WorldSkills Standards Specification

Carpentry

Construction and Building Technology

 WSC2019_WSSS26

THE WORLDSKILLS STANDARDS SPECIFICATION (WSSS)

GENERAL NOTES ON THE WSSS

The WSSS specifies the knowledge, understanding, and specific skills that underpin international best practice in technical and vocational performance. It should reflect a shared global understanding of what the associated work role(s) or occupation(s) represent for industry and business (www.worldskills.org/WSSS).

The skill competition is intended to reflect international best practice as described by the WSSS, and to the extent that it is able to. The Standards Specification is therefore a guide to the required training and preparation for the skill competition.

In the skill competition the assessment of knowledge and understanding will take place through the assessment of performance. There will only be separate tests of knowledge and understanding where there is an overwhelming reason for these.

The Standards Specification is divided into distinct sections with headings and reference numbers added.

Each section is assigned a percentage of the total marks to indicate its relative importance within the Standards Specification. This is often referred to as the "weighting". The sum of all the percentage marks is 100.

The Marking Scheme and Test Project will assess only those skills that are set out in the Standards Specification. They will reflect the Standards Specification as comprehensively as possible within the constraints of the skill competition.

The Marking Scheme and Test Project will follow the allocation of marks within the Standards Specification to the extent practically possible. A variation of five percent is allowed, provided that this does not distort the weightings assigned by the Standards Specification.

WORLDSKILLS STANDARDS SPECIFICATION

SECTION		RELATIVE IMPORTANCE (%)
1	**Safe work, organization and management**	**5**
	The individual needs to know and understand: • Task analysis and hazard identification and controls • The appropriate selection and use of personal protective equipment (PPE) • Safe use, care, handling, and storage of tools, equipment, and materials • The importance of interpreting drawings, instructions, and specifications • The importance of time activity planning and attention to detail, in all work practice • The potential environmental impact and sustainability issues associated with a construction project	

	The individual shall be able to: • Comply with relevant health and safety legislation, regulations, and obligations • Identify and control (eliminate, isolate and/or minimize) hazards • Select and use appropriate Personal Protective Equipment when necessary • Safely use, maintain, handle, and store tools, equipment, and materials on site • Complete a project safely, accurately and efficiently, as specified and within a projected timeline • Minimize the environmental impact of a project by efficient work practice, minimizing waste, and by using appropriate equipment	
2	**Business, communication, and interpersonal skills**	**5**
	The individual needs to know and understand: • The roles and responsibilities of parties involved in a construction project including, but not limited to, clients, architects, engineers, and sub trades • Relevant methods of communications between the above parties	
	The individual shall be able to: • Interact with the relevant parties in a construction project • Communicate clearly and comprehensively with parties involved in a construction project.	
3	**Problem solving, innovation, and creativity**	**10**
	The individual needs to know and understand: • Common variables which may affect a construction project such as material availability or material defects • Diagnostic approaches to problem solving • The importance of currency of industry knowledge and likely future developments	
	The individual shall be able to: • Anticipate and pre-empt common variables, for example through material selection. • Solve problems at their root cause, rather than their symptoms • Maintain currency of industry knowledge and trends through research, up-skilling, life-long training, and/or education • Supervise their own work	
4	**Reading and interpreting drawings and written instructions**	**10**
	The individual needs to know and understand: • Relevant conventions used in preparing drawings and written specifications, on paper or through computer assisted drafting (CAD) software and project management software (such as BIM) • How to interpret drawings, written instructions, and specifications • Relevant tolerances for accuracy	

	The individual shall be able to: • Accurately interpret conventionally prepared or Computer Assisted Drafting (CAD) prepared drawings and specifications • Select the correct materials to comply with the drawings and specifications • Where required, extrapolate information, using appropriate means or techniques • Produce work within specified tolerances, or where none are given, to a suitable standard	
5	**Setting out and measuring**	**10**
	The individual needs to know and understand: • The importance of accuracy in all setting out. • The risks and potential consequences of cumulative and compounded errors • Calculations and formulae used both in setting out and confirming accuracy	
	The individual shall be able to: • Set out relevant aspects of a construction project accurately and clearly using conventional measuring tools and digital instruments such as GPS location devices, laser levels, electronic distance measurement devices and digital callipers. • Avoid cumulative and compounded errors • Use appropriate calculations and formulae to confirm accuracy	
6	**Forming joints and preparing members for assembly**	**20**
	The individual needs to know and understand: • The properties of timbers, timber-based construction materials and finished wood materials • Conventional methods of forming joints in timber (called lumber in some countries) • How to select appropriate hand and power tools to cut materials safely and accurately	
	The individual shall be able to: • Confidently work with timber and timber-based materials • Select and safely use hand and power tools to cut joints safely and accurately • Identify and cut joints as specified, or where required can select and cut task appropriate joints	
7	**Assembling project**	**20**
	The individual needs to know and understand: • How to assemble and erect structures, without damage to components, personal risk, or risk to others or property • The appropriate use of fasteners and hardware	

	The individual shall be able to: • Accurately assemble and erect structures without damage to components, personal risk, risk to others, or to property • Select and use specified fasteners, or where required, can select and use appropriate fasteners and hardware	
8	**Finishing**	**20**
	The individual needs to know and understand: • The importance of finishing as specified, or where required finish to an appropriate standard	
	• The individual shall be able to: • Finish to a specification, with attention to surface finishes and avoidance of damage or unsightly marking of components • Produce accurate joints and intersections with no gaps • Attach the members neatly using appropriate fasteners • Where no specification is supplied, finishes to appropriate standards, with attention to the areas above	
	Total	**100**

REFERENCES FOR INDUSTRY CONSULTATION

WorldSkills is committed to ensuring that the WorldSkills Standards Specifications fully reflect the dynamism of internationally recognized best practice in industry and business. To do this WorldSkills approaches a number of organizations across the world that can offer feedback on the draft Description of the Associated Role and WorldSkills Standards Specification on a two-yearly cycle.

In parallel to this, WSI consults three international occupational classifications and databases:

- ISCO-08: (http://www.ilo.org/public/english/bureau/stat/isco/isco08/)
- ESCO: (https://ec.europa.eu/esco/portal/home)
- O*NET OnLine (www.**oneto**nline.org/)

This WSSS (Section 2) appears most closely to relate to *Carpenter*:
http://data.europa.eu/esco/occupation/2a22ff9e-de3b-408d-b312-5034896cc4f4
or *Construction Carpenters*: https://www.onetonline.org/link/summary/47-2031.01

Adjacent occupations can also be explored through these links.