

FRAUNHOFER RESEARCH INSTITUTION FOR ADDITIVE MANUFACTURING TECHNOLOGIES IAPT

ADDITIVE ACADEMY: THE WAY TO ADDITIVE SUCCESS



YOUR BENEFITS Independent **13** machine park & software different AM machines Established in 2014 1,200

Training executed worldwide

> 40 experienced trainers

participants trained

Excellent participant feedback

different AM technologies

Choose your individual module!

ACADEMY



WHAT IT IS ABOUT

The Additive Academy teaches application-based knowledge on subjects related to the industrial use of Additive Manufacturing (AM). Benefit from the comprehensive expertise of the leading research institution for Additive Manufacturing technologies. Our training program helps you to identify the opportunities and challenges associated with this innovative production technology and successfully get to grips with them within your own company.

The Additive Academy of Fraunhofer IAPT is your best choice AM training provider, because:

- It is your fast-track solution to obtaining a deep understanding of AM, including its benefits and restrictions
- It teaches your staff with target-group-oriented hands-on training programs
- You learn how to use AM-relevant software and hardware from a neutral user's perspective
- It empowers your team to think out of the box regarding the value chain and product design

firsthand practice-based knowledge.

- It makes you experience the full range of industrial research and benefit from being one step ahead
- You learn from recent research results how to become a first mover in a fast-developing field
- You benefit from tailor-made training and individualized workshops
- You exploit the full potential of AM for your business by attending our training courses

Our extensive seminar program offers various company divisions – such as production, management, and design – suitable training and workshop content. In every area, we make a distinction between the various levels: basic, advanced, and expert. Individual courses tailored to your needs and workshops at your company are also possible. In each case, we impart

	Design	Production	Management
Starter	Basic Training **	Basic Training **	Learning Expedition
	Design for Additive Manufacturing Training		
Advanced	Hands-on Training **	Hands-on Training **	Management Deep Dive
	Bionic Design Training		
Expert	Bionic Design Expert Training	Data Preparation Workshop	Strategy Workshop
	Design Workshop	Powder Workshop	

* Based on metal or polymer AM technology

Customer-specific modification of training content possible

Implementation





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Your contact for all Academy-related issues

Get in touch with our experts to help you identify the potentials, the feasibility on a part-specific level, and the successful implementation of 3D printing in your company. additive.academy@iapt.fraunhofer.de

additive.academy@iapt.fraunhofer.de +49 (0)40 484 010 771 / 736

BASIC TRAINING





DESIGN AND PRODUCTION

On our basic training course you are given a concise introduction to 3D printing. We teach in one day what others spread across several days, helping you to reach your goal more quickly. You only learn what is scientifically established and of practical relevance – from leading experts who will answer your questions in detail. All from one source, all in one day: the start of your journey to becoming an "additive leader."

Your benefits:

- Fundamentals of AM
- Comparison of the most relevant AM technologies for metals and polymers
- Deep insight into AM technology
- LBM materials and its characteristics
- Teaching and practicing the design guidelines for LBM
- Understanding of cost benefits and drivers
- Summary of the benefits and restrictions of AM

All requirements

Type of training: Classroom training

Training level: Starter

Requirements: Basic engineering knowledge Seminar size: Max. 20 participants

Language: English or German

Duration: 1 day

Training date: To be defined on demand Venue: At Fraunhofer IAPT or on

your premises

The content

Unit 1: Fundamentals of Additive Manufacturing (AM)

- Explanation of the fundamental principles of AM processes
- Overview of market-relevant AM technologies for polymers and metals
- Comparison of different AM technologies by production speed, precision, part properties, etc.
- Illustration of typical industrial applications for each AM technology

Unit 2: Laser Beam Melting (LBM)

- Presentation of the basic principle of the LBM process
- Explanation of LBM machine components like scanning system, powder recycling, etc.
- Transfer of relevant vocabulary regarding AM equipment, materials, and applications

Unit 3: Material Properties for LBM

- Obtainment of knowledge about crucial powder characteristics, how to measure them, and how they influence the LBM process
- Knowledge of main influencing factors regarding powder and how to avoid the critical ones
- Giving an overview of typical LBM materials
- Identification of the achievable physical and mechanical properties of LBM parts

Unit 4: Design for LBM

- Acquiring of skills necessary to design successfully for LBM
- Explanation of the design process for LBM
- Illustration of design guidelines and restrictions for LBM

Practical Unit 5: Design for LBM

- Hands-on practice of design thinking for AM
- Optimization of a part's performance via an AM-suitable redesign
- Receiving feedback on your redesign from our trainers

Unit 6: Cost Estimation and Design to Cost

- Definition of the relevant cost drivers for costs per part like machine-hour rate, powder prices, manual preparations, etc.
- Illustration of a typical cost estimation for LBM parts
- Price development for LBM machines and powders
- Highlight cost-reduction potentials for LBM parts

DESIGN FOR ADDITIVE MANUFACTURING TRAINING





DESIGN

Like all our training courses, our design training is provided by leading specialists in 3D printing. The hands-on sessions will teach you technology-specific software skills and familiarize you with the Siemens AM environment. The training course imparts knowledge that will help you to minimize the cost of printing errors and significantly reduce the cost of parts.

Your benefits:

- Learn how to successfully design for LBM
- Hands-on experience of the complete AM design workflow
- Introduction to AM software solutions
- Fundamentals of the AM process to understand AM design thinking
- Practical design exercises using AM Software solutions

All requirements

Type of training: Classroom training

Training level:

Starter

Requirements: CAD design experience /

basic engineering and design

knowledge

Seminar size: Equipment:

Max. 8 participants Software in use English or German

Language: Duration:

3 days

Training date:

To be defined on demand

Venue:

At Fraunhofer IAPT or on

your premises

Partner:

Nexeo

The content

Unit 1: Fundamentals of Additive Manufacturing (AM)

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- Illustration of typical industrial applications for each AM technology

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- Highlight cost-reduction potentials for LBM parts

Practical Unit 4: Introduction to Siemens NX

• Introduction to user interface, basic CAD functions, and 3D modelling

Practical Unit 5: Functions for AM in Siemens NX

• Introduction to assembly module, analysis of degree of freedom, assembly constraints, AM-specific measurements, importing of external data, and convergent modeling

Practical Unit 6: Introduction to Additive Manufacturing Module of Siemens NX

• Creation of a build job, orientation of parts, multiplication of parts, generation of support structures, slice viewer

Unit 7: Material Properties for LBM

- Obtainment of knowledge about crucial powder characteristics, how to measure them, and how they influence the LBM process
- Acknowledgement of the main influencing factors on powder and how to avoid the critical ones
- Giving an overview of typical LBM materials
- Identification of the achievable physical and mechanical properties of LBM parts

Unit 8: Design for LBM

- Acquiring of skills necessary to design successfully for LBM
- Explanation of the design process for LBM
- Illustration of design guidelines and restrictions for LBM

Practical Unit 9: Design for LBM

- Hands-on practice of design thinking for AM
- Optimization of a part's performance via an AM-suitable redesign
- Receiving feedback on your redesign from our trainers

Practical Unit 10: Orientation of a Pipe in Siemens NX

- Hands-on practice of design thinking for AM
- Optimization of a part's performance via an AM-suitable redesign

Practical Unit 11: Redesign of a Bracket in Siemens NX

- · Hands-on practice of design thinking for AM
- Optimization of a part's performance via an AM-suitable redesign

Practical Unit 12: Redesign of a Whistle with Internal Structures in Siemens NX

- · Hands-on practice of design thinking for AM
- Optimization of a part's performance via an AM-suitable redesign

Practical Unit 13: Redesign of a Hydraulic Block in Siemens NX

- Hands-on practice of design thinking for AM
- Optimization of a part's performance via an AM-suitable redesign

HANDS-ON TRAINING





DESIGN AND PRODUCTION

Our hands-on training minimizes the cost of printing errors, because you can learn and practice directly on the machine. This ultimately helps you to optimize efficiency by ensuring that the part is correctly positioned on the machine. Our training courses take an interdisciplinary approach that combines the expertise of 3D printing specialists with software knowledge to make sure that you are optimally prepared.

Your benefits:

- Hands-on experience of the complete AM process chain
- Influence of process parameters on part quality and process stability
- Digital data preparation including part orientation, support structures, and nesting
- LBM machine preparation and operation
- Post-processing and quality assurance methods

All requirements

Type of training: Classroom & hands-on training Requirements: Basic technical & engineering

knowledge, participation in Basic

Training recommended

Training level: Advanced

Seminar size: Max. 8 participants Equipment: Software & machines in use

Language: English or German

Duration: 2 days

To be defined on demand Training date: At Fraunhofer IAPT Venue:

The content

Unit 1: AM Process Parameters

- Correlations between the machine components and the parameters and how they influence the quality of the parts
- Acknowledgement of techniques to increase the productivity of the AM process

Unit 2: Digital Process Chain and Data Preparation

- Overview of different AM software solutions
- Part orientation, positioning of parts, generation of support structures

Practical Unit 3: Digital Process Chain and Data Preparation

Practicing data preparation for parts

Unit 4: Basics of Machine Operation

- Overview of current machine concepts and required
- Understanding of necessary steps for machine and build job preparation

Practical Unit 5: Machine Operation and Fraunhofer IAPT **Machinery Tour**

- Hands-on live elaboration of consecutive AM machine preparation steps and settings
- Hands-on live demonstration of the AM machine start procedure
- Guided tour through Fraunhofer IAPT

Unit 6: Quality Assurance

- Overview on quality assurance methods along the AM process chain
- Quality validation of critical powder and part characteristics

Unit 7: Post-processing

• Summary and comparison of all mechanical, chemical, and physical post-processing methods

Unit 8: Applications of Additive Manufacturing (AM) in Industry

- Best-practice cases of how to use AM capacities for increasing the performance of final products
- Pointing out the potentials of AM regarding supply and value chain optimization versus the conventional approach
- Explanation of how to identify new business opportunities due to AM

Practical Unit 9: Machine Operation

• Gain live experience of unpacking the build job, including powder removal and platform extraction

Practical Unit 10: Post-processing

• Live handling of the post-processing steps including removal of the support structures and sandblasting

Practical Unit 11: Quality Assurance

- Demonstration of optical 3D scanning on the job
- Analysis and interpretation of AM part's microsections

BIONIC DESIGN TRAINING





DESIGN

The training addresses the end-to-end process chain to design bionic lightweight parts. On the course, participants learn how to set up a topology optimization and how to include bionic features in the design. Finally a producible bionic part is designed, prepared to build, and manufactured.

Your benefits:

- Learn how to successfully design for Laser Beam Melting (LBM) including bionic design features
- Fundamentals of the AM process to understand AM design thinking
- Introduction to AM software solutions and topology optimization
- Practical design exercises using AM software solutions
- Hands-on experience of the complete AM optimization workflow
- Digital data preparation including part orientation, support structures, and nesting
- LBM machine preparation and operation
- Post-processing and quality assurance methods

All requirements

Seminar size:

Venue:

Type of training: Classroom & hands-on training
Training level: Advanced

Requirements: Basic engineering knowledge,

CAD experience recommended Max. 8 participants

At Fraunhofer IAPT

Equipment: Software and machines in use Language: English or German

Duration: 4 days

Training date: To be defined on demand

Partner: Altair

The content

Unit 1 and 2: Theory of Optimization and Introduction to
Altair's Inspire Software

- Introduction to the basics of optimization
- Introduction to the software interface

Practical Units 3–5: Set Up Topology Optimization and Structural Interpretation

- Setting up the part considering the given design constraints
- Perform topology optimization
- Structural interpretation of workshop part

Unit 6: Material Properties for Laser Beam Melting (LBM)

- Explanation of the static and fatigue properties of LBM
- Description of the achievable surface roughness and accuracy of LBM

Unit 7: Design for LBM

- All relevant design guidelines for LBM
- Learn from best-practice examples

Unit 8-10: Bionic Design of Individually Optimized Parts (Theory & Practical)

- Overview on bionic design principles and bionic methodology
- Introduction to the design capabilities of Inspire
- Change of workshop parts considering design rules

Unit 11 and 12: Digital Process Chain and Data Preparation in Magics (Theory & Practical)

- Overview on the digital process chain and relevant software solution
- Introduction to data preparation software

Practical Unit 13: Finalization of Bionic Design for Printing

- Design changes to improve the part cost performance
- Setting of supports and print preparation of the workshop part

Unit 14 and 15: LBM Machine Operation and Tour through
Fraunhofer IAPT Machinery (Theory and Practical)

- Introduction to required equipment and machine workflow for LBM
- Live demonstration of machine set-up and starting of workshop build job
- Guided tour through Fraunhofer IAPT machinery

Unit 16: Cost Estimation and Design to Cost for LBM

- Definition of most relevant cost driver and a cost-estimation framework
- Highlight cost-reduction potentials and cost-development trends for LBM parts

Unit 17: Application of AM in Different Industries

- Best-practice cases of how to use AM capacities for increasing performance of final products
- Explanation of how to identify new business opportunities due to AM

Unit 18–22: Post-processing and Quality Assurance (Theory and Practical)

- Introduction of quality assurance and post-processing methods
- Quality validation of critical powder and part characteristics
- Live handling of workshop part including machine handling, support removal, and peening
- Live demonstration of optical 3D scanning and AM part's microsections

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BIONIC DESIGN EXPERT TRAINING





DESIGN

On this course, leading experts teach you how to design manufacturable bionic structures. You learn how to use state-of-the-art software tools to get high-performance parts in terms of weight, cost, and quality. By applying the best practices from Fraunhofer IAPT you will soon be able to create superior part designs.

All requirements

Type of training: Classroom training

Training level: Expert

Requirements: Basic understanding of AM

process, experience in working
with 3D Experience Imagine & and the AM

Shape or 3D Experience Functional Generative Design (GDE)

Seminar size: Max. 8 participants Language: English or German

Duration: 2 days

Training date: To be defined on demand Venue: At Fraunhofer IAPT or on

your premises

The content

Unit 1: Design Guidelines

- Summary of design guidelines
- Explanation of the relation between design guidelines and the AM process
- Identification of optimization potential of example parts according to design guidelines
- Pros and cons of automatic overhang generation
- Deciding to use or not to use automatic overhang generation

Unit 2: Material Properties

- Overview of LBM materials
- Comparison of material properties
- Purpose of use of common LBM materials
- Selection of suitable materials for example parts

Unit 3: Orientation & Support

- Explanation of the importance of suitable orientation and support for LBM parts
- Impact of orientation on manufacturability, manufacturing time, costs, and different part properties
- Overview of supports and their use

• Explanation of the guideline for support design and the reasons to use supports in relation to the LBM process

- Impact of supports on post-processing, material consumption, and costs
- Selection of orientation and support for example parts

Unit 4: Design for Additive Manufacturing

- Selection of a provided topology optimization result for the redesign
- Selection of part orientation
- Redesign of the part using 3D Experience Functional Generative Design (GDE)
- Addition of standard supports using Materialise Magics as preparation for the process simulation

Unit 5: Process Simulation

- Overview of process simulation software
- Explanation of process simulation challenges
- Show how to run a process simulation
- Interpretation of process simulation results
- Simulation of attendees' redesign by Fraunhofer IAPT employees to provide the results for interpretation

Unit 6: Bionic Feature Principle & Workflow

- Basics of bionics
- Explanation of how to find bionic solutions
- Examples of successful bionic designs
- Explanation of bionic features available in the catalogue
- Application of bionic features within the design process for AM

Unit 7: Interpretation of Simulation Results

- Interpretation of provided process simulation results
- Derivation of optimization potential

Unit 8: Design Optimization

• Finishing the redesign of the part in an iterative design change process taking into account the design guidelines and the topology optimization results

Unit 9: Design for Manufacturing

- Overview of post-processing methods for LBM parts
- Design guidelines for post-processing challenges
- Part adjustment according to design guidelines for post-processing

Unit 10: Bionic Support Design

 Addition of suitable supports with Materialise Magics to the part taking into account the guideline for support design



DESIGN WORKSHOP*



DESIGN

Additive Manufacturing makes it possible to create new, disruptive part designs with new features and improved functionality. A business case can often only be presented once the new freedoms afforded by the technology are consistently used. A redesign concept is needed in order to be able to work out a resilient business case. The aim of the workshop is to get together with our experts to create a redesign concept that fully exploits the new opportunities presented by 3D printing. To think outside of the box in a creative atmosphere under structured guidance.

Your benefits:

- Bring your own AM project
- Qualify your designers via an on-the-job workshop
- Getting direct support from our AM design experts for the benefit of your actual projects
- Assessment of technological feasibility of your part by our design experts

All requirements

Type of training: Classroom training

Training level: Expert

Requirements: Understanding of design for the

AM and AM process chain

Seminar size: Max. 8 participants Language: English or German

Duration: 1 day

Training date: To be defined on demand Venue: At Fraunhofer IAPT or on

your premises

* Customer-specific modification of Training possible. Based on metal or polymer AM-Technology.

The content

Individually tailored to the costumer

- Direct benefits for current projects and problems
- Learning on the job for your employees
- Benefit from the experience of leading design specialists at Fraunhofer IAPT
- All from one provider, including the identification of suitable parts, qualification projects, redesigns at Fraunhofer IAPT, and the manufacture of parts

or

- Creating redesign concepts
- Working out the cost-cutting potential resulting from a redesign
- Assessing the technical feasibility
- Determining qualification and post-processing measures



DATA PREPARATION WORKSHOP



PRODUCTION

Well-practiced data preparation cuts costs caused by printing errors and follow-up work. The combination of supporting structures, the packaging of parts, and the right positioning of the parts can all be critical to the economic viability of a business case. Prepare your parts under the supervision of our specialists and benefit from their expertise to ensure that your printing is a success.

Your benefits:

• Bring your own parts from current projects and enjoy direct benefits or solve problems immediately

- Cut costs thanks to fewer printing errors, lower process costs, and less post-processing
- Benefit from our expertise gained from various implementation and consulting projects with major customers from the industry
- Learning on the job for your employees

The content

Unit 1: Introducti	on to Data	Preparation
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Unit 2: Screening and Analysis of Parts

Unit 3: Preparation of Individual Parts

All requirements

Type of training: Classroom training

Training level: Expert

Requirements: Basic & Hands-on Training
Seminar size: Max. 8 participants

Equipment: Software in use, machines in use

if defined

Language: English or German

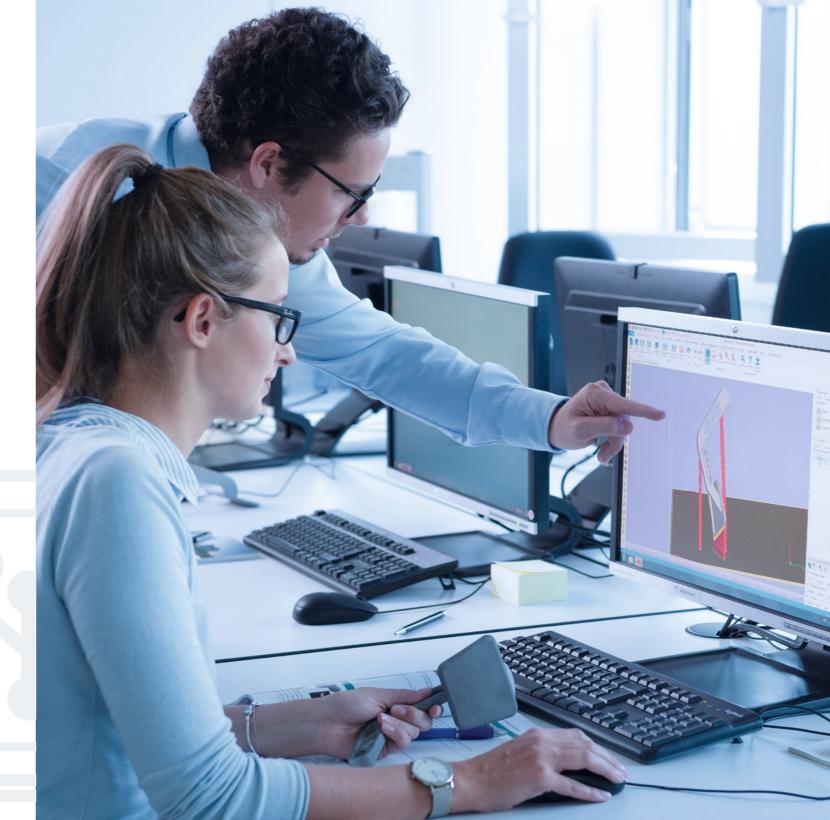
Duration: 1 day

Training date: To be defined on demand

Venue: At Fraunhofer IAPT or on your

are adequate

premises if IT infrastructures



POWDER WORKSHOP



PRODUCTION

In this compact workshop, leading-edge practitioners and scientists teach you the complex topic of powder quality. You learn how to treat and test powder in order assure high-quality Additive Manufacturing parts. The goal of the course is to accelerate the implementation of a powder quality routine and to improve your powder qualification process.

All requirements

Type of training: Classroom training

Training level: Expert

Requirements: Basic understanding of mechanics

and physics, understanding of

the LBM process

Seminar size: Max. 8 participants Language: English or German

Duration: 2 days

Training date: To be defined on demand Venue: At Fraunhofer IAPT or on

your premises

Unit 2: Powder Characteristics

- Presentation of the most relevant powder characteristics
- Overview of powder measurement methods and the required standards

Unit 3: Powder Specification

- Giving an overview of powder specification
- Demonstration of powder certificates and the main quality facts

Unit 4: Powder Quality and Handling

- Explanation of the powder process chain
- Illustration of powder mixing methods for new and reused powder
- Acquiring of general powder handling skills
- Introduction in safety aspects and powder FMEA

The content

Unit 1: Powder Production

- Explanation of the fundamental principle of established powder production methods
- Overview of advantages and disadvantages of the presented production methods
- Illustration of typical powder morphologies for each method



LEARNING EXPEDITION





MANAGEMENT

The Additive Manufacturing Learning Expedition gives decision makers an interactive entry point into the world of Additive Manufacturing. The participants on this training course will see the entire process chain up-close – from the design stage to the actual manufacturing processes and final quality assurance – all taught through a balanced mix of basic theoretical knowledge and hands-on use of software and hardware. The aim of the training course is to highlight the potential of Additive Manufacturing as well as the technological limitations. Course participants will be given the skills to identify strategic development opportunities and new business areas within their company and anticipate the possible impact on their business model.

Your benefits:

- A supervised start in a new business area
- A compact introduction to industrial AM implementation
- Economic feasibility analysis of AM parts
- Identification of business cases along the entire value chain

The content

Unit 1: Additive Manufacturing (AM) Market

- Market overview and outlook
- Identify the technological readiness level of your industry

All requirements

Type of training: Interactive classroom workshop

Training level: Starte

Requirements: Basic engineering knowledge

Seminar size: Max. 8 participants

Equipment in use: Design software and AM machine

Language: English or German

Duration: 2 days

Training date: To be defined on demand

Venue: At Fraunhofer IAPT

Venue: At Fraunhofe
Partner: Siemens

Practical Unit 2: AM Potential

 Potentials of AM technology concerning product improvements and process optimization

Unit 3: AM Process

- Benchmarking of different AM technologies
- Choose the most suitable AM technology for your individual application

Practical Unit 4: AM Design

 Hands-on practice of design thinking for Laser Beam Melting (LBM)

Practical Unit 5: AM Data Preparation

- Part orientation, positioning of parts, generation of support structures
- Print your part right the first time in LBM

Practical Unit 6: AM Machine Operation

- Overview of current LBM machine concepts
- Hands-on demonstration of the LBM machine start procedure

Unit 7: AM Post-processing and Quality Assurance

- Overview of relevant QA technologies
- Overview of relevant post-processing methods

Practical Unit 8: AM Business

- Illustration of a typical cost estimation for LBM parts
- Design to value to decrease life-cycle costs of your product

Practical Unit 9: AM Implementation Strategies

Change management to successfully implement AM in your business

Unit 10: Digitalization & Industrialization

MANAGEMENT DEEP DIVE WORKSHOP



MANAGEMENT

This training course is aimed at decision makers in the area of Additive Manufacturing who wish to gain a compact yet deeper insight into the technology. The aim of the Management Deep Dive Workshop is to work out business cases for Additive Manufacturing and raise awareness of the challenges relating to change management. Our experts use their in-depth knowledge to highlight and assess areas of activity, possible applications, and future developments.

Your benefits:

- Increase efficiency of your implementation process by obtaining in-depth technology and market knowledge
- Fast start into a new business field
- Become an innovator and gain a relevant competitive advantage

All requirements

Type of training: Interactive classroom workshop

Training level: Advanced

Requirements: Basic engineering knowledge Seminar size: Max. 8 participants

Equipment in use: Design software and AM machine Language: English or German

Duration: 1 day

Training date: To be defined on demand Venue: At Fraunhofer IAPT or on

your premises

The content

Unit 1: Introduction & Benchmark of Metal Additive Manufacturing Technologies

Unit 2: Laser Beam Melting Technology & Market Overview

Unit 3: Digital Process Chain & Design Process

Practical Unit 4: Live Demonstration of LBM Process Chain

Unit 5: Laser Beam Melting Supply Chain

Practical Unit 6: Laser Beam Melting Supply Chain

Unit 7: Additive Manufacturing Applications

Unit 8: Cost Driver & Business Case Development



STRATEGY WORKSHOP



MANAGEMENT

Tailored to your needs, you will be assisted by our experts to work out strategic matters relating to Additive Manufacturing and develop a profound plan to implement AM in your business.

Your benefits:

- Benefit from the supervised start in a new business area
- Take advantage of our expertise gained from various implementation and consulting projects with globally leading companies
- Transfer the lessons learned from Additive Manufacturing success stories to your own plans
- Become an innovator and gain a relevant competitive edge

The content

Unit 1: Work out Implementation Aims and an Implementation Strategy

Unit 2: Market Entry Strategies

Unit 4: Make-or-Buy Analysis

Unit 3: SWOT Analysis: Additive Manufacturing at your Company

All requirements

Type of training: Interactive workshop

Training level: Expert

Requirements: Knowledge of Additive Manufacturing technology, process

chain and market / Deep Dive

Management Training

recommended

Max. 10 participants

Seminar size: Max. 10 participants Language: English or German

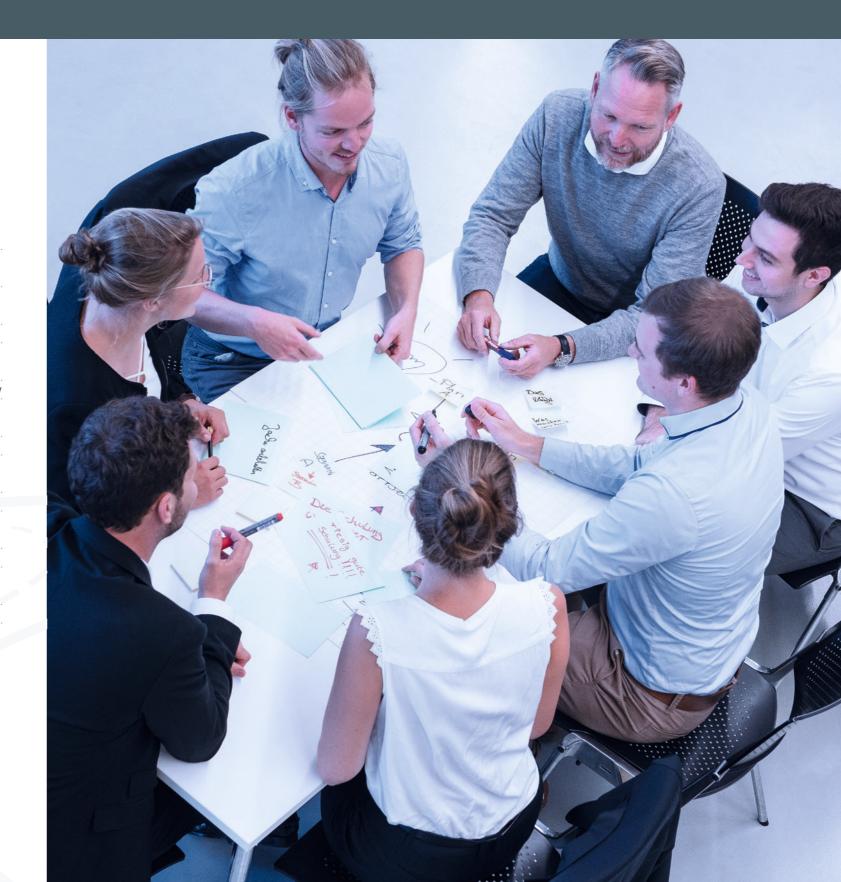
Duration: Depending on your requirements
Training date: To be defined on demand
Venue: At Fraunhofer IAPT or on

your premises

Unit 5: Create an Implementation Roadmap

Unit 6: Draw Up a Change Strategy

Unit 7: Your own Content



PART FEASIBILITY SCREENING/ DESIGN CHALLENGE





IMPLEMENTATION

The advantages of Additive Manufacturing are clear: functional, lightweight designs and the integration of parts ultimately lead to improved products. The task now is to identify and exploit the potential of your products.

Part Feasibility Screening

We enable your employees to identify the diamonds in your portfolio. With the help of our training courses or compact part screening workshops, we give you all the necessary tools for finding suitable parts for Additive Manufacturing. We then get together to examine the identified parts. With the assistance of our experts, we evaluate the technical and economic feasibility of the parts in detail.

Design Challenge

Take a great leap forward in implementing AM in your company successfully by starting an Additive Manufacturing competition.

The Design Challenge involves employees searching for parts for a certain period of time in the course of their daily work. Our employees oversee this process and subsequently analyze the results. Finally, awards are presented for the best parts with the biggest AM potential.

A Design Challenge motivates employees to think about AM. It is also an opportunity to identify lucrative applications for Additive Manufacturing within the shortest space of time.

Learning & Understanding

Acceptance & Motivation

Economic Benefit

Do you have any questions concerning the content of the training courses? Please do not hesitate to contact us:

+49 (0)40 484 010 771 / 736 additive.academy@iapt.fraunhofer.de



