COURSE CATALOG 2021

stratasys ACADEMY™

COURSE CATALOG

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Introduction and Content

At the Stratasys AcademyTM we're passionate about Additive Manufacturing – and love nothing more than conveying that passion.

Whether you are already an existing user of Stratasys 3D Printing Systems or are simply interested in learning about the possibilities the 3D world has to offer, the Stratasys AcademyTM provides everything you need to upskill yourself and increase your knowledge - from introductions for newcomers up to courses tailored to the needs of expert users and specific applications.

Take a look at our training program which will help you increase efficiency when using your 3D printing system in daily business.

Please contact us to help you find the right solution for you and receive your personal offer today.

Your Stratasys Academy Team EMEA

Content

Stratasys Academy™ **Learning Path**

		FDM OPERATOR	POLYJET OPERATOR	DESIGN ENGINEER
FDM 'Basic Operations' Training	The course covers all aspects of printing models, operations and user-maintenance procedures necessary for achieving optimum results with your 3D printer. The course combines hands-on sessions with teacher lead instruction.	•••		••
FDM 'Advanced Operations' Training	This course equips participants with the knowledge needed to increase utilization of their high-end FDM 3D-printing systems, to improve their 3D printing capabilities, and broaden their pre-processing, post-processing and material skills through theoretical and practical experience.	•••		•••
PolyJet 'Basic Operations' Training	This course is conducted to ensure the operator has the knowledge needed to operate, calibrate and perform the required maintenance tasks for the system in a safe manner. The course provides the core knowledge needed to perform system operations and user-maintenance procedures necessary for achieving optimum results from your 3D printer.		•••	••
PolyJet 'Advanced Operations' Training	This course is designed specifically for customers of PolyJet High-End 3D printing systems. The course is designed to equip customers with the knowledge needed to increase printer utilization and broaden material and application skills through theoretical and practical experience.		•••	••
PolyJet 'Color for Stratasys J-Series'	This course is designed specifically for customers of PJ J-Series High-End 3D printing systems. The course is designed to equip customers with the knowledge in Colour settings and printing considerations on the PJ J-Series through theoretical and practical experience.		••	•••
PolyJet 'Color Texturing Expert'	This training course is designed to give the participants the understanding of the workflow from solid single-color design to full-color 3D prints using Stratasys PJ J-Series printer 3D printer.		•	•••
FDM & PolyJet 'Post Processing Workshop'	It's designed to equip the participants with hands on experience and theoretical knowledge of Post-Processing FDM and PolyJet printed models.	•••	•••	••
'Design for Additive Manufacturing	This course covers everything from printing models, to workflows and maintenance procedures done by the user himself, in order to help the participant get the most out of their 3D printer. The course combines hands-on exercices with teacher-led instruction.	••	•	•••

• optional •• recommended ••• required

Course Datasheets

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ACADEMY™

FDM **'Basic Operations'** Training

TRAINING SPECIFICATIONS

Duration
The training is made during installation and duration is depending on the system..

Participants
The group of attendees is not limited.

Location
At customer site.

Prerequisites
None

Training Language
English, German

- Requests for local languages needs to be validated on individual basis

Target audience
- Operator
- Technician
- Application Engineer

TRAINING DESCRIPTION

The course covers all aspects of printing models, operations and user-maintenance procedures necessary for achieving optimum results from your 3D printer. The course combines hands-on sessions with teacher lead instruction.

Objective of this Training

By the end of this course, participants will be able to:

- Familiarize with the contents of the system User Guide
- Understand safety precautions and procedures
- Understand what the different materials and consumables are for
- Proper operate the FDM 3D printing system
  - Material replacement
  - Tip / Print Head replacement
- Calibrate the system and perform basic maintenance procedures
- Use the pre-processing software (GrabCAD Print / Insight) as required
- Know where to go for support

FDM **'Advanced Operations'** Training

TRAINING SPECIFICATIONS

Duration
2 days face-to-face training
or
2 days – 6 sessions at 1,5 hours each remote-training

Participants
The group of attendees is limited to a maximum of six participants. The minimum number of attendees for this training is three.

Location
At customer site or at the Stratasys training location in Rheinmünster (Germany).

Prerequisites
- FDM Operations Training Level 1 (Training during installation of the machine)
- Approximately 3 months of experience working with a FDM 3D-printing system

Training Language
English, German
- Requests for local languages needs to be validated on individual basis

Target audience
- Operator
- Part Designer
- Users of Insight Software and GrabCAD Print

Training available
Digital form

Article N°
TR-FDM-AOTL2-RH

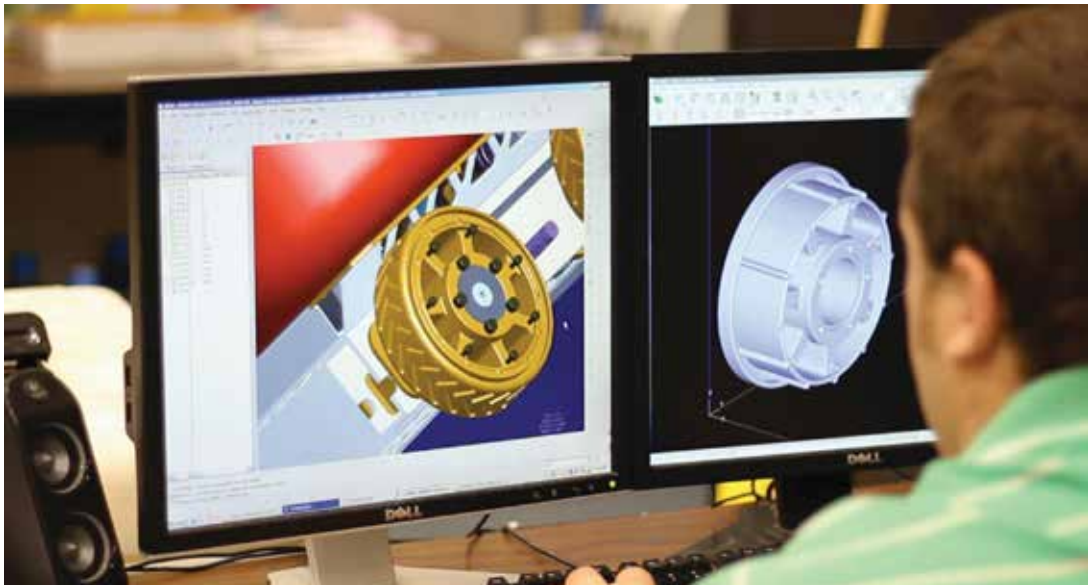
TRAINING DESCRIPTION

This course equips participants with the knowledge needed to increase utilization of their high-end FDM 3D-printing systems, to improve their 3D printing capabilities, and broaden their pre-processing, post-processing and material skills through theoretical and practical experience.

Objective of this Training

By the end of this course, participants will be able to:

- Print 3D parts with FDM technology in best quality and strength
- Pre-Process FDM parts, taking into consideration the most suitable material
- Change the infill of a part
- Use Custom Groups for modifying separate areas of a part
- Choose the best slice height and / or tip size
- Edit support structures
- Edit curves for fixing STL failures
- Embed hardware during printing
- Manage print jobs with GrabCAD Print and / or control center
- Generate an Analysis of material consumptions and machine utilization
- Describe FDM post-processing best practices.
- Perform basic printer calibration and maintenance procedures to ensure best part quality



PolyJet **'Basic Operations'** Training

TRAINING SPECIFICATIONS

Duration
The training is made during installation and duration is depending on the system.

Participants
The group of attendees is not limited.

Location
At customer site.

Prerequisites
None

Training Language
English, German

- Requests for local languages needs to be validated on individual basis

Target audience

- Operator
- Technician
- Application Engineer

TRAINING DESCRIPTION

This course is conducted to ensure the operator has the knowledge needed to operate, calibrate and perform the required maintenance tasks for the system in a safe manner.

The course provides the core knowledge needed to perform system operations and user-maintenance procedures necessary for achieving optimum results from your 3D printer. The course combines presentation of theoretical information with hands-on sessions.

Objective of this Training

By the end of this course, participants will be able to:

- Familiarize with the contents of the system User Guide
- Understand safety precautions and procedures
- Understand what the different materials are for
- Properly operate the PolyJet 3D printing system
- Perform basic maintenance procedures and locate them in the User Guide
- Use the pre-processing software (Objet Studio / GrabCAD Print) as required
- Know tips and tricks for support removal
- Know where to go for support

PolyJet **'Advanced Operations'** Training

TRAINING SPECIFICATIONS

Duration
3 days

Participants
The group of attendees is limited to a maximum of six participants. The minimum number of attendees for this training is three.

Location
At the Stratasys training location in Rheinmünster (Germany).

Prerequisites
- Eden/Connex/ObjetXXX/J5/7/ 8-Series/O1000 Series 3D printer installed at your facilities
- Level 1 training (part of installation) on Eden/Connex/ObjetXXX/J5/7/ 8-Series or O1000 platforms
- Approximately 6 months of experience working with a PolyJet 3D-printing system

Training Language
English, German
- Requests for local languages needs to be validated on individual basis

Target audience
- Operator
- Engineer
- CAD Part Designer

Article Nº
TR-PJ-AOTL2-RH

TRAINING DESCRIPTION

This course is designed specifically for customers of PolyJet High-End 3D printing systems. The course is designed to equip customers with the knowledge needed to increase printer utilization and broaden material and application skills through theoretical and practical experience.

Objective of this Training

By the end of this course, participants will be able to:

- Understand 3D printing with PolyJet technology
- Understand the different application possibilities with your 3D printer
- Experience with basic PolyJet parts finishing
- Consider pre-printing for the different PolyJet material
- Learn post-processing best practices
- Review printer calibration and maintenance procedure for best parts quality
- Learn STL fixing
- Choose the Correct DM/Color
- Access & properly use technical information
- Experience and learn PolyJet technology cleaning techniques

PolyJet **Color for Stratasys J-Series**

TRAINING SPECIFICATIONS

Duration
2 days face-to-face training
or
3 sessions at 1,5 hours each
remote-training

Participants
The group of attendees is limited to a maximum of six participants. The minimum number of attendees for this training is three.

Location
At the Stratasys training location in Rheinmünster (Germany).

Prerequisites
- L1 training on J-Series
- J-Series 3D printer installed at your facilities
- Recommended: Approximately 3 months of experience working with a J-Series 3D-printing system.

Training Language
English, German
- Requests for local languages needs to be validated on individual basis

Target audience
- J-Series Operator
- CAD Part Designer

Training available
Digital form

Article N°
TR-PJ-COLL3-RH

TRAINING DESCRIPTION

This course is designed specifically for customers of J-Series High-End 3D printing systems. The course is designed to equip customers with the knowledge in colour settings and printing considerations on the J5/7/8-Series through theoretical and practical experience.

Objective of this Training

By the end of this course, participants will be able to:

- Understand 3D colouring with PolyJet technology
- Understand the different application possibilities with your 3D printer
- Understand how colour files need to be prepared to make them printable
- Pre-Printing consideration for the different PolyJet material
- Understand the difference in VRML files
- Understand the printer calibration and printing head replacement
- Choosing the Correct DM / Color
- How to access & properly use technical information.

PolyJet
Color Texturing Expert

TRAINING SPECIFICATIONS

Duration
2 days face-to-face training
or
2 days remote-training

Participants
The group of attendees is limited to a maximum of six participants. The minimum number of attendees for this training is three.

Location
At customer site or at the Stratasys training location in Rheinmünster (Germany).

Prerequisites
- L1 training on J-Series platform
- J-Series 3D printer installed at your facilities
- Recommended: Approximately 3 months of experience working with a J5/7/8-Series 3D-printing system

Training Language
English

Target audience
- J-Series Operator
- J-Series Engineer
- J-Series Designer

Training available
Digital form

Article N°
TR-PJ-TEXL3-RH

TRAINING DESCRIPTION

This training course is designed to give the participants the understanding of the workflow from solid single-color design to fullcolor 3D prints textures using Stratasys J-Series 3D printer.

Objective of this Training

By the end of this course, participants will be able to:

- Have an understanding of the entire workflow from solid geometric design to complete, colorful and vibrant results, depending on the design requirements of the job.
- Understand how 2D image textures are wrapped on top of 3D model surfaces, how to generate UV maps with simple and more advanced methods when dealing with custom triangular geometries.
- Have learned and practiced how to use different software to accomplish different tasks in the process specifically for color 3D printing and texturing: Keyshot, Blender, Photoshop, GrabCAD Print.
- In general, a key objective of this course it to give participants full understanding and experience of the process of texturing (uv mapping) with Stratasys J-Series.

Post Processing Workshop
PolyJet and FDM

TRAINING SPECIFICATIONS

Duration
2 days

Participants
The group of attendees is limited to a maximum of six participants. The minimum number of attendees for this training is three.

Location
At the Stratasys training ocation in Rheinmünster (Germany).

Prerequisites
None

Training Language
English

Target audience
- Operator
- Application Engineer
- Finisher

Article N°
TR-G-PPW-RH

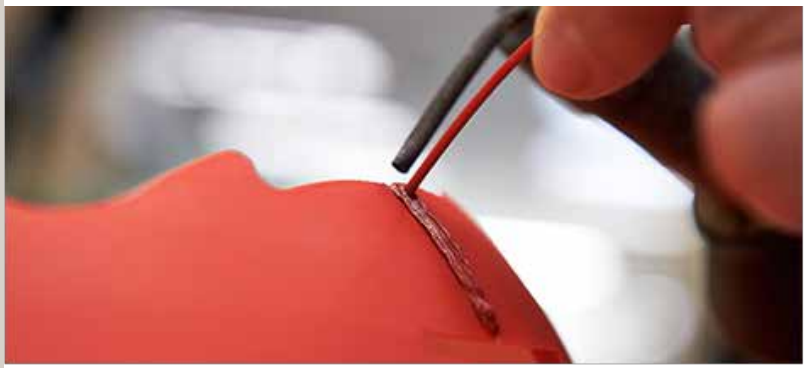
TRAINING DESCRIPTION

It's designed to equip the participants with hands on experience and theoretical knowledge of Post-Processing FDM and PolyJet printed models.

Objective of this Training

By the end of this course, participants will be able to:

- Remove Support of FDM models
- Remove Support of PolyJet models
- Perform following finishing processes
  - Photobleaching of PJ parts
  - Surface preparation for painting and lacquering
  - Painting / Lacquering
  - Mass finishing
  - Media blasting
  - Smoothing
  - Flocking
  - Metalizing
  - Thermal treatment
  - Dying
  - Sealing
  - Foiling
  - Bonding
  - Inserting Threads



Design for FDM

TRAINING SPECIFICATIONS

Duration
2 days face-to-face training
or
3 sessions at 1,5 hours each
remote-training

Participants
The group of attendees is limited to a maximum of six participants. The minimum number of attendees for this training is three

Location
At customer site or at the Stratasys training location in Rheinmünster (Germany)

Prerequisites
Design experience (CAD
Technical background

Training Language
English

Target audience
- CAD Designer
- Application Engineer

Training available
Digital form

Article N°
TR-G-DAM-RH

TRAINING DESCRIPTION

This course is designed to equip engineers and designers with the knowledge needed to increase the usage and outcome of their Stratasys 3D printers. Like all manufacturing technologies there are also design guidelines for our FDM technology which need to be considered to get the most value out of each part.

This training is designed to give customers a detailed overview about the several design guidelines. By end of this training the attendees will have a basic understanding about the existing key AM technologies and will be able to design their parts in a way to get the best results with regards to part quality, strength, material consumption and time for production.

Objective of this Training

By the end of this course, participants will be able to:

- Understand which Additive Manufacturing Technologies are existing
- Understand the process of FDM technology
- Choose the best suitable FDM material for specific application
- Design parts bearing in mind the design rules for FDM

Service – Part Optimization

FDM® (fused deposition modeling) 3D Printers offer unparalleled versatility to turn your CAD files into durable parts. These parts are tough enough to be used as advanced conceptual models, functional prototypes, manufacturing tools and production parts. Engineers can produce a wide variety of products just by loading different files and materials. No traditional machining process can do that.

Even though design freedom is one if the key advantages of 3D Printing, there are certain rules and tips and tricks to fully capture the benefits of additive manufacturing. A real challenge in good 3D Printing is the creation of the “print file”, which needs to be especially adjusted per technology. We have experts in-house to support you in the preprocessing of your CAD files and in optimization of STL files for printing using FDM technology.

WHAT WE OFFER:

- Free evaluation if your part can be optimized and individual quote for your part
- STL based design optimization, in order to:
- Improve part quality
- Optimize material and support usage
- Preprocessing of your STL files using mainly Stratasys Insight software

WHAT WE DON‘T OFFER

- Design optimization with CAD Software
- No full re-design of the part

EXAMPLE

PART OPTIMIZATION

66% quicker
21% less Material

Build time	5 hr 17 min
Model volume	32,3 cm³
Support volume	14,3 cm³

Build time	1 hr 47 min
Model volume	33,6 cm³
Support volume	3,2 cm³

CONTACT US TO RECEIVE YOUR INDIVIDUAL QUOTE

Please send your request to the Knowledge & Training Team at training.EMEA@stratasys.com. and we will create an individual non-binding price quotation at a rate of 150 EUR per hour for the optimization of the part. Please include the following information:

- STL File and measurements
- Information on part properties that should remain exactly the same
- Any information on the application of the part you can share
- Contact of the responsible engineer to discuss possible adjustments to the part

Tailor Made Training

In addition to the training courses mentioned in the coursebook, we also offer tailor-made training for users. There are already some existing modules for areas such as Design for Additive Manufacturing and practical tips for post-processing. Please get in contact with us to discuss about a customized training with the content required to improve your daily business.

Price

The price for this training needs to be defined regarding to the training needs, the duration and the time needed for preparation of the training varies.

Cooperation Partnerships

Aachen Center for Additive Manufacturing (ACAM)

The ACAM offers together with its research partners innovative learning formats and qualification concepts in order to provide the participants technical and scientific based content in the field of Additive Manufacturing.

They qualify professionals, executives and employees at all levels. In the seminars you will get to know about the special features of the technologies, learn about processes, their potentials and limits, and evaluate alternatives for an ideal use of Additive Manufacturing for the future of your company and for your future.

The ACAM seminar program features customized trainings, certificate courses as well as one-day seminars. For more information and to get the ACAM seminar program, please visit http://acam.rwth-campus.com/

AACHEN CENTER FOR ADDITIVE MANUFACTURING

Tknika – Vocational Education and Training

Tknika

LH-RI APLIKATUTAKO IKERKETA ETA BERRIKUNTZAKO EAE-KO ZENTROA
CENTRO DE INVESTIGACIÓN E INNOVACIÓN APLICADA DE LA FP DEL PAÍS VASCO
BASQUE CENTRE OF RESEARCH AND APPLIED INNOVATION IN VET

Tknika is a centre promoted by the Deputy Ministry of Vocational Education and Training of the Education Department of the Basque Government.Innovation and applied research are at the core of Tknika in its ongoing efforts to place Basque Vocational Training at the European forefront. Tknika is modelled after some of the world's most advanced vocational training centres.

In collaboration with the Vocational Education and Training Centres of the Basque Country, Tknika incorporates 3D Printing specialization courses at formal education, retraining courses for unemployed people, as well as training at international level.

Tknika also collaborates and advises SMEs from the Basque Country in the incorporation of 3D printing and additive manufacturing. For more information please visit https://www.tknika.eus/en/#

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