Siemens CNC Training portfolio

1. Programming course for G-code – PRG-CNC
   Application = Turning
   Duration = 5 days
   Cost = R 10 000-00
   Location = Tshwane University of Technology in Soshanguve, South Africa

Description:

G-codes, cycles and M-codes will be the focus of the course material. Good general mathematical principles will be required from the student. A short test program is completed at the end of the course.

Course content:

- General Technology
- General Geometry
- Simple motion commands
- Mathematical fundamentals
- Origins and zero offsets
- Program Structure
- Face turning and simple contours
- External turning
- Sub programs
- Roughing cycles
- Grooving cycle
- Recess for threading
- Threading cycle
- Deep hole drilling
- Internal turning
- Repetition, Jumps
- Offset, Scale
- Face machining
- Contour calculator
- Operating 840D
Siemens CNC Training portfolio

2. Programming course for G-code – PRG-CNC
   Application = Milling
   Duration = 5 days
   Cost = R 10 000-00
   Location = Tshwane University of Technology in Soshanguve, South Africa

Description:
G-codes, cycles and M-codes will be the focus of the course material. Good general mathematical principles will be required from the student. A short test program is completed at the end of the course.

Course content:
- Technology Basics
- Geometry Basics
- Simple Contour elements
- Mathematical Principles
- Zero offset and reference points
- Program structure
- Contour milling
- Programming of Subroutines - Milling
- Jumps - Repeats - Milling
- Circular and square pockets
- Mirror - Offsets - Rotation - Scale - Milling
- Working with Cycles
- Milling Cycles
- Drilling Cycles - Milling
- Operation_840D
3. **Advanced Programming course - ADV-PRG-CNC**

* Pre-requisite = Programming course  
Application = Milling /Turning  
Duration = 5 days  
Cost = R 10000-00  
Location = Tshwane University of Technology in  
Soshanguve, South Africa

**Description:**

Advanced G-codes, macro’s and subroutines will be the focus of the course material. Good general mathematical principles will be required from the student. A short test program is completed at the end of the course.

**Course content:**

- Contour milling
- Programming of Subroutines - Milling
- Jumps - Repeats - Milling
- Circular and square pockets
- Mirror - Offsets - Rotation - Scale - Milling
- Working with Cycles
- Milling Cycles
- Drilling Cycles - Milling
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4. **Operators and Setters course - OP-ST-CNC**

Application = Milling / Turning machines
Duration = 3 days theory and 2 days at machine
Cost = R 13 000-00
Location = Tshwane University of Technology in Soshanguve, South Africa

**Description:**
The course is designed around operators and setters of CNC machines. It aims to explain what is needed to get your CNC machine ready to execute a job.

**Course content:**
- Clamping
- Tooling
- Offsets
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5. SHOPMILL programming - SHOPM-CNC

Application = Milling machines
Duration = 3 days
Cost = R 6 000-00
Location = Tshwane University of Technology in Soshanguve South Africa

The course will show you how to program effectively in SHOPMILL.

Course content:
- Basics
- Creating program
- Editor
- Various
- Simulation
- NC Execute
Siemens CNC Training portfolio

6. SHOPTURN programming - SHOPT-CNC

Application = Turning machines
Duration = 3 days
Cost = R 6 000-00
Location = Tshwane University of Technology in Soshanguve, South Africa

The course will show you how to program effectively in SHOPTURN.

Course content:

- Basics
- Creating program
- Editor
- Various
- Simulation
- NC Execute