

Curriculum
For
Certificate in Boat Making & Repair
Six Months Duration Course
Code: VI80S003
(2013)

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CURRICULUM SPECIFICATION FOR BOAT MAKING

1. Introduction

The structure of this course

This curriculum comprises 10 modules. The recommended delivery time is 800 hours. Delivery of the course could therefore be full time, 5 days a week, for 6 months.

Training providers are at liberty to develop other models of delivery, including part-time and evening delivery.

The full structure of the course is as follow:

Module	Theory¹ Days/ hours	Workplace² Days/ hours	Total hours
Module 1: Use and maintaining of Tools & Equipment	26	80	106
Module 2: Performing Planning of Work	10	40	50
Module 3: Develop Structure of Boat	28	120	148
Module 4: Take Requirement of Client	8	12	20
Module 5: Fix Wooden Planks	16	100	116
Module 6: Create Upper Structure	16	100	116
Module 7: Fix Boat Accessories	10	60	70
Module 8: Ensure Safety Precautions	26	42	68
Module 9: Perform Finishing work	10	52	62
Module 10: Upgrade Skills	10	34	44

The purpose of the Boat making course is to engage young people with a programme of development that will provide them with the knowledge, skills and understanding to start this career in Pakistan and abroad. The course has been developed to address specific issues, such as the international, national, regional and local cultures, the work

¹ Learning Module hours in training provider premises

² Training workshop, laboratory and on-the-job workplace

force availability within the country, and meeting and exceeding the needs and expectations of their clients.

Central aim of the training provider, trainer or teacher

The aim for the team of staff responsible for delivery of the Boat making curriculum is to develop work related skills through comprehensive action orientation. Action orientation can be understood as the willingness and ability of a trainee to act in professional and industrial situations appropriate, thoughtfully and in a socially responsible manner.

Teaching staff will support trainee in developing their willingness and ability, through their technical knowledge and abilities, to solve tasks and problems that are goal-oriented. They will need to use trainee-centred, practically oriented methods. They will also need to develop a programme of practical assessment that reflects the learning outcomes stated in the curriculum.

Trainee of the Boat making curriculum will also develop their willingness and ability as an individual to clarify issues, think through and to assess development opportunities. They will learn to consider requirements and constraints in family, professional and private life and to develop their own talents and future life plans.

Teaching staff will also support trainee in developing characteristics such as self-reliance, reliability, responsibility, a sense of duty and the willingness and ability to criticize and to accept criticism well and to adapt their future behaviour accordingly.

Teaching also needs to use the boat making curriculum to address development of social competence. Trainees need to acquire a willingness and ability to live and shape their own social relationships.

Method competency, communicative competence and learning competence are inherent part of developing expertise, self-competence and social competence in trainee through the boat making curriculum. Method competence develops in trainees a willingness and ability to use a targeted, tactical approach during the handling of tasks and problems (for example, in the planning of steps). Communication competence develops a willingness and ability to understand and to shape communicative situations, including the ability for trainees to perceive, understand and to represent their own intentions and needs as well as those of their partners. Learning competence develops in trainees a willingness and ability to understand and evaluate – independently and together with others – information about facts and contexts through the boat making curriculum and to classify these in mental structures. As part of learning competencies, trainees will demonstrate the ability and willingness to develop in his or her professional or private life learning techniques and learning strategies and to use them for lifelong learning.

Entry level for trainees

Middle

ALL ENTRANTS SHOULD BE PHYSICAL AND MEDICALLY FIT

Minimum teaching qualification

Teaching staff should have at least three years' experience in the role of boat making Supervisor. They should also hold or be working towards a formal teaching qualification.

Other formal qualifications in the boat making industry would be useful in addition to the above. Trainers must be competent at Level 3 in Urdu/ English and numeracy.

Medium of instruction

Instruction will be Urdu and English. For employment in the Middle East, some Arabic expressions will be helpful. It will also be helpful to develop knowledge of Arabic, Greek and international terminology for the Boat making industry.

Terminology

This curriculum is for a Boat making. Some organisations may use alternative terms to describe this job role. Training providers should examine the Overview of the Curriculum to determine whether this curriculum meets the needs of potential trainees.

This curriculum specification also uses the term Boat making Manager to indicate the Boat maker's line manager. Organisations are likely to use a range of different terms and this should be interpreted flexibly.

Laws and regulations

- Training providers must ensure they keep up to date with laws, standards and regulations – at both national and regional levels – relating to health and safety and other relevant issues.
- Provincial Employees Social Security (Occupational Diseases) Regulation 1967
- Dock Labourers Act 1934
- Occupational Health and Environmental Safety (OH & ES)
- Risk Management

The team of staff responsible for delivery of the Boat making curriculum must familiarise themselves with laws and regulations that relate to their area of teaching and ensure that learners know and understand how to comply with and meet their responsibilities. Learning units will refer to the above list where appropriate.

Suggested distribution of Modules

This qualification is made up of 10 modules. Ten modules relate to designing, boat making and repairing of particular part of boat. A suggested distribution of these modules is presented overleaf. This is not prescriptive and training providers may modify this if they wish.

There is one further modules relating to skill upgrade that a Boat maker should have: Module 1: use and maintaining of tools & equipment for boat making throughout the course. Module 2: Performing planning of work. These are not independent with the planning and designing modules and need to be delivered in parallel. This is illustrated in the distribution table.

Each module covers a range of learning components. These are intended to provide detailed guidance to teachers (for example the Learning Elements component) and give them additional support for preparing their lessons (for example the Tools, materials requiredmodule). The detail provided by each module will contribute to a standardised approach to teaching, ensuring that training providers in different parts of the country have clear information on what should be taught.

The distribution table is shown overleaf:

Module 2: Performing Planning of work 50 hours	Module 3: Develop Structure of Boat 148 hours	Module 5: Fix Wooden Planks 116 hour	Module 1: Use and Maintaining of tools and equipment throughout the course 106 hours	
Module 4: Take Requirement of Client 106 hours	Module 6: Create Upper Structure 116 hours			
Module 8: Ensure Safety Precautions 68 hours	Module 7: Fix Boat accessories 70 hours	Module 9: Performing Finishing work 62 hours		
Module 10: Upgrade Skills 44 hours				

2. Competency Standard– “Boat Maker”

Definition

Boat design, prepare boat items and make boat. While specific duties vary depending on the type of boats, it is the boat maker's responsibility to prepare items and make simple boats that are both quality and strength. To repair boats properly is also a boat maker's responsibility.

Overall objectives of this course

- Selecting tools and equipment used to make boats and small vessel
- Measuring woods and material according to design
- Design and prepare boat as required by client's orders
- Working safely and qualitatively.

Competencies gained after completion of the course:

At the end of the course, the trainee must have achieved the following competencies:

- Understand and perform basic mathematical operations and Knowledge on Imperial & Metric System.
- Explain the wooden boat structure and repair work
- Understand and reading simple drawings
- Sketch the wooden boat and parts
- Understand boat Manufacturing and repairing techniques
- Use of hand tools and machine safely.
- Understand and apply personal and work safety.
- Understand and take measurements of wooden boat
- Understand and prepare the wooden boat structure
- Prepare the upper structure of wooden boat
- Prepare and repair the wooden boat parts
- Fix wooden boat accessories
- Estimate the wooden boat on client requirement
- Scheme the wooden boat as per client requirement

Personal requirements

Boat maker need the following characteristics:

- A genuine interest in boat making and repair work
- A desire to learn
- Physical fitness
- Good health
- Stamina – able to work for long duty hours in workshop environment
- Able to work as a member of a team
- Willingness to maintain the standard of quality and safety necessary in any boat industry.

Opportunities for employment and advancement

Boat makers are employed in Boat making industry, yachting clubs, boat repairing workshop, fishing worker, institutions. Self-employment by founding an enterprise in this field of activity is possible as well. Some jobs for boat making are seasonal and/or part-time. Experienced boat maker may advance through promotions with the same employer or by moving to more advanced positions with other employers. They can become:

- Senior worker
- Boat making Supervisor
- Boat builder contractor
- Boat builder Managers

Some experienced boat makers achieve a respected level of salaries. There are good prospects for travel both within Pakistan and abroad. The employment outlook in this industry will be influenced by a wide variety of factors including:

- Trends and events affecting overall employment (especially in the marine and Sea Food Services industry)
- Employment turnover (work opportunities generated by people leaving existing positions)
- Occupational growth (work opportunities resulting from the creation of new positions that never existed before)
- Size of the industry
- Flexibility of the applicant (concerning location and schedule of work).

3. Teaching and Learning Guide for Boat Making

The aim of the training is for trainees to be able to act independently and responsibly in their field of study, by following an educational programme where this is part of the overall methodological concept.

Different methodologies can therefore contribute to achieving this objective. Theory methodologies should be supported by appropriate resources, as indicated in the 'Materials required' column of the Learning Unit specifications. Teachers should also illustrate theory sessions with examples of how the learning could be applied in the workplace. Practical methodologies should be set in an appropriate environment and supported by appropriate resources, also indicated in the 'Materials required' column of the Learning Unit specifications. Methods that directly promote capacity-building for the trainee are particularly suitable and therefore should be included appropriately in the teaching approach.

3.1. Module 1: Use and maintaining of Tools & equipment

Objective of the module: The aim of this module is to develop basic knowledge, skills and understanding of professional wooden boat making tools and equipment that need to be maintained throughout the process.

Duration 106 hours **Theory:** 26 hours **Practical:** 80 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Understand the use of common tools and equipment in wooden boat making	The student will be able to: Explain the use of common hand tools and equipment	Explain the use of common tools and equipment in wooden boat making. Explain the safety precautions of common tools. Ability to: 1. Use of common tools and equipment 2. Properly maintain tools and equipment of boat making 3. Proper Operation of tools and equipment		Common Tools and equipment of wooden boat making. Timber, woods sharpen stone.	For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry for training purposes
LU2: Apply the common tools,	The student will be able to: Use the common hand tools Sharp the hand tools Maintain hand tools	Describe the function of common tools Practical use of common tools Sharpen & maintain the common tools.			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		Ability to: 1. Apply proper use of common tools and equipment 2. Sharpen tools of boat making 3. Proper Operation of tools			learning: Training workshop OR Access to industry for training purposes
LU3: Understand & use the functions of equipment and machines of wooden boat making	The student will be able to: Explain the function of equipment and machines in wooden boat making Use of equipment and machines in wooden boat making. Apply safety rules of equipment and machines	Understand the Knowledge of equipment & machines of wooden boat making Ability to: 1. Operate the equipment and machine 2. Properly maintain machine and equipment of boat making 3. Maintain equipment and machine. 4. Apply personal and machine safety.			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to Industry for training purposes
LU4: Ensure Safety Rules,	The student will be able to: Understand the personal and work safety Apply the safety rules Identify opportunities for reducing waste	Understand the personal and work safety State the first aid contents of accident Ability to: 1. Practice the safety			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	Follow organisational policies and procedures for managing and reducing waste	<ul style="list-style-type: none"> rules 2. Identify the hazardous working environment 3. Apply the first aid to effected person 4. tidy work areas, benefits for the environment 			<p>learning: Training workshop</p> <p>OR</p> <p>Access to Industry for training purposes</p>

3.2. Module 2: Performing Planning of Work and lofting

Objective of the module: The aim of this module is to develop general knowledge, skills and understanding of wooden boat making plan, different type, and categories of wooden boats. This module is intended to be delivered at end of practical and knowledge module of the main wooden boat making core modules. It contains estimation and planning elements that students need to implement at the level of supervisory at their practical work and lofting give us understanding of the design process and a graph of boat building fundamental.

Duration 50 hours **Theory:** 10 hours **Practical:** 40 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Understand the types and categories of wooden boat	The student will be able to: Know the types of wooden boat Know the classes of boat and capacity Know how to select appropriate equipment needed to make wooden boat Understand type, class and category that meet quality and requirement of client prior to preparation of boat	Understand the client need and design then sketches to determine what boat and equipment is needed Help the client manufacturing/ selection of the wooden boat class and category. Ability to: 1. Identify types and category of boat.		Boat Models, Drawings, plans of different boats,	For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU2: Understand how	The student will be able to: Understand the requirements	Understand raw material including design, quality and quantity required, and			For theoretical learning: Class room with

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
to prepare simpleboat for client with guidance from boat manager and other associates	<p>for preparing boat for client</p> <p>Know how to calculate and estimate cost and equipment to make different wooden boat correctly</p> <p>Know the appropriate methods to makedifferent boat for client</p> <p>Understand how to check that estimation of row material and accessories meets client requirements</p>	<p>equipment as required</p> <p>Quality requirements following appearance (size, shape, durability)</p> <p>Seeking guidance from boat manager and other associates when appropriate.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Prepare boat detail with guidance of manager. 2. Estimate the timber of boat 3. Demonstrate taking requirement of client. 			<p>multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p> <p>OR</p> <p>Access to industry</p>
<p>LU3:</p> <p>Calculate estimate of simple wooden boat, with guidance from Boat manager and other associates</p>	<p>The student will be able to:</p> <p>Understand the requirements of client for wooden boat making</p> <p>Know how to use measuring tools and equipment to calculate client requirement correctly</p> <p>Draw sketch to calculate boat structure</p>	<p>Understanding the effect of different estimation processes in boat making and their market value.</p> <p>Draw sketches for calculation of raw material</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Calculate timber of boat with supervision of boat manager 2. Take measurement of boat. 			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p>

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	<p>Know the appropriate methods to estimate a boat material</p> <p>Understand how to combine charges and material cost with other costs</p>				<p>OR</p> <p>Access to industry</p>
<p>LU4:</p> <p>Understand how to procure material and accessories for simple boat, with guidance from boat manager and other associates</p>	<p>The student will be able to:</p> <p>Understand the process of procurement of raw material and accessories</p>	<p>The importance of using the correct tools and equipment (as required by the boat), to client</p> <p>Seeking guidance from boat manager and other associates when appropriate.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Demonstrate procurement process of wooden boat 2. Produce list of procurement items for wooden boat. 		<p>Procurement plans, documentation of procurement, samples of woods, accessories of boats</p>	<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p> <p>OR</p> <p>Access to industry</p>
<p>LU5:</p> <p>Understand and Practice how to sharpen tools, and maintain equipment for</p>	<p>The student will be able to:</p> <p>Identify the tools and equipment for simple boat making</p> <p>List the material and accessories for simple boat</p>	<p>The importance of using the correct tools and equipment (as required by the boat), to client</p> <p>Manage the tools and equipment for different</p>			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p>

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
simple boat, with guidance from boat manager and other associates	<p>making</p> <p>Arrange the equipment of boat making</p> <p>Sharp the tools for simple boat making</p> <p>Maintain equipment</p>	<p>processes for boat making</p> <p>Seeking guidance from boat manager and other associates when appropriate</p> <p>Practice the tools sharpening and maintenance of equipment</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Practice the safety rules tool sharpen 2. Identify the hazardous machine operation 3. Apply the first aid to machine accident person 			<p>For practical learning:</p> <p>Training workshop</p> <p>OR</p> <p>Access to industry</p>
<p>LU6:</p> <p>Understand how to prepare workplace and material, accessories for simple boat making, with guidance from boat manager and other</p>	<p>The student will be able to:</p> <p>Understand the process of arrangement of workplace and raw material and accessories</p>	<p>The significance of workplace arrangement using the correct tools and equipment (as required by the boat)</p> <p>Understand the sequence of workplace arrangement</p> <p>Practice the arrangement of workplace</p> <p>Seeking guidance from boat manager and other</p>			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p>

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
associates		associates when appropriate Ability to: <ol style="list-style-type: none"> 1. Practice the workplace organization 2. Use accessories of simple boat making 3. Maintain accessories. 			OR Access to industry

3.3. Module 3: Develop Structure of Boat and template making.

Objective of the module: The aim of this module to develop skill and knowledge, of boat structure to make structure, parts and repair work of structure, template, that will be used in the construction of the variety of techniques for transferring shapes from lofting to pattern material. You will also look at the difference between temporary moulds and permanent frames

Duration 148 hours **Theory:** 28 hours **Practical:** 120 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Understand the tool selection and use of tools for development of structural parts for wooden boat	The student will be able to: Identify tools for preparing structural part of wooden boat List the tools for structure development and equipment Use tools and equipment for preparing structural parts of boat correctly Practice tools and equipment for development of structural parts	Understand the tools selection process for structure and template development for wooden boat. Ability to: <ol style="list-style-type: none"> 1. Use of tools for structure development 2. Develop structure of boat 		Parts of boats, structural parts of boats, drawings of boats, models of boats, woods, tools and equipment,	For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU2: Understand the identification of timber for cutting	The student will be able to: Identify timber for cutting Use tools and equipment to cut timber correctly	Identification process of timber for structural part designing Sharpen the tools for cutting practices Selection of equipment for structural parts design			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		Ability to: <ol style="list-style-type: none"> 1. Identify timber of boat structural parts 2. Practice cutting of timber of structural part. 			learning: Training workshop OR Access to industry
LU3: Lay zairab for wooden boat	The student will be able to: Understand laying technique of zairab of wooden boat Make sure zairab lay correctly	Selecting tools for laying zairab according to requirements Practice laying of zairab of wooden boat. Ability to: <ol style="list-style-type: none"> 1. Use of tools for laying of zairab 2. Lay the zairab of boat. 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU4: Prepare front and rear mora (taaps) for wooden boat	The student will be able to: Understand and prepare technique of dagra of wooden boat	Selecting tools for mora preparation according to requirements Practice preparation of mora of wooden boat Ability to: <ol style="list-style-type: none"> 1. Select tools mora preparation of boat 2. Use tools for mora preparation 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		3. Prepare mora (rear) of boat			OR Access to industry
LU5: Prepare morafor wooden boat	The student will be able to: Understand and prepare technique of mora of wooden boat	Selecting tools for mora preparation according to requirements Practice preparation of moraof wooden boat Ability to: 1. Select tools mora preparation of boat 2. Use tools for mora preparation 3. Prepare mora (rear) of boat			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU6: Assemble mora, saazg and bataan, milki and zairab for wooden boat	The student will be able to: Understand and assemble of saag, bataanand zairab of wooden boat	Selecting tools for mora, saazg assembly correctly Practice assembly of mora, saazg, bataan and zairab of wooden boat. Ability to: 1. Select tools assembly of structure parts (mora, saazg, bataan,milki, zairab) of boat 2. Use tools for assembly 3. Assemble parts of			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		boat (mora, saazg, bataan, milki, zairab) of boat			
LU7: Prepare baanga for wooden boat	The student will be able to: Understand and prepare technique of baanga of wooden boat	Selecting tools for baanga preparation according to requirements Practice preparation of baanga of wooden boat. Ability to: <ol style="list-style-type: none"> 1. Select tools baanga preparation of boat 2. Use tools for baanga preparation 3. Prepare baanga of boat 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU8: Framing of wooden boat	The student will be able to: Understand and practice framing technique of wooden boat	Selecting tools and equipment for framing according to requirement Practice framing of wooden boat. Ability to: <ol style="list-style-type: none"> 1. Use tools for framing of baot 2. Frame parts of boat 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
<p>LU 9:</p> <p>Ensure Proper levelling, saal of structure part of wooden boat.</p>	<p>The student will be able to:</p> <p>Understand and prepare level and saal of structural parts of wooden boat</p>	<p>Selecting tools and equipment for levelling and saal</p> <p>Practice levelling of parts of wooden boat.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Proper Use of tools for levelling, saal of structural parts of boat 2. Level and saal the structure of boat 			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p> <p>OR</p> <p>Access to industry</p>
<p>LU 10:</p> <p>Apply fish liver oil on wooden boat parts</p>	<p>The student will be able to:</p> <p>Understand the process and practice applying fish lever oil technique on wooden boat parts</p>	<p>Selecting tools and equipment for preparing of fish lever oil process according to requirement</p> <p>Practice applying oil on wooden boat parts.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Select proper tools for preparation of fish lever oil 2. Apply fish lever oil 			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p> <p>OR</p> <p>Access to industry</p>

3.4. Module 4: Fix Wooden Planks

Objective of the module: The aim of this module to develop basic knowledge, skills and understanding the fixing of wooden planks of wooden boat.

Duration 116 hours **Theory:** 16 hours **Practical:** 100 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU 1: Understand the tool selection and use for fixing, raw fitting (Haal), and body fitting, wooden planks for wooden boat	The student will be able to: Identify tools for preparing wooden planks of boat List the tools for wooden planks Use tools and equipment for preparing wooden planks of boat correctly Practice tools and equipment for wooden planks	Understand and explain tools and equipment for fixing of wooden planks List the tools for wooden planks Proper use of tools for preparing of wooden planks. Ability to: <ol style="list-style-type: none"> 1. Select tools for Haal preparation of boat 2. Use tools for planks preparation 		Woods, wooden planks, tools and equipment, model planks.	For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training Workshop OR Access to industry
LU2: Take measurement of wooden planks	The student will be able to: Identify wooden planks of boat Structure. Measure the wooden planks of boat	Identification of timber for wooden planks of boat Take measurement of wooden planks			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		Ability to: <ol style="list-style-type: none"> 1. Select measuring tools for Haal preparation of boat 2. Take proper measurement for planks preparation 			learning: Training workshop OR Access to industry
LU3: Perform cutting of wooden planks	The student will be able to: Select timber for wooden planks Mark cutting points of wooden planks. Prepare gola, darabo, alkin, and bamboo	Understand and explain cutting process of wooden planks Cut the wooden planks boat Proper use wooden planks gola, darabo, alkin, bamboo for wooden boat. Practice preparation of wooden planks Ability to: <ol style="list-style-type: none"> 1. Select tools for gola, darabo, alkin, bamboo preparation of boat 2. Use tools for planks preparation 3. Prepare wooden planks(gola, darabo, alkin, bamboo) of boat 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU 4: Fix the wooden	The student will be able to: Identify tools for fixing wooden	Understand and explain fixing tools and equipment			For theoretical learning:

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
planks, gola, darabo, alkin, bamboo for wooden boat	<p>planks of boat</p> <p>List tools and equipment for fixing wooden planks</p> <p>Fix wooden planks of boat correctly</p> <p>Practice fixing of wooden planks, gola, darabo, alkin, bamboo</p>	<p>for wooden planks</p> <p>Proper fixing of wooden planks, gola, darabo, alkin, bamboo</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Select tools for Haal fixing of boat 2. Use tools for planks preparation 3. Proper fixing of wooden planks(gola, darabo, alkin, bamboo) of boat 			<p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p> <p>OR</p> <p>Access to industry</p>
<p>LU 5:</p> <p>Final fix the wooden planks(panto)</p>	<p>The student will be able to:</p> <p>Identify tools for final fixing(panto) wooden planks of boat</p> <p>List tools and equipment for final fixing wooden planks</p> <p>Final Fixing of wooden planks of boat</p> <p>Practice final fixing(panto) of wooden planks</p>	<p>Understand and explain final fixing(panto) tools and equipment for wooden planks</p> <p>Perform final fixing(panto) of wooden planks.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Select tools for Panto of boat 2. Use tools for panto 3. Perform panto of boat 			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p> <p>OR</p> <p>Access to industry</p>
<p>LU 6:</p> <p>Apply fish lever oil on wooden</p>	<p>The student will be able to:</p> <p>Understand the process and practice applying fish lever oil</p>	<p>Selecting tools and equipment for preparing of fish lever oil process</p>			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-</p>

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
planks of boat	technique on wooden planks boat Apply the fish lever oil on wooden planks	according to requirement Practice applying oil on wooden boat parts Ability to: <ol style="list-style-type: none"> 1. Select proper tools for preparation of fish lever oil 2. Apply fish lever oil 			visual facilities and flip charts For practical learning: Training workshop OR Access to industry

3.5. Module 5: Create Upper Structure

Objective of the module: The aim of this module is to develop Skill and knowledge and practice to prepare upper structure of boat.

Duration 116 hours **Theory:** 16 hours **Practical:** 100 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Understand the tool selection and use of tools for development of upper structure of wooden boat	The student will be able to: Identify tools for preparing upper structure of wooden boat List the tools and equipment for upper structure development. Use tools and equipment for preparing upper structure of boat correctly Practice tools and equipment for development of upper structure of boat	Understand and explain creation of upper structure Proper creation of upper structure wooden boat Ability to: <ol style="list-style-type: none"> 1. Select tools for upper structure of boat 2. Use tools for planks preparation 3. Demonstrate upper structure of wooden boat 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU 2: Understand the identification of timber for upper structure	The student will be able to: Identify timber for upper structure Use tools and equipment for upper structure	Identification process of timber for upper structure part designing Sharpen the tools for upper structure wood cutting practices			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		Selection of equipment for structural parts design Ability to: <ol style="list-style-type: none"> 1. Identify timber for upper structure of boat 2. Demonstrate use of timber and tools for upper structure preparation 			learning: Training workshop OR Access to industry
LU 3: Take measurement of upper structure parts	The student will be able to: Identify upper structure parts of boat. Measure the parts of upper structure of boat. Design the upper structure parts	Identification of timber for upper structure of boat Take measurement of upper structure parts Ability to: <ol style="list-style-type: none"> 1. Measure the upper structure parts 2. Identify timber for upper structure of boat 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU 4: Perform cutting of wood for upper structure parts	The student will be able to: Select timber for upper structure parts Mark cutting points of wood. Prepare base deck, engine room, compartment, cabins,	Understand and explain cutting process of upper structure parts. Cut the wood of upper structure parts of boat Design and Prepare base			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	fish hole, net hole, deck pillars	deck, engine room, compartment, cabins, fish hole, net hole, deck pillars. Practice preparation of upper structure parts of boat Ability to: <ol style="list-style-type: none"> 1. Cut timber for upper structure of boat 2. Demonstrate cutting process use of timber and tools for upper structure preparation 			learning: Training workshop OR Access to industry

3.6. Module 6: Fix Boat Accessories

Objective of the module: The aim of this module is to develop Skill and knowledge and practice of fixing of boat accessories of wooden boat.

Duration 70 hours **Theory:** 10 hours **Practical:** 60 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU 1: Understand the tool selection and use of tools for fixing of accessories of wooden boat	The student will be able to: Identify tools for fixing of accessories of wooden boat List the tools and equipment for fixing accessories. Use tools and equipment for fixing accessories of boat correctly Practice tools and equipment for fixing accessories of boat.	Understand and explain boat accessories and fixing tools and equipment. Use of tools and equipment of fixing accessories. Ability to: <ol style="list-style-type: none"> 1. Select tools for boat accessories fixing 2. Proper use of tools for boat accessories fixing 3. Fix the boat accessories 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry

3.7. Module 7: Perform Finishing

Objective of the module: The aim of this module is to develop basic skill and knowledge and practice finishing of wooden boat

Duration 70 hours **Theory:** 10 hours **Practical:** 60 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
<p>LU 1:</p> <p>Understand the tool selection and use of tools for finishing work of wooden boat</p>	<p>The student will be able to:</p> <p>Identify tools for finishing work of wooden boat</p> <p>List the tools and equipment for finishing works.</p> <p>Use tools and equipment for finishing of boat correctly</p> <p>Practice tools and equipment for finishing works of boat.</p>	<p>Understand and explain boat finishing work and tools and equipment.</p> <p>Use of tools and equipment of finishing work.</p> <p>Perform finishing work of boat.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Select tools for finishing work preparation of boat 2. Proper use of tools for finishing work 			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p> <p>OR</p> <p>Access to industry</p>
<p>LU 2:</p> <p>Understand the tool selection and use of tools for fixing of permile, radar (sukaan) of wooden boat</p>	<p>The student will be able to:</p> <p>Identify tools for fixing of permile of wooden boat</p> <p>List the tools and equipment for fixing permile.</p> <p>Use tools and equipment for</p>	<p>Understand and explain boat permilefixing process and tools and equipment.</p> <p>Use of tools and equipment of fixing permile.</p> <p>Practice the permile fixing of boat.</p>			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical</p>

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	fixing permile of boat correctly.	Ability to: <ol style="list-style-type: none"> 1. Select tools for permile and sukaan fixing of boat 2. Use tools for planks preparation 3. Fix permile and sukaan of boat 			learning: Training workshop OR Access to industry
LU 3: Prepare drainage and anchors of wooden boat	The student will be able to: Understand and prepare technique of drainage and anchors of wooden boat. Select tools and equipment for preparation of drainage and anchors. Check the drainage Check the anchors points	Selecting tools for drainage and anchors preparation according to requirements Prepare drainage and anchors Practice preparation of drainage and anchors of wooden boat Ability to: <ol style="list-style-type: none"> 1. Select tools for drainage, anchors preparation of boat 2. Proper use of tools for drainage and anchors preparation 3. Prepare drainage and anchors of boat 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU4: Prepare surface	The student will be able to: Understand and prepare	Selecting tools for surface preparation according to			For theoretical learning: Class room with

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
for paint	<p>techniques of surface preparation.</p> <p>Select tools and equipment for preparation of surface.</p> <p>Check the surface for paint.</p>	<p>requirements</p> <p>Prepare surface for paint.</p> <p>Practice preparation of surface of wooden boat.</p> <p>Check surface for paint.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Select tools for surface preparation for paint of wooden boat 2. Use tools for surface paint preparation 3. Prepare surface of wooden boat for paint 			<p>multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning: Training workshop</p> <p>OR Access to industry</p>
<p>LU 5:</p> <p>Apply paint, anti-falling paint, laker and lubrication on wooden boat</p>	<p>The student will be able to:</p> <p>Understand the process of paint, anti-falling and lubrication</p> <p>Understand the type of lubrication and paint</p> <p>Apply lubrication and paint on wooden boat.</p>	<p>Selecting tools and equipment for applying lubrication and painting process according to requirement</p> <p>Practice applying lubrication and paint wooden boat.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Select tools for paint, anti-falling paint, laker and lubrication 2. Use tools for paint, laker, on boat 			<p>For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning: Training workshop</p> <p>OR Access to industry</p>

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		<p>surface</p> <p>3. Apply paint, anti-falling on boat</p>			
<p>LU 6:</p> <p>Apply resign paint on bottom of wooden boat</p>	<p>The student will be able to:</p> <p>Understand the process of resign paint</p> <p>Understand the type of lubrication and paint</p> <p>Apply lubrication and paint on wooden boat.</p>	<p>Selecting tools and equipment for applying lubrication and painting process according to requirement</p> <p>Practice applying lubrication and paint wooden boat.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Select tools for resign paint 2. Use tools for resign paint on boat surface 3. Apply resign paint on boat 			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p> <p>OR</p> <p>Access to industry</p>
<p>LU 7:</p> <p>Understand and perform cocking work on wooden boat</p>	<p>The student will be able to:</p> <p>Understand the process of Cocking process</p> <p>Perform Cocking work on wooden boat.</p>	<p>Selecting tools and equipment for Cocking work according to requirement</p> <p>Practice Cocking work on wooden boat.</p> <p>Ability to:</p> <ol style="list-style-type: none"> 1. Select tools for cocking work in wooden boat 2. Proper use of tools 			<p>For theoretical learning:</p> <p>Class room with multimedia aid, audio-visual facilities and flip charts</p> <p>For practical learning:</p> <p>Training workshop</p>

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		for cocking work 3. Perform cocking work on boat surface			OR Access to industry
LU 8: Apply decoration on wooden boat	The student will be able to: Understand the process of decoration. Understand the type of decoration. Decorate the decorations and accessories on wooden boat.	Understand and explain the decoration process. Selecting tools and equipment for decoration according to requirement. Practice the decoration items on wooden boat. Ability to: 1. Select tools for decoration of boat 2. Proper use of tools for decoration of boat 3. Perform decoration on boat			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry

3.8. Module 8: Ensure Safety Precautions

Objective of the module: The aim of this module is to develop knowledge, skills and understanding of safety measure, rules and first aid.

Duration 68 hours **Theory:** 26 hours **Practical:** 42 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Personal Safety	The student will be able to: Know and explain the personal safety. Apply the personal safety.	Introduction of Personal Safety. Know the Personal Safety. Apply the Personal Safety Rules and Regulations. Ability to: <ol style="list-style-type: none"> 1. Demonstrate the personal safety 2. Apply safety rules and regulations 			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU2: Work Safety	The student will be able to: Explain the work safety.	Under the work safety Rules. Explain the safety Rules of Workplace. Practice the work safety Rules. Ability to: <ol style="list-style-type: none"> 1. Demonstrate the 			

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
		work safety 2. Apply work safety			
LU3: Safety Standards	The student will be able to: Explain the safety standard.	Understand the safety standards. Explain the safety standards. Follow the safety standards. Ability to: <ol style="list-style-type: none"> 1. Follow the safety standards 2. Demonstrate the safety standards 3. Apply safety rules and regulations 			

3.9. Module 9: Upgrade Skills

Objective of the module: The aim of this module is to develop basic knowledge, skills and understanding to upgrading skills and knowledge on wooden boat making and its repair work

Duration 44 hours **Theory:** 10 hours **Practical:** 34 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
LU1: Attend training , workshop and seminar, awareness & upcoming technologies	The student will be able to: Know the training, workshop, and seminar opportunities in boat making industry. Network the boat making industry organizations and associations.	Introduction of boat making industry and training opportunities. Know up gradation of boat making skills. Connect with network of boat making industry and associations.			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning: Training workshop OR Access to industry
LU 2: Consult senior worker and supervisor	The student will be able to: Know the consultation process in boat making industry. Take advice from senior worker and supervisor of boat making industry, organizations and associations.	Understand the process of consultation with senior worker and supervisor of boat making industry and associations. Find the opportunities of advice and consultation in electronic media and			For theoretical learning: Class room with multimedia aid, audio-visual facilities and flip charts For practical learning:

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
	Visit boat making industries and related industries.	resources. Utilize consultation and advice from senior and other resources for up gradation of boat making skills.			Training workshop OR Access to industry

4. General assessment guidance for the Boat making Curriculum

Most of TVET practice in Pakistan makes use of sessional and final assessments, the basis of which is described below. Practices by vocational training providers in Pakistan are to use a combination of these sessional and final assessments, combined to produce the final qualification result.

Sessional assessment is going on all the time. Its purpose is to provide feedback on what students are learning:

- to the trainees : to identify achievement and areas for further improvement
- to the trainer : to evaluate the effectiveness of teaching to date, and to efforton future plans.

Assessors need to develop sessional assessments for both theoretical and practical. Final assessment is the assessment, commonly on completion of a course or module, which says whether the trainee has "qualified "or not.

Methods of assessment

For lessons with a high quantity of theory, written or oral tests related to learning outcomes and/ or learning content can be conducted. For workplace lessons, assessment can focus on the quality of planning the related process, the quality of executing the process, the quality of the product and/or evaluation of the process.

Methods include direct assessment, which is the most desirable form of assessment. For this method, evidence is obtained by direct observation of the trainee's performance.

Indirect assessment is the method used where the performance could not be watched and evidence is gained indirectly. Indirect assessment should only be a second choice. (In some cases, it may not even be guaranteed that the work products were produced by the person being assessed.)

Assessment strategy for the Boat making Curriculum

This curriculum comprises 10 modules:

- Module 1: Use and maintaining of tools & equipment
- Module 2: Performing planning of work

- Module 3: Develop structure of Boat
- Module 4: Take requirement of Client
- Module 5: Fix wooden planks
- Module 6: Create upper structure
- Module 7: Fix Boat Accessories
- Module 8: Ensure Safety Precautions
- Module 9: Perform finishing work
- Module 10: Upgrade Skills

Module 1: Use and maintaining of Tools & equipment

Learning Units	Theory hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
1. Use and maintaining of tools & Equipment	26	80	<ol style="list-style-type: none"> 1. Explain different tools and equipment used in boat making. 2. Explain and demonstrate the working principle and operation of different tools of boat making 3. Demonstrate the basic operation on timber wood 4. Demonstrate proper use of tools and equipment in boat making work 5. Demonstrate proper use of machines and equipment in boat making work 6. Prepare basic timber wood jobs according to drawings 	MCQ, Short Question and answer, Oral test, Task	

Module 2: Performing Planning of Work and lofting

Learning Units	Theory hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
<p>2. Performing planning of work and lofting</p>	<p>10</p>	<p>40</p>	<ol style="list-style-type: none"> 1. Explain different types and categories of wooden boat. 2. Explain and demonstrate the planning of boat making 3. Demonstrate the basic operation of planning of boat making 4. Demonstrate proper use of tools and equipment in boat making work 5. Estimate timber woods for simple boat 6. Prepare simple procurement plan boat according to drawings 7. Demonstrate sharpening and maintaining of tools 8. Demonstrate preparation of work place and materials of boat making 	<p>MCQ, Short Question and answer, Oral test, Task</p>	

Module 3: Develop Structure of Boat and template making

Learning Units	Theory hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
<p>3. Use and maintaining of tools & Equipment</p>	<p>28</p>	<p>120</p>	<ol style="list-style-type: none"> 1. Explain different tools and equipment used in boat structure making. 2. Explain and demonstrate the working principle and operation of different structural parts of boat making 3. Demonstrate identification of timber for boat making 4. Demonstrate cutting of timber for structural parts 5. Demonstrate the basic operation on timber wood 6. Demonstrate proper use of tools and equipment in boat making work 7. Demonstrate proper use of machines and equipment in boat making work. 8. Demonstrate lay of ziarab of boat 9. Demonstrate preparation of front, rear mora 10. Assemble the mora, zaaga, bataan, milki, zairab of boat 11. Prepare baanga 12. Framing of boat 13. Level (saal) the structure of boat 14. Demonstrate apply fish liver oil 	<p>MCQ, Short Question and answer, Oral test, Task</p>	

			15. Prepare basic timber wood jobs according to drawings		
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Module 4: Fix Wooden Planks

Learning Units	Theory hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
4. Fix wooden Planks	28	120	<ol style="list-style-type: none"> 1. Explain different tools and equipment used in raw fitting (Haal) of boat making. 2. Explain and demonstrate the measurement of wooden planks of boat making 3. Demonstrate cutting of wooden planks of boat 4. Demonstrate preparation of gola, darabo, alkin, bamboo 5. Demonstrate the basic fixing of gola, darabo, alkin, bamboo of boat 6. Demonstrate final fixing of wooden planks (panto) 7. Demonstrate application of fish liver oil 8. Prepare basic timber wood jobs according to drawings 	MCQ, Short Question and answer, Oral test, Task	

Module 5: Create Upper Structure

Learning Units	Theory hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
5. Create Upper Structure	16	100	<ol style="list-style-type: none"> 1. Explain different tools and equipment used in upper structure of boat. 2. Explain and demonstrate the working principle and operation of upper structure parts of boat making 3. Demonstrate identification of timber for upper structure of boat. 4. Demonstrate measurement of upper structure of boat. 5. Demonstrate cutting of timber for upper structure parts. 6. Demonstrate proper use of tools and equipment in upper structure of boat making work 7. Prepare basic upper structure parts of boat jobs according to drawings 	MCQ, Short Question and answer, Oral test, Task	

Module 6: Fix Boat Accessories

Learning Units	Theory hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
6. Fix boat accessories	10	60	<ol style="list-style-type: none"> 1. Explain different tools and equipment used in boat accessories fixing. 2. Explain and demonstrate basic operation of boat accessories. 3. Prepare basic timber wood jobs according to drawings 	MCQ, Short Question and answer, Oral test, Task	

Module 7: Perform Finishing

Learning Units	Theory hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
7. Perform Finishing	10	60	<ol style="list-style-type: none"> 1. Explain different tools and equipment used in boat finishing work of boat. 2. Explain and demonstrate the finishing work of boat making. 3. Demonstrate fixing of permile, radar (sukaan)of boat. 4. Demonstrate drainage and anchors preparation. 5. Demonstrate Preparation of surface for paint 6. Demonstrate anti-falling paint, lakar, and lubrication of 	MCQ, Short Question and answer, Oral test, Task	

			boat. 7. Demonstrate proper application of resin paint on bottom of boat. 8. Demonstrate cocking work on wooden boat 9. Demonstrate preparation of basic decoration of boat 10. Prepare basic decoration jobs according to given instruction/ drawings		
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Module 8: Ensure Safety Precautions

Learning Units	Theory hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
8. Ensure Safety Precautions	26	42	1. Explain safety rules and regulation of tools and equipment usage in boat making. 2. Explain and demonstrate personal safety 3. Explain safety standard of boat making 4. Demonstrate the basic first Aid operation in wood making 5. Prepare basic timber wood jobs according to drawings	MCQ, Short Question and answer, Oral test, Task	

Module 9: Upgrade Skills

Learning Units	Theory hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
9. Up Grade Skills	10	34	<ol style="list-style-type: none"> 1. Explain basic report of workshop, seminar of boat making. 2. Brief on awareness for boat making industry 3. Explain upcoming technologies in wooden boat making industry 4. Describe assembling process of wooden boat parts 5. Explain repairing process of boat. 	MCQ, Short Question and answer, Oral test, Task	

5. Tools and equipment

S.No.	Name of Item	Quantity	Remarks
1	Rulers 2 feet	20	
2	Divider	20	
3	Compasses set	20	
4	T- Squares	20	
5	Mortise	20	
6	Plumb bob	20	
7	Hand saws set	20	
8	Saw teeth file	20	
9	Boring tools set	20	
10	Hammer set	20	
11	Screw Drivers set	20	
12	Axe set	20	
13	Nail punch set	20	
14	Measuring tapes 8m (folding)	20	

15	Calipers (inside, outside) set	20	
16	Marking tools	20	
17	Spirit level 8"	20	
18	Hand planers 6"	20	
19	Hand planers 10"	20	
20	Chalk line	20	
21	Sharpen stone	20	
22	Brace bit 6 set	20	
23	Mallets 6 piece set	20	
24	Rasps 6 piece set	20	
25	File set	20	
26	Adze 6 piece set	20	
27	Zamboor(Pincer)	20	
28	Aalen key set	20	
29	Open hand Spanner set	10	
30	Bench vice heavy duty	20	

31	Sliding T bevel 8"	20	
32	Jack plan 14"	10	
33	Smoothing plane 8"	20	
34	Block plane 8"	20	
35	Mortise chisel set 6 pieces	20	
36	Retched brace 30-130mm	20	
37	Claw hammer 8 ons	20	
38	C- Clamp 6"	10	
39	C- Clamp 36"	10	

Note: the tools, equipment and material are for 20 trainee's batch

Wood Working hand machine (portable Machine)

1. Portable electric circular saw
2. Portable electric bital sender
3. Portable electric jig saw
4. Portable electric hand drill, /w-stand

Fire, first aid and safety equipment

1 copy of personal safety guidelines

1 copy of industrial safety standards

Illustrative range of emergency and first Aid notices

1 set of fire equipment, including the provision of fire exits, fire extinguishers, fire safety.

1 set of first aid equipment

1 example copy of logbooks for recording accidents and incidents

6. List of consumable supplies

S.No.	Name of Item	Quantity	Remarks
1	Timber	200 feet	
2	Woods	400 feet	
3	Plywood	100 feet	
4	Nails	5 kg	
5	Wood screw	3 kg	
6	Ring nails	2 kg	
7	Clench nails	2 kg	
8	Wooden planks	40 nos	

9	Sand paper	10 sheet	
10	Assorted nails	5 kg	
11	Nuts bolts	2 kg	
12	Washers	1 kg	
13	Sharpen stone	4	
14	Jack saw blades	2 nos	
15	Cotton ropes	20 meter	
16	Fish liver oil	40 kg	
17	Anti- falling paint	20 kg	
18	Resign paint	20 kg	
19	Cotton	40 kg	

7.CONTRIBUTIONS FOR DEVELOPMENT OF THIS CURRICULUM

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