

Course Details

Day 1: January 23, 2020

Introduction to L-Edit

- Launching L-edit
- Graphical User Interface
- Opening an existing file
- Customizing the design environment
- Toolbars and Docking Views
- Viewing the curved objects
- Technology Setup (Intro)
 - Units
 - Grids
 - Manufacturing grid, Curve display
- Information Toolbars
- Design Area and Design Area controls
- Mask creation - Positive and Negative masks
- The Layer Palette-
 - Compact and Advanced Layer Palette
 - Layer selection and operations
 - Hide/show
 - Choosing a drawing layer
- Mask Drawing-
 - Drawing toolbar
 - Drawing objects
- Object selection
 - Edge, center
 - Multiple
 - Cycle select
 - Using layer hide show
 - Select all
- Mask Editing-
 - Editing Toolbar
 - Graphical editing
 - Textual editing
 - Changing layers
 - Draw> Move
 - Single, Multiple edits
- MEMS Pro Toolbar functions-
 - Overview
 - Curves
 - Fillet tool
 - Shape recovery

- Viewing Transforms-
 - View menu
 - Zoom/Window Zoom/+/- keys
 - Pan
 - Home
 - Docking Views
- Cells and hierarchy
 - Design/Cell Hierarchy
 - The Design Navigator
 - New cell/Cell Origin
 - Types of cell views
 - Cell commands-Open, Copy
 - Grouping commands
 - Instancing cells
 - Edit Instance dialog- Array
 - Windows management- Cascade, active cell

Exercise 1: Layout of a Tunable Filter

- Creating a New Design-
 - Design data file and database types
 - Technology references
- Setup Technology
 - Setting up a tech reference
 - Importing a Technology
 - Exporting a Technology
- Libraries
 - Library Navigator
 - Setting up a Design Library
- Setting up layers,
 - Setup Layers dialog
 - Adding
 - Purpose
 - Special layers
 - Setup information
 - Rendering, mode and pass
 - Setting up colours
 - Derivation and Boolean operations
 - Generating layers

Exercise 2

- Boolean operations on selections
- Base Points
- Object Snapping
- Alignment Commands
- GDS Export

Exercise 3

Introduction to MEMS Pro

- Toolbar overview
- Process Import/Export
- 3D Model Generation
- Step by step display
- Viewing Controls
- Cross-section
- Region-Based 3D Visualization
- Z-Scaling
- 3D model Output

Exercise 4 – Tunable filter

MEMS Pro Advanced

- Material Properties Setup
- Process Definition Setup
- Process commands

Exercises 5 and 6

Day 2: January 24, 2020

L-Edit: Advanced Layout Topics

- Additional Layout commands
 - Tips
 - Multigrid toolbar
 - Find commands
 - Rulers
- Curves
 - Edge conversion
 - Conversion from Polygon
 - Chamfer/Fillet
- Wires
 - Setup
 - Usage
- Built-in Macros
 - Mask bias
 - Image Import
 - Text Generator
- Cell Operations
 - Flattening
 - Editing in Place
 - Hierarchy Navigation
 - Locking
 - ClipOut
 - Save to TDB
- Advanced Boolean Operations
 - Select- Inside/Outside
 - Touch/Select/Overlap
 - Cut/Vertex
 - Area/Density
- MEMS Pro Toolbar features
 - Curves
 - Device Generators
 - Easy MEMS
- Design Setup
 - Selection
 - Drawing
- Application Setup
 - Keyboard/Mouse
 - Rendering
 - Selection/Editing
 - Palettes
 - Text Editor
 - Text style
- Open Access features

- UPI- scripting
- T-Cells
- DRC
- DXF input/output

Advanced MEMS Pro

- Defeaturing models
- Document Fabrication Process
- Mult-model Output
- Process Documentation- EXCEL, ppt
- Model Documentation-Camera, Movie
- Boundary Conditions on Layout
- 2D Models
- Hierarchical output
- Stand-alone Viewer
- Links to FEM Tools
- Using SoftMEMS in a team