FFSC FURNITURE & FITTINGS SKILL COUNCIL
कुशल • सक्षम • आत्मनिर्भर

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP

N·S·D·C RE IMAGINE FUTURE

Skill India
कौशल भारत-कुशल भारत

Model Curriculum

QP Name: Joiner (WorldSkills)

QP Code: FFS/Q0903

QP Version: 1.0

NSQF Level: 4.5

Model Curriculum Version: 1.0

Furniture and Fittings Skill Council || Furniture and Fittings Skill Council (FFSC), 407-408, DLF City Court, MG Road, Sikanderpur, Gurgaon - 122002

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Training Parameters

Sector	Interiors, Furniture and Fixtures
Sub-Sector	Furniture Design & Production
Occupation	Furniture Production (Work Shop)
Country	India
NSQF Level	4.5
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7115.0500
Minimum Educational Qualification and Experience	As per WorldSkills and IndiaSkills criteria
Minimum Level of Education for Training in School	NA
Prerequisite License or Training	NA
Minimum Job Entry Age	14 Years
Last Reviewed on	
Next Review Date	
NSQC Approval Date	
Q.P. Version	1.0
Model Curriculum Creation Date	
Model Curriculum Valid Up to Date	
Model Curriculum Version	1.0
Minimum Duration of the Course	510 Hrs.
Maximum Duration of the Course	510 Hrs.

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills:

- Highlight the key components and trace the historical evolution of the Interiors, Furniture, and Allied Industry
- Define the role, enumerate responsibilities, and proficiently use essential tools
- Demonstrate comprehension of WorldSkills competition structure, objectives, and showcase acquired skills
- Conduct thorough site assessments considering environmental factors
- Comprehend and execute drawings accurately for project implementation
- Fabricate joints with precision, ensuring structural integrity
- Plan materials efficiently and execute accurate setting out for projects
- Demonstrate proficiency in processing materials for joinery projects
- Fabricate jigs with precision for efficient component manufacturing
- Prepare components accurately in alignment with project specifications
- Execute joint fabrication techniques with precision and craftsmanship
- Conduct assembly trials and finalize product assembly with meticulous attention to detail
- Apply finishing techniques to joinery products with attention to quality
- Install joinery products efficiently, ensuring proper fit and functionality
- Adhere to safety compliance protocols for a secure work environment
- Plan work areas efficiently to optimize productivity and resource utilization
- Evaluate personal work efficiency and conduct continuous self-assessment
- Manage relationships effectively, fostering collaboration with team members and stakeholders
- Apply a structured decision framework and collaborate effectively with suppliers
- Demonstrate precision in budgeting and stay informed about market trends and insights
- Exhibit adaptability and innovative approaches in the execution of joinery projects
- Communicate effectively and continuously seek ways to enhance the quality of joinery work

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module(s)	**30:00**	**00:00**	**00:00**	**00:00**	**30:00**
Module 1: Introduction to the Interiors, Furniture, and Allied Industry	10:00	00:00	00:00	00:00	10:00
Module 2: Introduction to the role of a Joiner	08:00	00:00	00:00	00:00	08:00

Module 3: Introduction to World Skills Competition	12:00	00:00	00:00	00:00	12:00
FFS/N0914 – Perform site recce and prepare the product drawings NOS Version No. 1 NSQF Level- 4.5	**24:00**	**66:00**	**00:00**	**00:00**	**90:00**
Module 4: Environmental Site Assessment	04:00	12:00	00:00	00:00	16:00
Module 5: Drawing Comprehension and Execution	12:00	22:00	00:00	00:00	34:00
Module 6: Precision Joint Fabrication	08:00	32:00	00:00	00:00	40:00
FFS/N0915 – Select and prepare the materials into required specifications and dimensions NOS Version No. 1 NSQF Level- 4.5	**28:00**	**92:00**	**00:00**	**00:00**	**120:00**
Module 7: Material Planning and Setting out	12:00	24:00	00:00	00:00	36:00
Module 8: Material Processing	08:00	38:00	00:00	00:00	46:00
Module 9: Jig Fabrication	08:00	30:00	00:00	00:00	38:00
FFS/N0916 – Prepare the components with internal and external joints to perform product assembly NOS Version No. 1 NSQF Level- 4.5	**28:00**	**92:00**	**00:00**	**00:00**	**120:00**
Module 10: Component Preparation	08:00	30:00	00:00	00:00	38:00
Module 11: Joint Fabrication	12:00	38:00	00:00	00:00	50:00
Module 12: Product Assembly Trial and Finalization	08:00	24:00	00:00	00:00	32:00
FFS/N0917 – Perform the product finishing and installation based on design specifications NOS Version No. 1 NSQF Level- 4.5	**24:00**	**66:00**	**00:00**	**00:00**	**90:00**
Module 13: Product Finishing	12:00	28:00	00:00	00:00	40:00

Module 14: Product Installation	12:00	38:00	00:00	00:00	50:00
FFS/N8211 – Execute joinery work with safety and adherence to workplace management standards NOS Version No. 1 NSQF Level- 4.5	**12:00**	**18:00**	**00:00**	**00:00**	**30:00**
Module 15: Safety Compliance	04:00	06:00	00:00	00:00	10:00
Module 16: Efficient Work area Planning	04:00	06:00	00:00	00:00	10:00
Module 17: Work Efficiency and Self-Assessment	04:00	06:00	00:00	00:00	10:00
FFS/N8212 – Display effective communication and professional skills at workplace NOS Version No. 1 NSQF Level- 4.5	**12:00**	**18:00**	**00:00**	**00:00**	**30:00**
Module 18: Effective Relationship Management	02:00	04:00	00:00	00:00	06:00
Module 19: Decision Framework and Supplier Collab	02:00	04:00	00:00	00:00	06:00
Module 20: Budgeting Precision and Market Insight	02:00	04:00	00:00	00:00	06:00
Module 21: Adaptability and Innovation	02:00	02:00	00:00	00:00	04:00
Module 22: Communication and Quality Enhancement	04:00	04:00	00:00	00:00	08:00
Total Duration	**158:00**	**352:00**	**00:00**	**00:00**	**510:00**

Module Details

Module 1: Introduction to the Interiors, Furniture, and Allied Industry

Bridge Module

Terminal Outcomes:

- Explain the functioning of the furniture industry.
- Describe the segments of the furniture industry.
- Explain the scope and significance of the furniture industry.

Duration: *10:00*	**Duration**: *00:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the scope and significance of the furniture industry. • Discuss the various segments of the furniture industry and how they function. • Explain various types and categories of furniture. • Describe the types of allied or enabling industries involved in furniture manufacturing. • Describe the relationship between interiors and the furniture industry. • Classify different types of Interior projects. • Describe the occupational map of the furniture industry. • Explain the significance of the Interiors, Furniture, and Allied industries.	
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
N.A.	

Module 2: Introduction to the role of a Joiner

Bridge Module

Terminal Outcomes:

- Explain the role and responsibilities of a Joiner
- Discuss the scope of work for a Joiner

Duration: *08:00*	**Duration**: *00:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Elaborate on the various organizational structure, processes, code of conduct, reporting matrix, and escalation hierarchy. • Explain the role, responsibilities, and limitations of a Joiner • Describe the attributes and basic skill sets required for a Joiner • Explain the process of communication with team members and supervisors as per the protocol of the organization. • List all the documents required to carry out the job, such as a job sheet and checklist for oneself. • List the various operations/activities that take place at the worksite and Joiner's role in the same. • Discuss the regulatory authorities, laws, and regulations related to an individual while working in the Furniture and Fittings Industry. • Discuss the career path for the Joiner job role. • Explain the nature of work, timeliness, and requirement.	
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
N.A.	

Module 3: Introduction to World Skills Competition

Bridge Module

Terminal Outcomes:

- Explain the significance and scope of the WorldSkills Competition.
- Explain the participation criterion for WorldSkills Competition.

Duration: *12:00*	**Duration**: *00:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• State the significance of the World Skills Organization. • Discuss the different categories of sectors and trades as per the WorldSkills Competition. • Describe the selection criteria for the WorldSkills and India Skills Competition. • Discuss various trades related to the Furniture and Fittings sector in the WorldSkills Competition. • List out the skill set required for the Carpentry trade in the World Skills Competition. • Discuss the career prospectus associated with the WorldSkills and India Skills Competition. • Explain how to participate in the World skills competition.	
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
N.A.	

Module 4: Environmental Site Assessment

Mapped to FFS/N0914, v 1.0

Terminal Outcomes:

- Demonstrate proficiency in site assessment and environmental evaluation.
- Showcase advanced teamwork and communication skills, collaborating with experts and measuring the installation area

Duration: *04:00*	**Duration**: *12:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain how environmental factors impact the design and construction process. • Describe how collaboration with specialists contributes to better site insights and influences the construction process. • Explain the importance of accurate measurements in construction.	• Apply practical knowledge to evaluate environmental conditions, understanding their impact on construction. • Demonstrate the ability to engage with specialists, extracting valuable insights for the construction process • Utilize practical skills to measure and record accurate dimensions of the site for construction planning.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional)	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 5: Drawing Comprehension and Execution

Mapped to FFS/N0914, v 1.0

Terminal Outcomes:

- Interpret drawing dockets precisely for high-quality construction, considering design intent.
- Determine and check construction material quantities, emphasizing waste minimization and cost-effectiveness.
- Produce meticulous drawings adhering to scale and full-size specifications, with accurate dimensional annotations.
- Utilize geometric methods adeptly to determine missing complex angles, joints, and intersections, ensuring clear and accurate line.

Duration: *12:00*	**Duration**: *22:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe how drawing dockets guide construction, considering design intent. • Explain the considerations for minimizing waste and ensuring cost-effectiveness in material quantity determination. • Describe how clarity in drawings reduces potential issues in the construction process. • Explain how detailed drawings contribute to high-quality construction. • Explain how annotation provides dimensional points, specifications, conventions, and notes in full-scale drawings. • Explain how geometric methods aid in determining complex angles and intersections. • Explain the importance of straight, crisp, and accurate lines in drawings. • Explain how different line types effectively convey various elements in design and construction.	• Apply practical insights to interpret drawing dockets with precision, optimizing for quality construction and design alignment. • Demonstrate practical skills in determining and verifying material quantities, emphasizing waste reduction and cost-effectiveness. • Apply practical knowledge to clarify and rectify drawing discrepancies, ensuring accurate and error-free information for construction. • Apply practical drawing skills to create detailed and accurate drawings following specifications, considering both scale and full size. • Demonstrate practical proficiency in annotating drawings with dimensional points, specifications, and relevant conventions.. • Apply practical geometric methods for accurate determination of complex angles and intersections in construction. • Demonstrate practical skills in producing lines that are straight, accurate, and maintain consistent thickness, meeting design requirements. • Apply practical understanding to ensure that line types convey various design and construction elements effectively in drawings.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 6: Precision Joint Fabrication

Mapped to FFS/N0914, v 1.0

Terminal Outcomes:

- Demonstrate advanced proficiency in joinery by creating accurate, proportioned, and design-aligned joint details.
- Exhibit meticulous attention to detail, ensuring all measurements in working drawings meet specified requirements and align with project specifications.

Duration: *08:00*	**Duration**: *32:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain how accurate joint details contribute to overall design alignment. • Explain how meeting specified requirements in measurements ensures project alignment.	• Demonstrate practical expertise in producing accurate joint details, ensuring proper proportions and alignment with the overall design intent. • Apply practical skills to ensure that measurements in working drawings meet specified requirements and align with project specifications.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 7: Material Planning and Setting out

Mapped to FFS/N0915, v 1.0

Terminal Outcomes:

- Demonstrate advanced material knowledge by selecting defect-free materials, enhancing the overall appearance of the finished product.
- Showcase proficiency in material selection by assessing chosen materials for functionality, durability, and adherence to industry standards.
- Exhibit advanced planning skills by preparing cutting lists based on finished and raw dimension specifications.
- Demonstrate precision in fabrication processes, including meticulous material set-out, face marking, and labeling, utilizing both traditional and digital tools with advanced proficiency.

Duration: *12:00*	**Duration**: *24:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the properties of wood materials, methods to identify defects, and techniques for enhancing appearance. • Describe how material properties, functionality, durability, and industry standards are considered in material selection. • Explain how to read cutting lists and interpret finished and raw dimension specifications. • Describe layout techniques, measuring methods, and the importance of precision in setting out materials. • Explain face marking techniques, the significance of final dimensions, and maintaining fidelity to design specifications. • Describe the use of digital tools and technology for accurate measurement determination and material set out. • Explain the importance of labeling for organization and clarity in the fabrication process.	• Employ material selection skills by choosing suitable wood, avoiding defects, and enhancing the appearance of the finished product. • Apply material assessment skills by evaluating the suitability of chosen materials based on functionality, durability, and industry standards outlined in drawings. • Demonstrate proficiency in preparing cutting lists based on finished and raw dimension specifications for accurate fabrication. • Display skills in setting out materials by employing layout techniques, precise measuring methods, and ensuring accuracy in measurements, sections, angles, mitres, and joints. • Display skills in performing face marking by accurately marking final dimensions and shapes for fabrication, ensuring fidelity to design specifications. • Employ digital tools and technology for precise measurement determination and material set out in the fabrication process • Demonstrate labeling proficiency by appropriately labeling materials and items throughout the fabrication process to maintain organization and clarity.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 8: Material Processing

Mapped to FFS/N0915, v 1.0

Terminal Outcomes:

- Demonstrate advanced proficiency in precision cutting, performing sawing of materials considering grain direction and project requirements.
- Showcase advanced skills in material treatment for drying and achieving "squareness" and desired thickness through planing.

Duration: *08:00*	**Duration**: *38:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain various sawing techniques and the impact of grain direction and project requirements on sawing. • Describe the importance of drying materials and the moisture content requirements for different projects. • Explain planing techniques and the importance of achieving "squareness" and desired thickness in materials.	• Demonstrate proficiency in sawing by accurately cutting materials according to specifications in the material list • Implement proper drying techniques to set sawn materials, ensuring the right moisture content suitable for different project requirements. • Display planing proficiency by employing appropriate techniques to achieve "squareness" and the desired thickness in materials through the planing process.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 9: Jig Fabrication

Mapped to FFS/N0915, v 1.0

Terminal Outcomes:

- Demonstrate advanced proficiency by accessing jig requirements and selecting suitable tools, materials, and specifications for fabrication.
- Showcase advanced skills in jig fabrication, producing accurate jigs for stationary machines based on drawing

Duration: *08:00*	**Duration**: *30:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Describe the purpose of jigs and the different types of jigs and their applications. • Explain the selection criteria for tools, materials, and process specifications for jig fabrication. • Explain the importance of safety in jig fabrication and reading drawings accurately for precision.	• Employ suitable methods to assess part specifications and determine the requirement of jigs for effective woodworking processes. • Demonstrate selection skills by choosing the appropriate tools, materials, and process specifications for effective jig fabrication. • Implement safety measures and accuracy in the manufacturing process by producing jigs for stationary machines based on drawings.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 10: Component Preparation

Mapped to FFS/N0916, v 1.0

Terminal Outcomes:

- Demonstrate advanced proficiency in machine operations for precision cutting and shaping elements, aligning with design specifications.
- Showcase advanced woodworking skills by skillfully utilizing machines to form grooves, rebates, and mouldings, and adapting elements to meet evolving project requirements and design alterations.

Duration: *08:00*	**Duration**: *30:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the procedures and specifications for cutting woodworking panels. • Describe the role of jigs on stationary machines in shaping elements to design specifications. • Explain the operations of woodworking machines for forming grooves, rebates, and moldings. • Describe the process of adapting and refining shaped elements to meet evolving project requirements and design alterations.	• Apply cutting procedures skilfully using a cutting machine to achieve required specifications for woodworking panels. • Utilize jigs proficiently on stationary machines to produce shaped elements aligned with design specifications. • Demonstrate skilful operation of woodworking machines to form grooves, rebates, and moldings with precision and accuracy. • Display proficiency in adapting and refining shaped elements as needed to meet evolving project requirements and design alterations.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 11: Joint Fabrication

Mapped to FFS/N0916, v 1.0

Terminal Outcomes:

- Demonstrate advanced joinery proficiency, ensuring precise joint preparation with accurate measurements and intersections, leaving no gaps.
- Showcase advanced skills in tool selection and utilization, using appropriate hand tools and machines for joint preparation.
- Exhibit advanced proficiency in joint fabrication, producing mortices and haunches to specified dimensions and preparing joints that align with the drawing.

Duration: *12:00*	**Duration**: *38:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the principles and importance of accurate measurements and gap-free intersections in joint preparation. • Describe the selection and usage of appropriate hand tools and machines for joint preparation. • Explain the specifications and requirements for producing mortices and haunches as per drawing. • Describe the principles ensuring parallelism, cleanliness, and correct sizing in joint preparation. • Explain the importance of squareness in faces, edges, and shoulders in joint preparation. • Describe the process of achieving snug fits in joints and the importance of a smooth "push fit". • Explain the checks necessary for assessing the strength and durability of joints. • Describe the process of comparing joint geometry with the product drawing and its significance.	• Apply principles with precision to undertake joint preparation with accurate measurements and gap-free intersections. • Employ suitable tools and machines adeptly for joint preparation, ensuring accuracy and efficiency in the process. • Demonstrate precision in producing mortices and haunches to the specified depth, width, and length as per drawing requirements. • Implement principles effectively to prepare joints that are parallel, clean, and correct in size according to drawing specifications. • Display attention to detail by ensuring faces, edges, and all shoulders are square straight and to the drawing specifications. • Practice achieving snug fits in joints, ensuring a smooth "push fit" without excessive tightness or looseness, for optimal results. • Implement checks rigorously to ensure joints meet standards of strength and durability, verifying their structural integrity. • Employ thorough checks to confirm that joint geometry aligns with the product drawing, ensuring precise adherence to specifications.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 12: Product Assembly Trial and Finalization

Mapped to FFS/N0916, v 1.0

Terminal Outcomes:

- Demonstrate advanced assembly proficiency through seamless trial assembly, addressing discrepancies.
- Showcase advanced knowledge in adhesive application, applying glue evenly and attaching edging with precision.
- Exhibit advanced skills in joint quality assurance, ensuring completeness, alignment, and overall quality in assembled components.

Duration: *08:00*	**Duration**: *24:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of trial assembly in verifying seamless fit and conformity to drawing specifications. • Describe the processes and significance of rectification in addressing discrepancies post-trial assembly. • Explain the types of glues, their properties, and factors influencing glue selection. • Describe techniques for applying glue evenly and attaching edging with precision. • Explain the criteria for complete, well-finished joints aligned with specifications. • Describe techniques for inspecting joints to verify completeness and quality.	• Demonstrate meticulousness by performing trial assembly to ensure seamless fit, gap-free joints, and strict adherence to drawing specifications. • Apply corrective measures proficiently to rectify any discrepancies identified during trial assembly, ensuring final product alignment with specifications. • Apply knowledge in glue selection by choosing and preparing the appropriate glue for assembly based on material compatibility and project requirements. • Demonstrate precision in glue application by applying glue evenly and attaching edging without twists, ensuring a square and well-aligned attachment. • Verify joint completeness and quality by ensuring joints are complete, well-finished, and precisely aligned according to project specifications. • Proficiently inspect joints in assembled components, ensuring their completeness and high-quality alignment as per project specifications.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 13: Product Finishing

Mapped to FFS/N0917, v 1.0

Terminal Outcomes:

- Demonstrate advanced proficiency in finalizing products to drawing specifications, ensuring adherence to quality standards.
- Exhibit advanced understanding of customer or trade quality requirements for further processes.
- Showcase advanced finishing skills by using appropriate tools for surface smoothening, hand and/or machine sanding, and preparing durable edging for protection.

Duration: *12:00*	**Duration**: *28:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of interpreting and following design specifications. • Describe quality standards in woodworking and their importance. • Explain sanding techniques and the use of appropriate tools in woodworking. • Describe edging techniques and their role in protection and durability. • Explain the significance of maintaining surface quality during assembly. • Describe procedures for identifying and resolving defects in woodworking.	• Employ knowledge in interpreting and following design specifications to complete the product according to outlined standards. • Apply knowledge of quality standards to interpret requirements for further processes as required by customers or trades. • Demonstrate proficiency in using appropriate tools for sanding, achieving a specified standard for the product surface. • Display competence in preparing edging for protection, ensuring the durability and longevity of the woodworking product. • Implement practices to maintain the quality of the surface during assembly and installation, avoiding defects or chips. • Practice defect resolution by addressing and resolving any defects identified during the quality checking process.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 14: Product Installation

Mapped to FFS/N0917, v 1.0

Terminal Outcomes:

- Demonstrate advanced proficiency in project coordination by planning installations, repairs, or maintenance to meet customer and trade expectations.
- Showcase advanced attention to detail by checking the quality and completeness of components before installation, addressing identified discrepancies.
- Exhibit advanced knowledge in fittings selection, evaluating and choosing based on functional requirements and aesthetic considerations

Duration: *12:00*	**Duration**: *38:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of planning and coordination for installations, repairs, or maintenance. • Describe quality checks and procedures for addressing discrepancies before installation. • Explain the importance of considering both functional and aesthetic aspects in fittings selection. • Describe the procedures for evaluating and adjusting component positioning or fixing during installation. • Explain the significance of preventing damage to finishes during woodworking installations. • Describe the importance of regular quality checks to prevent defects or detect errors during installation. • Explain the importance of thorough cleaning post-installation.	• Demonstrate effective planning skills to meet customer and related trades needs and expectations during installations, repairs, or maintenance. • Apply quality checks rigorously to ensure the completeness of components before installation and address any identified discrepancies or issues. • Implement knowledge in fittings selection, considering both functional requirements and aesthetic considerations for optimal outcomes. • Display competence in evaluating and adjusting component positioning or fixing as necessary during the installation process. • Practice prevention methods to ensure the protection of finishes during the installation process, avoiding any damage. • Incorporate regular quality checks during installation to avoid defects or errors that could be detected at a later stage. • Execute cleaning procedures effectively to ensure the installed product is thoroughly cleaned before handover to the customer.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 15: Safety Compliance

Mapped to FFS/N8211, v 1.0

Terminal Outcomes:

- Demonstrate advanced adherence to health and safety standards in construction environments.
- Exhibit advanced commitment to workplace safety, ensuring a secure working environment.
- Showcase advanced safety practices, including proper use and storage of tools, equipment, materials, and personal protective equipment.

Duration: *04:00*	**Duration**: *06:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of adhering to health and safety standards in construction. • Describe strategies for maintaining a safe working environment in construction. • Explain the significance of various PPE in construction, including footwear, ear and eye protection, and dust protection. • Explain the importance of safe practices in using, cleaning, maintaining, and storing hand and powered tools and equipment. • Describe the principles of safe material handling and storage in accordance with established safety guidelines.	• Consistently adhere to and implement health and safety standards on construction sites. • Implement measures to ensure a safe working environment, prioritizing well-being for oneself and others. • Identify and use the necessary PPE, including safety footwear, ear and eye protection, and dust protection. • Demonstrate safe and proper techniques in the use, cleaning, maintenance, and storage of tools and equipment. • Apply safe practices in the selection, use, and storage of materials, following established safety guidelines.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 16: Efficient Workarea Planning

Mapped to FFS/N8211, v 1.0

Terminal Outcomes:

- Optimize work areas efficiently by planning and integrating regular tidying and cleaning practices
- Ensure resource efficiency by measuring accurately to avoid wastage

Duration: *04:00*	**Duration**: *06:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the principles of workspace planning and optimization for efficiency, including tidying and cleaning practices. • Describe accurate measurement techniques to minimize wastage and ensure efficient use of resources.	• Employ efficient planning techniques to optimize the workspace, integrating regular tidying and cleaning practices. • Apply accurate measurement techniques to minimize wastage, ensuring the efficient use of resources.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 17: Work Efficiency and Self-Assessment

Mapped to FFS/N8211, v 1.0

Terminal Outcomes:

- Demonstrate advanced efficiency in work, regularly checking progress for sustained productivity.
- Exhibit advanced self-assessment, identifying areas for improvement, and implementing corrective measures for continuous improvement.

Duration: *04:00*	**Duration**: *06:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the principles of efficient work practices and productivity monitoring. • Describe self-assessment techniques and corrective measures in woodworking.	• Demonstrate efficient work practices by regularly checking progress and outcomes, maintaining high productivity. • Implement self-assessment techniques to evaluate personal work, identifying areas for improvement and applying corrective measures.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 18: Effective Relationship Management

Mapped to FFS/N8212, v 1.0

Terminal Outcomes:

- Earn customer trust through effective interpretation, positive expectation management, and reliable commitment delivery.
- Visualize and interpret customer desires, offering advice that enhances their design and budget preferences.

Duration: *02:00*	**Duration**: *04:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain why building customer trust is crucial through interpreting needs, managing expectations, and delivering on commitments. • Describe the process of visualizing and advising to meet design and budget needs.	• Implement strategies to foster customer trust by interpreting requirements, managing expectations, and delivering on commitments. • Apply visualization techniques and offer advice aligning with design and budget needs.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 19: Decision Framework and Supplier Collab

Mapped to FFS/N8212, v 1.0

Terminal Outcomes:

- Guide decision-making assertively, ensuring alignment with project objectives.
- Establish effective connections with suppliers, negotiating prices, placing orders, and fostering positive relations.

Duration: *02:00*	**Duration**: *04:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the significance of positively supporting and leading assertive decision-making aligned with project objectives. • Describe techniques and the significance of performing liaison with suppliers for negotiation, ordering, and maintaining positive relations.	• Display effective support and leadership in assertive decision-making aligned with project objectives. • Demonstrate effective supplier liaison skills for negotiating prices, placing orders, and fostering positive relations.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 20: Budgeting Precision and Market Insight

Mapped to FFS/N8212, v 1.0

Terminal Outcomes:

- Show advanced financial and temporal competency through precise cost and time estimates for customers.
- Stay updated on construction industry trends and advancements, displaying dedication to continuous learning and industry awareness.

Duration: *02:00*	**Duration**: *04:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the methods and principles of cost and time estimation in joinery projects. • Describe current trends, advancements, and changes in the construction industry and their impact on joinery.	• Apply financial and temporal competency by generating precise cost and time estimates for customers. • Demonstrate adaptability and knowledge application to stay informed about trends and advancements in the construction industry.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 21: Adaptability and Innovation

Mapped to FFS/N8212, v 1.0

Terminal Outcomes:

- Showcase adaptability by embracing change and trying new methods for a culture of innovation.
- Demonstrate advanced problem-solving by swiftly recognizing and resolving issues, challenging incorrect information for future prevention.
- Exhibit effective time management and communication skills by performing tasks, meeting deadlines, and reporting progress.

Duration: *02:00*	**Duration**: *02:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss the significance of innovation in joinery. • Explain problem-solving techniques, emphasizing swift recognition and resolution. • Outline project management and reporting procedures in joinery projects.	• Contribute to a culture of innovation by actively trying new methods and embracing change. • Apply swift problem-solving, challenge incorrect information to prevent future issues. • Execute tasks, meet deadlines, and effectively report progress in joinery projects.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Module 22: Communication and Quality Enhancement

Mapped to FFS/N8212, v 1.0

Terminal Outcomes:

- Demonstrate commitment to high standards by scrutinizing work for accuracy, minimizing later-stage issues.
- Showcase advanced problem-solving by recognizing and resolving issues, and proactively challenging incorrect information.
- Exhibit proactive innovation by contributing ideas for improvement, staying informed on industry developments, and being open to experimenting with new methods.

Duration: *04:00*	**Duration**: *04:00*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the significance of quality control and adherence to standards in joinery. • Describe strategies for recognizing and resolving problems in joinery. • Emphasize the importance of accuracy and the role of vigilance in joinery work. • Explain the role of innovation and continuous improvement in enhancing joinery products and industry quality. • Describe the significance of staying informed about industry developments and changes in joinery. • Explain the importance of adaptability and openness to new methods in joinery.	• Employ frequent inspections to ensure accuracy and adherence to standards, minimizing issues in later stages. • Swiftly identify and resolve issues, applying a self-managed process to prevent escalation. • Actively question and correct any inaccuracies to prevent potential problems and ensure precision in work. • Identify and implement ideas that enhance the quality of joinery products and contribute to industry improvement. • Stay updated on industry developments, maintaining a current understanding of changes and trends in joinery. • Display willingness and adaptability to new methods and embracing change in joinery practices.
Classroom Aids	
White Board, Board Marker, Duster, Projector, Tablet, Chairs, Tables, Smart Board (Optional).	
Tools, Equipment, and Other Requirements	
Workbench, Measurement and Marking Tools, Hand Tools, Power Tools, Housekeeping Tools (As per tool list)	

Annexure

Trainer Requirements

A trainer should be eligible in any of below mentioned categories:

1. Have a formal and/or recognized certification with proven industrial and/or practical experience in the relevant skill (minimum 10 years).
2. To facilitate smooth implementation of WorldSkills/IndiaSkills competition and to avoid any disruption, for the year 2024, following additional categories of trainers shall also be eligible to conduct training of WorldSkills/IndiaSkills qualifications:
   a. Have worked as a Jury member/expert in skill competitions and other competitions of similar nature at regional/national levels
      OR
   b. Trained/mentored competitors for IndiaSkills/ WorldSkills competitions (national/ international).

NOTE: If a Trainer is affiliated with an organization, it is imperative to secure the endorsement of their employer, institution, or organization, including their commitment to support WorldSkills India in upcoming competitions.

Assessor Requirements

An assessor should be eligible in any of below mentioned categories:

1. Have a formal and/or recognized certification with proven industrial and/or practical experience in the relevant skill (minimum 10 years).
2. To facilitate smooth implementation of WorldSkills/IndiaSkills competition and to avoid any disruption, for the year 2024, following additional categories of assessors shall also be eligible to conduct of assessment of WorldSkills/IndiaSkills qualifications:
    a. Have worked as a Jury member/expert in skill competitions and other competitions of similar nature at regional/national levels
    OR
    b. Trained/mentored competitors for IndiaSkills/ WorldSkills competitions (national/ international).

NOTE: If an Assessor is affiliated with an organization, it is imperative to secure the endorsement of their employer, institution, or organization, including their commitment to support WorldSkills India in upcoming competitions.

Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the learner on the required competencies of the program.

The following skill assessment strategy and procedures for the skill competition are taken into account:

A - Interior Joints:

- Criteria: Surfaces should be flat with minimum saw/chisel marks, and no overcutting at internal joint faces.
- Assessment Method: Experts will assess the accuracy and cleanness of joints and cuts.

B - Dimensions:

- Criteria: Members should be cut and assembled with high accuracy; dimensions are identified on the marking team's drawings.
- Assessment Method: Two groups of three Experts will measure dimensions; if results differ by more than 0.5 mm, a third team of two Experts will confirm measurements.

C - Exterior Joints:

- Criteria: Joints formed with no gaps; the biggest gap in each cluster of joints is measured.
- Assessment Method: Joints are assessed by three Experts.

D - Neatness of Finish, Cleanness, and General Impression:

- Criteria: All members in place, no unsightly joints, flat surfaces, accurate backing bevels, minimal pencil marks and stains, neat screw fixings.
- Assessment Method: Overall project judged by Experts for neatness, cleanness, and general impression.

E - Use of Material:

- Criteria: Complete the project using provided material, optimize material ordering, no re-cutting after interior joints are marked, no sanding/planning after assembly.
- Assessment Method: Experts will ensure compliance with material use criteria.

Assessment Procedures:

1. Team Allocation: Chief Expert allocates Experts into marking teams based on WorldSkills experience, language, and culture considerations.
2. Assigned Aspects: Each marking team is allocated specific aspects of the project to assess for all competitors.
3. Competitor Requests: Competitors can request permission for recuts (up to four) or a new piece of wood (up to two) up to their deduction credit.

Additional Notes:

1. Communication: Clear communication between marking teams and competitors is essential.
2. Consistency: Marking teams should ensure consistency in applying assessment criteria.
3. Transparency: Competitors should be aware of the deduction credit available for recuts and new pieces.
4. Fairness: The assessment process should be fair and unbiased, considering competitors' requests within the defined limits.

This strategy aims to ensure a comprehensive and fair evaluation of skills in the WorldSkills competition, emphasizing accuracy, neatness, and adherence to specified criteria.

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts, and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (Theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on-site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on-site
Procedural Knowledge	Procedural knowledge addresses how to do something or how to perform a task. It is the ability to work or produce a tangible work output by applying cognitive, affective, or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	The terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

Term	Description
QP	Qualification Pack
NSQF	National Skills Qualification Framework
NSQC	National Skills Qualification Committee
NOS	National Occupational Standards
QC	Quality Checking
PwD	Person with Disability
ToT	Training of Trainers
ToA	Training of Assessors
FFSC	Furniture and Fittings Skill Council
TP	Training Partner
PC	Performance Criteria
NA	Not Applicable
PPE	Personal Protective Equipment