

**OJT Syllabus for Bamboo Product Artisan**

<b>Course Name</b>	Bamboo Product Artisan
<b>Sector</b>	HANDICRAFTS & CARPETS
<b>Course Code</b>	HAC/2024/BPAR/290
<b>Level</b>	3
<b>Occupation</b>	Bamboo Product Artisan
<b>Job Description</b>	Bamboo product artisan is responsible for crafting high-quality, sustainable products from bamboo materials. The role will involve interpreting design specifications, selecting suitable bamboo varieties and utilizing traditional and modern techniques to create functional and aesthetically pleasing items such as furniture, home decor and accessories.
<b>Course Duration</b>	Total Duration: Min. 300 Hrs, Max. 450 Hrs (ES-60)
<b>Trainees' Entry Qualification</b>	Grade 10 OR Grade 8 pass and pursuing continuous schooling in regular school with vocational subject OR 8th grade pass with 2 yrs relevant experience OR Previous relevant Qualification of NSQF Level 2 with one yr experience OR Previous relevant Qualification of NSQF Level 2.5 with 6 months experience
<b>Trainers Qualification</b>	GSDP Trained or 10th pass with five years of Industrial and training experience in Bamboo work

**Structure of Course (in OJT Mode)**

<b>Module No.</b>	<b>Module name</b>	<b>Outcome</b>	<b>Compulsory/ Optional</b>	<b>Total (Hrs) OJT</b>
1	Historical Development and Applications of Bamboo	Explain the application of bamboo traditionally used for housing, tools/utensils, crafts, and more throughout history.	Compulsory	30
2	Bamboo Identification and Selection	Identify and select different bamboo plants based on characteristics like culm skin color, sizes, diameters, and other features for given product scenarios.	Compulsory	30
3	Hands-on Training in Bamboo Workshop Skills	Handle and operate various tools and machineries used in the Bamboo craft industry safely and effectively.	Compulsory	30
4	Bamboo Product Sketching and finishing techniques	Demonstrate the procedure of Sketching and Finishing Techniques of Bamboo Products.	Compulsory	30
5	Finished Products	Conduct finished goods quality check, sorting, stacking and labeling.	Compulsory	30
6	Bamboo Handicrafts and Mat Weaving	Demonstrate the manufacturing procedure of different types of bamboo handicraft products and mats.	Compulsory	90

Module No.	Module name	Outcome	Compulsory/ Optional	Total (Hrs) OJT
7	Bamboo Furniture and Laminated Board Making	Manufacture different types of bamboo furniture and laminated bamboo products.	Optional	150
8	Employability Skill	As per guided curriculum	Compulsory	60
Total				Min. 300 Hrs Max. 450Hrs

**SYLLABUS:**

Unit	Lesson	Expected Outcome	Total Lesson Hours (OJT)	Total Unit Hours (OJT)
<b>Unit 1: Historical Development and Applications of Bamboo</b>	<b>Lesson 1: Origins and Traditional Uses of Bamboo</b> This lesson will provide an overview of the historical origins of bamboo and its traditional uses in various cultures and regions.	Students will gain knowledge about how bamboo has been traditionally used for housing, tools/utensils, crafts, and more throughout history.	15	30
	<b>Lesson 2: Modern Bamboo Product Development</b> This lesson will explore the wide array of modern household, commercial, and industrial products that are now derived from bamboo. Emerging bamboo technologies will also be discussed.	Students will learn about bamboo product categories like furniture, flooring, composites, textiles and more.	15	
<b>Unit 2: Bamboo Identification and Selection</b>	<b>Lesson 1: Identifying Bamboo Plants</b> Common bamboo species will be covered.	Students will be able to physically identify different bamboo plants based on characteristics like culm skin color, sizes, diameters, and other features.	15	30
	<b>Lesson 2: Selecting Bamboo for End Uses</b> Factors like regional availability, material properties, and sustainability will be examined for selecting appropriate bamboo species for various end uses in areas like crafts, furniture, construction materials, and other applications.	Students will become able in selecting bamboo for given product scenarios.	15	
<b>Unit 3: Hands-on Training in Bamboo Workshop Skills</b>	<b>Lesson 1: Workshop Machinery and Tool Orientation</b> Students will learn about the organization's bamboo workshop facility through a guided tour. Common machinery, tools, and	Students will be able to physically identify different tools and machineries used in Bamboo craft industry.	6	30

	equipment used in bamboo working processes will be demonstrated and their proper use and maintenance covered.			
	<p><b>Lesson 2: Operating Bamboo Machinery</b> With instructor supervision, students will have hands-on practice operating various machines used in the bamboo industry like planers, sanders, saws, and more to gain experience handling the equipment safely and effectively.</p>	Students will be able to handle and operate various machines used in the bamboo industry safely and effectively.	10	
	<p><b>Lesson 3: Tool Knowledge and Practice</b> The proper use and care of hand tools for bamboo like knives, chisels, hammers, etc. will be covered. Students will have practice using these tools for basic bamboo working tasks.</p>		8	
	<p><b>Lesson 4: Workshop Safety Procedures</b> Potential accident sources and safety precautions for all workshop machinery and areas will be outlined. Students will learn first aid and have practice implementing safe operating procedures with all tools and equipment.</p>		6	
<b>Unit 4: Bamboo Product Sketching and finishing techniques</b>	<p><b>Lesson 1: Bamboo Product Sketching</b> Students will learn sketching techniques to visually design bamboo craft, furniture, and other product concepts. Practice observing and sketching existing bamboo goods will be included.</p>	Students will be able to neatly sketch bamboo craft, furniture, and other products.	10	30
	<p><b>Lesson 2: Bamboo Product Finishing Techniques</b> Methods of finishing like sanding, polishing, dyeing, coloring and their appropriate tools will be covered. Students will practice each method under supervision.</p>	Students will be able to use finishing techniques independently.	10	
	<p><b>Lesson 3: Bamboo Product Model Making</b> The process of developing initial mockups and models based on sketched designs will be explored. Students will practice developing such models under supervision.</p>	Students will become able in making rough product models and prototypes as per demand and also in refining their designs.	10	

<b>Unit 5: Finished Products</b>	<b>Lesson 1: Quality Assurance Systems</b> Concepts of quality assurance, inspection, standardized dimensions and weights will be covered. Students will practice measurement and quality checking of sample products.	Students will be able to measure and check quality of sample products.	16	30
	<b>Lesson 2: Packaging and Storage</b> Proper packaging, labeling, and storage methods will be demonstrated and implemented by students for sample products.	Students will be able to neatly pack and store or parcel finished products.	14	
<b>Unit 6: Bamboo Handicrafts and Mat Weaving</b>	<b>Lesson 1: Bamboo Handicrafts</b> Students will learn techniques for drawing and designing various bamboo products including luggage, lamp shades, decorative lamps, vases, showpieces, and jewelry and stationery items. They will also learn to design kitchen and household products as well as carrier items, gift boxes, trays, and more using bamboo.	Students will be able to manufacture different types of bamboo handicrafts and products through various designs and techniques.	45	90
	<b>Lesson 2: Bamboo Mat Weaving</b> Students will learn techniques for weaving bamboo mats by hand and machine. They will learn the process and layout for mat making and practice hand-weaving mats using bamboo slivers and sticks. Students will also practice weaving various patterns on bamboo mats using slivers as well as weaving whole mats from bamboo sticks. They will learn to identify the appropriate thickness, width, length, and quality of slivers and sticks for high quality mats. Students will also learn techniques for weaving bamboo blinds by automatic and hand looms.	Students will be able to weave bamboo mats by hand and machine.	45	
<b>Unit 7: Bamboo Furniture and Laminated Board Making (Optional)</b>	<b>Lesson 1: Bamboo Furniture Making</b> Students will learn about different types of household and public bamboo furniture. They will observe and sketch various furniture types. Students will also learn about jigs, fixtures, joints, and fastening techniques used for bamboo furniture making such as tongue and groove, male/female, bolt, overlapping, U-shape, and horizontal/vertical joints. Additional	Students will be able to manufacture different types of household and public bamboo furniture.	75	150

	<p>materials used such as cane, nails, wood, adhesives, bending wire, and plastic rope will be covered. Students will then practice making furniture like sofas, chairs, tables, beds, and more using bamboo and joint techniques.</p>			
	<p><b>Lesson 2: Bamboo Laminated Board Manufacturing</b> Students will learn about machinery used to produce laminated bamboo boards such as cross-cutting, radial splitting, automatic splitting, knot removal, polishing, manual/powered slivering, round stick making, hand/power drilling, planning, and saw machines. They will practice operating and maintaining these machines, including cleaning, oiling, lubricating, and identifying/remediating defects. Students will also learn manufacturing processes for bamboo mat boards, flooring boards, strand boards, and other laminated bamboo products as wood substitutes. Decorative lamination techniques will also be covered.</p>	<p>Students will be able to manufacture bamboo mat boards, flooring boards, strand boards, and other laminated bamboo products as wood substitutes.</p>	75	
<b>Total Hours</b>				Min. 300 Hrs Max. 450 Hrs

### Module No. 8: Employability Skills (60 Hrs)

#### Key Learning Outcomes

#### Introduction to Employability Skills

Duration: 1.5 Hours

After completing this programme, participants will be able to:

1. Discuss the Employability Skills required for jobs in various industries
2. List different learning and employability related GOI and private portals and their usage

#### Constitutional values - Citizenship

Duration: 1.5 Hours

3. Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a

responsible citizen

4. Show how to practice different environmentally sustainable practices.

### **Becoming a Professional in the 21st Century**

Duration: 2.5 Hours

5. Discuss importance of relevant 21st century skills.
6. Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
7. Describe the benefits of continuous learning.

### **Basic English Skills**

Duration: 10 Hours

8. Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone
9. Read and interpret text written in basic English
10. Write a short note/paragraph / letter/e -mail using basic English

### **Career Development & Goal Setting**

Duration: 2 Hours

11. Create a career development plan with well-defined short- and long-term goals

### **Communication Skills**

Duration: 5 Hours

12. Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.
13. Explain the importance of active listening for effective communication
14. Discuss the significance of working collaboratively with others in a team

### **Diversity & Inclusion**

Duration: 2.5 Hours

15. Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
16. Discuss the significance of escalating sexual harassment issues as per POSH act.

### **Financial and Legal Literacy**

Duration: 5 Hours

17. Outline the importance of selecting the right financial institution, product, and service
18. Demonstrate how to carry out offline and online financial transactions, safely and securely
19. List the common components of salary and compute income, expenditure, taxes, investments etc.
20. Discuss the legal rights, laws, and aids

### **Essential Digital Skills**

Duration: 10 Hours

21. Describe the role of digital technology in today's life
22. Demonstrate how to operate digital devices and use the associated applications and features, safely and securely
23. Discuss the significance of displaying responsible online behavior while browsing, using various social media platforms, e-mails, etc., safely and securely
24. Create sample word documents, excel sheets and presentations using basic features
25. utilize virtual collaboration tools to work effectively

**Entrepreneurship**

Duration: 7 Hours

26. Explain the types of entrepreneurship and enterprises
27. Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan
28. Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement
29. Create a sample business plan, for the selected business opportunity

**Customer Service**

Duration: 5 Hours

30. Describe the significance of analyzing different types and needs of customers
31. Explain the significance of identifying customer needs and responding to them in a professional manner.
32. Discuss the significance of maintaining hygiene and dressing appropriately

**Getting Ready for apprenticeship & Jobs**

Duration: 8 Hours

33. Create a professional Curriculum Vitae (CV)
34. Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively
35. Discuss the significance of maintaining hygiene and confidence during an interview
36. Perform a mock interview
37. List the steps for searching and registering for apprenticeship opportunities

**List of Tools, Equipment & materials needed for 30 Trainees (Practical)**

Item	Specification	Quantity
Bamboo saw	Manual, blade length: 12"	10
Planer	Electric, 110V	5
Sander	Orbital, 120V	5
Chisels	Set of assorted sizes	30
Hammers	Claw hammer, 16 oz	30
Knives	Utility knives	30
Safety goggles	ANSI-approved	30
Ear protection	Noise-canceling earmuffs	30
Dust masks	NIOSH-approved	30
Work gloves	Leather, assorted sizes	30
First aid kit	Standard	1
Fire extinguisher	ABC type	1
Band saw	Electric, 220V	2
Drill press	Benchtop, 1/2 HP	2
Clamps	Assorted sizes	20
Measuring tape	25 ft	30
Squares	Combination square	30
Levels	24" spirit level	10
Sandpaper	Assorted grits	100 sheets
Brushes	Assorted sizes	30
Dyeing equipment	Brushes, trays, buckets	As needed

Item	Specification	Quantity
Polishing equipment	Buffing wheels, polishing compounds	As needed
Laminating machines	Automatic, 220V	2
Glue guns	Electric, dual temperature	10
Staple guns	Manual	10
Pliers	Assorted sizes	30
Wire cutters	Assorted sizes	10
Clamps	Spring clamps	30
Respirators	NIOSH-approved	30
Workbenches	Heavy-duty, with vices	10

### Marks Distribution

Outcome	Outcome Code	Total Th marks	Total Pr marks	Total OJT marks
Explain the application of bamboo traditionally used for housing, tools/utensils, crafts, and more throughout history.	HAC/1507/OC1	0	0	140
Identify and select different bamboo plants based on characteristics like culm skin color, sizes, diameters, and other features for given product scenarios.	HAC/1507/OC2	0	0	140
Handle and operate various tools and machineries used in the Bamboo craft industry safely and effectively.	HAC/1507/OC3	0	0	140
Demonstrate the procedure of Sketching and Finishing Techniques of Bamboo Products.	HAC/1507/OC4	0	0	140
Conduct finished goods quality check, sorting, stacking and labeling.	HAC/1507/OC5	0	0	130
Demonstrate the manufacturing procedure of different types of bamboo handicraft products and mats.	HAC/1507/OC6	0	0	260
Manufacture different types of bamboo furniture and laminated bamboo products.	HAC/1507/OC7	0	0	300
Employability Skills – 60 Hrs	DGT/VSQ/N0102	50	0	0