KOENIG SOLUTIONS · COURSE OUTLINE

Introduction to COMSOL Multiphysics® Training Course

18 Hours	4	16
DURATION	MODULES	TOPICS

COURSE OVERVIEW

Learn the fundamentals of the COMSOL® software modeling workflow. This course is the recommended starting point for learning how to use the COMSOL Multiphysics® software. During this training course, you will develop a strong foundation for your future multiphysics modeling work. We start at an introductory level, leading students through the essential steps needed in all analyses (geometry creation, interactive meshing techniques, model setup, results evaluation, etc.) Then, we move into more advanced topics, such as solution techniques and multiphysics modeling. To teach this course, we use a combination of instructor- and self-guided hands-on exercises as well as theoretical and practical lectures. The goal is to immerse you in all of the main aspects of using COMSOL Multiphysics®, so that you feel comfortable working with the software. You will leave the course feeling confident that you are correctly solving your simulation problems with COMSOL Multiphysics®. After 2 days of class, there will be a 1-day gap where trainees work on assigned exercises and explore features in the software related to their own application areas. This course is the web version of the 2-day COMSOL Multiphysics® Intensive training course. It aims to provide the same material online for attendees that cannot travel to course locations.

PREREQUISITES

- The COMSOL Multiphysics® Introductory training course is suitable for anyone with an engineering, physics, or science background. No previous experience with COMSOL Multiphysics® is required.

LEARNING OBJECTIVES

What You Will Learn

- We will use a combination of instructive and self-guided hands-on training together with theoretical and practical lectures. The goal is to immerse you in the COMSOL Multiphysics® modeling workflow and help you feel comfortable working with the user interface. By the end of the training course, you will know how to efficiently navigate through the COMSOL® software.

COURSE SYLLABUS

4 Modules, 16 Topics

DAY 1

01

TOPICS

- COMSOL Multiphysics® modeling workflow
- COMSOL Multiphysics® graphical user interface
- Key features of the COMSOL Multiphysics® architecture
- Geometry import and geometry creation

DAY 2

02

TOPICS

- Practical and theoretical aspects of multiphysics modeling and efficient solution techniques
- Understanding the theory behind the linear and nonlinear finite element method
- Considerations for coupling different physics together
- Adding equations and couplings to the problems
- Finding, understanding, and eliminating errors in the model
- Modeling time-dependent problems with explicit or implicit events

DAY 3

03

TOPICS

- Work on exercises (no class)

DAY 4

04

TOPICS

- More on global parameters, variables, functions, probes and nonlocal couplings
- Best practices for meshing geometry
- Use of moving and adaptive meshes
- Summary of best practices for modeling in COMSOL Multiphysics®
- Results and vizualization

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

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