

List of Skills for Skills Competitions

A consolidated reference of every trade skill and its indicative testing criteria, covering both the Individual and Team competition categories.

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Individual Category Skills

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Team Category Skills

SECTION ONE

Individual Category

Skills contested by a single competitor, spanning construction trades, manufacturing, digital technology, creative industries and personal services.

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Skills listed in this section

01 3D Digital Game Art

Concept interpretation; 3D modelling; texturing; UV mapping; lighting; asset optimisation; game-engine compatibility; animation fundamentals; artistic quality and technical efficiency.

02 Additive Manufacturing

3D model preparation; design optimisation; slicing; machine setup; material selection; printing; post-processing; dimensional inspection; troubleshooting; sustainable material practices.

03 Aircraft Maintenance

Aircraft maintenance documentation; inspection procedures; mechanical systems; electrical/electronic systems; fault identification; use of maintenance tools; safety procedures; quality assurance and regulatory awareness.

04 Autobody Repair

Damage assessment; panel repair; dent removal; body alignment; welding/repair techniques; filler application; surface preparation; dimensional accuracy; quality inspection; safety.

05 Automobile Technology

Vehicle inspection; mechanical and electrical diagnostics; engine systems; transmission; braking; steering and suspension; electronic systems; fault diagnosis; repair procedures; use of diagnostic tools.

06 Bakery

Ingredient selection and weighing; dough preparation; fermentation; baking techniques; product consistency; decoration; hygiene; food safety; presentation and time management.

07 Beauty Therapy

Client consultation; skin analysis; facial treatments; manicure/pedicure; body and beauty treatments; product selection; hygiene and sanitation; customer care; professional presentation; safety.

08 Bricklaying

Reading drawings; setting out; mortar preparation; brick/block laying; bonding patterns; alignment; level and plumb; corners and openings; finishing; dimensional tolerance; safe work practices.

09 Cabinet Making

Reading technical drawings; material optimisation; precision measurement; cutting and machining; joinery; assembly; fitting of hardware; surface preparation; finishing; dimensional accuracy and quality.

10 Car Painting

Surface preparation; masking; colour matching; primer application; paint mixing; spray painting; clear coat application; defect identification and rectification; finish quality; safety and environmental practices.

11 Carpentry

Interpretation of drawings; measurement and marking; timber/material selection; hand and power tool operation; cutting and shaping; joints; assembly; installation; dimensional accuracy; finishing; workplace safety.

12 Chemical Laboratory Technology

Laboratory safety; sample preparation; chemical handling; analytical techniques; use of laboratory instruments; measurement accuracy; data recording; quality control; waste disposal.

13 Cloud Computing

Cloud architecture; virtual machines/containers; networking; storage; deployment; security; scalability; monitoring; automation; troubleshooting and documentation.

14 CNC Milling

Interpretation of engineering drawings; process planning; CAD/CAM programming; machine setup; tooling selection; work holding; CNC operation; machining accuracy; inspection; optimisation and safety.

15 CNC Turning

Drawing interpretation; process planning; CNC programming; tooling and work holding; machine setup; turning operations; dimensional inspection; surface finish; optimisation and safety.

16 Cooking

Menu interpretation; mise en place; ingredient preparation; cooking techniques; flavour balance; portioning; presentation; hygiene; food safety; time management and waste minimisation.

17 Dental Prosthetics

Interpretation of dental prescription; model preparation; wax-up; fabrication techniques; dental materials handling; fitting and finishing; accuracy; aesthetics; hygiene and laboratory safety.

18 Digital Construction

Interpretation of architectural/engineering drawings; BIM modelling; digital project coordination; quantity extraction; clash detection; construction documentation; model accuracy; collaboration and data management.

19 Digital Interactive Media

Digital content planning; UI/UX principles; interactive design; multimedia integration; animation; usability; content optimisation; technical functionality and creativity.

20 Electrical Installations

Electrical drawing interpretation; wiring installation; conduit/cable management; distribution systems; protection devices; testing; fault finding; earthing; electrical safety and compliance.

21 Electronics

Circuit interpretation; component identification; PCB assembly; soldering; testing; troubleshooting; analogue and digital electronics; measurement instruments; repair and safety.

22 Fashion Technology

Interpretation of design brief; pattern development; fabric selection; cutting; garment construction; machine operation; fitting; finishing; quality control; creativity and sustainability.

23 Floristry

Flower and foliage identification; conditioning and preparation; design principles; bouquet and arrangement preparation; colour harmony; structural techniques; creativity; sustainability; presentation and time management.

24 Graphic Design Technology

Design brief interpretation; typography; layout; image editing; vector graphics; branding; colour management; print/digital output preparation; creativity and technical accuracy.

25 Green Energy

Renewable energy system fundamentals; solar PV installation; electrical connections; system commissioning; energy storage basics; measurement and testing; fault diagnosis; energy efficiency; safety and environmental sustainability.

26 Hairdressing

Client consultation; hair analysis; shampooing and preparation; cutting; colouring; styling; chemical treatments where applicable; finishing; hygiene; customer care and professional standards.

27 Health & Social Care

Person-centred care; communication; basic care procedures; hygiene and infection control; patient/client safety; mobility and support; emergency response fundamentals; documentation; professional ethics and teamwork.

28 Heavy Vehicle Technology

Diagnosis of heavy vehicle systems; engine and drivetrain systems; brakes; suspension; electrical and electronic systems; preventive maintenance; fault rectification; use of diagnostic equipment; safety.

29 Hotel Reception

Guest handling; reservation procedures; check-in/check-out; communication; complaint handling; billing; property management system fundamentals; customer service and professional etiquette.

30 ICT Network Infrastructure

Network design; cabling; switching and routing; IP addressing; wireless systems; configuration; testing; troubleshooting; network security and documentation.

31 Industrial Control

Electrical control systems; PLC programming; sensors and actuators; motor control; HMI configuration; process automation; troubleshooting; commissioning; safety and documentation.

32 Industrial Design Technology

Design research; concept development; sketching; CAD modelling; ergonomics; material/process selection; prototyping; design validation; presentation and innovation.

33 Industrial Mechanics

Mechanical assembly; fitting; alignment; bearings and drives; power transmission; maintenance; fault diagnosis; measurement and precision; preventive maintenance; safety.

34 Intelligence Security Technology

Security monitoring; information analysis; threat identification; surveillance/security technology fundamentals; incident analysis; digital tools; reporting; confidentiality and ethical practices.

35 IT Network Systems Administration

Operating system administration; server configuration; user and access management; network services; virtualisation; backup and recovery; security; troubleshooting and documentation.

36 Jewellery

Design interpretation; metal preparation; measurement; sawing; filing; soldering; stone setting where applicable; assembly; polishing; finishing; precision; material conservation and safety.

37 Joinery

Interpretation of drawings; timber selection; marking and measurement; cutting; preparation of joints; assembly; fitting; installation; dimensional precision; surface finish and safety.

38 Logistics & Freight Forwarding

Shipment planning; documentation; cargo handling; freight calculation; customs and regulatory awareness; route planning; supply chain coordination; digital logistics systems; customer service and problem solving.

39 Mechanical Engineering CAD

Engineering drawing interpretation; 2D drafting; 3D modelling; assemblies; tolerancing; technical documentation; design accuracy; CAD standards; manufacturability considerations.

40 Mobile Applications Development

Requirement interpretation; UI development; coding; database/API integration; mobile functionality; testing; debugging; security; performance optimisation.

41 Optoelectronic Technology

Optical and electronic component handling; fibre/optical systems fundamentals; laser/light-based systems; measurement and testing; alignment; troubleshooting; precision and safety.

42 Painting & Decorating

Surface inspection and preparation; filling and sanding; paint selection and mixing; application techniques; decorative finishes; wallpaper/finishing where applicable; colour matching; quality and uniformity; safety and housekeeping.

43 Patisserie & Confectionery

Preparation of pastries and confectionery products; dough/batter preparation; creams and fillings; chocolate and sugar work; decoration; presentation; precision; hygiene and food safety.

44 Plastering & Drywall Systems

Surface preparation; measurement and setting out; drywall framing; board installation; joint treatment; plaster application; angles and profiles; finishing quality; dimensional accuracy; safety.

45 Plumbing & Heating

Interpretation of plumbing drawings; pipe measurement and cutting; pipe joining; sanitary fixture installation; water supply systems; drainage systems; leak testing; heating systems where applicable; fault identification; safety.

46 Refrigeration and Air Conditioning

RAC system installation; refrigeration cycle understanding; piping and brazing; charging; electrical controls; testing; fault diagnosis; maintenance; energy efficiency and safety.

47 Restaurant Service

Table preparation; menu knowledge; guest interaction; order taking; food and beverage service; sequence of service; billing fundamentals; hygiene; customer satisfaction and professional etiquette.

48 Retail Sales

Customer interaction; needs assessment; product knowledge; sales presentation; billing/POS operations; handling objections; after-sales service; merchandising awareness; communication and professionalism.

49 Software Applications Development

Requirement analysis; algorithm design; programming; database integration; application development; debugging; testing; documentation; code quality and security.

50 Software Testing

Test planning; test case development; functional testing; regression testing; defect reporting; automation fundamentals; performance/security testing concepts; documentation and quality assurance.

51 Unmanned Aerial Systems

UAV assembly; system configuration; flight planning; pre-flight inspection; piloting/operation; sensor and payload operation; data acquisition; maintenance; troubleshooting; aviation safety and regulatory compliance.

52 Visual Merchandising

Interpretation of merchandising brief; product display; space utilisation; colour coordination; lighting principles; visual communication; store presentation; creativity; commercial effectiveness and sustainability.

53 Wall & Floor Tiling

Surface preparation; measurement and layout; cutting and shaping tiles; adhesive application; tile fixing; alignment and spacing; grouting; finishing; waste minimisation; accuracy and aesthetics.

54 Water Technology

Water sampling; water quality testing; treatment processes; filtration; pumping systems; plumbing/process controls; monitoring; troubleshooting; environmental standards; safety.

55 Web Technologies

Web design; HTML/CSS; scripting; responsive design; database integration; server-side concepts; functionality; testing; security and optimisation.

56 Welding

Interpretation of welding drawings/WPS; material preparation; joint preparation; welding process selection; welding execution; weld quality; dimensional accuracy; defect identification; inspection; safety.

SECTION TWO

Team Category

Skills contested by a coordinated team, covering advanced manufacturing, robotics, automation and infrastructure disciplines.

07

Skills listed in this section

01 Concrete Construction Work

Interpretation of drawings and specifications; setting out and measurement; formwork preparation; reinforcement placement; concrete mixing and handling; construction accuracy; finishing quality; teamwork and coordination; safe use of tools and equipment; workplace housekeeping.

02 Cyber Security

Identification of vulnerabilities; network and system security; secure configuration; penetration-testing methodology in controlled environments; threat detection; incident response; digital forensics fundamentals; security documentation; teamwork; compliance with cybersecurity best practices.

03 Landscape Gardening

Interpretation of landscape drawings; site preparation; measurement and setting out; soil preparation; plant selection and handling; hardscape and softscape installation; irrigation basics; aesthetic composition; sustainability; teamwork and safe use of gardening tools.

04 Autonomous Mobile Robotics

Robot assembly and configuration; mechanical integration; sensor integration; programming; navigation and localisation; obstacle detection; autonomous task execution; troubleshooting; optimisation; teamwork and documentation.

05 Robotics System Integration

Interpretation of production requirements; robotic cell design; mechanical and electrical integration; robot programming; sensor and actuator integration; PLC/HMI interfacing; safety systems; commissioning; troubleshooting; teamwork.

06 Mechatronics

Mechanical assembly; pneumatic systems; electro-pneumatic control; PLC programming; sensors and actuators; process control; system commissioning; fault diagnosis; optimisation; documentation and teamwork.

07 Industry 4.0

Industrial automation; IoT integration; sensor networks; data acquisition; cloud/edge connectivity; cyber-physical systems; digital monitoring; predictive maintenance concepts; data analysis; system integration and teamwork.