DEXP-F-15-241
Available Releases	3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	8.50 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following role: - Structural Generative Engineer
Description	This course is a comprehensive introduction to the structural optimization capabilities of the Design Exploration app on the 3DEXPERIENCE platform. Design exploration allows engineers to study and improve designs through topology and shape optimization, review and validate results and easily re-transfer optimized shapes into the downstream design process.
Objectives	Upon completion of this course, you will be able to: - Understand design exploration on the 3DEXPERIENCE platform - Define topology and shape design exploration studies - Validate and review the study results
Prerequisites	- The following course is required prior to taking this one: - Structural Simulation Essentials or its equivalent
Available Online	Yes

Geometry Idealization Basics

Course Code	SIM-en-MUES-F-15-251
Available Release	3DEXPERIENCE R2025x
Duration	7.42 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all roles that include either the Geometry Idealization or the Geometry Idealization Essentials app.
Description	This course provides in-depth treatment of cleaning/ repairing geometry for the purpose of generating high quality meshes on the 3DEXPERIENCE platform. It also introduces geometry creation techniques to address situations where additional geometry is needed for the purpose of the completing the simulation model.
Objectives	Upon completion of this course, you will be able to: - Clean and repair native and imported geometry. - Create simple geometry to meet simulation requirements
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Physics Simulation
Available Online	Yes

Getting Started with Automation and Optimization

Course Code	SIM-en-GSAO-F-15-241
Available Releases	3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following roles: - Multidisciplinary Optimization Engineer - Simulation Collaborator - Simulation Process Engineer
Description	This interactive course is intended for on-demand learning and is the prerequisite for many process automation and design optimization courses (if you are new to using the 3DEXPERIENCE platform). Using automation apps requires a baseline knowledge of how to log in to the platform, use 3DSearch to find and filter data, manage maturity of the data for collaboration. The 3DEXPERIENCE native (desktop) apps and web interfaces (including dashboards) will be introduced in this course.
Objectives	Upon completion of this course you will be able to: - Log in to the 3DEXPERIENCE platform - Search for and find your data using native and dashboard interfaces - Manage maturity of data, track revisions, and delete example data - Configure preferences and settings
Prerequisites	None
Available Online	Yes

Practice SIMULIA Performance Study

Course Code	SIM-en-DISB-F-15-251
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	3.25 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following roles: - Simulation Process Engineer - Multidisciplinary Optimization Engineer
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

Practice SIMULIA Performance Trade-off

Course Code	SIM-en-PTO-F-15-241
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	2.42 hours
Course Material	English
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 dashboard app 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: - Compare alternatives, from simulation or test datasets - Conduct trade-off analyses to select the best alternative
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Automation and Optimization
Available Online	Yes

Practice SIMULIA Physics Simulation Review

Course Code	SIM-en-PSR-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	2.50 hours
Course Material	English
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 Process Composer

Course Code	SIM-en-PRCW-F-15-241
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8.25 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following roles: - Simulation Process Engineer - Multidisciplinary Optimization Engineer
Description	Automation Process Composer and Optimization Process Composer apps are apps for authoring simulation processes on the 3DEXPERIENCE platform. Such simulation processes can be used to automate simulations and capture best practices to distribute to other users in your organization. Optimization Process Composer also enables design space exploration with DOE and Optimization or reliability calculations including Monte Carlo simulation. This course is intended for users of either app. Features unique to the Optimization Process Composer app are covered in optional contents. You can choose the lessons and workshops that are useful for the role(s) assigned to you.
Objectives	Upon completion of this course you will be able to: - Automate physics simulation of design variants using geometric and other parameters. - Automate applications external to the 3DEXPERIENCE platform including calculations in Microsoft Excel®, simple calculator examples, and/or standalone executables. - Control flow of parameters between integrated simulations and external applications.

Practice SIMULIA Process Composer

	- Iterate analyses with a Loop adapter, DOE or Optimization (if enabled by your role). - Understand the working directory and working files necessary for automation. - Open a job in the Performance Study or Results Analytics dashboard apps. - Run your job with cloud or remote resources (if enabled by the available roles and licensing).
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Automation and Optimization
Available Online	Yes

Practice SIMULIA Process Experience Studio

Course Code	SIM-en-EXPS-F-15-251
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	2.25 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following roles: - Simulation Process Engineer - Multidisciplinary Optimization Engineer
Description	This course is an introduction to the Process Experience Studio widget on the 3DEXPERIENCE platform. Process Experience Studio allows engineers to create custom interfaces for distributing simulation processes and simulation templates throughout the organization. This widget is similar to a form builder which allows the engineer to develop a simple or complex interface of inputs and outputs to/from the process. Using the widget in a dashboard provides a way to collaborate in teams around process integration and automation.
Objectives	Upon completion of this course you will be able to: - Produce simulation templates to distribute processes - Create one-click or custom user interfaces
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Automation and Optimization
Available Online	Yes

Practice SIMULIA Results Analytics

Course Code	SIM-en-REII-F-15-241
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	7 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following role: - Multidisciplinary Optimization Engineer
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. 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 simulations.
Objectives	Upon completion of this course you will be able to: - Initialize an analytics case - Conduct trade-off analyses - Select the best alternative
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Automation and Optimization
Available Online	Yes

Practice SIMULIA Simulation Companion

Course Code	SIM-en-COMP-F-15-211
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x
Duration	3.42 hours
Course Material	English
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

Quickstart: Durability Simulation on the 3DEXPERIENCE platform

Course Code	SIM-en-QDR-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all types of learners who are interested in performing durability simulation on the 3DEXPERIENCE platform. To complete the final (capstone) exercise, the user needs a role enabling durability analysis (see Details for applicable roles).
Description	This course provides a hands-on introduction to the durability features of the Structural Scenario Creation and Mechanical Scenario Creation apps on the 3DEXPERIENCE platform. It provides a quick start to fatigue loading definition, fatigue properties of materials, fatigue analysis and postprocessing.
Objectives	After completing this course, you will be able to: - Navigate the 3DEXPERIENCE platform; identify key components of the user interface; understand the features of a durability analysis case; define, run and postprocess a durability simulation on your own.
Prerequisites	A basic understanding of metal fatigue and loading for durability is recommended but not required. Users do not need access to an installation of the 3DEXPERIENCE platform until the final module. For assistance with installation and login, review the resources in the course Bookshelf: 3DEXPERIENCE Basics for Simulation.

Quickstart: Durability Simulation on the 3DEXPERIENCE platform

Available Online	Yes

Quickstart: Structural Simulation on the 3DEXPERIENCE platform

Course Code	SIM-en-QST-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all types of learners who are interested in performing structural simulation on the 3DEXPERIENCE platform.
Description	This course provides a hands-on introduction to the structural simulation capabilities on the 3DEXPERIENCE platform. It provides a quick start to simulation model and scenario definition, analysis and postprocessing.
Objectives	After completing this course, you will be able to: Navigate the 3DEXPERIENCE platform; review an existing simulation; explore key components of the user interface; understand the major features of a simulation; define, run and postprocess a structural simulation on your own.
Prerequisites	A basic understanding of Finite Element Analysis is recommended but not required.
Available Online	Yes

Quickstart: Topology Optimization on the 3DEXPERIENCE platform

Course Code	SIM-en-QTO-F-15-251
Available Release	3DEXPERIENCE R2025x
Duration	2.50 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for learners of all backgrounds who are interested in performing topology optimization using the 3DEXPERIENCE platform.
Description	This course offers a hands-on introduction to the topology optimization capabilities of the 3DEXPERIENCE platform. It provides a quick start to defining the design space, objectives, and constraints, as well as generating concept shapes and performing validation analyses.
Objectives	After completing this course, you will be able to: - Navigate the 3DEXPERIENCE platform - Review existing topology optimization studies - Explore the key components of the user interface - Understand the major features and workflow of topology optimization - Define, run, and validate a topology optimization independently
Prerequisites	A basic understanding of Finite Element Analysis (FEA) is recommended.
Available Online	Yes

Simulation Manager Essentials (On Cloud)

Course Code	SIM-en-SMGE-F-15-251
Available Releases	3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all simulation roles.
Description	This course is an introduction to the Simulation Manager app on the 3DEXPERIENCE platform, enabling analysts to run, monitor, and manage simulations on the cloud, for analyses created using traditional SIMULIA products, such as Abaqus, CST, Simpack, PowerFLOW, XFlow, and Wave6.
Objectives	Upon completion of this course, you will be able to: - View and Manage simulations - Submit a simulation on the cloud - Monitor details as a simulation is running - View and download data associated with the simulation - Access simulation results
Prerequisites	None
Available Online	Yes

SIMULIA

Electromagnetics Simulation

Bookshelf: 3DEXPERIENCE Basics for Simulation

Course Code	SIM-en-QBS-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling desktop apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	This course provides a selection of short standalone modules (5-10 min each) on how to install, configure, and start using the 3DEXPERIENCE desktop interface for physics simulation. Choose any module to get the help you need!
Objectives	When you reference a module, you will understand one of the topics: - Installation & Login, Requesting a Role, Where to Find Help, Importing Geometry, Material Databases, Search in the Desktop Interface, View Manipulation, Preferences in the Desktop Interface or Deleting your Data.
Prerequisites	None
Available Online	Yes

Getting Started with Physics Simulation

Course Code	SIM-en-GSPS-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling native apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	Physics simulation on the 3DEXPERIENCE platform can include simulation in disciplines such as Structures, Fluids, Electromagnetics, Vibroacoustics or Motion. Using the apps to run the simulations requires a baseline knowledge of how to log in to the platform, use 3DSearch to find and filter data, how to explore the data and manage the maturity for the purposes of physics simulation. The 3DEXPERIENCE native apps and web interfaces (including dashboards) will be introduced in this course. This course is the prerequisite for other physics simulation courses in the learning paths for the roles shown here.
Objectives	Upon completion of this course you will be able to: - Log in to the 3DEXPERIENCE platform - Search for and explore physical products and simulation objects - Manage maturity of data on the platform, track revisions, and delete example data - Configure preferences and settings including default display units
Prerequisites	None

Getting Started with Physics Simulation

Available Online	Yes

Practice SIMULIA Antenna Placement

Available Releases	3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.17 hours
Course Material	English
Level	Fundamental
Audience	Antenna Placement Electromagnetics Engineers
Description	This course is an introduction to the Antenna Placement app on the 3DEXPERIENCE platform. It teaches you how to import antenna models from CST Studio Suite and then evaluate their installed performance at positions on a selected platform (for example, a vehicle, an aircraft, or an electronic device). Antenna placement studies help you find the best position for an antenna on the platform by providing you the results of the installed antenna's performance. The course covers the complete simulation workflow from model setup, to simulation execution and postprocessing.
Objectives	Upon completion of the course you will: - Be able to perform simulation of installed antenna(s) using the 3DEXPERIENCE platform - Import and setup of 3DXML file, simulation execution in CST, and analyzing results using widgets on the platform. - Understand the Hybrid task solver and other solvers suitable for Antenna Placement applications. - Simulate a workshop model to understand the setup and simulation of the model on 3DEXPERIENCE platform.
Prerequisites	None, but a basic knowledge of electromagnetics and antenna applications would be beneficial.

Practice SIMULIA Antenna Placement

Available Online	Yes

Practice SIMULIA Connector for CST

Course Code	SIM-en-CSTPB-F-15-211
Available Releases	3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2024x
Duration	1 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following role: - Electromagnetics Analyst - Antenna Placement Electromagnetics Engineer - All Physics Analyst
Description	This course is an introduction to the interactive connector between CST Studio Suite and the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Import Product Structure CST Studio Suite - Save results to the 3DEXPERIENCE platform - Open/download results from the 3DEXPERIENCE platform - View/analyze the results using the Physics Simulation Review app
Prerequisites	- The following course is required prior to taking this one: - Introduction to CST Studio Suite
Available Online	Yes

Practice SIMULIA Performance Trade-off

Course Code	SIM-en-PTO-F-15-241
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	2.42 hours
Course Material	English
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 dashboard app 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: - Compare alternatives, from simulation or test datasets - Conduct trade-off analyses to select the best alternative
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Automation and Optimization
Available Online	Yes

Practice SIMULIA Physics Simulation Review

Course Code	SIM-en-PSR-F-15-251
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	2.58 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following roles: - Simulation Collaborator - Simulation Process Engineer - Multidisciplinary Optimization Engineer - All Physics Analyst
Description	This course teaches you how to view lightweight simulation data with the Physics Simulation Review widget in the 3DEXPERIENCE platform dashboard interface. If the native apps user has generated experience content, the reviewer will be able to browse: the mesh, material assignments, scenario content (such as loads and restraints), and results. Results display can include contour plots, streamlines, sensors and charts. You can animate these lightweight results and change way objects in the plots are displayed.
Objectives	Upon completion of this course, you will be able to: - Generate experience content for the lightweight simulation viewers - Perform lightweight visualization through web browsers
Prerequisites	None

Practice SIMULIA Physics Simulation Review

Available Online	Yes

Simulation Manager Essentials (On Cloud)

Course Code	SIM-en-SMGE-F-15-241
Available Releases	3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all simulation roles.
Description	This course is an introduction to the Simulation Manager app on the 3DEXPERIENCE platform, enabling analysts to run, monitor, and manage simulations on the cloud, for analyses created using traditional SIMULIA products, such as Abaqus, CST, Simpack, PowerFLOW, XFlow, and Wave6.
Objectives	Upon completion of this course, you will be able to: - View and Manage simulations - Submit a simulation on the cloud - Monitor details as a simulation is running - View and download data associated with the simulation - Access simulation results
Prerequisites	None
Available Online	Yes

SIMULIA
Fluids Simulation

Bookshelf: 3DEXPERIENCE Basics for Simulation

Course Code	SIM-en-QBS-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling desktop apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	This course provides a selection of short standalone modules (5-10 min each) on how to install, configure, and start using the 3DEXPERIENCE desktop interface for physics simulation. Choose any module to get the help you need!
Objectives	When you reference a module, you will understand one of the topics: - Installation & Login, Requesting a Role, Where to Find Help, Importing Geometry, Material Databases, Search in the Desktop Interface, View Manipulation, Preferences in the Desktop Interface or Deleting your Data.
Prerequisites	None
Available Online	Yes

Fluid Simulation: Advanced Topics

Course Code	SIM-en-FMK2-A-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	8.25 hours
Course Material	English
Level	Advanced
Audience	- This course is intended for all roles that enable the Fluid Scenario Creation app, including: - Fluid Dynamics Engineer - Thermal Engineer
Description	This course includes lessons and workshops covering advanced capabilities and techniques that can be included in a flow simulation using the Fluid Model Creation and Fluid Scenario Creation apps on the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Understand convergence issues for steady-state and transient flow procedures. - Include porous media modeling in a fluid flow analysis. - Mesh fluid and solid domains using different meshing techniques. - Configure and run simulations including compressible and/or multiphase flow.
Prerequisites	- The following course is strongly recommended prior to taking this one: - Fluid Simulation Essentials
Available Online	Yes

Fluid Simulation Essentials

Course Code	SIM-en-FMK-F-15-231
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	11.17 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	- This course is intended for all roles that enable the Fluid Scenario Creation app, including: - Fluid Dynamics Engineer
Description	This course is an introduction to solving fluid flow and conjugate heat transfer problems in the 3DEXPERIENCE platform. In this course, you will learn workflows for steady-state internal and external flow as well as Conjugate Heat Transfer (CHT) problems through the Fluid Model Creation and Fluid Scenario Creation apps.
Objectives	Upon completion of this course you will be able to: - Define fluid flow simulations in the 3DEXPERIENCE platform, including isothermal internal and external steady-state flow. - Perform fully coupled conjugate heat transfer (CHT) simulations. - Postprocess flow simulation results.
Prerequisites	- The following course is strongly recommended prior to taking this one: - Getting Started with Physics Simulation
Available Online	Yes

Geometry Idealization Basics

Course Code	SIM-en-MUES-F-15-251
Available Release	3DEXPERIENCE R2025x
Duration	7.42 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all roles that include either the Geometry Idealization or the Geometry Idealization Essentials app.
Description	This course provides in-depth treatment of cleaning/repairing geometry for the purpose of generating high quality meshes on the 3DEXPERIENCE platform. It also introduces geometry creation techniques to address situations where additional geometry is needed for the purpose of the completing the simulation model.
Objectives	Upon completion of this course, you will be able to: - Clean and repair native and imported geometry. - Create simple geometry to meet simulation requirements
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Physics Simulation
Available Online	Yes

Getting Started with Physics Simulation

Course Code	SIM-en-GSPS-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling native apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	Physics simulation on the 3DEXPERIENCE platform can include simulation in disciplines such as Structures, Fluids, Electromagnetics, Vibroacoustics or Motion. Using the apps to run the simulations requires a baseline knowledge of how to log in to the platform, use 3DSearch to find and filter data, how to explore the data and manage the maturity for the purposes of physics simulation. The 3DEXPERIENCE native apps and web interfaces (including dashboards) will be introduced in this course. This course is the prerequisite for other physics simulation courses in the learning paths for the roles shown here.
Objectives	Upon completion of this course you will be able to: - Log in to the 3DEXPERIENCE platform - Search for and explore physical products and simulation objects - Manage maturity of data on the platform, track revisions, and delete example data - Configure preferences and settings including default display units
Prerequisites	None

Getting Started with Physics Simulation	57 / 116
Available Online	Yes

Parametric Design Improvement: Fluids

Course Code	SIM-en-PDSF-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	7.58 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for all roles that enable the Parametric Design Study and Fluid Scenario Creation apps including: - Fluid Dynamics Engineer - Thermal Engineer
Description	Design improvement studies allow engineers to find the best design while varying design parameters. Using the Parametric Design Study app, you can easily author, monitor and postprocess a parametric design improvement study based on a flow analysis. Physics simulations from which the user initiates a study are first defined and run using the Fluid Scenario Creation app.
Objectives	Upon completion of this course you will be able to: - Create a design improvement study, defining design variables and objective(s) - Perform design space checks and run the study - Monitor and review study results
Prerequisites	- An understanding of the scenario app to be used to define a simulation and analysis case is required prior to taking this course, for instance by completing: - Fluid Simulation Essentials

Parametric Design Improvement: Fluids

Available Online	Yes

Practice SIMULIA Physics Results Explorer

Course Code	SIM-en-PHYR-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4 hours
Course Material	English
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

Simulation Manager Essentials (On Cloud)

Course Code	SIM-en-SMGE-F-15-241
Available Releases	3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all simulation roles.
Description	This course is an introduction to the Simulation Manager app on the 3DEXPERIENCE platform, enabling analysts to run, monitor, and manage simulations on the cloud, for analyses created using traditional SIMULIA products, such as Abaqus, CST, Simpack, PowerFLOW, XFlow, and Wave6.
Objectives	Upon completion of this course, you will be able to: - View and Manage simulations - Submit a simulation on the cloud - Monitor details as a simulation is running - View and download data associated with the simulation - Access simulation results
Prerequisites	None
Available Online	Yes

SIMULIA
Knowledge & Knowhow Capitalization

Getting Started with Automation and Optimization

Course Code	SIM-en-GSAO-F-15-241
Available Releases	3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following roles: - Multidisciplinary Optimization Engineer - Simulation Collaborator - Simulation Process Engineer
Description	This interactive course is intended for on-demand learning and is the prerequisite for many process automation and design optimization courses (if you are new to using the 3DEXPERIENCE platform). Using automation apps requires a baseline knowledge of how to log in to the platform, use 3DSearch to find and filter data, manage maturity of the data for collaboration. The 3DEXPERIENCE native (desktop) apps and web interfaces (including dashboards) will be introduced in this course.
Objectives	Upon completion of this course you will be able to: - Log in to the 3DEXPERIENCE platform - Search for and find your data using native and dashboard interfaces - Manage maturity of data, track revisions, and delete example data - Configure preferences and settings
Prerequisites	None
Available Online	Yes

Getting Started with Physics Simulation

Course Code	SIM-en-GSPS-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling native apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	Physics simulation on the 3DEXPERIENCE platform can include simulation in disciplines such as Structures, Fluids, Electromagnetics, Vibroacoustics or Motion. Using the apps to run the simulations requires a baseline knowledge of how to log in to the platform, use 3DSearch to find and filter data, how to explore the data and manage the maturity for the purposes of physics simulation. The 3DEXPERIENCE native apps and web interfaces (including dashboards) will be introduced in this course. This course is the prerequisite for other physics simulation courses in the learning paths for the roles shown here.
Objectives	Upon completion of this course you will be able to: - Log in to the 3DEXPERIENCE platform - Search for and explore physical products and simulation objects - Manage maturity of data on the platform, track revisions, and delete example data - Configure preferences and settings including default display units
Prerequisites	None

Getting Started with Physics Simulation

Available Online	Yes

Practice SIMULIA Connector for PowerFLOW: Connecting PowerDELTA and 3DEXPERIENCE

Course Code	SIM-en-PDPB-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following role: - All Physics Analyst
Description	This course describes the set of tools provided by PowerDELTA to: - Save and access frames to/from the 3DEXPERIENCE platform - Update to the latest available meshes
Objectives	Upon completion of this course you will be able to: - Import a Product Structure into PowerDELTA - Save frames to the 3DEXPERIENCE platform - Open/download frames from the 3DEXPERIENCE platform
Prerequisites	- The following courses are required prior to taking this one: - Introduction to PowerDELTA - Getting Started with Physics Simulation
Available Online	Yes

Practice SIMULIA Connector for Simpack

Course Code	SIM-en-SMPKPB-F-15-221
Available Releases	3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	1.17 hours
Course Material	English
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 Performance Trade-off

Course Code	SIM-en-PTO-F-15-241
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	2.42 hours
Course Material	English
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 dashboard app 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: - Compare alternatives, from simulation or test datasets - Conduct trade-off analyses to select the best alternative
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Automation and Optimization
Available Online	Yes

Practice SIMULIA Physics Results Explorer

Course Code	SIM-en-PHYR-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4 hours
Course Material	English
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-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	2.50 hours
Course Material	English
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

Simulation Manager Essentials (On Cloud)

Course Code	SIM-en-SMGE-F-15-251
Available Releases	3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all simulation roles.
Description	This course is an introduction to the Simulation Manager app on the 3DEXPERIENCE platform, enabling analysts to run, monitor, and manage simulations on the cloud, for analyses created using traditional SIMULIA products, such as Abaqus, CST, Simpack, PowerFLOW, XFlow, and Wave6.
Objectives	Upon completion of this course, you will be able to: - View and Manage simulations - Submit a simulation on the cloud - Monitor details as a simulation is running - View and download data associated with the simulation - Access simulation results
Prerequisites	None
Available Online	Yes

SIMULIA
Mold, Casting & Tooling

Bookshelf: 3DEXPERIENCE Basics for Simulation

Course Code	SIM-en-QBS-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling desktop apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	This course provides a selection of short standalone modules (5-10 min each) on how to install, configure, and start using the 3DEXPERIENCE desktop interface for physics simulation. Choose any module to get the help you need!
Objectives	When you reference a module, you will understand one of the topics: - Installation & Login, Requesting a Role, Where to Find Help, Importing Geometry, Material Databases, Search in the Desktop Interface, View Manipulation, Preferences in the Desktop Interface or Deleting your Data.
Prerequisites	None
Available Online	Yes

Geometry Idealization Basics

Course Code	SIM-en-MUES-F-15-251
Available Release	3DEXPERIENCE R2025x
Duration	7.42 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all roles that include either the Geometry Idealization or the Geometry Idealization Essentials app.
Description	This course provides in-depth treatment of cleaning/ repairing geometry for the purpose of generating high quality meshes on the 3DEXPERIENCE platform. It also introduces geometry creation techniques to address situations where additional geometry is needed for the purpose of the completing the simulation model.
Objectives	Upon completion of this course, you will be able to: - Clean and repair native and imported geometry. - Create simple geometry to meet simulation requirements
Prerequisites	- The following course is required prior to taking this one: - Getting Started with Physics Simulation
Available Online	Yes

Getting Started with Physics Simulation

Course Code	SIM-en-GSPS-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling native apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	Physics simulation on the 3DEXPERIENCE platform can include simulation in disciplines such as Structures, Fluids, Electromagnetics, Vibroacoustics or Motion. Using the apps to run the simulations requires a baseline knowledge of how to log in to the platform, use 3DSearch to find and filter data, how to explore the data and manage the maturity for the purposes of physics simulation. The 3DEXPERIENCE native apps and web interfaces (including dashboards) will be introduced in this course. This course is the prerequisite for other physics simulation courses in the learning paths for the roles shown here.
Objectives	Upon completion of this course you will be able to: - Log in to the 3DEXPERIENCE platform - Search for and explore physical products and simulation objects - Manage maturity of data on the platform, track revisions, and delete example data - Configure preferences and settings including default display units
Prerequisites	None

Getting Started with Physics Simulation

Available Online	Yes

Quickstart: Plastic Injection Simulation on the 3DEXPERIENCE platform

Course Code	SIM-en-QPI-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all types of learners who are interested in performing plastic injection simulation on the 3DEXPERIENCE platform.
Description	This course provides a hands-on introduction to the plastic injection simulation capabilities on the 3DEXPERIENCE platform. It provides a quick start to simulation model and scenario definition, analysis and postprocessing.
Objectives	After completing this course, you will be able to - Navigate the 3DEXPERIENCE platform to review an existing plastic injection simulation - Explore the key components of the user interface of the plastic injection simulation on the 3DEXPERIENCE platform - Define, run and postprocess a plastic injection simulation on your own - Visualize manufacturing defects such as weld lines, sink marks and air traps.
Prerequisites	A basic understanding of Computational Fluid Dynamics is recommended.
Available Online	Yes

Simulation Manager Essentials (On Cloud)

Course Code	SIM-en-SMGE-F-15-251
Available Releases	3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all simulation roles.
Description	This course is an introduction to the Simulation Manager app on the 3DEXPERIENCE platform, enabling analysts to run, monitor, and manage simulations on the cloud, for analyses created using traditional SIMULIA products, such as Abaqus, CST, Simpack, PowerFLOW, XFlow, and Wave6.
Objectives	Upon completion of this course, you will be able to: - View and Manage simulations - Submit a simulation on the cloud - Monitor details as a simulation is running - View and download data associated with the simulation - Access simulation results
Prerequisites	None
Available Online	Yes

SIMULIA
Motion Engineering

Bookshelf: 3DEXPERIENCE Basics for Simulation

Course Code	SIM-en-QBS-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling desktop apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	This course provides a selection of short standalone modules (5-10 min each) on how to install, configure, and start using the 3DEXPERIENCE desktop interface for physics simulation. Choose any module to get the help you need!
Objectives	When you reference a module, you will understand one of the topics: - Installation & Login, Requesting a Role, Where to Find Help, Importing Geometry, Material Databases, Search in the Desktop Interface, View Manipulation, Preferences in the Desktop Interface or Deleting your Data.
Prerequisites	None
Available Online	Yes

Practice SIMULIA Connector for Simpack

Course Code	SIM-en-SMPKPB-F-15-221
Available Releases	3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	1.17 hours
Course Material	English
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 Motion Analysis

Course Code	SIM-en-MOTA-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	4 hours
Course Material	English
Level	Fundamental
Audience	Designers and engineers who want to perform kinematic and dynamic analysis on mechanical systems.
Description	This course is an introduction to performing multibody system simulation on the 3DEXPERIENCE platform. The Motion Analysis app enables engineers to perform kinematic and dynamic simulations to predict and optimize the motion behavior of any mechanical system.
Objectives	Upon completion of this course, you will be able to: - • Create mechanisms to understand the motion behavior of a product assembly - • Enhance mechanisms with motion specific elements such as contact and springs - • Perform kinematic and dynamic analyses of a mechanism - • Review the results of a simulation
Prerequisites	Before undertaking this course, you should have some familiarity with fundamental multibody concepts and you should have completed the Getting Started with Physics Simulation course.
Available Online	Yes

Quickstart: Motion and Multibody Simulation on the 3DEXPERIENCE platform

Course Code	SIM-en-QMB-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	2 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all types of learners who are interested in performing multibody simulation on the 3DEXPERIENCE platform. To complete the final (capstone) exercise, the user needs a role enabling multibody analysis (see Details for applicable roles).
Description	This course provides a hands-on introduction to the multibody features of the Motion Engineering, Motion Analysis and Suspension Analysis apps on the 3DEXPERIENCE platform. It provides a quick start to mechanism creation, multibody model element definition and postprocessing.
Objectives	After completing this course, you will be able to: - Navigate the 3DEXPERIENCE platform; identify key components of the user interface; understand the features of a motion simulation; define, run and postprocess a multibody simulation on your own.
Prerequisites	A basic understanding of fundamental multibody concepts is recommended but not required. Users do not need access to an installation of the 3DEXPERIENCE platform until the final module. For assistance with installation and login, review the resources in the course Bookshelf: 3DEXPERIENCE Basics for Simulation.

Quickstart: Motion and Multibody Simulation on the 3DEXPERIENCE platform

Available Online	Yes

SIMULIA
Structures Simulation

3DEXPERIENCE Simulation Primer for Abaqus/CAE Users

Course Code	SIM-en-CAEX-F-15-231
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	5.33 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following roles: - Structural Engineer - Structural Performance Engineer - Structural Mechanics Engineer - Structural Analysis Engineer
Description	This 1-day course is intended to help experienced Abaqus/CAE users transition to simulation on the 3DEXPERIENCE platform. The course provides a high-level introduction to the complete simulation workflow on the 3DEXPERIENCE platform, and for each step compares back to the approach in Abaqus/CAE, allowing users to leverage their existing knowledge, whilst highlighting some key advantages of simulation on the 3DEXPERIENCE platform.
Objectives	Upon completion of this course you will be able to: - Leverage Abaqus/CAE knowledge to start to navigate the 3DEXPERIENCE platform - Understand key differences in the simulation workflow on the 3DEXPERIENCE platform - Create and run a simulation and evaluate the simulation results
Prerequisites	- The following course is required prior to taking this one:

3DEXPERIENCE Simulation Primer for Abaqus/CAE Users

	- None
Available Online	Yes

Explore the Structural Mechanics Engineer Role: Getting Started

Course Code	SIM-en-SSU-F-15-241
Available Releases	3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	1.17 hours
Course Materials	Chinese , English , French , German , Japanese
Level	Fundamental
Audience	
Description	Get started with the Structural Mechanics Engineer role. Understand the basics of the role and perform a simple structural analysis of a part and an assembly.
Objectives	Objectives of Learning Module include: - * Discover the SIMULIA roles and applications available to SOLIDWORKS users - * Import your SOLIDWORKS models in the Structural Mechanics Engineer role - * Learn how the 3DEXPERIENCE Platform manages material data - •Setup, run, and analyze a model with the Structural Mechanics Engineer role's applications - * Explore SIMULIA's advanced capabilities: cloud computing, explicit steps, and contact
Prerequisites	
Available Online	Yes

Explore the Structural Performance Engineer Role

Course Code	SIM-en-SFO-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x
Duration	1.50 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following role: - Structural Performance Engineer
Description	This course provides an overview on the Structural Performance Engineer role on the 3DEXPERIENCE platform. A step-by-step tutorial shows a typical simulation workflow for the role. Finally, the learning path delivering detailed training on the apps provided with the role is explained.
Objectives	Upon completion of this course you will be able to: - • Understand the major capabilities of the Structural Performance Engineer role - • Access geometry on the platform - • Create a FEM model - • Create and run a simulation - • Evaluate the results
Prerequisites	None
Available Online	Yes

Getting Started with Physics Simulation

Course Code	SIM-en-GSPS-F-15-221
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	8 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	This course is intended for users on the 3DEXPERIENCE platform with roles enabling native apps including physics simulation in the disciplines of Structures, Fluids, Electromagnetics or Motion.
Description	Physics simulation on the 3DEXPERIENCE platform can include simulation in disciplines such as Structures, Fluids, Electromagnetics, Vibroacoustics or Motion. Using the apps to run the simulations requires a baseline knowledge of how to log in to the platform, use 3DSearch to find and filter data, how to explore the data and manage the maturity for the purposes of physics simulation. The 3DEXPERIENCE native apps and web interfaces (including dashboards) will be introduced in this course. This course is the prerequisite for other physics simulation courses in the learning paths for the roles shown here.
Objectives	Upon completion of this course you will be able to: - Log in to the 3DEXPERIENCE platform - Search for and explore physical products and simulation objects - Manage maturity of data on the platform, track revisions, and delete example data - Configure preferences and settings including default display units
Prerequisites	None

Getting Started with Physics Simulation

Available Online	Yes

Mechanical Scenario Creation: Advanced Topics

Course Code	SIM-en-MECS3-A-15-251
Available Releases	3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	12 hours
Course Material	English
Level	Advanced
Audience	- This course is intended for the following roles: - Structural Mechanics Engineer - Structural Analysis Engineer
Description	This course is an overview of selected advanced topics related to simulation with the Mechanical Scenario Creation app on the 3DEXPERIENCE platform. The topics are independent of each other. Thus, you may consider only those topics of interest and examine them in any order.
Objectives	Use advanced structural simulations techniques including - Riks Analysis - Submodeling - Substructures - Coupled Eulerian-Lagrangian Analysis - Smoothed Particle Hydrodynamics - Tire Analysis
Prerequisites	- Either of the following courses is required prior to taking this one: - Structural Simulation Essentials - Mechanical Scenario Creation Essentials
Available Online	Yes

Parametric Design Improvement: Structural

Course Code	SIM-en-PDSM-F-15-221
Available Releases	3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	9.75 hours
Course Material	English
Level	Fundamental
Audience	
Description	Design improvement studies allow engineers to find the best design while varying design parameters. Using the Parametric Design Study Essentials or Parametric Design Study app, you can easily author, monitor and postprocess a parametric design improvement study based on an analysis case for a single physics simulation object or a geometrical model. Physics simulations from which the user initiates a study can be either: structural analysis case or durability analysis case.
Objectives	Upon completion of this course you will be able to: - Create a design improvement study, defining design variables and objective(s) - Perform design space checks and run the study - Monitor and review study results
Prerequisites	- An understanding of the scenario app to be used to define a simulation and analysis case is required prior to taking this course, for instance by completing one of the following: - Linear Structural Scenario Creation Essentials - Structural Simulation Essentials
Available Online	Yes

Practice SIMULIA Composite Structures Simulation

Course Code	SIM-en-SCI-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	8.67 hours
Course Material	English
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

Practice SIMULIA Durability Simulation

Course Code	SIM-en-FGA-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x
Duration	6 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	The course is intended for users with role: Durability Performance Engineer, Durability and Mechanics Engineer, Structural and Durability Engineer or Structural Analysis Engineer
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: - Create a durability analysis case and define fatigue loading - Assign fatigue properties of materials and simulate surface roughness - Run durability simulations, review fatigue results including log of life and damage
Prerequisites	An understanding of the Structural Scenario Creation or Mechanical Scenario Creation app is recommended prior to taking this course, for instance by completing: Structural Simulation Essentials, Mechanical Scenario

Practice SIMULIA Durability Simulation

	Creation Essentials or Structural Scenario Creation Essentials
Available Online	Yes

Practice SIMULIA Linear Structural Scenario Creation

Course Code	SIM-en-LNCS-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	7 hours
Course Material	English
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-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	8.33 hours
Course Materials	English , Japanese
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 Mechanical Scenario Creation

Course Code	SIM-en-MECS-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	13.42 hours
Course Material	English
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-A-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	8 hours
Course Material	English
Level	Advanced
Audience	- This course is intended for all roles that enable the Mechanical Scenario Creation app, including: - • Structural Mechanics Engineer - • Structural Analysis Engineer
Description	This course is an introduction to linear dynamics simulation in the 3DEXPERIENCE platform. It covers how to solve linear dynamics problems including natural frequency, harmonic response, and model dynamic applications. It provides an introduction to 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	- An understanding of the Mechanical Scenario Creation app is recommended prior to taking this course, for instance by completing: - • Structural Simulation Essentials - • or Mechanical Scenario Creation Essentials

Practice SIMULIA Mechanical Scenario Creation: Linear Dynamics

Available Online	Yes

Practice SIMULIA Model Assembly Design

Course Code	SIM-en-MSAM-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for all roles that enable the Model Assembly Design app, including: - • Simulation Model Build Engineer - • 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	- The following courses are required prior to taking this one: - Structural Model Creation: Geometry and Meshing
Available Online	Yes

Practice SIMULIA Performance Study

Course Code	SIM-en-DISB-F-15-251
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	3.25 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following roles: - Simulation Process Engineer - Multidisciplinary Optimization Engineer
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

Practice SIMULIA Physics Results Explorer

Course Code	SIM-en-PHYR-F-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4 hours
Course Material	English
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: Geometry and Meshing

Course Code	SIM-en-MECM2-A-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	16 hours
Course Material	English
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-15-221
Available Releases	3DEXPERIENCE R2020x , 3DEXPERIENCE R2021x , 3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	15.17 hours
Course Material	English
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

Simulation Manager Essentials (On Cloud)

Course Code	SIM-en-SMGE-F-15-241
Available Releases	3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	This course is intended for all simulation roles.
Description	This course is an introduction to the Simulation Manager app on the 3DEXPERIENCE platform, enabling analysts to run, monitor, and manage simulations on the cloud, for analyses created using traditional SIMULIA products, such as Abaqus, CST, Simpack, PowerFLOW, XFlow, and Wave6.
Objectives	Upon completion of this course, you will be able to: - View and Manage simulations - Submit a simulation on the cloud - Monitor details as a simulation is running - View and download data associated with the simulation - Access simulation results
Prerequisites	None
Available Online	Yes

Structural Simulation: Heat Transfer and Thermal Stress Analysis

Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	13.17 hours
Course Material	English
Level	Advanced
Audience	- This course is intended for all roles that enable the Structural Scenario Creation and Mechanical Scenario Creation apps, including: - Structural Performance Engineer - Structural Mechanics Engineer - Structural Analysis Engineer
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. This course introduces you to the heat transfer and thermal-stress capabilities available within 3DEXPERIENCE. Practical examples and workshops are used to illustrate these capabilities.
Objectives	Upon completion of this course you will be able to: - Perform steady-state and transient heat transfer simulations - Perform sequentially-coupled, fully-coupled and adiabatic thermal-stress analyses - Model contact in heat transfer problems
Prerequisites	- The following course is required prior to taking this one: - Structural Simulation Essentials (or equivalent)

Structural Simulation: Heat Transfer and Thermal Stress Analysis

Available Online	Yes

Structural Simulation Essentials

Course Code	SIM-en-STRSIM-F-15-231
Available Releases	3DEXPERIENCE R2022x , 3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	18.58 hours
Course Materials	English , Japanese
Level	Fundamental
Audience	- This course is intended for all roles that enable the Structural Scenario Creation and Mechanical Scenario Creation apps, including: - Structural Performance Engineer - Structural Mechanics Engineer - Structural Analysis Engineer
Description	This course is an introduction to structural simulation on the 3DEXPERIENCE platform using the Structural Scenario Creation or Mechanical Scenario Creation app. The basics of Finite Element Modeling with the Structural Model Creation app and post processing with the Physics Results Explorer app are included to provide an end-to-end view of the simulation process. You can use geometry imported/created on the 3DEXPERIENCE platform or designed with SOLIDWORKS.
Objectives	Upon completion of this course you will be able to: - Create complete Finite Element models for structural and thermal simulations - Perform structural (linear and nonlinear; statics and dynamics) and thermal simulations - View and evaluate simulation results
Prerequisites	- The following course is strongly recommended prior to taking this one: - Getting Started with Physics Simulation

Structural Simulation Essentials

Available Online	Yes

Structural Simulation for Education

Available Releases	3DEXPERIENCE R2023x , 3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	8.17 hours
Course Materials	Chinese , English , French , Japanese , Korean
Level	Fundamental
Audience	Design Engineers, Structural Analysts
Description	In this module, you will learn to perform structural simulation and conduct virtual tests allowing you to create virtual twins in the 3DExperience platform.
Objectives	Upon completion of this learning module, you will be able to: - Select the appropriate level of fidelity for structural simulations. - Create Structural Simulations. - Solve Structural Simulations. - Create virtual twin experiences that reinforce and extend fundamental theory.
Prerequisites	Learners attending this module should be familiar with fundamentals of CAD and structural simulation. They should also have completed the Explore the 3D Swymer Role and Explore the Collaborative Industry Innovator Role modules.
Available Online	Yes

Thermal-Electrochemical-Stress Simulation of Li-ion Batteries

Course Code	SIM-en-STRBT-A-15-251
Available Releases	3DEXPERIENCE R2024x , 3DEXPERIENCE R2025x
Duration	9.75 hours
Course Material	English
Level	Advanced
Audience	- This course is intended for the following roles: - Structural Mechanics Engineer - Structural Analysis Engineer
Description	This course introduces cell-level multiscale, multiphysics analysis of the electrochemical performance of Li-ion batteries based on porous electrode theory. The thermal effects from various losses (associated with the ionic diffusion, electrical conduction, entropy change and intercalation) and the mechanical effects due to lithiation-induced swelling are considered in a fully coupled manner.
Objectives	Upon completion of this course, you will be able to: - Define material properties for Li-ion batteries - Perform battery electrochemical analyses - Define contact and constraints - Postprocess Li-ion battery analyses
Prerequisites	- The following course is required prior to taking this one: - Structural Simulation Essentials (or its equivalent)
Available Online	Yes

SIMULIA
Test Management

Test Management Essentials

Course Code	SIM-en-VRP-F-15-241
Available Release	3DEXPERIENCE R2024x
Duration	4.92 hours
Course Material	English
Level	Fundamental
Audience	- This course is intended for the following role: - Test Manager
Description	The Test Manager role enables the apps on the 3DEXPERIENCE platform that teams use to build a validation plan, record the steps an operator needs to know to carry out a virtual or physical test and record whether requirements are met. This course introduces each app used by the various team members to store data for the purposes of traceability. The tests being tracked can be anything: from physical lab tests to simulations of physical functional or logical systems.
Objectives	Upon completion of this course, you will be able to: - Create a dashboard to track your team's validation plan - Create reusable test scripts in the V&V Library app - Add test steps to the script to give instructions for the test operator - Create Test Specifications, Test Cases and Test Executions for your project or design team in the V&V Strategy app - Create Test Results and upload Evidence in the Test Results Capture app - Change the maturity of the content on the 3DEXPERIENCE platform to enable collaboration and storage of the data

Test Management Essentials

	- Review the links between content on the 3DEXPERIENCE platform to understand the digital thread
Prerequisites	- Familiarity with the web interface of the 3DEXPERIENCE platform is recommended. Alternatively, completing the installation, login and 3DSearch units of following course is recommended prior to taking this one: - Getting Started with Automation and Optimization
Available Online	Yes