

Specification of Competency Standards for the Watch & Clock Industry

Unit of Competency

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| 1. Title | Master the Technique of Using Computer Numerical Control (CNC) Machining Centre to Manufacture Timepiece Component |
| 2. Code | WCZZHM401A |
| 3. Level | 4 |
| 4. Credit | 9 |
| 5. Competency | <p style="text-align: center;"><u>Performance Requirements</u></p> <p>5.1 Apply CNC</p> <ul style="list-style-type: none"> ◆ Understand the operation of the machine and computer numerical control system ◆ Have introductory knowledge of CNC ◆ Master the writing, loading and editing of CNC programme ◆ Understand the G code programming ◆ Understand the M code programming ◆ Understand the T code programming ◆ Master the working coordinates system and datum setting ◆ Master the writing of sub-programmes ◆ Understand the conversion of coordinates ◆ Understand the processing of cycling programmes ◆ Understand the automatic dialogue programming system ◆ Apply macro programme writing and processing ◆ Apply data transmission, storage and direct numerical control processing ◆ Understand the machining arrangements for work pieces ◆ Understand the features of the processing centre |

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| | <ul style="list-style-type: none"> ◆ Understand the computer-aided software system connected to the machining centres ◆ Use CNC machining centres to manufacture Timepiece components <p>5.2 Know about the cutting tools</p> <ul style="list-style-type: none"> ◆ Master the application of various cutting tools ◆ Understand the compensation of various cutting tools ◆ Understand the grinding for cutting tools <p>5.3 Know about the maintenance for CNC machines or machining centres</p> <ul style="list-style-type: none"> ◆ Know about the importance of maintenance for CNC machines or machining centres ◆ Know about the maintenance procedures for CNC machines or machining centres |
| 6. Range | In Timepiece workshops, can use CNC machining centres to manufacture Timepiece components except movements. |
| 7. Assessment Criteria | <p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) capable of using CNC machining technology to manufacture timepiece components; and</p> <p>(ii) capable of performing maintenance routine for CNC machining centres.</p> |
| 8. Remarks | The credit value of this unit of competency is set on the presumption that the learners already have basic knowledge about machine tool and computer. |