ADDITIVE**MINDS**
ACADEMY

Learning Paths
and E-Learnings overview

February 2023

A brand of EOS GmbH

Introduction AM Academy

Additive Minds Academy is the EOS education provider for the Additive Manufacturing (AM) industry.

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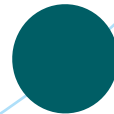
Our passion is to enable people and organizations worldwide to use the potential of industrial 3D printing for responsible manufacturing. We are building partnerships and programs that provide enablement, and inspiration to future generations of AM creators and innovators.

In cooperation with renowned partners, Additive Minds Academy has developed a comprehensive online training program to optimize onboarding processes and accelerate your knowledge buildup at the forefront of additive manufacturing innovation. The portfolio consists of online courses for all levels of expertise.

Our comprehensive digital learning paths bring you up to speed in the shortest possible time and are completed with an examination and a certificate.

Our digital courses make AM knowledge available anytime, anywhere. Thus, they help reduce training time and costs, and by conserving resources contribute to eco-friendly learning.

We design our products with state-of-the art learning methods to be engaging and fun to use. Finally, we are committed to smart learning and promote innovative tools to provide you the best learning experience, while setting the course for future learning with augmented and virtual reality formats.

Types of teaching

E-Learning:

E-Learnings are online trainings, which include videos, animation and tasks to train the learner in the specific topic. They can range from overall introductory courses to in deep-dives into specific techniques.
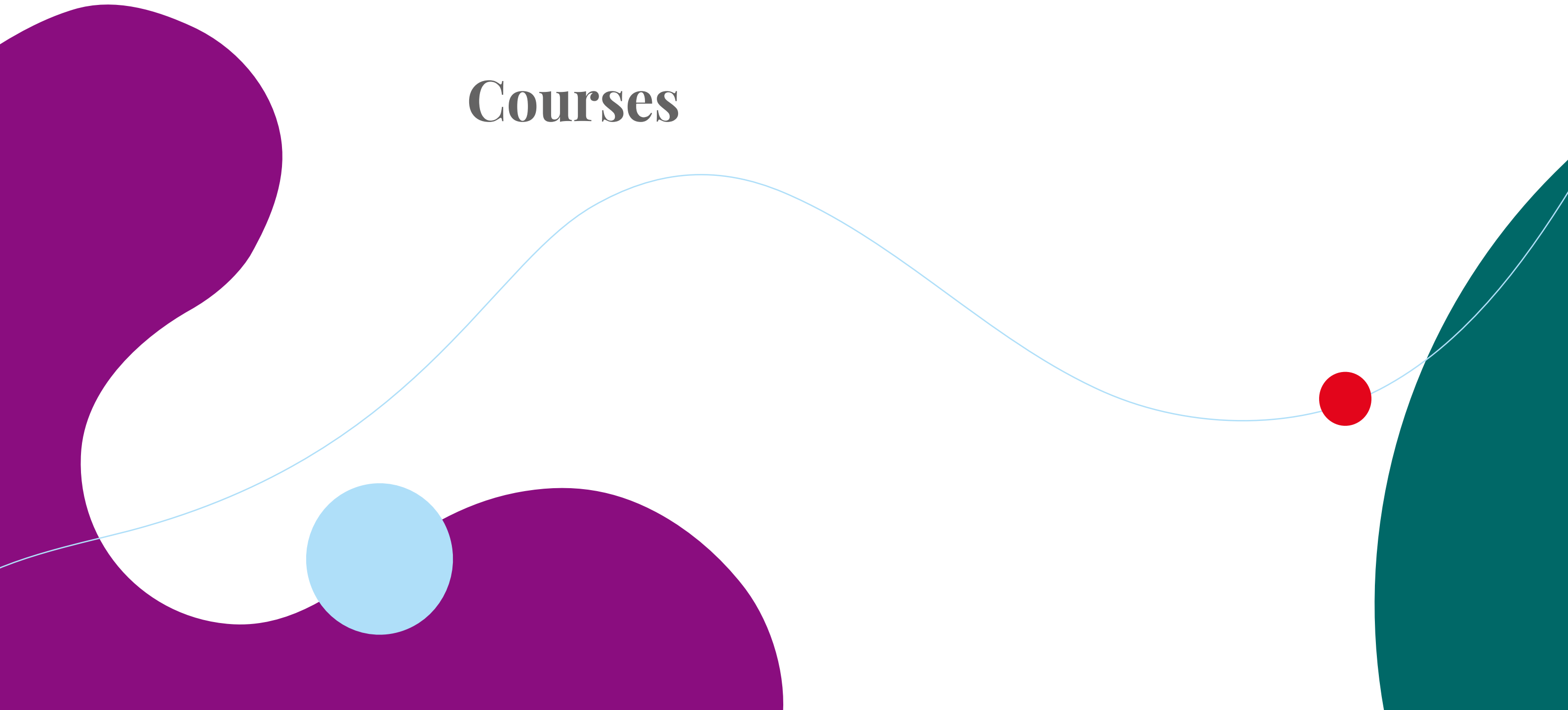
Learning Path:

Learning paths are a collection of multiple e-learnings in order to train the learner for a specific role in the company. They guide the user from the beginning with little to no knowledge about AM to be an expert in their field.

Workshop:

Our customized workshops are a combination of in-person workshops concerning topics of your choice, across all levels of knowledge and with the access to 3 of our E-learnings.

Courses

General Trainings

Getting started with Industrial 3D Printing

Article	500011305
Languages	English
Online & Self-Study	30 minutes
Level	Beginner
EOS Certificate	Y

Description

Additive manufacturing (AM) and the industry is evolving very dynamically and is quickly advancing in many fields. There are many opportunities for the application of additive manufacturing technology.

This additive manufacturing online class will demonstrate the key benefits of additive technologies and enable you to create your own AM incorporating strategy, helping you to lead the way in the exciting and unconventional world of 3D printing.

Learning Objectives

- understand additive manufacturing (AM) technology
- articulate the opportunities and limitations of additive manufacturing (AM) technology
- determine next steps in incorporating additive manufacturing (AM) technolog
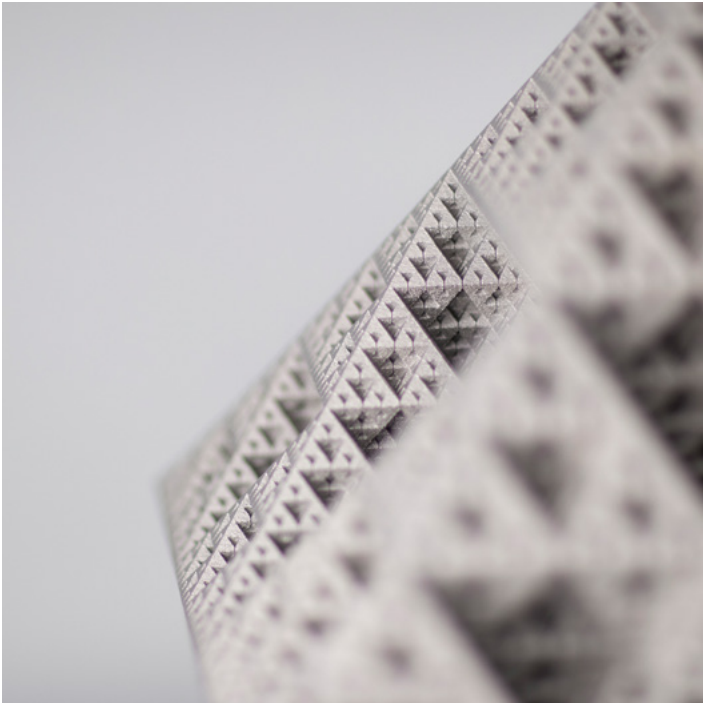
Sale price (€)

25,–

Identify AM Applications

Article	500008823
Languages	English, German
Online & Self-Study	6h
Level	Beginner
EOS Certificate	Y

Description

- Learn an easy adaptable method to find those applications with the highest potential within your portfolio and get a starting point for your journey.

- Evaluate the economical and the technical fit quickly and have a high-level assessment.

Learning Objectives

- Choosing the right applications

- Technical Fit

- Economic Fit

- Methodology

Sale price (€)

270,–

Business Case Analysis

Article	500009557
Languages	English, German
Online & Self-Study	6h
Level	Beginner
EOS Certificate	Y

Description

- This e-learning focuses on assessing cost per part for selected applications in polymer and metal technology and developing a business case for Additive Manufacturing.

- Also, the impact of key cost levers, such as machine hours, build job setup and parameter setting for example are discussed within the concept of a sensitivity analysis.

- The second block then addresses on AM specific business case scenarios to determine suitable production setups and identify AM value drivers along the application's process chain

Learning Objectives

- Cost Estimation

- Cost drivers and levers

- Business case simulation

- Associate costs along value chain

- Reduce the cost of an AM Part

- Develop your first business Case

Sale price (€)

270,–

New to Industrial 3D Printing

Hardware & Software Prerequisites	Please relax and enjoy the course, we have already taken care of everything. We will provide you with all the licenses and software tools needed for your ideal learning experience.

Article	500026310 (1 seat)
Languages	English
Online & Self-Study	8 hours
Level	Beginner

Description

Are you considering an investment in **additive manufacturing**, but are still unsure whether it is worthwhile for your company? Are you interested in additive manufacturing and looking for a **compact introductory program**? Then we have put together just the right training program for you. You will learn the basics of additive manufacturing technology, a method for **identifying the potentially best application** for AM production in your portfolio, experience augmented reality in in the area of operator training and **exchange ideas with our experts.**

Learn more about the following topics:

Module 1: **Getting Started with Industrial 3D Printing:** This additive manufacturing online class will demonstrate the key benefits of additive technologies and enable you to create your own AM incorporating strategy, helping you to lead the way in the exciting and unconventional world of 3D printing.

Module 2: **Industry Introduction:** In this introductory course, you will gather AM industry insights with relevant facts and figures. You will learn which applications in different industries are suitable for additive manufacturing and have actually changed an industry.

Module 3: **Identifying AM Applications:** In this course, you'll learn a method to confidently identify which applications are suitable for additive manufacturing and which are not. Because not everything you can print should be printed.

Module 4: **M 290 AR Training:** Get an immersive AR experience by augmenting the best metal 3D printer of the year, EOS M 290, anywhere near you.

Module 5: **Expert Session/Webinar:** Our expert will answer all your questions and discuss your implementation strategy with you.

Sale price (€)

399,–

AM Design

Prerequisites	Please relax and enjoy the course, we have already taken care of everything. We will provide you with all the licenses and software tools needed for your ideal learning experience.

Article	500023931 (1 seat) 500023933 (4 seats)
Languages	English
Online & Self-Study	4-6 weeks
Level	Intermediate and Advanced Level

Description

Integrate the benefits of additive and traditional manu-facturing technologies into your design projects, use a variety of design approaches, inspire customers with your sketches and designs and master state-of-the-art design software tools.

The certified AM Academy training programs combine theory and practice in teaching AM design skills. The knowledge imparted comes from hundreds of industry projects in all industries over the last 30 years.

This course is split into four phases

Phase 1: We start with project- and stakeholder management, because, as a designer, you are also a project manager of your design projects. We teach you all additive manufacturing technologies and compare them to traditional manufacturing processes. You will get an insight into all relevant industries. To finish this phase, we will teach you a forgotten and great skill. You will learn how to put your ideas and sketches on paper.

Phase 2: Delve into the world of additive manufacturing. Learn a method for identifying additive design use cases. Deepen your knowledge in additive design, post-processing and the impact on your designs as well as the dependency between design and business case.

Phase 3: Master state-of-the-Art additive manufacturing design tools. Become an expert for different design approaches.

Phase 4: Pass your final examination and receive your certification.

Sale price / 4 seats (€)

15.400,–

Sale price (€)

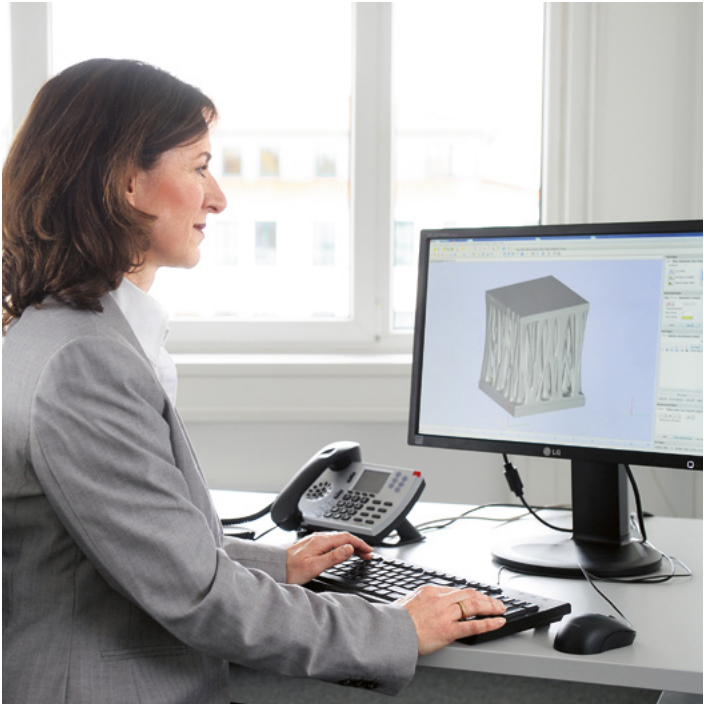**4.800,–**

Cost per Part for Additive Manufacturing

Languages	English
Web Application	
EOS Certificate	N

Description

- Gather your first basic AM technology knowledge and get a feeling for disruption.
- Learn the cost per part levers along the AM process.
- Understand impactful cost per part drivers.
- Visualize the cost in different graphical representations.
- Sensitize the costing data to match target costs

With this web-based application, you will gain access to

- Transparent cost analysis
- Visual analytics- Cost scenario analysis
- Cost sensitivity analysis
- Report generation
- Data-driven design to match cost targets
- Customized cases for customer pricing

Sale price freemium / 90 days / 500018126 (€)

0,–

Sale price premium / 1 year / 500019693 (€)

150,–

Sale price platinum / unlimited / 500019692 (€)

250,–

Customized Workshop – 3D Printing Part Innovation

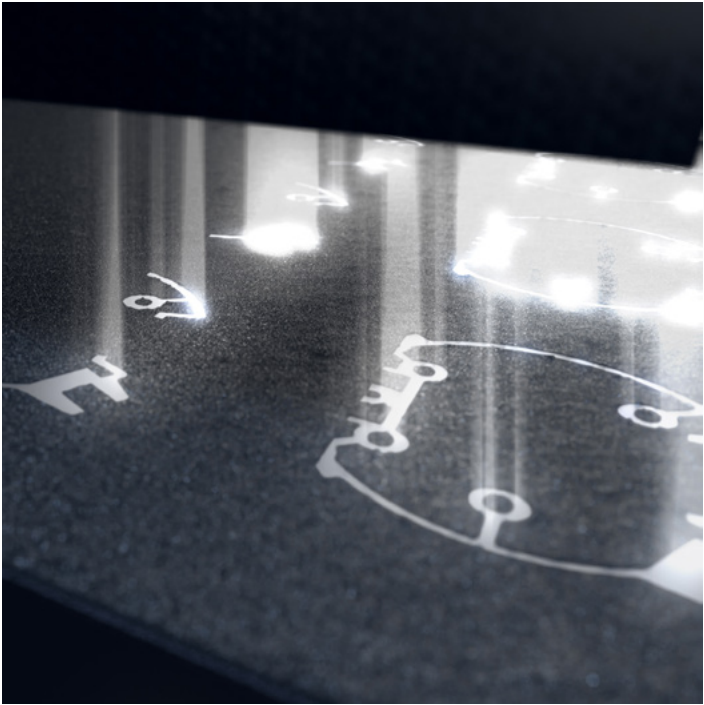|	
Article	500015519
Languages	English, German
Hybrid	5 weeks
Level	Beginner, Intermediate, Advanced
EOS Certificate	Y

Description

Book a customized workshop together with our EOS Application Engineering Expert and realise your full additive manufacturing potential

Classroom (either at EOS branch or on site) All you need is enthusiasm for additive manufacturing technology and up to three applications from your portfolio

- Customize your workshop choosing from different modules of your interest

- In-depth knowledge about Laser Powder Bed Fusion (LPBF) from the market leader

- Together we redesign your application for your market and business success

- Innovate your application parts with our Application Engineering experts

- Your workshop result will be produced on our 3D Printers

Curriculum

1. Alignment Call

2. Remote preparation of workshop

3. Workshop - Technologies

4. Workshop 2 – Application analysis

5. Remote design of first AM application

6. Workshop 3 – Review and questions

7. Next steps – Access to 3 E-Learnings: Innovation with 3D Printing, Part Screening & Selection, Application Sprint

Sale price (€)

9.900,–

Metal Specific Trainings

Parameter Editor Metal for EOSPRINT 2.X

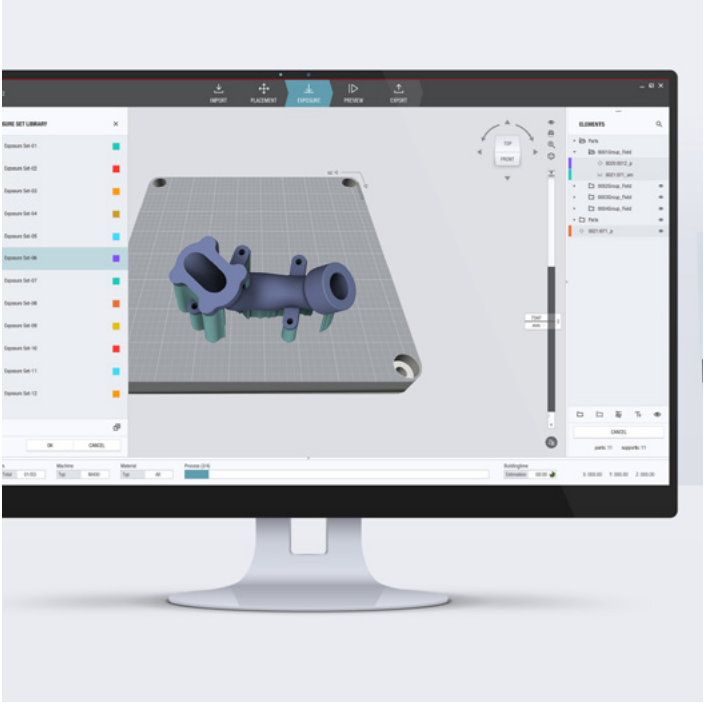|	
Venue	E-Learning
Article	500010249
Prerequisites	EOSPRINT 2.7 or 2.8 with Premium module EOSPRINT 2 License Key
Online, self study & Video Based Training	6h
Level	Intermediate
EOS Certificate	Y

Description

- Introduction of basic principles of parameter-set creation using EOS Parameter Editor functionalities.

- Learn how to save and organize parameter sets with self-created values.

- Apply newly obtained skills to create custom exposure strategies

- Evaluate an impact of parameters variation on part density, surface finish and other part properties

- Create custom strategy to optimize supports strength and meet other specified criteria

Learning Objectives

- Parameter Editor Basics

- Supports and Hatching

- Core, Contours and Edges

- Build job time

- Layout optimization

- Custom exposure strategies

Sale Price / 500011717 (€)

570,–

E-Learning & Remote Expert Session / 1 seat / 500021067 (€)

1.530,–

E-Learning & Remote Expert Session / 4 seats / 500021066 (€)

3.240,–

Post Processing & Surface Finish Metal

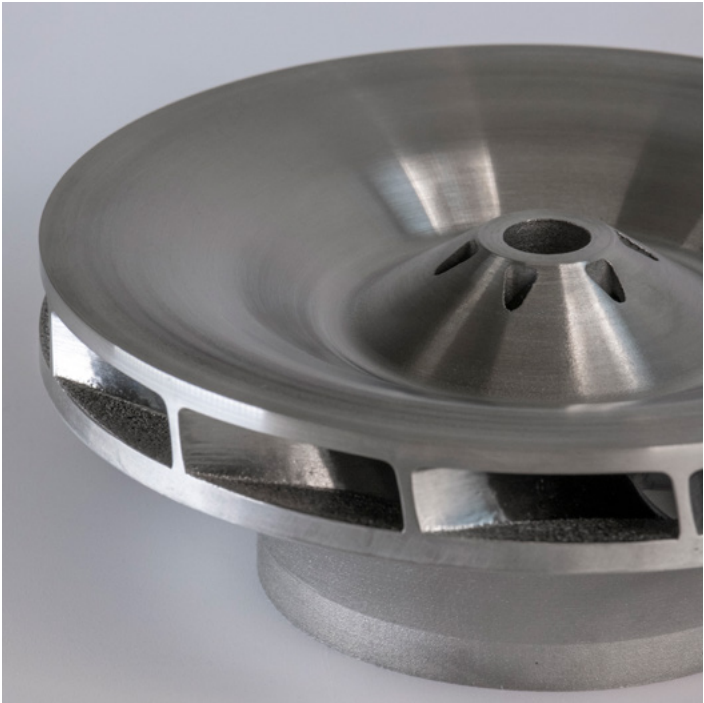|	
Article	500012700
Languages	English, German
Online & Self Study	8h
Level	Intermediate
EOS Certificate	Y

Description

- In this module you learn different methods and technology to postprocess AM parts with focus on surface finishing.

- In the next step you will get an overview what is important about cleaning and cutting of parts and how to remove the support structure.

- You will be able to select the best surface finishing procedures for your application.

- Finally, you will learn how to optimize the design for post processing.

- Gain an understanding of the importance of each method, their differences, and what makes a high-quality part finish

Learning Objectives

- Design guidelines for post-processing

- Methods of post-processing

- Powder removal- Support removal

- Cutting parts from the platform

- SOLUKON automated de-powdering process

- Extrude Hone support removal

Sale price (€)

470,–

Remote Expert Session opt. / 500018124 (€)

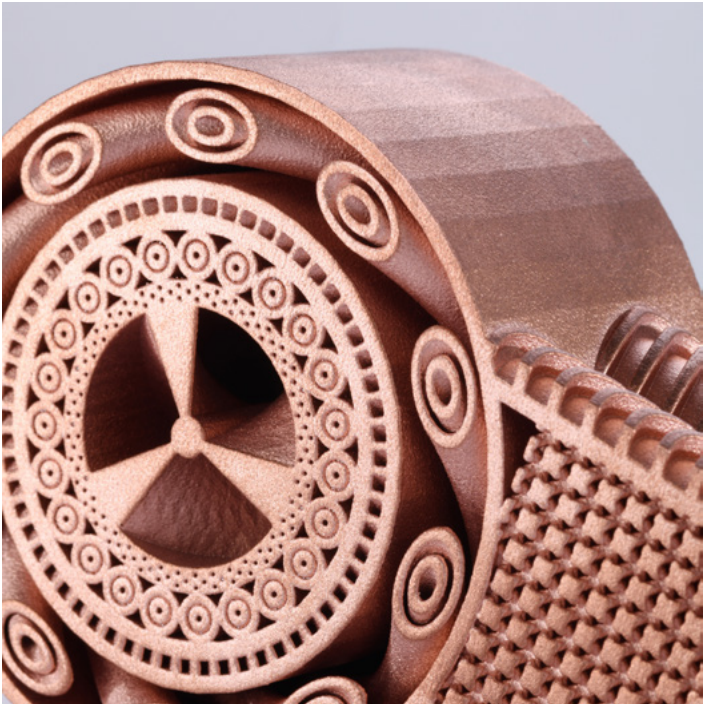### 960,–

Design for Additive Manufacturing Metal

Article	500008824
Prerequisites	EOSPRINT 2.x In-depth knowledge of exposure parameters
Languages	English
Online & Self-Study	16h
Level	Beginner
EOS Certificate	Y

Description

- This additive manufacturing module will teach you the ins and outs of proper design procedure, enabling you to design high quality and efficient projects that minimise build time and maximise profit.

- You will learn of the possibilities and limitations in 3D printing, and how to apply this knowledge to design viable yet innovative parts and progress your career in additive manufacturing.

- Explore the entire process chain from design through to build and application, as well as the optimisation and orientation stages.

Learning Objectives

- General AM Introduction

- AM Process fundamentals

- Materials

- Design Guidelines

- Generative Design and Topology Optimization

- Post Processing

- DMLS (Direct Metal Laser Sintering) process

- Minimize part weight

- Improving part performance

- Functional integration

- Part consolidation

Sale price (€)

270,–

Support-free Additive Manufacturing Metal

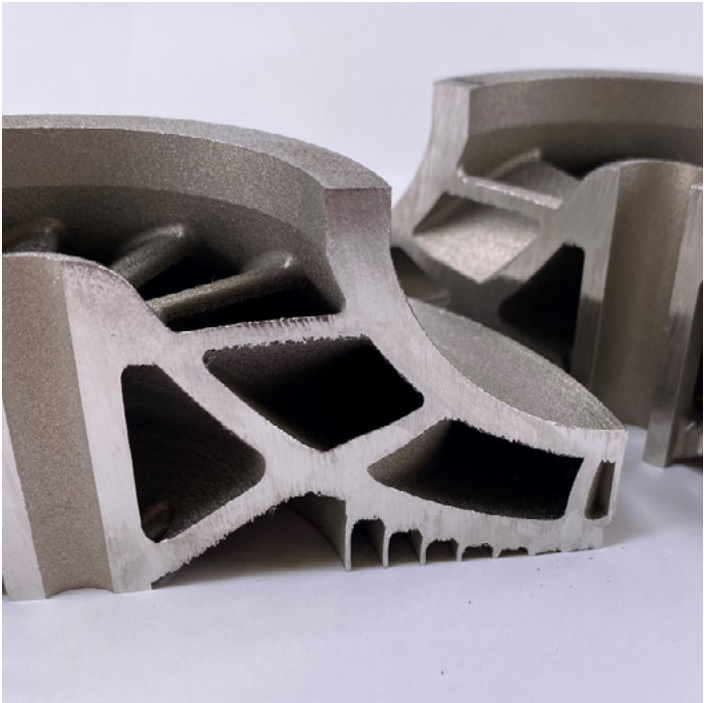|	
Article	500011905
Languages	English, German
Prerequisites	EOSPRINT 2.x Materialise Magics 24 or newer
Online, self study	8h
Level	Advanced
EOS Certificate	Y

Description

- This 3D printing module will provide a comprehensive overview of support-free additive manufacturing for metal, providing you with specialist knowledge to reduce costs, save time and drive innovation across the process chain.

- Dive into the world of support-free additive manufacturing and learn how to design parts that require little to zero support structures.

- Understand the different support strategies and manage them right the first time.

Learning Objectives

- Role of support structures

- Benefits of support-free builds

- Support-free methodologies

- Toolbox of methods to avoid supports

- Possibilities and limitations of support-free building

Sale price (€)

670,–

Reference Point Calibration M 290

Article	500016609
Prerequisites	EOSPRINT 2.7 or higher EOSPRINT 2 License key Basic knowledge of EOS M290 machine operation
Online, self study	1,5h
Level	Intermediate
EOS Certificate	Y

Description

- In this course you will learn how to carry out absolute placement of parts, using the EOS Reference Point Calibration functionality in EOSPRINT 2.

- Learn from an application example and to be able to use the knowledge in your daily job and perform the procedure of reference point calibration yourself.

- For the first real life calibration process, our experts are available to assist you with onsite hands-on consulting.

Learning Objectives

- Principles of reference point calibration

- Prepare the calibration job in EOSPRINT 2

- Measure and evaluate the calibration job

- Hybrid parts

- Absolute positioning of parts.

Sale price (€)

25,–

EOSTATE Exposure OT & MeltPool Monitoring (Level 1 & 2)

Article	500008529
Technology	Metal 3D-Printing
Languages	English
Online & Self Study	4h + 16h
Level	Intermediate
EOS Certificate	Y

Description

- You will gather a comprehensive explanation about all software feature

- You will discover exemplary effects and phenomena within the sample data provided.

- Hands-on exercises grant an interactive learning experience.

- You will additionally get multiple example Monitoring data sets to learn independent from your machine availability, giving you the head start in additive manufacturing you need

Learning Objectives

- Monitoring software features

- Evaluation of job geometries, design of experiments and possible pitfalls

- Analysis and correlation inside and outside the software

- Potential defect correlations

- Usage of the OT client

Sale price (€)

1.450,–

Sale price Remote Expert Session opt. MPM / 500012683 (€)

960,–

Sale price Remote Expert Session opt. EOSTATE OT / 500009559 (€)

960,–

AM Data Preparation Metal

Prerequisites	Please relax and enjoy the course, we have already taken care of everything. We will provide you with all the licenses and software tools needed for your ideal learning experience.

Languages	English
Duration	4-6 weeks
Level	Beginner, Intermediate, Advanced
EOS Certificate	Y

Description

Realise your full potential with our Learning Path and become an AM Academy certified "Data Preparation Specialist" for Metal Applications.
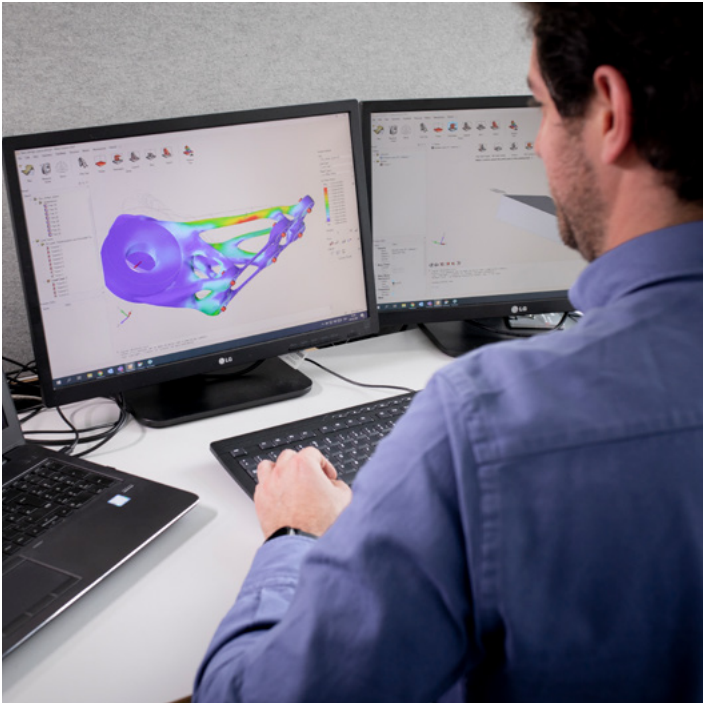
In Additive Manufacturing (AM), every aspect of the process chain matters. Data preparation is one of the most important parts of this process and can make or break the end result. Understanding data preparation will determine the quality and efficiency of production.

Our additive manufacturing courses will teach you how to implement best practices in data preparation for metal, to improve the overall production process and advance your career in the field.

Phases

Phase 1: An introduction to additive manufacturing and EOS systems and software, peer reviews and portfolio scoring.

Phase 2: A deeper exploration of software, metal selection and online discussion seminar.

Phase 3: Mastering support and orientation, case studies, practical exercises, exam preparation and Q&A sessions.

Phase 4: Theory examination, practical examination, certification and live event.

Sale price / 1 seat / 500003168 (€)

3.500,–

Sale price / 4 seats / 500009554 (€)

8.800,–

AM Application Engineering Metal

Prerequisites	Please relax and enjoy the course, we have already taken care of everything. We will provide you with all the licenses and software tools needed for your ideal learning experience.

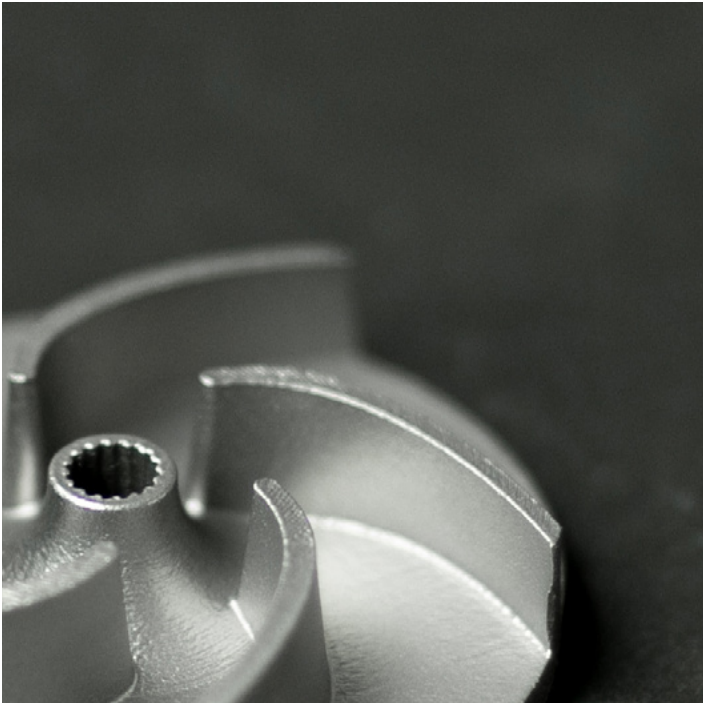|	
Languages	English
Duration	4-6 weeks
Level	Intermediate, Advanced
EOS Certificate	Y

Description

Realise your full potential with our Learning Path and become a certified EOS AM Application Specialist in Metal

- Design your customer application using the additive manufacturing potentials
- Develop process parameters for your production
- Generate high quality build jobs
- Master AM data preparation, monitoring and quality software
- Understand quality measurements for Additive Manufacturing processes
- Deep dive learning with Amphyon and Materialise
- Master the AM process from part design towards post-processing

Phases

Phase 1: An introduction to EOS systems and software, learning how to build job preparations with Materialise Magics software.

Phase 2: Delve into the world of parameter editing, materials and post processing.

Phase 3: Cover AM quality standards and deepen your knowledge of Additive Works Amyphon.

Phase 4: Theory examination, practical examination, certification and farewell event.

Sale price / 1 seat / 500003174 (€)

4.500,–

Sale price / 4 seats / 500012280 (€)

10.800,–

XR Basic Training EOS M 290

Languages	English
Level	Beginner
EOS Certificate	N

Description

- With this EOS M 290 mobile app you will train your skills for system set up and unloading as well as safety training.

- Familiarize yourself with the main components and interact with the real-size model of the EOS M 290 in Augmented Reality.

- Navigate and distinguish between different components of the EOS M 290 System as well as define their key features

- Understand the key safety concepts when working with EOS metal systems

Learning Objectives

- M 290 equipment augmentation

- safety training

- guided tutorial to learn system installation and unloading

- unassisted mode to train system installation and unloading

Sale price freemium / 500023111 (€)

0,–

Sale price premium / 6 months / 500018127 (€)

1.099,99

XR Basic Training EOS M 400-4

Languages	English
Level	Beginner
EOS Certificate	N

Description

- With this EOS M 400-4 mobile app you will train your skills for professional system operation from system setup to unloading of final print job as well as safety training.

- Learn how to perform the fine tuning procedure of the EOS M400-4 by building the quality job and optimizing overlap accuracy by using EOS EOSYSTEM SmartCAL.

- Familiarize yourself with the main components and interact with the real-size model of the EOS M 400-4 in Augmented Reality.

- Navigate and distinguish between different components of the EOS M 400-4 system, including the Setup Station and Graphical User Interface, as well as define their key features.

- Understand the key safety concepts when working with EOS metal systems.

Learning Objectives

- EOS M 400-4 Equipment incl. Periphery
- System Safety
- System setup
- System operation
- Graphical Machine Interface
- Fine tuning the machine

Sale price freemium / access / 500026586 (€)

0,–

Sale price premium / 6 months access / 500025634 (€)

1099,99

Polymer Specific Trainings Alternative

Design for Additive Manufacturing Polymer

Article	500012682
Languages	English, German
Online, self study	6h
Level	Beginner
EOS Certificate	Y

Description

- This additive manufacturing module will teach you the ins and outs of proper design procedure for polymer materials, enabling you to design high quality and efficient projects that minimise part weight, increasing part performance and foster functional integration as well as part consolidation.

Learning Objectives

- Process Fundamentals
- Process Chain
- Design Introduction
- Design Thinking
- Design for Additive Manufacturing
- SLS (Selective Laser Sintering) process
- Minimize part weight
- Improving part performance
- Functional integration
- Part consolidation

Sale price (€)

470,–

Post-Processing Polymer

Article	500018125
Languages	English, German
Online, self study	3h
Level	Intermediate
EOS Certificate	Y

Description

- In this module you learn different methods and technology to postprocess AM parts.

- In the next step you will get an overview what is important about cleaning.

- You will be able to select the best surface finishing procedures for your application such as smoothing, coloring or coating.

- Finally, you will learn how to optimize the design for post processing.

- Gain an understanding of the importance of each method, their differences, and what makes a high-quality part finish

Learning Objectives

- Design guidelines for post-processing

- Methods of post-processing

- Powder removal

- Functional and decorative part requirements

- Dyemansion coloring

- Adhesive Bonding

Sale price (€)

470,–

AM Data Preparation Polymer

Prerequisites	Please relax and enjoy the course, we have already taken care of everything. We will provide you with all the licenses and software tools needed for your ideal learning experience.

Languages	English
Duration	4-6 weeks
Level	Beginner, Intermediate, Advanced
EOS Certificate	Y

Description

Realise your full potential with our Learning Path and become an AM Academy certified "Data Preparation Specialist" for Polymer Applications. In Additive Manufacturing (AM), every aspect of the process chain matters. Data preparation is one of the most important parts of this process and can make or break the end result. Understanding data preparation will determine the quality and efficiency of production.

Our additive manufacturing courses will teach you how to implement best practices in data preparation for polymer, to improve the overall production process and advance your career in the field.

Phases

Phase 1:   An introduction to additive manufacturing and EOS systems and software, peer reviews and portfolio scoring.

Phase 2:   A deeper exploration of software, polymer selection and online discussion seminar.

Phase 3:   Mastering data preparation software and get used to expert functions, case studies, practical exercises, exam preparation and Q&A sessions.

Phase 4:   Theory examination, practical examination, certification and live event.

Sale price / 1 seat / 500008822 (€)

3.500,–

Sale price / 4 seats / 500012210 (€)

8.800,–

AM Application Engineering Polymer

Prerequisites	Please relax and enjoy the course, we have already taken care of everything. We will provide you with all the licenses and software tools needed for your ideal learning experience.

Languages	English
Duration	4-6 weeks
Level	Intermediate, Advanced
EOS Certificate	Y

Description

Realise your full potential with our Learning Path and become a certified EOS AM Application Specialist in Polymer

- Design your customer application using the additive manufacturing potentials
- Develop process parameters for your production
- Understand quality measurements for Additive Manufacturing processes

- Master the AM process from part design towards post-processing
- Learn from experts how to set up the best process temperature and how to troubleshoot your process parameter for best quality and performance
- Tech Talk "build extreme parts" with Andrea Weichselbaumer (23 years of experience with additive manufacturing)

This course is split into four phases

Phase 1:   Receive an introduction to EOS systems and software. Gain an in-depth understanding of specific industries and their typical applications and learn how to calculate your business case.

Phase 2:   Delve into the world of materials and post processing. Deepen your knowledge of Dye Mansion post processing opportunities and improve your AM design skills.

Phase 3:   Master common challenges in temperature setting, optimizing process parameters, meeting customer quality standards, and become an expert in systematic troubleshooting.

Phase 4:   Pass your final examination, receive your certification and participate in a farewell event.

Sale price / 1 seat / 500010554 (€)

4.500,–

Sale price / 4 seats / 500012281 (€)

10.800,–