

# GENESIS Basics

## Basic GENESIS Training Course

The focus of the course is on structural optimization. Students will learn optimization concepts and will work over a dozen hands-on exercises for shape, sizing, topology, topography, topometry and freeform optimization. Students will learn how to interpret and use the optimization results. The first two days of the course will introduce students to GENESIS and Design Studio. The third day of the course goes through some of the advanced features available in GENESIS which include frequency response optimization, optimization of composites etc. During the class, students will be exposed to industrial applications and examples. The class is highly interactive and students can optionally bring their own problems.

## Prerequisites

- A basic knowledge of finite element analysis

## Class Topics

- Shape, sizing, topology, topography and topometry optimization concepts
- Optimization Pre- and Post-processing using Design Studio
- Results visualization with Design Studio
- Mode tracking, mesh smoothing and other special topics
- Optimization with manufacturing constraints

## Class Style

- The instructor will present teaching material and solve examples
- Hands-on exercises will be solved by the students assisted by instructor
- 3 days
- One student per computer

## Instructors

- The class will be taught by experts in optimization

## Locations

- Training courses will be held on-site at our Novi, Michigan office.

## Class Information

- Class Dates: July 25-27, 2012
- Class begins at 8:30 a.m.
- Deadline for Registration is July 20, 2012

