

Engineering and manufacturing foundation

Apprenticeship

Knowledge and skills coverage document

Information for providers

Coverage of each knowledge and skill statement must include each and every occupation it is mapped to, unless expressly stated otherwise. For instance, if skill S1 is mapped to occupation 1 and occupation 2, then the range of coverage must include elements of both 1 and 2 so the apprentice benefits from a broad experience.

Competence is to the level described by this Foundation Apprenticeship's knowledge and skills and not the often higher level of the mapped occupations. Coverage will be a blend of on and off the job learning.

Technical Knowledge

- K1. Employee responsibilities under relevant health, safety and welfare regulations (OCC0537A, version 1.3, K2) (OCC0537B, version 1.3, K2) (OCC0537D, version 1.3, K2) (OCC0537F, version 1.3, K2).
- K2. Sustainability principles and practices relevant to the role, including waste disposal and the impact of engineering and manufacturing on the environment (OCC0537A, version 1.3, K2) (OCC0537B, version 1.3, K2) (OCC0537D, version 1.3, K2) (OCC0537F, version 1.3, K2).
- K3. Types, use and storage of personal protective equipment (PPE) (Not mapped to standards)
- K4. The engineering and manufacturing function and role and responsibilities of the operative (OCC0537A, version 1.3, K3) (OCC0537B, version 1.3, K3) (OCC0537D, version 1.3, K3) (OCC0537F, version 1.3, K3) (OCC0537A, version 1.3, K4) (OCC0537B, version 1.3, K4) (OCC0537D, version 1.3, K4) (OCC0537F, version 1.3, K4)
- K5. Workplace safety and operating procedures. What they are and why they are important (OCC0537A, version 1.3, K2) (OCC0537B, version 1.3, K2) (OCC0537D, version 1.3, K2) (OCC0537F, version 1.3, K2).
- K6. Work area preparation and maintenance techniques (OCC0537A, version 1.3, K5) (OCC0537B, version 1.3, K5) (OCC0537D, version 1.3, K5) (OCC0537F, version 1.3, K5)
- K7. Use and characteristics of job specifications, engineering and manufacturing drawings, and technical information (OCC0537A, version 1.3, K1) (OCC0537B, version 1.3, K1) (OCC0537D, version 1.3, K1) (OCC0537F, version 1.3, K1)*

- K8. Use, basic maintenance and storage techniques of tools, equipment and machinery associated with engineering and manufacturing tasks (OCC0537, version 1.3, K6)
- K9. Types and use of common components, connections and fastenings associated with engineering and manufacturing tasks (Not mapped to standards)*
- K10. Techniques to carry out basic hand-based engineering and manufacturing tasks, including measuring and marking out, bench fitting and hand tool tasks (OCC0537A, version 1.3, K4) (OCC0537B, version 1.3, K4) (OCC0537D, version 1.3, K4) (OCC0537F, version 1.3, K4)*
- K11. Techniques to carry out basic machine-based engineering and manufacturing tasks: drilling, milling, turning, grinding, basic Computer Numerical Control (CNC) operations, and additive manufacturing (Not mapped to standards)*
- K12. Methods of assisting in tasks, for example preparatory work, pre-assembly, monitoring equipment, lifting, holding and positioning materials and components (OCC0537A, version 1.3, K4) (OCC0537B, version 1.3, K4) (OCC0537D, version 1.3, K4) (OCC0537F, version 1.3, K4)
- K13. Techniques to carry out simple quality checks: visual inspections and basic operational testing (Not mapped to standards)

Technical Skills

- S1. Comply with employee responsibilities under health, safety and welfare regulations (OCC0537A, version 1.3, S1) (OCC0537B, version 1.3, S1) (OCC0537D, version 1.3, S1) (OCC0537F, version 1.3, S1)
- S2. Dispose of waste safely and sustainably. Segregate resources for reuse and recycling (OCC0537A, version 1.3, S1) (OCC0537B, version 1.3, S1) (OCC0537D, version 1.3, S1) (OCC0537F, version 1.3, S1) (OCC0537A, version 1.3, S8)
- S3. Use and store PPE (OCC0537A, version 1.3, S1) (OCC0537B, version 1.3, S1) (OCC0537D, version 1.3, S1) (OCC0537F, version 1.3, S1)
- S4. Prepare and maintain the work area (OCC0537A, version 1.3, S1) (OCC0537B, version 1.3, S1) (OCC0537D, version 1.3, S1) (OCC0537F, version 1.3, S1) (OCC0537A, version 1.3, S2) (OCC0537B, version 1.3, S2) (OCC0537D, version 1.3, S2) (OCC0537F, version 1.3, S2)
- S5. Interpret engineering and manufacturing information for example, job specifications, engineering and manufacturing drawings, and technical information (OCC0537A, version 1.3, S5) (OCC0537B, version 1.3, S5) (OCC0537D, version 1.3, S5) (OCC0537F, version 1.3, S5)*

- S6. Use and store tools, equipment and machinery associated with engineering and manufacturing tasks, including carrying out basic maintenance (OCC0537A, version 1.3, S6) (OCC0537B, version 1.3, S6) (OCC0537D, version 1.3, S6) (OCC0537F, version 1.3, S6)
- S7. Assist co-workers in engineering and manufacturing activity when required. For example, holding and positioning work-piece assembly (Not mapped to standards)
- S8. Apply techniques to carry out basic hand-based engineering and manufacturing tasks (OCC0537A, version 1.3, S6) (OCC0537B, version 1.3, S6) (OCC0537D, version 1.3, S6) (OCC0537F, version 1.3, S6)*
- S9. Apply techniques to carry out basic machine-based engineering and manufacturing tasks (Not mapped to standards)*
- S10. Carry out simple quality checks of own work (OCC0537A, version 1.3, S5) (OCC0537B, version 1.3, S5) (OCC0537D, version 1.3, S5) (OCC0537F, version 1.3, S5)