# MSC LearningCenter

Get the training you need anytime you need it

# MSC Learning Center

## Flexible training solutions

How many of us find it difficult to fit training into our schedules?

Unfortunately, it is quite challenging to achieve a workload and study balance so that we are up to date with the latest features in technology that we use on a day to day basis.

The MSC Learning Center focuses on making training convenient and accommodating different learning styles by providing you with a blended approach to learning; meeting your needs whether you have five minutes or five days, whether you want a lot of interaction or just simply find the information you need when you need it. Making it easy for you to fit training into your schedule!

MSC understands that everyone learns differently; some of the most coming learning styles include: visual, auditory, social, and kinesthetic ("Hands-on"). Many of us use different learning styles depending on the time and circumstance. Whatever the circumstance, you can guarantee that MSC has an approach to learning that will suite your needs, style, and requirements.

**Our philosophy:**

- MSC's on-demand e-Learning training philosophy is to leverage the same content as our live instructor-led classes, developed by MSC experts across many engineering disciplines and industries.

- Single-sourcing our content allows MSC to combine the benefits of our mature, time-tested live content with the new capabilities on-demand training offers.

# E-Learning subscription

Anywhere, Anytime!

The MSC Learning Center's e-Learning subscription provides you an innovative and creative approach to instruction that provides unprecedented access to resources and training. Besides offering flexibility and cost savings, you can proceed through a training curriculum "at your own pace and at your own place."

MSC e- learning is an efficient and effective training solution that:

- Accommodates your Schedule without travel

- Decreases cost & Increases access to training

- Allows you to manage your own learning experience

- Provides access to MSC experts and users via MSC communities

- Delivers Course Completion and Certification Certificates

## Offering:

MSC's on-Demand e-Learning is offered on a subscription basis. With the e-learning subscription you get access to all online training courses for the various software products such as: MSC Nastran, Adams, Marc, Patran, Easy5, Actran, Material Center, SimManager, Apex and Adams toolkits with courses being added/updated continuously throughout the year.

*See for the details for each courses on the next page.

## Subscription includes:

- Individual named user access to the MSC Learning Center and your subscription content from your desktop, laptop, or tablet device.

- Unlimited access to all available content in your subscription area for 12 months from your start date.

- Certification Exams that, upon achieving a passing score, you will receive a certificate and/or you can post to your public community profile.

- Social membership and forum participation to allow collaboration within your company and the broader MSC simulation community

## Social collaboration

- Each training class has a dedicated support forum for posting course related questions to the experts at MSC and the online community.

- Users can engage, collaborate, co-create, and share knowledge by asking and answering questions

- A Document Management System with Rate & Share Capability is available to allow sharing of value-added content

- Peer-to-Peer Networking allows users to collaborate among themselves, form a team, and set team goals.

## Actran e-Learning content

| Course | Course name |
| --- | --- |
| 1 | Introduction to Acoustics with Actran |
| 2 | Advanced topics on Acoustics with Actran |
| 3 | Introduction to Vibroacoustics with Actran |
| 4 | Advanced topics on Vibroacoustics with Actran |
| 5 | Introduction to Aeroacoustics with Actran |
| 6 | Introduction to Virtual SEA with Actran |
| 7 | Meshing for Acoustics in ActranVI |

## CFD solutions e-Learning content

| Course | Course name |
| --- | --- |
| 1 | Advanced Postprocessing |
| 2 | Basics of CFD - An Introduction to the Computational Fluid Dynamics |
| 3 | scSTREAM for Electronics 101 - An Introduction |
| 4 | scSTREAM for Electronics 102 - An Introduction |
| 5 | Importing and Cleaning CAD Data |
| 6 | Mesh Generation |
| 7 | SC/Tetra 101 - An Introduction to SC/Tetra |
| 8 | SC/Tetra 102 - An Introduction to SC/Tetra |
| 9 | scFLOW Introductory Seminar |
| 10 | Scattering of Spray Paint Particles Inside a Naturally Ventilated Building |
| 11 | scSTREAM for Architecture: At a Glance |
| 12 | scSTREAM 102 - An Introduction to scSTREAM |
| 13 | scSTREAM Introductory Seminar |
| 14 | PICLS Training |
| 15 | scFLOW Demonstration - Simple Thermo-Fluid Analysis |

## Adams e-Learning content

| Course | Course name |
| --- | --- |
| ADM701 | Complete Multibody Dynamics Analysis with Adams |
| ADM702 | Fundamentals of Multibody Dynamics Analysis with Adams |
| ADM703A | Advanced Modeling Elements and Techniques with Adams Solver |
| ADM703B | Adams Solver Theory: Achieving Robust, Converged Solutions |
| ADM703C | Writing User Subroutines in Adams Solver |
| ADM704A | Advanced Parametrics, Design Sensitivity and Optimization using Adams View |
| ADM704B | Automating Tasks using Adams View Scripting, Macros, and GUI Customization |
| ADM705 | Python Scripting in Adams |
| ADM706 | Adams Explore |
| ADM710 | Flex Body Dynamics and Modal Stress Recovery using Adams |
| ADM711 | Control System Integration with Adams using MATLAB or Easy5 |
| ADM720 | Frequency Domain Analysis using Adams/Vibration |
| ADM730 | Design of Experiments DOE and Stochastics Monte Carlo Analyses using Adams |
| ADM740 | Vehicle Modeling and Simulation using Adams Car |
| ADM741 | Vehicle Modeling and Simulation using Adams Driveline |
| ADM742 | Adams Tire |
| ADM743 | Formula SAE Applications using Adams Car |
| ADM750 | Gear, Belt, and Chain Modeling with Adams Machinery |
| ADM761 | Basic Suspension and Full Vehicle Analysis using Adams Chassis |
| ADM7N2 | Adams Tracked Vehicle |
| GAT101 | Advanced drivetrain modeling with Adams Gear AT |
| ADM744 | Adams Car Driving Machine Course Overview |
| ADM745 | Adams Car Electric Vehicle Modeling |

## Digimat e-Learning content

| Course | Class name |
| --- | --- |
| DIG101 | Introduction to Multi-scale Material Modeling using Digimat |
| DIG102 | Chopped Fiber Reinforced Plastic |
| DIG103 | Continuous Fiber Reinforced Plastic |

## Dytran e-Learning content

| Course | Class name |
| --- | --- |
| DYT101 | Dytran Structures and Fluids |
| DYT103 | Introduction to Airbag Analysis and occupant safety using Dytran |

## Easy5 e-Learning content

| Course | Course name |
| --- | --- |
| EAS101 | Dynamic System Modeling and Simulation using Easy5 |
| EAS103 | Modeling and Simulation of Fluid Power Systems using Easy5 |
| EAS105 | Modeling and Simulation of Gas Systems using Easy5 |
| EAS106 | Overview and Usage of the Easy5 Matrix Algebra Tool |
| EAS107 | Modeling and Simulation of Multi-Phase Fluids using Easy5 |
| EAS108 | Working with libraries and custom components in Easy5 |
| EAS109 | Modeling and simulation of Electric system using Easy5 |
| EAS110 | Interfacing EASY5 with Other Software |
| EAS111 | Python Scripting in Easy5 |

## FormingSuite e-Learning content

| Course | Course name |
| --- | --- |
| 1 | FormingSuite 2021 Geometry and 3D Addendum Workbenches: Basic Introduction" |
| 2 | FASTFORM Advanced: An Introduction |
| 3 | COSTOPTIMIZER: Basic Introduction |
| 4 | COSTOPTIMIZER Advanced: An Introduction |
| 5 | FormingSuite Professional: An Introduction |
| 6 | COSTOPTIMIZER Professional: An Introduction |
| 7 | PROCESS PLANNER Line Die Plan: An Introduction |
| 8 | PROCESS PLANNER Prog Die Process: An Introduction |

## FlightLoads e-Learning content

| Course | Course name |
| --- | --- |
| FLD120 | Aeroelasticity using FlightLoads and Patran |

## Marc e-Learning content

| Course | Course name |
| --- | --- |
| MAR101 | Basic Nonlinear Analysis using Marc and Mentat |
| MAR102 | Advanced Nonlinear Analysis using Marc and Mentat |
| MAR103 | Experimental Elastomer Analysis |
| MAR105 | Thermal Protection Systems Analysis using Marc and Mentat |
| MAR108 | What's New in Marc |
| MAR120 | Basic Nonlinear Analysis using Marc and Patran |
| MAR121 | Advanced Nonlinear Analysis using Marc and Patran |

## MaterialCenter e-Learning content

| Course | Course name |
| --- | --- |
| MAT101 | Introduction to MaterialCenter |
| MAT102 | MaterialCenter for the Materials Engineer |

## Patran e-Learning content

| Course | Course name |
| --- | --- |
| PAT301A | Introduction to Patran |
| PAT301B | Advanced Geometry, Meshing, and Customization |
| PAT304 | Automating Tasks and Basic GUI Customization Using the Patran Programming Command Language PCL |
| PAT318A | Basic Durability and Fatigue Life Analysis Using MSC Fatigue |
| PAT318B | Advanced Durability and Fatigue Life Analysis Using MSC Fatigue |
| PAT312 | Thermal Analysis Using Patran Thermal |
| PAT325 | Composite Laminate Modeling using Patran |

## MSC Nastran e-Learning content

| Course | Course name |
|---|---|
| NAS101A | Linear Static and Normal Modes Analysis using MSC Nastran |
| NAS101B | Advanced Linear Analysis using MSC Nastran |
| NAS102A | Dynamic Analysis using MSC Nastran |
| NAS102B | Advanced Dynamic Analysis using MSC Nastran |
| NAS106A | Basic Substructure Analysis using MSC Nastran - Primary Superelements |
| NAS106B | Advanced Substructure Analysis using MSC Nastran - Secondary Superelements |
| NAS107 | Design Sensitivity and Optimization using MSC Nastran |
| NAS108 | What's New in MSC Nastran and Patran |
| NAS110 | Working with Custom MSC Nastran Solu-tion Sequences |
| NAS111 | Aeroelasticity using MSC Nastran |
| NAS113 | Composite Material Analysis with MSC Nastra |
| NAS115 | Fluid Structure Analysis using MSC Nastran |
| NAS120 | Linear Static Analysis using MSC Nastran and Patran |
| NAS124 | Thermal Analysis using MSC Nastran |
| NAS126 | Explicit Nonlinear Analysis (SOL700) us-ing MSC Nastran |
| NAS127 | Rotordynamic Analysis using MSC Nastran |
| NAS133 | Contact Analysis using Contact Pairs in MSC Nastran and Patran |
| NAS134 | Advanced Contact Analysis using Contact Pairs in MSC Nastran and Patran |
| NAS318 | Implementation of Fatigue Methods using MSC Nastran – Embedded Fatigue (NEF) with Patran |
| NAS400 | Implicit Nonlinear Analysis using MSC Nastran and Patran |
| HDF5 | HDF5 Usage in Nastran and Patran |

## SimDesigner e-Learning Content

| Course | Course name |
|---|---|
| SMD102 | Fundamentals of Multibody Dynamics Analysis with SimDesigner |

## Sinda e-Learning

| Course | Course name |
|---|---|
| SND501 | Thermal analysis using Patran with Sinda |

## Simufact e-Learning Content

| Course | Course name |
|---|---|
| 1 | Simufact Additive |
| 2 | Simufact Welding |
| 3 | Simufact Welding - Apex Modeler |
| 4 | Simufact Forming - Introduction |
| 5 | Simufact Forming - Application Tutorial |
| 6 | Simufact Forming - Basic Tutorial |
| 7 | Simufact Forming - Scientific Tutorial |
| 8 | Simufact Forming - Open Die Forging |
| 9 | Simufact Welding - Resistance Spot Welding |

## SimManager e-Learning Content

| Course | Course name |
|---|---|
| SMM101 | Introduction to SimManager |
| SMM102 | SimManager Basic Configuration |
| SMM301 | SimManager Advanced Configuration |
| SMM201 | SimManager Installation and Administration |

**Value:**

- If you are in the middle of a project and need to gain insight on a new task or simulation method quickly drop into the MSC Learning Center to browse through the courses and topics of interest to quickly get up to speed

- Flexibility, Convenience and Easy Access

- Interactive and Hands-on Training

- Community access that allows user to ask MSC SME's questions

- Accessed from any internet enabled device

- Quickly identify the skills you are proficient at and the skills you need to focus on developing

- Career advancement/Development

- Prove to your current/future employer that you have sufficient CAE skills to add value on projects
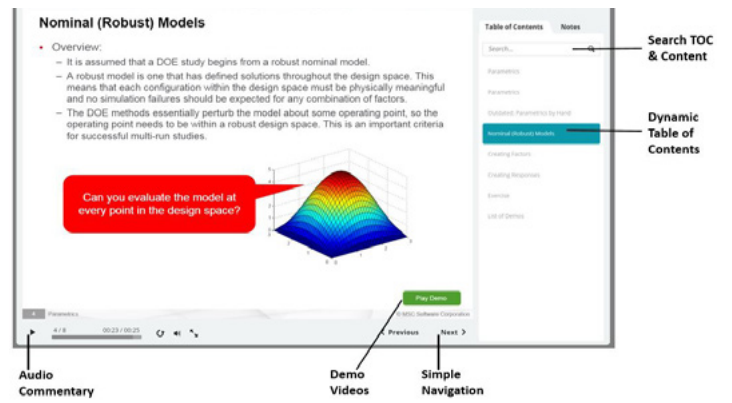
## Content highlights

- Each class is broken into a series of modules, building on knowledge learned from previous modules. This allows users to connect the dots from each topic; developing thorough skillsets and knowledge.

- Each module typically comes with lecture slides, workshops ranging from simple examples to real world problems delivered with model files, video demonstrations, end of lecture and workshop review questions, and audio from subject matter experts (SMEs).

- Audio from the SME is designed to supplement the lecture slides by providing insight and expertise from years of teaching.

- Dynamic table of contents allows users to quickly browse and jump to any point in the course.

- After class completion, you can take certification exams that prove your proficiency in the features and skillsets learned in the training course(s).

- Social collaboration via MSC communities acts as the Face-to-Face interaction with an MSC SME to support any questions about the course content and course files to Link to Technical Forums.
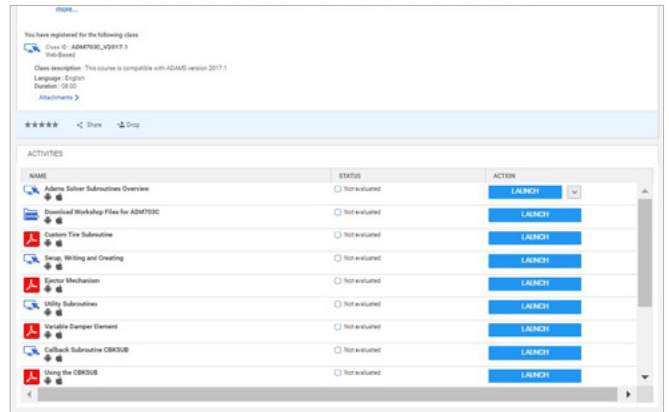




Activities view
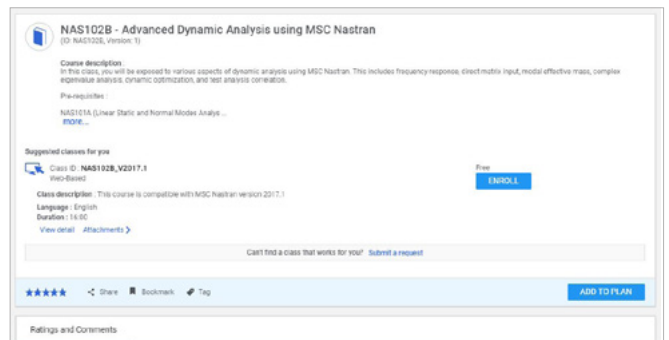


Training courses are rated and reviewed by users

## Certification program:

Interested in advancing in your current field? Interested in assessing your team's skills? It's important to have the necessary qualifications to show that you are capable.

Earning a professional certificate from MSC Software can help you build your skills, increase your knowledge in your chosen area of study, prepare you for career advancement, and prove your proficiency in MSC Software Products.

### Benefits:

- Establishes a goal for your training; supports your studying process

- Quickly Identifies the skills you are proficient at and the skills you need to focus on developing

- Prove to your current/future employer that you have sufficient CAE skills to add value on projects

- Career advancement/development

### Features:

- Certification Exams contain up to 50 multiple-choice questions, randomly chosen out of a question pool

- Exams take up to an hour to complete

- Ability to retake exam up to 3 times, with 1 day lockout period between exam attempts

- Certifications achieved can be posted on your community profile (optional)

- Receive a certificate via email upon passing exam or completing a course

- Can access the certificate from the training details page on your transcript in the MSC Learning Center

## Mobile learning:

Mobile learning is a step further than e-Learning allowing users to learn virtually anywhere.

### Features:

- Easy access (anywhere, anytime)

- Self-paced learning

### Features:

- Access e-Learning from any mobile device, through our dedicated apps for Apple and Android.

- View and take learning programs and courses

- View and take assessments

## MSCOne e-Learning:

MSC LearningCenter is now available through MSCOne. In order to get access to the LearningCenter with an existing MSC One license, you must request an updated license file with the LearningCenter feature.

Request an updated MSC One license from your MSC Sales Admin or Account Manager. If you are unsure who this is, Please send us an email at: Learning@mscsoftware.com and we will be happy to assist.

**HEXAGON** | **MSC Software**®
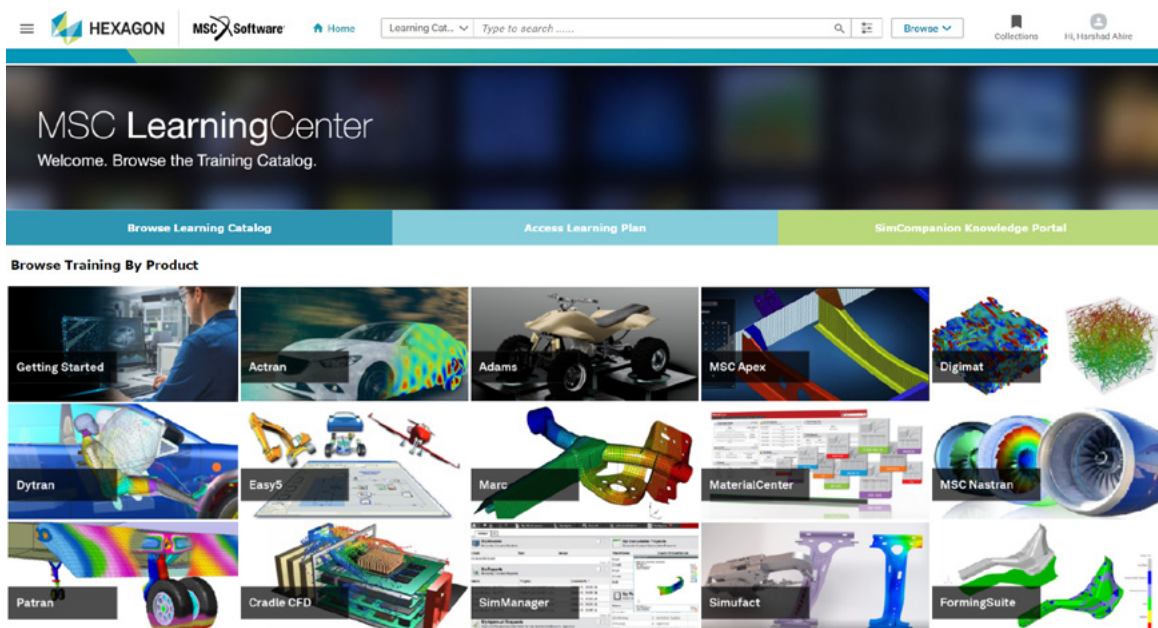
Hexagon is a global leader in sensor, software and autonomous solutions.
We are putting data to work to boost efficiency, productivity,
and quality across industrial, manufacturing, infrastructure, safety,
and mobility applications.

Our technologies are shaping urban and production ecosystems
to become increasingly connected and autonomous – ensuring a scalable,
sustainable future.

MSC Software, part of Hexagon's Manufacturing Intelligence division,
is one of the ten original software companies and a global leader in helping
product manufacturers to advance their engineering methods with
simulation software and services. Learn more at mscsoftware.com.
Hexagon's Manufacturing Intelligence division provides solutions that utilise
data from design and engineering, production and metrology to make
manufacturing smarter.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com
and follow us @HexagonAB.