ADM701 - Complete Multibody Dynamics Analysis with Adams

If you're new to mechanical system simulation, this course will give you the foundation of skills you'll need to begin using Adams' powerful virtual prototyping, testing, and visualization capabilities.

Pre-requisites:

None

Topics:

- Create parts and organize them into mechanical systems
- Connect parts with ideal constraints, such as:
 - Standard joints (hinges, sliders, etc.)
 - Joint primitives
 - Complex (couplers, screw, etc.)
 - Curve (cam-follower, pin-in-slot)
- Actuate a system with:
 - Ideal and complex part motion
 - Applied forces
 - Gravity
- Connect parts with more realistic forces:
 - Simple (springs, dampers, etc.)
 - Complex based on system states (displacements, velocities, etc.)
 - Complex based on test data
 - Contacts and collisions
- Measure quantities of interest (displacements, velocities, accelerations, applied loads, forces)
- Perform static, transient, and linear simulations
- Precisely control and manage your simulations
- Investigate test results via animations and plots
- Manage files generated and used by Adams/View and Adams/Solver
- "Putting it all together" to complete a comprehensive workshop that tests comprehension of modelling elements and techniques discussed in class
- Additional topics discussed are:
 - Importing CAD-based geometry
 - Performing cam synthesis
 - Applying joint friction
 - Performing design studies
 - Applying sensors to your system