

Overview

Course Length: 40 hours (*can be taken via flexible schedule in-center or remotely*)

Description: This course is designed to build on skills learned from Inventor – Essentials and Inventor – Intermediate Courses. Material covered includes Cable & Harness Design, Simulation FEA Essentials, Simulation Kinematic Essentials and iLogic Essentials.

Course Objectives/Topics

- **Cable and Harness Design**
In this courseware, students learn the fundamental principles and recommended workflows for creating and documenting 3D electrical parts and wire harness designs using Autodesk® Inventor®. Students learn how to add electrical components, cables, and wires to a design, route wires through an assembly to create a harness, and create ribbon cables. Students also learn how to document the wire harness assembly in drawings and generate reports used to build the wire harnesses.
- **Simulation FEA Essentials**
Autodesk Inventor Simulation FEA Essentials gives the experienced Autodesk Inventor user the tools required to begin analyzing their design with Finite Element Analysis (FEA). Users will learn how to prepare their model and run the analysis on either parts or assemblies.
- **Simulation Kinematic Essentials**
Autodesk Inventor Simulation Kinematic Essentials gives the experienced Autodesk Inventor user the tools required to begin testing the kinematic motion of their design. Designers will learn how to prepare their assembly, run the simulation, analyze the results, and share the results with Inventor Stress Analysis.
- **iLogic Essentials**
The Autodesk Inventor iLogic Essentials course is designed to effectuate active user involvement in Rule-based Design, using Inventor iLogic. Considered the next evolution of parametric design, this Rule-based Design add-on is a simple way of recording and reusing engineering concepts and knowledge while creating parts and assemblies. The course is designed to take design engineers to the next level of productivity by `automating` the design process, while creating parts or assemblies using Inventor iLogic. In this course, users will be taught to simplify design processes by creating rules to: use Excel sheets to input values; suppress and activate features; trigger rules based on events such as file open/close, parameter change, etc; create `intelligent` parametric iLogic components for use in assemblies, and select drawing views, and many more. The course also addresses the addition of forms that can be created using iLogic. This course has been created for Design engineers with little or no programming expertise. However, users with programming experience will find this course useful to streamline or automate their design process and achieve a lot more in Inventor.

Practical practice and Projects

- Put what you learned to use. Practice virtualized part modeling using advanced techniques from traditional 2D drawings, 3D annotated illustrations, and from measuring/approximating existing items.
- Put it all together with a final project of your choosing.

Prerequisites

- Autodesk Inventor – Essentials Course
- Practice and experience using Autodesk Inventor.

Audience

- A person who wants to be proficient in Autodesk Inventor to find a job
- A person who wants to build advanced Autodesk Inventor part modeling skills