VisualDOC Basics

VisualDOC Basics Training Course

This course introduces students to the concept of optimization and its practical applications. Students will learn the basic ideas behind various optimization procedures as well as practice using these procedures on example problems. Students will learn how to couple optimization with any analysis/simulation program. Students will become familiar with Response Surface optimization, Multidisciplinary Design optimization (MDO), optimization with uncertainty, Six Sigma design, Global Optimization, Design of Experiments and other procedures.

After the course is completed the students will be able to decide which optimization methods are more appropriate for their particular problems. All the exercises and examples will be performed using VR&D's graphical optimization software system VisualDOC. The class is highly interactive. The students are encouraged to bring their own problems and discuss them with the instructors.

Prerequisites

- A basic knowledge of algebra and calculus
- No prior knowledge of optimization is required

Class Topics

- Gradient-based optimization
- Response surface optimization
- Probabilistic optimization
- Global optimization
- Design of experiments
- Multidisiplinary optimization
- Interfacing to analysis programs, Excel, MATLAB, and using the API
- What-If study tool

Class Style

- The instructor will present teaching material and solve examples
- Hands-on exercises will be solved by the students assisted by instructor
- 2 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 Time

- Class begins at 8:30 a.m.

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