



EDEM Training Agenda

Course length: Two days (2nd day is optional)

Prerequisites: The course assumes you have no prior experience of working with DEM.

Day 1 – Using EDEM for Discrete Element Modeling

Module	Title	Format	Content
1	<i>Introduction</i>	Class	Introduces DEM, its uses, DEM Solutions and our products.
2	<i>EDEM Quickstart</i>	Class	Step-by-step overview on creating a model, running a simulation and analyzing the results.
3	<i>Screw Auger Simulation</i>	Tutorial	How to setup and analyze a basic simulation.
4	<i>EDEM Technical Overview</i>	Class	EDEM objects, DEM cycle, contact detection, introduction to contact models.
5	<i>Conveyor Simulation</i>	Tutorial	More complex simulation tutorial, including how to import particle templates, moving plane models, coloring models and bin groups.
6	<i>SAG Mill Simulation</i>	Tutorial	Simulation tutorial, including mill dynamics and how to plot charts.
7	<i>EDEM API and User-Defined Libraries</i>	Class	Overview of EDM customization, introducing custom factories, contact models and particle body forces.
8	<i>Plug-in Contact Model</i>	Tutorial	How to use EDEM's API to write, build, and include a new "cohesion" contact model.
9	<i>Residence Time</i>	Tutorial	How to create a simulation that uses custom particle properties.
10	<i>Heat Transfer</i>	Tutorial	How to use the heat transfer feature in a simulation.
11	<i>Bonded Particles</i>	Tutorial	How to use the integrated bonded-particle contact model. This tutorial also uses a custom particle factory.
12	<i>Dynamics Coupling</i>	Tutorial	How to use the dynamics coupling module.

Day 2 – EDEM-CFD Coupling Module for FLUENT

Module	Title	Format	Content
1	<i>Introduction</i>	Class	Introduces EDEM-FLUENT coupling, how it works and some of the module's features.
2	<i>Eulerian Simulation</i>	Tutorial	How to setup a two-phase Eulerian simulation in Fluent and EDEM.
3	<i>Lagrangian Simulation</i>	Tutorial	How to setup a two-phase Lagrangian simulation.
4	<i>Entrainment Simulation</i>	Tutorial	How to setup a two-phase Eulerian entrainment simulation.
5	<i>Eulerian with Heat Transfer Simulation</i>	Tutorial	Follows-on from the two-phase Eulerian simulation by adding heat transfer.