

# [ Siemens Certificate + EMCO Industrial Training modules ]



## EMCO – a full-range supplier of machines:

- Concept machines for industrial training
- Conventional machines
- CNC machines



## SINUMERIK Operate Including ShopMill & ShopTurn

### Industry oriented training including\*

- 6-seat license for SinuTrain from SIEMENS
- Full curriculum. **Free of charge.**
- Up to 3 levels “Train-the-Trainer” programming training, 3 days each. **Free of charge.**
- Level 1 and 2 training can be held at school location, nationwide. **Free of charge.**
- Level 1 and 2 can be certified at school location, nationwide. **Free of charge.**
- Siemens certified trainers are qualified to train and certify students. **Free of charge.**
- Siemens NX CAD-CAM training and certification upon request.

\*) some conditions apply

## ➔ Key factors for a successful industry oriented training

## L.E.A.P.—Lifelong Educational Advantage Program course curriculum

[Comprehensive Instructor Training and Certification]

| CNC turning courses   |  | CNC milling courses  |   |   |
|---|--|--|---|---|
| Turning Level I: ShopTurn   | Turning Level II: programGUIDE   | Milling Level I: ShopMill  | Milling Level II: programGUIDE  | Milling Level III: 5-axis Programming   |
| <p>This introductory turning course consists of 13 in-depth educational modules that include hands-on application sections to reinforce classroom-learned skills and grow operational understanding.</p> <p><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Confidence in the basics of operations for all operating modes such as JOG, MDS, parameter, program manager, and automatic.</li> <li>Basic understanding of ShopTurn programming for applications such as drilling, turning, contouring, and milling.</li> <li>Competence in setting up automatic mode functions, program correction and hand wheel operations.</li> </ul> | <p>Building upon the course material learned in Turning Level I, Level II will instill students with the skills needed to effectively program a range of turning operations using programGUIDE, the Siemens graphical CNC editor. The course consists of 7 in-depth modules that cover major turning commands.</p> <p><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Students will learn G-code programming with functions such as loops, jumps, and repetitions with the help of programGUIDE.</li> <li>Drilling and contour-turning skills will be enhanced, as well as learning the commands of mirroring, shifting, rotating, and scaling of contours.</li> <li>Automatic and Manual Reposition and program Restart functions. Learn the options of the automatic operating mode to overstore technological parameters. Parameters include: auxiliary functions, axis feed, spindle speed, and programmable instructions.</li> </ul> | <p>Students will gain a solid foundation in this introductory milling course. The course is comprised of 12 in-depth educational modules that include hands-on application sections to reinforce classroom-learned skills and grow operational understanding of milling.</p> <p><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Confidence in the basics of operations for all operating modes such as JOG, MDS, parameter, program manager, and automatic.</li> <li>Basic understanding of ShopMill programming for applications such as drilling, contouring, and milling.</li> <li>Competence in setting up automatic mode functions, program correction and hand wheel operations.</li> </ul> | <p>Building upon the course material learned in Milling Level I, Level II will instill students with the skills needed to effectively program a range of milling operations using programGUIDE, the Siemens graphical CNC editor. This course consists of 7 in-depth modules that cover major milling commands.</p> <p><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Students will learn G-code programming with functions such as loops, jumps, and repetitions with the help of programGUIDE.</li> <li>Drilling and contour-milling skills will be enhanced, as well as learning the commands of mirroring, shifting, rotating, and scaling of contours.</li> <li>Learn the options of the automatic operating mode to overstore technological parameters, Automatic and Manual Reposition and program Restart functions. Parameters include: auxiliary functions, axis feed, spindle speed, and programmable instructions.</li> </ul> | <p>Building upon course material previously learned in Milling Level I and Level II, Level III will instill students with the skills needed to effectively perform shopfloor 5-axis programming with Cycle800 leveraging 5-axis machining technologies. The course consists of 9 in-depth modules that cover 5-axis milling setup and programming operations.</p> <p><b>Learning outcomes:</b></p> <ul style="list-style-type: none"> <li>Students will learn 5-axis setup techniques including Align Edge and Align Plane and setup of 5-axis parts in jog mode.</li> <li>Programming 5-axis (3+2) parts programming directly on the control.</li> <li>5-axis part program creation through ShopMill.</li> <li>Simulation of the created part for verification purposes.</li> <li>Review of the same part methodized in G-code with programGuide.</li> <li>Running the created part program in auto while demonstrating key features.</li> </ul> |

