# SELF - ASSESSMENT GUIDE

## Qualification:

**MOLD MAKING NC III**

## Units of Competency Covered:

- Machine mold components
- Implement surface finishing
- Fit and assemble mold
- Rectify mold flaw

## Instruction:

- Read each of the questions in the left-hand column of the chart.
- Place a tick in the appropriate box opposite each question to indicate your answer.

<table>
<thead>
<tr>
<th>Can I?</th>
<th>YES</th>
<th>NO</th>
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</thead>
<tbody>
<tr>
<td><strong>Determine job requirements</strong>*</td>
<td></td>
<td></td>
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<tr>
<td>- Interpret drawing to produce mold components according to drawing specifications</td>
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<tr>
<td>- Determine sequence of operation to produce mold component according to specification</td>
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<tr>
<td>- Select cutting tools according to the requirements of the operation</td>
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<tr>
<td><strong>Prepare the CAM environment</strong>*</td>
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<tr>
<td>- Obtain all relevant manuals, instructions and operating procedures for the CAM software in accordance with the standard operating procedures</td>
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<td>- Boot up CAM package in accordance with the standard operating procedures</td>
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<tr>
<td>- Set screen display areas and tools and workpiece parameters in accordance with instructions</td>
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<tr>
<td><strong>Generate CNC machining program</strong>*</td>
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<tr>
<td>- Prepare 3D CAD drawing according to appropriate machining sequence</td>
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<tr>
<td>- Create machining program of mold components using CAM software</td>
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<tr>
<td>- Generate machining program in standard CNC operations, code and format in accordance with SOP</td>
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<tr>
<td><strong>Edit CNC program</strong>*</td>
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<tr>
<td>- Simulate program using CAM software according to SOP</td>
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</tbody>
</table>
- Edit program using CAM software according to SOP
- Save and downloads edited program to machine according SOP

**Set-up machine and cutting tools***
- Set machine zero point to required position
- Set cutting tool to required position using pre-setting device
- Position cooling medium according to SOP
- Perform cuttings tool and holders set-up according to SOP

**Set up workpiece***
- Mount workpiece on the machine using clamping device
- Align workpiece using gauges
- Determine workpiece reference point based on generated program

**Dry run program***
- Download program to CNC machine
- Edit program according to the required tool path
- Edit program based on available cutting tool
- Perform program dry run in accordance with the desired tool path movement

**Perform trial cut on workpiece***
- Machine workpiece as program
- Check workpiece dimension using appropriate measuring instruments
- Edit program and adjusts tool parameters as required

**Perform machining of workpiece***
- Machine workpiece based on final program
- Inspect workpiece dimension using appropriate measuring instruments
- Edit and re-run program as required
- **Perform machine shut down***
  - Clean and remove machined workpiece in accordance to workplace procedures
  - Remove tools and holders as required
  - Shut down the machine in accordance with SOP

- **Perform housekeeping***
  - Clean machine and tools in accordance with workplace procedures
  - Dispose waste material according to environmental standard

- **Determine job requirements for surface finishing***
  - Interpret drawing to determine mold finishing requirements
  - Determine sequence of operation to produce the required finishing according to specification
  - Select finishing tool, equipment and supplies according to the requirement of the operation

- **Prepare mold components***
  - Identify components for surface finishing based on parts drawing
  - Set up mold component according to workplace procedures
  - Set up components in accordance with safety procedures and using PPE

- **Set-up surface finishing tools and equipment***
  - Determine type of surface finish according to specification
  - Prepare tools and equipment according to work requirements
  - Set up surface finishing tools and equipment according to SOP

- **Perform surface finishing***
  - Perform surface finishing of mold in accordance with safety procedure and using PPE

- **Perform equipment shutdown***
  - Clean and remove finished workpiece in accordance to workplace procedures
  - Remove tools and holders as required
- Shut down the equipment in accordance with SOP

- **Perform housekeeping***
  - Clean equipment and tools used in accordance workplace procedures
  - Keep unused supplies in accordance with workplace procedures
  - Dispose waste material according to environmental standard

- **Determine mold components to be fitted***
  - Interpret assembly drawing to determine mold components to be fitted
  - Check quantity of mold components and standard parts
  - Identify fitting tool, equipment and supplies according to work requirements

- **Perform mold components assembly***
  - Perform assembly of components in accordance with safety procedures and uses PPE
  - Perform assembly according to required sequence
  - Perform fitting and aligning of mold components according to assembly procedure
  - Assemble mold components according to assembly drawing

- **Perform housekeeping for assembly***
  - Clean and keep tools and equipment used in accordance with workplace procedures
  - Keep unused supplies in accordance with workplace procedures
  - Dispose waste material according to environmental standard

- **Identify and analyze mold flaws***
  - Inspect molded products for presence of defects
  - Identify mold flaws based of observe products defects
  - Identify and analyses mold components attributed to flaws
- **Correct/ Modify mold flaws**
  - Determine corrective action based on flaws
  - Disassemble mold for correction according to workplace procedures
  - Correct identified mold components
  - Assemble mold according to assembly drawing

I agree to undertake assessment in the knowledge that information gathered will only be used for professional development purposes and can only be accessed by concerned assessment personnel and my manager/supervisor.

<table>
<thead>
<tr>
<th>Candidate's Name &amp; Signature:</th>
<th>Date:</th>
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