

Appendix A — Full table of skill points breakdown for the manufacturing and engineering industries

Skill sector	Skill title	Points	Skill limit
Environmental Awareness	Participate in environmentally sustainable work practices	3	C8
Assembly	Perform manual production assembly	4	C8
Assembly	Perform precision assembly	4	C8
Assembly	Perform sheet and plate assembly	4	C8
Assembly	Perform electronic/electrical assembly (production)	8	C8
Assembly	Rework and repair (electrical/electronic production)	8	C8
Assembly	Set assembly stations	2	C8
Casting & Moulding	Operate melting furnaces	4	C8
Casting & Moulding	Perform gravity die casting	2	C8
Casting & Moulding	Operate pressure die casting machine	4	C8
Casting & Moulding	Prepare and mix sand for metal moulding	4	C8
Casting & Moulding	Operate sand moulding and core making machines	8	C8
Casting & Moulding	Pour molten metal	4	C8
Casting & Moulding	Fettle and trim metal castings/forgings	4	C8
Casting & Moulding	Develop and manufacture wood patterns	20	C8
Casting & Moulding	Produce polymer patterns	8	C8
Casting & Moulding	Assemble plated patterns	8	C8
Casting & Moulding	Develop and manufacture polystyrene patterns	2	C8
Casting & Moulding	Develop and manufacture production patterns	8	C8
Casting & Moulding	Develop and manufacture vacuum forming moulds and associated equipment	6	C8
Casting & Moulding	Develop and manufacture precision models	6	C8
Casting & Moulding	Develop and manufacture gear, conveyor screw and propeller patterns	4	C8
Casting & Moulding	Perform general woodworking machine operations	4	C8
Casting & Moulding	Perform refractory installation and repair	4	C8
Casting & Moulding	Supervise individual ferrous melting and casting operation	4	C5
Casting & Moulding	Supervise individual non-ferrous melting and casting operation	4	C5
Casting & Moulding	Examine appropriateness of methoding for mould design	4	C5
Casting & Moulding	Undertake prescribed tests on foundry related materials	4	C5
Casting & Moulding	Produce moulds and cores by hand	4	C8
Casting & Moulding	Produce moulds and cores by hand (advanced)	12	C8

Skill sector	Skill title	Points	Skill limit
Fabrication	Perform manual soldering/desoldering -electrical/ electronic components	4	C8
Fabrication	Perform high reliability soldering and desoldering	4	C8
Fabrication	Perform soft soldering	2	C8
Fabrication	Perform routine oxy acetylene welding	2	C8
Fabrication	Carry out mechanical cutting	2	C8
Fabrication	Perform brazing and/or silver soldering	2	C8
Fabrication	Perform manual heating and thermal cutting	2	C8
Fabrication	Perform advanced manual thermal cutting, gouging and shaping	2	C8
Fabrication	Perform automated thermal cutting	2	C8
Fabrication	Apply fabrication, forming and shaping techniques	8	C8
Fabrication	Assemble fabricated components	8	C8
Fabrication	Perform routine manual metal arc welding	2	C8
Fabrication	Perform manual production welding	2	C8
Fabrication	Monitor quality of production welding/fabrications	2	C8
Fabrication	Weld using manual metal arc welding process	4	C8
Fabrication	Perform advanced welding using manual metal arc welding process	4	C8
Fabrication	Weld using gas metal arc welding process	4	C8
Fabrication	Perform advanced welding using gas metal arc welding process	4	C8
Fabrication	Weld using gas tungsten arc welding process	4	C8
Fabrication	Perform advanced welding using gas tungsten arc welding process	4	C8
Fabrication	Perform advanced welding using oxy acetylene welding process	6	C8
Fabrication	Weld using submerged arc welding process	4	C8
Fabrication	Perform welding supervision	12	C5
Fabrication	Perform welding/fabrication inspection	12	C5
Fabrication	Apply welding principles	4	C5
Fabrication	Perform aluminothermic welding	2	C8
Fabrication	Repair/replace/modify fabrications	4	C8
Fabrication	Perform geometric development	6	C8
Fabrication	Perform advanced geometric development - cylindrical/rectangular	2	C8
Fabrication	Perform advanced geometric development - conical	2	C8
Fabrication	Perform advanced geometric development - transitions	4	C8

Skill sector	Skill title	Points	Skill limit
Fabrication	Weld using flame powder spraying	4	C8
Fabrication	Perform welds to code standards using flux core arc welding process	8	C5
Fabrication	Perform welds to code standards using gas metal arc welding process	8	C5
Fabrication	Perform welds to code standards using gas tungsten arc welding process	8	C5
Fabrication	Perform pipe welds to code standards using manual metal arc welding process	8	C5
Fabrication	Perform welds to code standards using manual metal arc welding process	8	C5
Fabrication	Weld using flux core arc welding process	4	C8
Fabrication	Perform advanced welding using flux core arc welding process	2	C8
Fabrication	Perform routine gas tungsten arc welding	2	C8
Fabrication	Perform routine gas metal arc welding	2	C8
Fabrication	Select welding processes	2	C8
Fabrication	Apply safe welding practices	4	C8
Fabrication	Set and edit computer controlled thermal cutting machines	4	C5
Fabrication	Write basic NC/CNC programs for thermal cutting machines	4	C5
Fabrication	Weld using oxy fuel gas welding process	4	C8
Fabrication	Perform routine flux core arc welding	2	C8
Fabrication	Perform routine submerged arc welding	2	C8
Fabrication	Perform advanced welding using submerged arc welding	4	C8
Fabrication	Perform welds to code standards using submerged arc welding process	8	C5
Fabrication	Perform welds to code standards using oxy fuel gas welding process	8	C5
Fabrication	Apply basic metallurgy principles to welding applications	8	C5
Fabrication	Apply welding and welding related codes and standards	4	C5
Fabrication	Maintain weld records	4	C8
Fabrication	Undertake advanced weld repair and maintenance	6	C5

Skill sector	Skill title	Points	Skill limit
Forging	Perform hand forging	4	C8
Forging	Perform hammer forging	4	C8
Forging	Carry out heat treatment	6	C8
Forging	Select heat treatment processes and test finished product	4	C8
Forging	Repair springs	4	C8
Forging	Perform basic incidental heat/quenching, tempering and annealing	2	C8
Forging	Hammer forge complex shapes	4	C8
Forging	Hand forge complex shapes	4	C8
Machine & Process Operations	Perform operational maintenance of machines/equipment	2	C8
Machine & Process Operations	Perform precision shaping/planing/slotting operations	4	C8
Machine & Process Operations	Perform machine setting (routine)	4	C8
Machine & Process Operations	Perform machine setting (complex)	8	C8
Machine & Process Operations	Perform general machining	8	C8
Machine & Process Operations	Perform lathe operations	4	C8
Machine & Process Operations	Perform milling operations	4	C8
Machine & Process Operations	Perform grinding operations	4	C8
Machine & Process Operations	Perform precision jig boring operations	4	C8
Machine & Process Operations	Perform tool and cutter grinding operations	4	C8
Machine & Process Operations	Perform complex milling operations	4	C8
Machine & Process Operations	Perform complex grinding operations	4	C8
Machine & Process Operations	Perform machining operations using horizontal and/or vertical boring machines	4	C8
Machine & Process Operations	Perform electro-discharge machining operations (EDM)	4	C8
Machine & Process Operations	Set computer controlled machines/processes	2	C8
Machine & Process Operations	Set and edit computer controlled machines/processes	4	C7
Machine & Process Operations	Write basic NC/CNC programs	4	C5

Skill sector	Skill title	Points	Skill limit
Fabrication	Program NC/CNC machining centre	2	C5
Fabrication	Program multiple spindle and/or multiple axis NC/CNC machining centre	2	C5
Fabrication	Perform complex lathe operations	4	C8
Fabrication	Program CNC wire cut machines	2	C5
Fabrication	Program and set up CNC manufacturing cell	6	C5
Fabrication	Operate and monitor machine/process	4	C8
Fabrication	Perform advanced machine/process operation	6	C8
Fabrication	Perform advanced plastic processing	6	C8
Fabrication	Perform advanced press operations	6	C8
Fabrication	Operate computer controlled machine/processes	2	C8
Fabrication	Perform routine sharpening/maintenance of production tools and cutters	4	C8
Fabrication	Perform metal spinning lathe operations (basic)	8	C8
Fabrication	Perform metal spinning lathe operations (complex)	4	C8
Fabrication	Use workshop machines for basic operations	2	C8
Fabrication	Operate and monitor basic boiler	6	C8
Fabrication	Write programs for industrial robots	4	C5
Fabrication	Set multistage integrated processes	6	C8
Fabrication	Perform production machining	8	C8
Fabrication	Undertake corrections and basic maintenance to aluminium extrusion dies and die support systems	4	C8
Fabrication	Identify causes of faulty aluminium extrusions	6	C8
Fabrication	Test a new aluminium extrusion die	4	C8
Surface Finishing	Perform wire, jig and barrel load/unload work	4	C8
Surface Finishing	Pre-treat work for subsequent surface coating	4	C8
Surface Finishing	Perform electroplating operations	6	C8
Surface Finishing	Finish work using wet, dry and vapour deposition methods	4	C8
Surface Finishing	Prepare and produce specialised coatings	4	C8
Surface Finishing	Produce clear and/or coloured and/or sealed anodised films on aluminium	2	C8
Surface Finishing	Control surface finish production and finished product quality	4	C8
Surface Finishing	Operate and control surface finishing waste treatment process	3	C8
Surface Finishing	Make up solutions	2	C8
Surface Finishing	Manually finish/polish materials	6	C8

Skill sector	Skill title	Points	Skill limit
Surface Finishing	Prepare surfaces using solvents and/or mechanical means	2	C8
Surface Finishing	Prepare surfaces by abrasive blasting (basic)	4	C8
Surface Finishing	Prepare surfaces by abrasive blasting (advanced)	4	C8
Surface Finishing	Apply protective coatings (basic)	4	C8
Surface Finishing	Apply protective coatings (advanced)	4	C8
Surface Finishing	Control blast coating by-products, materials and emissions	1	C8
Surface Finishing	Electroplate engineering coatings	6	C8
Surface Finishing	Electroplate protective finishes	6	C8
Surface Finishing	Electroplate decorative finishes	6	C8
Drawing, drafting & design	Interpret technical drawing	4	C8
Drawing, drafting & design	Prepare basic engineering drawing	8	C8
Drawing, drafting & design	Perform electrical/electronic detail drafting	8	C5
Drawing, drafting & design	Perform basic engineering detail drafting	8	C8
Drawing, drafting & design	Perform advanced engineering detail drafting	4	C5
Drawing, drafting & design	Perform advanced mechanical detail drafting	4	C5
Drawing, drafting & design	Perform advanced structural detail drafting	4	C5
Drawing, drafting & design	Create 2D drawings using computer aided design system	8	C5
Drawing, drafting & design	Create 3D models using computer aided design system	4	C5
Drawing, drafting & design	Apply basic engineering design concepts	6	C8
Drawing, drafting & design	Interpret and produce curved 3-dimensional shapes	4	C8
Drawing, drafting & design	Create 2D code file using computer aided manufacturing system	4	C8
Drawing, drafting & design	Create 3D code files using computer aided manufacturing system	6	C5
Drawing, drafting & design	Prepare mechanical models for computer-aided engineering (CAE)	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Prepare mechatronic models for computer-aided engineering (CAE)	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Perform mechanical engineering design drafting	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Drawing, drafting & design	Perform mechatronics engineering design drafting	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Work effectively in an engineering drafting workplace	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Produce freehand sketches	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Measure and sketch site information	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Produce basic engineering detail drawings	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Produce electrical schematic drawings	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Produce drawings for mechanical services	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Produce drawings for reticulated services	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Detail fasteners and locking devices in mechanical drawings	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Detail bearings, seals and other componentry in mechanical drawings	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Create 3-D solid models using computer-aided design (CAD) system	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Produce drawings or models for industrial piping	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Produce detailed drawings of steel to non-steel connections	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Produce schematic drawings for hydraulic and pneumatic fluid power systems	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Perform advanced engineering detail drafting	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Supervise detail drafting projects	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Interpret and produce curved 3-D shapes and Patterns	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Prepare plans for pipe and duct fabrication	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Drawing, drafting & design	Participate in drafting projects for building services	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Prepare drawings for fabricated sheet metal products	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Apply surface modelling techniques to 3-D drawings	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Create 3-D model assemblies using computer-aided design (CAD) system	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Interpret and maintain or restore original drawings	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Interpret architectural and engineering design specifications for structural steel detailing	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Detail bolts and welds for structural steelwork connections	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Detail standardised structural connections	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Detail structural steel members	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Incorporate structural steel detailing into fabrication and construction project management	No points allocated	Not connected to C-Scale
Drawing, drafting & design	Detail ancillary steelwork	No points allocated	Not connected to C-Scale
Installation & Commissioning	Erect structures	4	C8
Installation & Commissioning	Terminate and connect electrical wiring	3	C8
Installation & Commissioning	Install and test electrical wiring and circuits up to 1000 volts ac and 1500 volts dc	12	C8
Installation & Commissioning	Enter and change programmable controller operational parameters	2	C8
Installation & Commissioning	Commission programmable controller programs	4	C8
Installation & Commissioning	Install machine/plant	4	C8
Installation & Commissioning	Modify control systems	6	C5
Installation & Commissioning	Undertake commissioning procedures for plant and/or equipment	4	C5
Installation & Commissioning	Install refrigeration and air conditioning plant and equipment	4	C8

Skill sector	Skill title	Points	Skill limit
Installation & Commissioning	Install pipework and pipework assemblies	4	C8
Installation & Commissioning	Terminate and connect specialist cables	3	C8
Installation & Commissioning	Install split air conditioning systems and associated pipework	6	C8
Installation & Commissioning	Terminate and test electrical wiring and accessories	4	C8
Installation & Commissioning	Select cable types and sizes to suit loads and electrical installation environment	4	C8
Installation & Commissioning	Select circuit protection devices by type and rating, fit to switchboards and install earthing	2	C8
Installation & Commissioning	Install low voltage cabling and fit-off accessories, appliances and equipment	4	C8
Installation & Commissioning	Inspect, test and verify electrical installations	4	C8
Installation & Commissioning	Commission and decommission high and low voltage equipment or installations	2	C8
Installation & Commissioning	Design and connect control switching of circuits for building services and industrial equipment	4	C8
Installation & Commissioning	Install and troubleshoot luminaires and ancillary equipment	2	C8
Installation & Commissioning	Undertake a capstone assessment	1	C8
Material Handling	Erect/dismantle scaffolding and equipment	4	C8
Material Handling	Erect/dismantle intermediate scaffolding and equipment	4	C8
Material Handling	Coordinate erection/dismantling of complex scaffolding/equipment	4	C8
Material Handling	Undertake dogging	4	C8
Material Handling	Pick and process order	4	C8
Material Handling	Perform production packaging	2	C8
Material Handling	Administer inventory procedures	4	C8
Material Handling	Package materials (stores and warehouse)	2	C8
Material Handling	Handle/move bulk fluids/gases	4	C8
Material Handling	Operate mobile load shifting equipment	4	C8
Material Handling	Undertake manual handling	2	C8
Material Handling	Purchase materials	6	C8
Material Handling	Undertake warehouse receipt process	4	C8
Material Handling	Undertake warehouse dispatch process	4	C8
Material Handling	Manage warehouse inventory system	6	C8

Skill sector	Skill title	Points	Skill limit
Material Handling	Order materials	2	C8
Material Handling	Organise and lead stocktakes	4	C8
Material Handling	Organise and maintain warehouse stock receival and/or dispatch system	6	C8
Material Handling	Undertake tool store procedures	4	C8
Material Handling	Perform advanced warehouse computer operations	4	C8
Material Handling	Perform advanced operation of load shifting equipment	2	C8
Material Handling	Operate fixed/moveable load shifting equipment	4	C8
Material Handling	Operate a bridge and gantry crane	4	C8
Material Handling	Undertake basic rigging	4	C8
Material Handling	Operate a non-slewing mobile crane of greater than three tonnes capacity	4	C8
Measurement	Use comparison and basic measuring devices	2	C8
Measurement	Perform electrical/electronic measurement	2	C8
Measurement	Perform precision mechanical measurement	2	C7
Measurement	Perform precision electrical/electronic measurement	4	C7
Measurement	Calibrate measuring equipment	6	C5
Measurement	Mark off/out (general engineering)	4	C8
Measurement	Mark off/out structural fabrications and shapes	4	C8
Measurement	Measure components using coordinate measuring machines	4	C8
Measurement	Set and operate coordinate measuring machines	2	C8
Measurement	Program coordinate measuring machines	4	C8
Measurement	Program coordinate measuring machines (advanced)	2	C8
Measurement	Perform engineering measurements	5	C8
Measurement	Perform computations	3	C8
Measurement	Use graphical techniques and perform simple statistical computations	2	C5
Measurement	Perform advanced trade calculations in a manufacturing, engineering or related environment	4	C5
Work health & safety	Perform emergency first aid	1	C8
Work health & safety	Undertake occupational health and safety activities in the workplace	3	C8
Work health & safety	Work safely with industrial chemicals and materials	2	C8
Work health & safety	Work safely with molten metals/glass	2	C8

Skill sector	Skill title	Points	Skill limit
Work health & safety	Collect and evaluate occupational health and safety data for an enterprise or section of an enterprise	4	C8
Work health & safety	Maintain water treatment systems for cooling towers	2	C8
Work health & safety	Supervise occupational health and safety in an industrial work environment	4	C5
Work health & safety	Work safely with ionizing radiation	4	C8
Work health & safety	Work safely and effectively in manufacturing and engineering	2	C8
Work health & safety	Work in hazardous areas	2	C8
Work health & safety	Apply safety practices, procedures and compliance standards associated with licensed electrical work	2	C8
Planning	Schedule material deliveries	8	C5
Planning	Undertake basic process planning	8	C5
Planning	Undertake production scheduling	8	C5
Planning	Plan work activities	4	C8
Planning	Apply mechanical engineering analysis techniques	No points allocated	Not connected to C-Scale
Planning	Apply mechatronic engineering analysis techniques	No points allocated	Not connected to C-Scale
Planning	Apply manufactured product design techniques	No points allocated	C8 Not connected to C-Scale
Planning	Apply maintenance engineering techniques to equipment and component repairs and modifications	No points allocated	C8 Not connected to C-Scale
Planning	Integrate mechanical fundamentals into an engineering task	No points allocated	C8 Not connected to C-Scale
Planning	Integrate mechatronic fundamentals into an engineering task	No points allocated	C8 Not connected to C-Scale
Planning	Integrate manufacturing fundamentals into an engineering task	No points allocated	C8 Not connected to C-Scale
Planning	Integrate maintenance fundamentals into an engineering task	No points allocated	C8 Not connected to C-Scale
Quality	Perform basic statistical quality control	2	C8
Quality	Use improvement processes in team activities	4	C8
Quality	Perform inspection	2	C8
Quality	Select and control inspection processes and procedures	4	C8

Skill sector	Skill title	Points	Skill limit
Quality	Conduct product and/or process capability studies	6	C5
Quality	Perform advanced statistical quality control	2	C5
Quality	Perform laboratory procedures	8	C5
Quality	Exercise external quality assurance	6	C5
Quality	Maintain/supervise the application of quality procedures	4	C5
Quality	Examine trading practices	No points allocated	Not connected to C-Scale
Quality	Inspect pre-packed articles	No points allocated	Not connected to C-Scale
Quality	Use and maintain reference standards	No points allocated	Not connected to C-Scale
Quality	Investigate consumer complaints	No points allocated	Not connected to C-Scale
Quality	Conduct a field inspection	No points allocated	Not connected to C-Scale
Quality	Perform verification/certification or in-service inspection	No points allocated	Not connected to C-Scale
Quality	Conduct audits of servicing licensees and public weighbridge licensees	No points allocated	Not connected to C-Scale
Quality	Verify reference standards	No points allocated	Not connected to C-Scale
Communication	Give formal presentations and take part in meetings	2	C5
Communication	Conduct formal interviews and negotiations	4	C8
Communication	Provide advanced customer service	2	C5
Communication	Perform internal/external customer service	2	C8
Communication	Operate as a team member to conduct manufacturing, engineering or related activities	2	C8
Communication	Organise and communicate information	2	C8
Communication	Interact with computing technology	2	C8
Communication	Research and analyse engineering information	2	C5
Communication	Write reports	2	C5
Communication	Communicate with individuals and small groups	2	C5
Communication	Interpret technical specifications and manuals	4	C5
Communication	Operate in a self-directed team	2	C5
Communication	Report technical information	2	C5

Skill sector	Skill title	Points	Skill limit
Training	Assist in development and deliver training in the workplace	2	C5
Training	Conduct workplace assessment	2	C5
Training	Assist in the provision of on the job training	2	C8
Maintenance & diagnostics	Use hand tools	2	C8
Maintenance & diagnostics	Use power tools/hand held operations	2	C8
Maintenance & diagnostics	Use tools for precision work	4	C8
Maintenance & diagnostics	Maintain and overhaul mechanical equipment	4	C8
Maintenance & diagnostics	Perform fault diagnosis, installation and removal of bearings	4	C8
Maintenance & diagnostics	Perform precision fitting of engineering components	6	C8
Maintenance & diagnostics	Maintain and repair mechanical drives and mechanical transmission assemblies	4	C8
Maintenance & diagnostics	Balance equipment	2	C8
Maintenance & diagnostics	Perform precision levelling and alignment of machines and engineering components	4	C8
Maintenance & diagnostics	Perform equipment condition monitoring and recording	4	C5
Maintenance & diagnostics	Shut down and isolate machines/equipment	2	C7
Maintenance & diagnostics	Perform installation and removal of mechanical seals	2	C8
Maintenance & diagnostics	Perform gland packing	2	C8
Maintenance & diagnostics	Manufacture press tools and gauges	8	C8
Maintenance & diagnostics	Maintain tools and dies	4	C8
Maintenance & diagnostics	Analyse plant and equipment condition monitoring results	4	C5
Maintenance & diagnostics	Modify mechanical systems and equipment	8	C5
Maintenance & diagnostics	Maintain pneumatic system components	4	C8
Maintenance & diagnostics	Maintain pneumatic systems	4	C5
Maintenance & diagnostics	Maintain hydraulic system components	4	C8

Skill sector	Skill title	Points	Skill limit
Maintenance & diagnostics	Maintain hydraulic systems	4	C5
Maintenance & diagnostics	Maintain fluid power controls	8	C5
Maintenance & diagnostics	Modify fluid power system operation	8	C5
Maintenance & diagnostics	Fault find/repair electrical equipment/ components up to 250 volts single phase supply	4	C8
Maintenance & diagnostics	Fault find/repair electrical equipment/ components up to 1000 volts ac/1500 volts dc	10	C8
Maintenance & diagnostics	Fault find and repair/rectify basic electrical circuits	12	C8
Maintenance & diagnostics	Disconnect/reconnect fixed wired equipment up to 1000 volts ac/1500 volts dc	3	C7
Maintenance & diagnostics	Disconnect/reconnect fixed wired equipment over 1000 volts ac/1500 volts dc	3	C7
Maintenance & diagnostics	Fault find and repair/rectify complex electrical circuits	6	C8
Maintenance & diagnostics	Modify fluid power control systems	6	C5
Maintenance & diagnostics	Fault find, test and calibrate instrumentation systems and equipment	8	C7
Maintenance & diagnostics	Dismantle, replace and assemble engineering components	3	C8
Maintenance & diagnostics	Diagnose and repair analog equipment and components	10	C7
Maintenance & diagnostics	Maintain/service analog/digital electronic equipment	6	C8
Maintenance & diagnostics	Modify electronic equipment	4	C5
Maintenance & diagnostics	Modify electronic systems	4	C5
Maintenance & diagnostics	Maintain, repair control instrumentation -single and multiple loop control systems	8	C5
Maintenance & diagnostics	Maintain/calibrate complex control systems	8	C5
Maintenance & diagnostics	Install, maintain and calibrate instrumentation sensors, transmitters and final control elements	8	C5
Maintenance & diagnostics	Terminate signal and data cables	4	C8
Maintenance & diagnostics	Maintain instrumentation system components	6	C8
Maintenance & diagnostics	Diagnose and repair digital equipment and components	10	C7

Skill sector	Skill title	Points	Skill limit
Maintenance & diagnostics	Diagnose and repair microprocessor-based equipment	6	C5
Maintenance & diagnostics	Tune control loops -multi controller or multi element systems	6	C5
Maintenance & diagnostics	Maintain, repair instrumentation process control analysers	6	C5
Maintenance & diagnostics	Modify complex electrical circuits and systems	6	C5
Maintenance & diagnostics	Connect/disconnect fluid conveying system components	2	C8
Maintenance & diagnostics	Manufacture fluid conveying conductor assemblies	4	C8
Maintenance & diagnostics	Handle fluorocarbon refrigerants according to regulations	1	C8
Maintenance & diagnostics	Commission and decommission split air conditioning systems	4	C8
Maintenance & diagnostics	Install, service and repair domestic air conditioning and refrigeration appliances	6	C8
Maintenance & diagnostics	Test, recover, evacuate and charge refrigeration systems	4	C8
Maintenance & diagnostics	Service and repair domestic and light commercial refrigeration and air conditioning equipment	6	C8
Maintenance & diagnostics	Maintain and repair commercial air conditioning systems and components	4	C8
Maintenance & diagnostics	Maintain and repair central air handling systems	6	C8
Maintenance & diagnostics	Maintain and repair industrial refrigeration systems and components	6	C8
Maintenance & diagnostics	Maintain and repair multi stage, cascade and/or ultra-cold industrial refrigeration systems	4	C5
Maintenance & diagnostics	Maintain and repair commercial and/or industrial refrigeration and/or air conditioning controls	6	C5
Maintenance & diagnostics	Maintain and repair integrated industrial refrigeration and/or large air handling system controls	8	C5
Maintenance & diagnostics	Service and repair commercial refrigeration	6	C8
Maintenance & diagnostics	Maintain and repair cooling towers/evaporative condensers and associated equipment	4	C8
Maintenance & diagnostics	Maintain, repair/replace and adjust refrigerant flow controls and associated equipment	6	C8
Maintenance & diagnostics	Manufacture cavity dies	8	C8

Skill sector	Skill title	Points	Skill limit
Maintenance & diagnostics	Prepare to perform work associated with fuel system installation and servicing*	2	C8
Maintenance & diagnostics	Fault-find, test and rectify AC machines and circuits	4	C8
Maintenance & diagnostics	Fault-find, test and rectify single and three-phase transformers	4	C8
Maintenance & diagnostics	Fault-find, test and rectify electrical circuits and equipment	4	C8
Maintenance & diagnostics	Dismantle, replace and assemble electrical components and equipment	3	C8
Maintenance & diagnostics	Disconnect and reconnect high voltage fixed wired equipment	3	C7
Maintenance & diagnostics	Terminate communication and data cables	4	C8
Maintenance & diagnostics	Troubleshoot analog and digital electronic equipment	4	C8
Maintenance & diagnostics	Troubleshoot instrumentation systems and equipment	4	C8
Jewellery & horological	Perform jewellery metal casting	6	C8
Jewellery & horological	Prepare jewellery illustrations	4	C8
Jewellery & horological	Handle gem materials	2	C8
Jewellery & horological	Handle and examine gemstone materials	6	C8
Jewellery & horological	Produce three-dimensional precision items	8	C8
Jewellery & horological	Replace watch batteries	1	C8
Jewellery & horological	Perform gemstone setting	6	C8
Jewellery & horological	Prepare jewellery designs	6	C8
Jewellery & horological	Perform investment procedures for lost wax casting process	1	C8
Jewellery & horological	Produce rubber moulds for lost wax casting process	2	C8
Jewellery & horological	Perform wax injection of moulds for lost wax casting process	2	C8
Jewellery & horological	Produce jewellery wax model	4	C8
Jewellery & horological	Produce jewellery metal masters	4	C5
Jewellery & horological	Perform hand engraving	4	C8
Jewellery & horological	Perform jewellery enamelling	4	C8
Jewellery & horological	Construct jewellery components	4	C8
Jewellery & horological	Fabricate jewellery items	6	C8
Jewellery & horological	Repair jewellery items	6	C5
Jewellery & horological	Fault-find and maintain micro-mechanisms	4	C8
Jewellery & horological	Diagnose and service micro-mechanisms	6	C8

Skill sector	Skill title	Points	Skill limit
Jewellery & horological	Perform precision micro-mechanism diagnosis and servicing	6	C8
Jewellery & horological	Apply drawing and rendering techniques to jewellery or object design	No points allocated	Not connected to C-Scale
Jewellery & horological	Use CAD to create and display 3D jewellery and object models	No points allocated	Not connected to C-Scale
Jewellery & horological	Create and present designs for jewellery and other 3D objects	No points allocated	Not connected to C-Scale
Jewellery & horological	Investigate quality and application of jewellery materials	No points allocated	Not connected to C-Scale
Jewellery & horological	Produce life drawings for presenting jewellery and object designs	No points allocated	Not connected to C-Scale
Jewellery & horological	Select materials and new technologies for jewellery and 3D object design applications	No points allocated	Not connected to C-Scale
Jewellery & horological	Produce a professional jewellery design and 3D object portfolio	No points allocated	Not connected to C-Scale
Jewellery & horological	Research and design sustainable objects	No points allocated	Not connected to C-Scale
Jewellery & horological	Produce renderings and technical drawings for jewellery and object design construction	No points allocated	Not connected to C-Scale
Jewellery & horological	Design and implement mechanisms in jewellery items	No points allocated	Not connected to C-Scale
Jewellery & horological	Create silversmithing objects	No points allocated	Not connected to C-Scale
Jewellery & horological	Apply chain manufacture process	No points allocated	Not connected to C-Scale
Jewellery & horological	Plan and apply casting techniques for jewellery and object designs	No points allocated	Not connected to C-Scale
Jewellery & horological	Use specialised techniques to produce jewellery and objects	No points allocated	Not connected to C-Scale
Jewellery & horological	Plan and implement chenier fabrication process	No points allocated	Not connected to C-Scale
Jewellery & horological	Apply traditional techniques to jewellery and 3D object production	No points allocated	Not connected to C-Scale
Jewellery & horological	Plan, conduct and supervise a jewellery and object exhibition	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Jewellery & horological	Create and manufacture jewellery or object design prototypes for the mass market	No points allocated	Not connected to C-Scale
Jewellery & horological	Experiment with jewellery or object designs	No points allocated	Not connected to C-Scale
Jewellery & horological	Render images using computer graphics software	No points allocated	Not connected to C-Scale
Jewellery & horological	Oversee jewellery or object design production	No points allocated	Not connected to C-Scale
Jewellery & horological	Repair and restore antique jewellery	No points allocated	Not connected to C-Scale
Jewellery & horological	Set gems in channel style settings	No points allocated	Not connected to C-Scale
Jewellery & horological	Apply grain setting techniques	No points allocated	Not connected to C-Scale
Jewellery & horological	Set gems in claw and bezel style settings	No points allocated	Not connected to C-Scale
Jewellery & horological	Develop and apply complex borders and decorations for hand engraving	No points allocated	Not connected to C-Scale
Jewellery & horological	Develop and apply heraldic designs for hand engraving	No points allocated	Not connected to C-Scale
Jewellery & horological	Hand carve engraving work	No points allocated	Not connected to C-Scale
Jewellery & horological	Construct multiple stone settings	No points allocated	Not connected to C-Scale
Jewellery & horological	Produce complex objects using silversmithing techniques	No points allocated	Not connected to C-Scale
Jewellery & horological	Create complex findings and mechanisms for jewellery items	No points allocated	Not connected to C-Scale
Jewellery & horological	Fabricate platinum jewellery items	No points allocated	Not connected to C-Scale
Jewellery & horological	Identify and assess opal	No points allocated	Not connected to C-Scale
Jewellery & horological	Handle and store rough and cut opal	No points allocated	Not connected to C-Scale
Jewellery & horological	Complete pre-cutting processes for solid opals	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Jewellery & horological	Cut and polish solid opals	No points allocated	Not connected to C-Scale
Jewellery & horological	Complete pre-cutting processes for opal doublets and triplets	No points allocated	Not connected to C-Scale
Jewellery & horological	Cut and polish an opal doublet/triplet	No points allocated	Not connected to C-Scale
Jewellery & horological	Use opal carving tools	No points allocated	Not connected to C-Scale
Jewellery & horological	Production cut and polish opal	No points allocated	Not connected to C-Scale
Jewellery & horological	Use a faceting machine	No points allocated	Not connected to C-Scale
Jewellery & horological	Cut opal spheres and beads	No points allocated	Not connected to C-Scale
Jewellery & horological	Obtain opal	No points allocated	Not connected to C-Scale
Jewellery & horological	Identify the requirements for establishing an opal-cutting workshop	No points allocated	Not connected to C-Scale
Jewellery & horological	Apply advanced pre-cutting processes to complex opals	No points allocated	Not connected to C-Scale
Locksmithing	Produce keys	4	C8
Locksmithing	Assemble and test lock mechanisms	6	C8
Locksmithing	Install and upgrade locks and hardware	4	C8
Locksmithing	Gain entry	4	C8
Locksmithing	Install and maintain door control devices/systems	2	C8
Locksmithing	Maintain and service mechanical locking devices	6	C8
Locksmithing	Plan and prepare a masterkey system	4	C8
Locksmithing	Develop and implement a masterkey system	6	C5
Locksmithing	Gain entry and reinstate fire and security containers	4	C8
Locksmithing	Gain entry and reinstate automotive locking systems	4	C8
Locksmithing	Service and repair fire and security containers	6	C5
Locksmithing	Service and repair mechanical automotive locking systems	4	C5
Locksmithing	Service automotive transponder systems	2	C5

Skill sector	Skill title	Points	Skill limit
Locksmithing	Perform a site security survey	2	C8
Locksmithing	Produce hand cut keys	2	C8
Locksmithing	Produce keys by cutting to code	2	C8
Locksmithing	Produce keys by duplication and cloning	2	C8
Locksmithing	Identify and program transponder keys	2	C5
Locksmithing	Service automotive transponder systems using diagnostic equipment	2	C5
Locksmithing	Use EEPROM programmers to service automotive transponder systems	2	C5
Locksmithing	Perform a building security inspection	2	C8
Horology	Replace watch batteries, capacitors and bands	2	C8
Horology	Perform watch movement exchange	2	C8
Horology	Perform watch case servicing, repair and refurbishment	4	C8
Horology	Clean watch and clock components	2	C8
Horology	Diagnose faults in quartz watches	2	C8
Horology	Service quartz watches	4	C8
Horology	Service complex quartz watches	4	C8
Horology	Service mechanical watches	4	C8
Horology	Inspect, diagnose, adjust and repair mechanical watches	4	C8
Horology	Service watch power generating systems	2	C8
Horology	Service calendar and other dial indication mechanisms for watches	4	C8
Horology	Service and repair mechanical watch oscillating systems	4	C8
Horology	Service, test and adjust watch escapements	4	C8
Horology	Service mechanical chronograph watches	6	C8
Horology	Perform precision watch timing and adjustment	6	C8
Horology	Install and set up clocks	2	C8
Horology	Service and repair clock timepieces	6	C8
Horology	Service clock escapements and oscillating systems	4	C8
Horology	Service and repair clock striking mechanisms	4	C8
Horology	Service and repair clock chiming mechanisms	6	C8
Horology	Restore clockwork mechanisms	6	C5
Horology	Manufacture watch and clock components	6	C5
Horology	Plan, set up and operate horological workshop or service centre	4	C5

Skill sector	Skill title	Points	Skill limit
Management & Organisation	Perform engineering activities	No points allocated	Not connected to C-Scale
Management & Organisation	Manage self in the engineering environment	No points allocated	Not connected to C-Scale
Management & Organisation	Manage environmental effects of engineering activities	No points allocated	Not connected to C-Scale
Management & Organisation	Coordinate resources for an engineering project or operation	No points allocated	Not connected to C-Scale
Management & Organisation	Coordinate engineering projects	No points allocated	Not connected to C-Scale
Management & Organisation	Coordinate engineering-related manufacturing operations	No points allocated	Not connected to C-Scale
Management & Organisation	Source and estimate engineering materials requirements	No points allocated	Not connected to C-Scale
Management & Organisation	Coordinate continuous improvement and technical development	No points allocated	Not connected to C-Scale
Management & Organisation	Coordinate sales and promotion of engineering-related products or services	No points allocated	Not connected to C-Scale
Engineering Science	Operate and program computers and/or controllers in engineering situations	No points allocated	Not connected to C-Scale
Engineering Science	Apply technical mathematics	No points allocated	Not connected to C-Scale
Engineering Science	Apply statistics and probability techniques to engineering tasks	No points allocated	Not connected to C-Scale
Engineering Science	Apply fluid and thermodynamics principles in engineering	No points allocated	Not connected to C-Scale
Engineering Science	Apply calculus to engineering tasks	No points allocated	Not connected to C-Scale
Engineering Science	Apply advanced algebra and numerical methods to engineering tasks	No points allocated	Not connected to C-Scale
Engineering Science	Apply basic electro and control scientific principles and techniques in aeronautical engineering situations	No points allocated	Not connected to C-Scale
Engineering Science	Select and test mechanical engineering materials	No points allocated	Not connected to C-Scale
Engineering Science	Select and test mechatronic engineering materials	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Engineering Science	Apply scientific principles and techniques in avionic engineering situations	No points allocated	Not connected to C-Scale
Engineering Science	Apply engineering mechanic principles	No points allocated	Not connected to C-Scale
Engineering Science	Select electrical equipment and components for engineering applications	No points allocated	Not connected to C-Scale
Engineering Science	Investigate electrical and electronic controllers in engineering applications	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate hydrodynamic systems and system components	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate thermodynamic systems and components	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate fluid power systems	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate programmable logic controller and related control system component applications	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate microcontroller applications	No points allocated	Not connected to C-Scale
Engineering Science	Apply production and service control techniques	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate continuous improvement processes	No points allocated	Not connected to C-Scale
Engineering Science	Select mechanical machine and equipment components	No points allocated	Not connected to C-Scale
Engineering Science	Analyse loads on frames and mechanisms	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate computer integrated manufacturing systems	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate manufacturing processes	No points allocated	Not connected to C-Scale
Engineering Science	Measure and analyse noise and vibration	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate maintenance systems	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate industrial robotic applications	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Engineering Science	Evaluate thermal loads in heating, ventilation, air conditioning and refrigeration	No points allocated	Not connected to C-Scale
Engineering Science	Coordinate servicing and fault-finding of HVAC/R control systems	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate rapid prototyping applications	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate rapid manufacturing processes	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate rapid tooling applications	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate jigs and fixtures	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate moulding tools and processes	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate stamping and forging tools	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate rolling tools and processes	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate suitability of materials for engineering-related applications	No points allocated	Not connected to C-Scale
Engineering Science	Design a basic single zone duct distribution system	No points allocated	Not connected to C-Scale
Engineering Science	Determine operational parameters for building HVAC hydronic systems	No points allocated	Not connected to C-Scale
Engineering Science	Complete a building thermal performance survey	No points allocated	Not connected to C-Scale
Engineering Science	Determine psychrometric processes and system performance	No points allocated	Not connected to C-Scale
Engineering Science	Apply energy management principles	No points allocated	Not connected to C-Scale
Engineering Science	Contribute to the design of a commercial refrigeration system	No points allocated	Not connected to C-Scale
Engineering Science	Apply codes and regulations to air conditioning designs	No points allocated	Not connected to C-Scale
Engineering Science	Contribute to the design of industrial refrigeration systems	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Engineering Science	Contribute to the design of hydronic systems	No points allocated	Not connected to C-Scale
Engineering Science	Develop energy management solutions	No points allocated	Not connected to C-Scale
Engineering Science	Contribute to the design of commercial and industrial exhaust systems	No points allocated	Not connected to C-Scale
Engineering Science	Contribute to the design of heating systems	No points allocated	Not connected to C-Scale
Engineering Science	Commission and optimise performance of HVAC/R systems	No points allocated	Not connected to C-Scale
Engineering Science	Apply principles of refrigeration food storage technology	No points allocated	Not connected to C-Scale
Engineering Science	Contribute to the design of heat exchanger systems	No points allocated	Not connected to C-Scale
Engineering Science	Analyse and service HVAC/R systems	No points allocated	Not connected to C-Scale
Engineering Science	Plan and manage engineering-related projects or operations	No points allocated	Not connected to C-Scale
Engineering Science	Integrate engineering technologies	No points allocated	Not connected to C-Scale
Engineering Science	Design machines and ancillary equipment	No points allocated	Not connected to C-Scale
Engineering Science	Design for engineering-related noise and vibration mitigation	No points allocated	Not connected to C-Scale
Engineering Science	Design hydrodynamic pumping systems	No points allocated	Not connected to C-Scale
Engineering Science	Evaluate and select thermodynamic systems or sub-systems	No points allocated	Not connected to C-Scale
Engineering Science	Design fluid power systems	No points allocated	Not connected to C-Scale
Engineering Science	Design plant using computer simulations	No points allocated	Not connected to C-Scale
Engineering Science	Design computer-integrated manufacturing systems	No points allocated	Not connected to C-Scale
Engineering Science	Design microcontroller applications	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Engineering Science	Design programmable logic controller applications	No points allocated	Not connected to C-Scale
Engineering Science	Design integrated maintenance management systems	No points allocated	Not connected to C-Scale
Engineering Science	Plan and design engineering-related manufacturing processes	No points allocated	Not connected to C-Scale
Engineering Science	Design a robotic system	No points allocated	Not connected to C-Scale
Engineering Science	Design hydronic heat exchanger systems	No points allocated	Not connected to C-Scale
Engineering Science	Design refrigeration systems	No points allocated	Not connected to C-Scale
Engineering Science	Design exhaust, ventilation and dust collection systems	No points allocated	Not connected to C-Scale
Engineering Science	Design heating, ventilation, air conditioning and refrigeration control systems	No points allocated	Not connected to C-Scale
Engineering Science	Apply finite element analysis in engineering design	No points allocated	Not connected to C-Scale
Engineering Science	Coordinate small lot manufacture using rapid manufacture processes	No points allocated	Not connected to C-Scale
Engineering Science	Apply statistics to technology problems	No points allocated	Not connected to C-Scale
Engineering Science	Apply advanced calculus to technology problems	No points allocated	Not connected to C-Scale
Engineering Science	Apply differential equations to technology problems	No points allocated	Not connected to C-Scale
Engineering Science	Apply advanced mathematics in technology problems	No points allocated	Not connected to C-Scale
Engineering Science	Apply numerical methods to technology problems	No points allocated	Not connected to C-Scale
Engineering Science	Develop and coordinate engineering-related contingency plans	No points allocated	Not connected to C-Scale
Engineering Science	Plan and manage materials supply for an engineering project or manufacturing operation	No points allocated	Not connected to C-Scale
Engineering Science	Produce and manage technical documentation	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Engineering Science	Produce and manage technical publications	No points allocated	Not connected to C-Scale
Engineering Science	Provide specialised technical and engineering guidance to other technical employees	No points allocated	Not connected to C-Scale
Engineering Science	Manage installation, commissioning or modification of machines and equipment	No points allocated	Not connected to C-Scale
Engineering Science	Manage fluid power related technologies in an enterprise	No points allocated	Not connected to C-Scale
Engineering Science	Lead engineering-related quality operations in an enterprise	No points allocated	Not connected to C-Scale
Engineering Science	Manage heating, ventilation, air conditioning and refrigeration systems or projects	No points allocated	Not connected to C-Scale
Engineering Science	Maintain and apply technical and engineering skills	No points allocated	Not connected to C-Scale
Engineering Science	Apply configuration management procedures in engineering project management	No points allocated	Not connected to C-Scale
Engineering Science	Perform maintenance-related integrated logistic support management activities	No points allocated	Not connected to C-Scale
Engineering Science	Apply systems engineering procedures to engineering design project management	No points allocated	Not connected to C-Scale
Non Destructive Testing	Perform basic penetrant testing	2	C8
Non Destructive Testing	Perform penetrant testing	4	C5
Non Destructive Testing	Perform basic magnetic particle testing	2	C8
Non Destructive Testing	Perform magnetic particle testing	4	C5
Non Destructive Testing	Perform basic eddy current testing	2	C8
Non Destructive Testing	Perform eddy current testing	6	C5
Non Destructive Testing	Perform ultrasonic thickness testing	2	C8
Non Destructive Testing	Perform ultrasonic testing	6	C5
Non Destructive Testing	Perform basic radiographic testing	2	C8
Non Destructive Testing	Perform radiographic testing	6	C5
Non Destructive Testing	Establish non-destructive tests	12	C5
Non Destructive Testing	Apply metallurgy principles	4	C5
Marine craft construction	Apply fibre-reinforced materials	2	C8
Non Marine craft construction Testing	Form and integrate fibre-reinforced structures	4	C8
Marine craft construction	Set up marine vessel structures	4	C8

Skill sector	Skill title	Points	Skill limit
Marine craft construction	Fair and shape surfaces	2	C8
Marine craft construction	Construct and assemble marine vessel timber components	8	C8
Marine craft construction	Undertake marine sheathing operations	2	C8
Marine craft construction	Maintain marine vessel surfaces	4	C8
Marine craft construction	Repair marine vessel surfaces and structures	4	C8
Marine craft construction	Form timber shapes using hot processes	2	C8
Marine craft construction	Perform fit out procedures	4	C8
Marine craft construction	Install marine systems	8	C8
Marine craft construction	Install and test operations of marine auxiliary systems	6	C8
Marine craft construction	Produce three-dimensional plugs/moulds	12	C7
Marine craft construction	Perform marine slipping operations	2	C8
Marine craft construction	Assemble and install equipment and accessories/ancillaries	2	C8
Composites	Lay-up composites using open moulding techniques	6	C8
Composites	Lay-up composites using vacuum closed moulding techniques	6	C8
Composites	Lay-up composites using pressure closed moulding techniques	6	C8
Composites	Make basic plugs for composites fabrication	3	C8
Composites	Make basic moulds for composites fabrication	3	C8
Composites	Mark and cut out sheets for composite use	4	C8
Composites	Select and use reinforcing appropriate for product	4	C8
Composites	Select and use resin systems appropriate for product	4	C8
Composites	Select and use cores and fillers appropriate for product	2	C8
Composites	Store and handle composite materials	2	C8
Composites	Determine materials and techniques for a composite component or product	6	C8
Composites	Record and trial work processes for one-off composite products	4	C8

Skill sector	Skill title	Points	Skill limit
Composites	Select and use composite processes or systems appropriate for product	4	C8
Composites	Adjust resin chemicals for current conditions	4	C8
Composites	Select and apply repair techniques	6	C8
Composites	Select and use joining techniques	6	C8
Composites	Prepare composite or other substrate surfaces	4	C8
Composites	Organise composite trials	4	C8
Composites	Finish a composite product	4	C8
Composites	Identify and interpret required standards for composites	2	C8
Fixed & mobile plant	Maintain and repair stationary and mobile plant engine cooling systems	2	C8
Fixed & mobile plant	Test and repair compression ignition systems	4	C8
Fixed & mobile plant	Overhaul engine fuel system components	8	C8
Fixed & mobile plant	Maintain and repair engine lubrication systems	2	C8
Fixed & mobile plant	Tune diesel engines	4	C8
Fixed & mobile plant	Diagnose and rectify batteries, low voltage sensors and circuits	8	C8
Fixed & mobile plant	Diagnose and rectify low voltage starting systems	2	C8
Fixed & mobile plant	Maintain induction, exhaust and emission control systems	4	C8
Fixed & mobile plant	Diagnose and rectify braking systems	6	C8
Fixed & mobile plant	Diagnose and rectify low voltage charging systems	2	C8
Fixed & mobile plant	Maintain track type undercarriage on mobile plant	4	C8
Fixed & mobile plant	Maintain mobile plant suspension systems	4	C8
Fixed & mobile plant	Maintain steering systems	4	C8
Fixed & mobile plant	Diagnose and rectify automatic transmissions	8	C8
Fixed & mobile plant	Diagnose and rectify drive line and final drives	4	C8
Fixed & mobile plant	Diagnose and maintain electronic controlling systems on mobile and stationary plant	4	C8
Fixed & mobile plant	Maintain, fault find and rectify hydraulic systems for mobile plant	4	C8
Fixed & mobile plant	Test, diagnose and rectify mobile and stationary plant external monitoring and control systems	4	C5
Fixed & mobile plant	Diagnose, repair and replace diesel engines in stationary and mobile plant	5	C8
Fixed & mobile plant	Apply knowledge of large combustion engine operations to service and maintenance tasks	2	C8
Fixed & mobile plant	Maintain, fault find and repair stationary plant gas turbine engines	6	C8

Skill sector	Skill title	Points	Skill limit
Fixed & mobile plant	Maintain, fault find and repair traction drive mechanics	4	C8
Fixed & mobile plant	Diagnose and rectify fieldbus circuits in mobile and stationary plant and equipment	4	C8
Fixed & mobile plant	Diagnose and rectify mobile plant hydrostatic systems	4	C5
Fixed & mobile plant	Maintain, diagnose and rectify fluid power controls in mobile equipment	6	C5
Fixed & mobile plant	Service and repair mobile plant air conditioning systems	4	C8
Fixed & mobile plant	Install or modify mobile plant air conditioning systems	4	C5
Fixed & mobile plant	Diagnose and rectify manual transmissions	4	C8
Fixed & mobile plant	Maintain wheels and tyres	2	C8
Fixed & mobile plant	Perform engine bottom-end overhaul	4	C8
Fixed & mobile plant	Perform engine top-end overhaul	8	C7
Fixed & mobile plant	Service combustion engines	2	C8
Fixed & mobile plant	Perform advanced equipment testing and diagnostics on mobile plant and equipment	8	C5
Engineering Technician	Calculate force systems within simple beam structures	No points allocated	Not connected to C-Scale
Engineering Technician	Calculate stresses in simple structures	No points allocated	Not connected to C-Scale
Engineering Technician	Select common engineering materials	No points allocated	Not connected to C-Scale
Engineering Technician	Apply basic economic and ergonomic concepts to evaluate engineering applications	No points allocated	Not connected to C-Scale
Engineering Technician	Contribute to the design of basic mechanical systems	No points allocated	Not connected to C-Scale
Engineering Technician	Set up basic hydraulic circuits	No points allocated	Not connected to C-Scale
Engineering Technician	Set up basic pneumatic circuits	No points allocated	Not connected to C-Scale
Engineering Technician	Apply mathematical techniques in a manufacturing, engineering or related environment	4	C5
Engineering Technician	Assist in the preparation of a basic workplace layout	No points allocated	Not connected to C-Scale
Engineering Technician	Apply basic just in time systems to the reduction of waste	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Engineering Technician	Develop recommendations for basic set up time improvements	No points allocated	Not connected to C-Scale
Engineering Technician	Assist in the analysis of a supply chain	No points allocated	Not connected to C-Scale
Engineering Technician	Use basic preventative maintenance techniques and tools	No points allocated	Not connected to C-Scale
Engineering Technician	Undertake basic process planning	No points allocated	Not connected to C-Scale
Engineering Technician	Use resource planning software systems in manufacturing	No points allocated	Not connected to C-Scale
Engineering Technician	Develop and manage a plan for a simple manufacturing related project	No points allocated	Not connected to C-Scale
Engineering Technician	Prepare a simple production schedule	No points allocated	Not connected to C-Scale
Engineering Technician	Undertake supervised procurement activities	No points allocated	Not connected to C-Scale
Engineering Technician	Prepare a simple cost estimate for a manufactured product	No points allocated	Not connected to C-Scale
Engineering Technician	Participate in quality assurance techniques	No points allocated	Not connected to C-Scale
Engineering Technician	Analyse a simple electrical system circuit	No points allocated	Not connected to C-Scale
Engineering Technician	Select and test components for simple electronic switching and timing circuits	No points allocated	Not connected to C-Scale
Engineering Technician	Prepare basic programs for programmable logic controllers	No points allocated	Not connected to C-Scale
Engineering Technician	Assist in sales of technical products/systems	No points allocated	Not connected to C-Scale
Engineering Technician	Use workshop equipment and processes to complete an engineering project	No points allocated	Not connected to C-Scale
Engineering Technician	Operate computer-aided design (CAD) system to produce basic drawing elements	No points allocated	Not connected to C-Scale
Engineering Technician	Produce basic engineering drawings	No points allocated	Not connected to C-Scale
Engineering Technician	Use computer-aided design (CAD) to create and display 3-D models	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Metallurgy	Test the mechanical properties of materials	No points allocated	Not connected to C-Scale
Metallurgy	Monitor ferrous melting and casting processes	No points allocated	Not connected to C-Scale
Metallurgy	Monitor non-ferrous melting and casting processes	No points allocated	Not connected to C-Scale
Metallurgy	Interpret basic binary phase diagrams	No points allocated	Not connected to C-Scale
Metallurgy	Demonstrate basic knowledge of casting operations	No points allocated	Not connected to C-Scale
Metallurgy	Prepare and examine metallographic samples	No points allocated	Not connected to C-Scale
Metallurgy	Monitor and test sands, cores and moulds	No points allocated	Not connected to C-Scale
Metallurgy	Evaluate mould design and gating	No points allocated	Not connected to C-Scale
Metallurgy	Undertake and interpret results of chemical analysis on metal samples	No points allocated	Not connected to C-Scale
Metallurgy	Determine and supervise heat treatment of metal	No points allocated	Not connected to C-Scale
Metallurgy	Apply basic chemical principles to metallurgy	No points allocated	Not connected to C-Scale
Metallurgy	Calculate and predict chemical outcomes in metallurgical situations	No points allocated	Not connected to C-Scale
Metallurgy	Identify and describe equipment for mineral and chemical processing plants	No points allocated	Not connected to C-Scale
Metallurgy	Recommend a refractory for an application	No points allocated	Not connected to C-Scale
Metallurgy	Select metal forming process	No points allocated	Not connected to C-Scale
Metallurgy	Select metal joining process	No points allocated	Not connected to C-Scale
Metallurgy	Monitor blast furnace operations	No points allocated	Not connected to C-Scale
Metallurgy	Monitor primary steelmaking process	No points allocated	Not connected to C-Scale

Skill sector	Skill title	Points	Skill limit
Metallurgy	Monitor secondary steelmaking operations	No points allocated	Not connected to C-Scale
Metallurgy	Recommend ferrous and non-ferrous metals of alloys for an application	No points allocated	Not connected to C-Scale
Metallurgy	Apply metallurgical principals and techniques in welding and other thermal processes	No points allocated	Not connected to C-Scale
Metallurgy	Apply metallurgy principles and practice to determine metal forming and shaping processes	No points allocated	Not connected to C-Scale
Metallurgy	Apply metallurgy principals and practice to optimise furnace operations	No points allocated	Not connected to C-Scale
Metallurgy	Plan and complete metallurgical projects	No points allocated	Not connected to C-Scale
Metallurgy	Select surface treatment methods for metallic components or products	No points allocated	Not connected to C-Scale
Metallurgy	Analyse metallurgical failures of components and recommend preventative measures	No points allocated	Not connected to C-Scale
Metallurgy	Select non-metallic materials for engineering applications	No points allocated	Not connected to C-Scale
Metallurgy	Determine corrosion prevention strategies for metal and alloys	No points allocated	Not connected to C-Scale
Metallurgy	Interpret complex binary phase diagrams	No points allocated	Not connected to C-Scale
Cotton Ginning	Identify cotton characteristics	No points allocated	Not connected to C-Scale
Cotton Ginning	Gin cotton	No points allocated	Not connected to C-Scale
Cotton Ginning	Control bale or mote press operations	No points allocated	Not connected to C-Scale
Cotton Ginning	Identify factors that impact on cotton quality	No points allocated	Not connected to C-Scale
Boating Services	Classify recreational boating technologies and features	0	E
Boating Services	Work safely on marine craft	1	C8
Boating Services	Follow work procedures to maintain the marine environment	1	C8
Boating Services	Maintain quality of environment by following marina codes	1	C8

Skill sector	Skill title	Points	Skill limit
Boating Services	Refuel vessels	0	E
Boating Services	Check operational capability of marine craft	0	E
Boating Services	Check operational capability of sails and sail operating equipment	0	E
Boating Services	Carry out trip preparation and planning	0	E
Boating Services	Safely operate a mechanically powered recreational boat	2	C8
Boating Services	Respond to boating emergencies and incidents	0	E

Imported training from other industries			
Skill sector	Skill title	Points	Skill limit
Food and Beverage	Operate a process control interface	2	C8
Food and Beverage	Operate and monitor interrelated processes in a production or packaging system	4	C7
Construction	Operate elevated work platforms	3	C8
Construction	Licence to perform dogging	8	C8
Construction	Licence to perform rigging basic level	N/A	C8
Construction	Licence to perform rigging intermediate level	4	C8
Construction	Licence to perform rigging advanced level	4	C8
Construction	Licence to erect, alter and dismantle scaffolding basic level	4	C8
Construction	Licence to erect, alter and dismantle scaffolding intermediate level	4	C8
Construction	Licence to erect, alter and dismantle scaffolding advanced level	4	C8
Construction	Work safely at heights	2	C8
Construction	Work in accordance with an issued work permit	2	C8
Construction	Issue Work Permits	2	C8
Construction	Enter confined space	3	C8
Construction	Coordinate permit process	3	C8
Construction	Apply 5S procedures	4	C8
Construction	Undertake root cause analysis	5	C8
Emergency Response	Operate as part of an emergency control organisation	7	C8
Transport & Logistics	Licence to operate a boom-type elevating work platform (boom length 11 metres or more)	3	C8
Transport & Logistics	Licence to operate a derrick crane	5	C8
Transport & Logistics	Licence to operate a portal boom crane	8	C8

Imported training from other industries			
Skill sector	Skill title	Points	Skill limit
Transport & Logistics	Licence to operate a non-slewing mobile crane (greater than 3 tonnes capacity)	8	C8
Transport & Logistics	Licence to operate a slewing mobile crane (up to 20 tonnes)	6	C8
Transport & Logistics	Licence to operate a slewing mobile crane (up to 60 tonnes)	7	C8
Transport & Logistics	Licence to operate a slewing mobile crane (up to 100 Tonnes)	7	C8
Transport & Logistics	Licence to operate a boom-type elevating work platform (boom length 11 metres or more)	3	C8
Transport & Logistics	Licence to drive a light rigid vehicle	4	C8
Transport & Logistics	Licence to drive a medium rigid vehicle	4	C8
Transport & Logistics	Licence to drive a heavy rigid vehicle	5	C8
Transport & Logistics	Licence to drive a heavy combination vehicle	6	C8
Transport & Logistics	Licence to drive a multi-combination vehicle	6	C8
Transport & Logistics	Licence to operate a reach stacker (greater than 3 tonnes capacity)	4	C8
Electrical	Conduct in-service safety testing of electrical cord connected equipment and cord assemblies	2	C8
Electrical	Apply Occupational Health and Safety regulations, codes and practices in the workplace	2	C8
Fire Safety	Conduct routine inspection and testing of fire extinguishers and fire blankets*	4	C8
Fire Safety	Inspect, test and maintain fire extinguishers	3	C8
Gas	Install and commission stationary gas fuelled reciprocating engines	6	C7
Gas	Repair and maintain stationary gas fuelled reciprocating engines	6	C7
Automotive	Provide technical guidance	4	C8
Business	Show leadership in the workplace	5	C7
Business	Lead and manage team effectiveness	6	C5

Notes

- Skills with no points attached comprise the technical field of work. The technical skills ranking system does not operate on a points-basis at that level, so no points are allocated.
- Skills with no colour in the above table are common skills used by workers in our industries, but sit outside the MEM training package.