

# **Generative Design for Manufacturing Applications**

## **Course Content:**

## **Getting started**

- Module overview
- Course overview
- Course resources

## Introduction to the generative design space

- Module overview
- Edit model
- Define generative study settings
- Define study loads and constraints
- Define study objectives
- Define manufacturing methods
- Define materials
- Review a generative design study
- Practice exercise
- Challenge exercise

## Generative design for part consolidation

- Module overview
- Assembly review
- Obstacles and preserves
- Define a casting manufacturing method
- Review casting outcomes
- Practice exercise
- Challenge exercise

## Generative design for performance and weight reduction

- Module overview
- Review a design
- Generative design setup
- Create a 3D design
- Set up a simulation study
- Practice exercise
- Challenge exercise

## Generative design for fluid flow

- Module overview
- Fluid volumes
- Objectives and materials
- Explore a fluid flow outcome
- Practice exercise
- Challenge exercise