seeNC

**CNC program simulator for Programming training**

seeNC CNC program simulator enables students to learn CNC programming in ISO format, interactively. seeNC Turn and seeNC Mill make your CNC programming training highly efficient. They come with illustrated CNC programming handbooks and lab workbooks. Make sessions highly efficient, improve students’ understanding and retention.

### What you can do with seeNC

**What the student learns**

- Programming for Fanuc, Siemens, Fagor, Mitsubishi
- Programming with basic motions, subprograms, canned cycles
- Tool selection, spindle speed, feed rate
- Tool nose radius compensation
- Process planning
- Use of industry standard tools
- Avoiding collisions
- Optimizing the tool path and cycle time

**How seeNC works**

- Type in the program through a special inbuilt editor
- Software checks the program for errors
- See the list of programming errors and their locations
- Use online programming guide to correct errors
- Select tools from database of tools used in industry
- Check the tool path in graphical simulation
- Correct logical errors like collisions
Screen shots

seeNC Turn

Program editor

Program errors list after automatic checking

<table>
<thead>
<tr>
<th>Line no.</th>
<th>Error status</th>
<th>Error description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td>Improper G-code (G199)</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Improper M-code (M081)</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>Address F is missing in G71 cycle</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>Improper NC-Word (M05)</td>
</tr>
</tbody>
</table>
Simulation in solid mode

Collision highlighted in Red
Simulation in filled mode, with tool holder display

Simulation in line mode
seeNC Mill

Program editor

Program errors list after automatic checking

<table>
<thead>
<tr>
<th>Line no.</th>
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</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td></td>
<td>Improper G-code (G191)</td>
</tr>
<tr>
<td>8</td>
<td></td>
<td>Improper G-code (G431)</td>
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<tr>
<td>9</td>
<td></td>
<td>Address F is missing in G81 cycle</td>
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<tr>
<td>19</td>
<td></td>
<td>Improper NC-Word (M03)</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>No spindle direction programmed</td>
</tr>
</tbody>
</table>
Blank definition

Tool selection from database
Simulation in solid mode

Collision highlighted in Red
Special teaching material with seeNC

- CNC programming handbook for Milling, CNC programming handbook for Turning.
- Explain basic motions, canned cycles, subprograms.
- Can be used for self-learning as well as for teaching.
- Teachers’ CNC workbook with ready-made exercises for various operations, with solutions.
- Students’ CNC workbook with just the exercises, without the solutions.

Matches CNC education syllabi

NCyclo suits CNC training software requirement for ITI, CGSC NOS, Diploma and BE.

**NCVT ITI**

ITI syllabus for the trades Turner, Machinist, and Operator Advanced Machine Tool seeNC CNC program simulator matches the specification “Interactive CNC part programming software for turning & milling”.

**CITS syllabus requirement for machining-related related trades seeNC CNC program simulator matches the CITS syllabus requirement “Interactive CNC part programming software for turning & milling”.”
Together, CADEM Ncyclo, seeNC and doNC match the software specifications in the ITI syllabus for the trades Turner, Machinist, and Operator Advanced Machine Tool: “Multimedia teachware / courseware for cnc technology and interactive cnc part programming software for turning & milling with virtual machine operation and simulation using popular operation control system such as Fanuc, Siemens, etc.”

**CGSC NOS**

NCyclo CNC training software suits the syllabus requirement for the following

**Qualification packs:**

**Operator – Vertical** Machining Centre CSC/ Q 0116
CNC Operator Turning CSC/ Q 0115
CNC programmer CSC/ Q 0401
CNC Setter cum operator – Turning CSC/ Q 0120
CNC Setter cum Operator – Vertical Machining Centre – CSC/ Q0123

seeNC CNC program simulator is perfect for learning how to write G and M code CNC programs for Fanuc, Siemens, Fagor and Mitsubishi controls. It makes teaching of Computer Aided Manufacturing very efficient, and reduces the investment on your CAM Lab.