

# Fusion Generative Design

## Training course outline



Autodesk Fusion generative design lets you create complex, performance-optimised parts with reduced material usage in less time.



### Course summary

Introduces the concepts behind FEA and generative design, and covers generative study setup, result interpretation and design iteration beyond generative. Sessions include:

- Overview of FEA simulations
- Introduction to generative design
- Preserve and Obstacle geometry
- Setting up a generative study
- Exploring results
- Implementing results

*Some features covered in this course require the Fusion Simulation extension. If you don't have this extension, we can provide it for the training.*

### Duration

Two days

### Prerequisites

You should have a good working knowledge of Fusion, i.e. be familiar with the topics taught in our [Fusion Essentials course syllabus](#).

No prior knowledge of FEA or generative design is required.

### Windows or Mac

Fusion works similarly running on a Windows computer or Mac, and our course is suitable for users of both platforms.

If you attend a course in-class, you can choose to use a Windows computer or a Mac to practice the techniques taught.

### In-class or live online

You can attend in-person at our centres, or participate live online from your place of work or home.

To read about our approach to online training, see [armada.co.uk/liveonline](#).

### General information

Armada is a long-standing Autodesk authorised Training Centre (ATC), and our *Fusion Generative Design* courses are accredited by Autodesk.

Courses are hosted by Autodesk Certified Instructors (ACIs) with vast experience of using Fusion professionally.

### Course materials and certificate

You'll receive:

- Training materials and video content recommendations.
- An e-certificate confirming successful completion of an accredited *Fusion Generative Design* course.

### After course support

Following training, you're entitled to 30 days' email support from your trainer.

### Further information

See: [armada.co.uk/course/fusiongenerative](#) or scan the QR code above.

### Course syllabus

See over.

### Other Fusion courses

- [Fusion Essentials](#) (2 days).
- [Fusion Intermediate](#) (2 days).
- [Fusion Advanced](#) (2 days).
- [Fusion CAM and CNC Essentials](#) (2 days).
- [Fusion CAM and CNC Advanced](#) (2 days).
- [Fusion Sheet Metal Design](#) (1 day).
- [Fusion Technical Drawings](#) (1 day).
- [Fusion Additive Manufacturing](#) (2 days).
- [Fusion Simulation and FEA Stress Analysis](#) (1-3 days).

# Course syllabus

Session	Topics
<b>Overview of FEA Simulations</b>	Introduction to the Simulation workspace Goals of a simulation Simplification Materials management Creating load cases Interpreting simulation results
<b>Introduction to Generative Design</b>	Purpose of generative design Generative design examples Generative mindset
<b>Preserve and Obstacle Geometry</b>	Understanding the purpose of Preserve and Obstacle geometry Modelling basics to create geometry Offset obstacles
<b>Setting up a Generative Study</b>	Differences between generative design and FEA simulations Adding load cases Assigning materials Specifying goals Defining manufacturing methods Using Pre-Check and Previewer

Session	Topics
<b>Exploring Results</b>	Format of explore results Filtering of results Compare results Use of graphs
<b>Implementing Results</b>	Exporting results into your design Adjusting results with the Form workspace How to get value from results Validating results