

# *Advanced Composite Materials Optimization*

## **Advanced Composites Optimization Training Course**

This course will give students an introduction to optimization of composite materials. Students will learn optimization concepts as applied to composites, formulation of composite materials design as optimization problems and work on several hands-on exercises. Students will learn how to interpret and use the optimization results. During the class, students will be exposed to industrial applications and examples.

### **Prerequisites**

- A basic knowledge of finite element analysis and composite materials

### **Class Topics**

- Sizing optimization of composites
- Optimization of SMC shell thickness
- Optimization of woven glass fabric thickness
- Laminate design with thickness and angle optimization
- Shape optimization of composites
- Comparison of composites design with steel designs

### **Class Style**

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

### **Instructors**

- The class will be taught by Dr. Brian Knouff

### **Locations**

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

### **Class Time**

- Class begins at 8:30 a.m.

