

## Kinetics tool of ANSA for multi body dynamics

<b>Training</b>	Kinetics tool of ANSA for multi body dynamics
<b>Duration</b>	2 days (16 hours)
<b>Level</b>	Advanced
<b>Who should attend</b>	CAE analysts who perform dynamic analysis of multi-body systems (kinetics or kinematics).
<b>Training description and objectives</b>	<p>This course introduces participants to the principles of kinetics and kinematics with ANSA and demonstrates how to set up a model for such types of analysis.</p> <p>Upon course completion, participants will be able to :</p> <ul style="list-style-type: none"> <li>– Set up a model for Kinematic, Dynamic, Contact, Static equilibrium analysis,</li> <li>– perform motion analysis,</li> <li>– study and analyze the dynamics of mechanical systems that change their response with respect to time.</li> </ul>
<b>Prerequisites</b>	Participants should have an engineering background. Basic knowledge of ANSA is necessary.
<b>Language</b>	English <i>*ask for more languages</i>

*Course content is subject to change without notice.  
Course content may be adjusted to audience requirements or background.*



## Suggested topics

### Day 1

- Introduction to multi body dynamic kinematics and kinetics
- Kinematic markers
  - a) Creation and orientation methods
- Kinematic bodies
  - a) Creation and characteristics
- Kinematic graphics
  - a) Creation and examples
- Kinematic joints
  - a) Creation – joint entity card
  - b) Example types
- Kinematic motions
  - a) Creation
  - b) Motion on bodies/joints
- Kinematic forces
  - a) Creation – kinematic force card
  - b) Example types
- Function wizard
  - a) How and when it is used –wizard window

### Day 2

- Kinematic contacts
  - a) Theory behind non smooth contacts
  - b) Smooth vs non smooth contact
  - c) Creation – Contact entity card
- Kinematic measures
  - a) Definition
  - b) Plot
- Kinematic sensors
  - a) When are they used
  - b) Creation and examples
- Kinematic entities
  - a) Kinematic table
  - b) Kinematic variable
  - c) Kinematic request
- Simulator
  - a) Window explanation
  - b) Run simulator
  - c) Solver parameters
- Results viewer
  - a) Explanation and examples
- Tracer function
- Configurator