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| 1. Title      | Apply basic bench fitting techniques and use small typical hand tools  |  |  |
| 2. Code       | EMCUIN106A   |  |  |
| 3. Range      | Apply basic bench fitting techniques, including marking, sawing, filing, grinding, drilling and chiseling, in tasks of production, installation and maintenance and repairs for electrical and mechanical works.   |  |  |
| 4. Level      | 1  |  |  |
| 5. Credit     | 9  |  |  |
| 6. Competency | <p style="text-align: center;"><u>Performance Requirements</u></p> <div> <div> 6.1 Know about basic bench fitting techniques and small typical hand tools </div> <div> <ul style="list-style-type: none"> <li>◆ Understand basic bench fitting techniques, including marking, sawing, filing, grinding, drilling and chiselling</li> <li>◆ Understand the operation of small typical hand tools, including cutting tools, measuring instruments, files, assembling and dismantling tools, marking-out tools, portable power drills, drilling machines, and relevant concerns</li> </ul> </div> </div> <div> <div> 6.2 Apply basic bench fitting techniques and small typical hand tools in tasks of production, installation and maintenance and repairs </div> <div> <ul style="list-style-type: none"> <li>◆ Understand the correct use of small typical hand tools <ul style="list-style-type: none"> <li>• Capable to use various types of cutting tools correctly, such as bow saws and shears</li> <li>• Capable to use metric and imperial measuring instruments correctly, such as steel rules, venires, inside callipers and outside callipers</li> <li>• Capable to use steel rules and beam squares to measure the length and to check horizontal, vertical and curved surfaces correctly</li> <li>• Capable to select and use files correctly, such as single cut files, flat files, round files, half-round files, triangular files, double cut files, rough-cut and smooth files of different degree of fineness</li> <li>• Capable to select and use scrapers correctly</li> <li>• Capable to use assembling and dismantling tools correctly, such as open-ended spanners, adjustable spanners, box spanners, hexagon ring spanners, screw drivers, jaw vices, hand vices and hammers, to assemble or dismantle simple mechanical devices</li> <li>• Capable to use various types of marking-out tools correctly, such as line needle, hook needle, centre punches, pin punches and dividers</li> <li>• Capable to use portable power drills and drilling machines correctly</li> </ul> </li> </ul> </div> </div> |  |  |

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|                        |  | <ul style="list-style-type: none"> <li>◆ Apply basic bench fitting techniques and use small typical hand tools               <ul style="list-style-type: none"> <li>• Identify and select common metals                   <ul style="list-style-type: none"> <li>▸ Capable to identify various types of common metals</li> <li>▸ Capable to select suitable common metals according to uses</li> </ul> </li> <li>• Capable to apply basic bench fitting techniques, including marking, sawing, filing, grinding, drilling and chiselling, to trim materials, to measure work pieces and to make metal work pieces to required dimensions, according to templates or simple drawings</li> </ul> </li> </ul> |
|                        | 6.3 Code of practice for bench fitting   | <ul style="list-style-type: none"> <li>◆ Capable to use small typical hand tools and bench fitting techniques in completing tasks of production, installation, maintenance and repairs according to the code of safety</li> </ul>  |
| 7. Assessment Criteria | <p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to make metal pieces to required dimensions according to templates or simple drawings; apply the techniques of marking, sawing, filing, grinding, drilling and chiseling in tasks of production, installation, maintenance and repairs; capable to observe the code of safety.</p> |  |
| 8. Remarks             | This unit of competency is applicable to new entrants of the electrical and mechanical trade.  |  |