# THE UNITED REPUBLIC OF TANZANIA

# MINISTRY OF EDUCATION, SCIENCE, AND TECHNOLOGY



CARPENTRY AND JOINERY WITH METAL WORKS SYLLABUS FOR ORDINARY SECONDARY EDUCATION VOCATIONAL STREAM FORM I – IV

© Vocational Education and Training Authority, 2022 Published 2022

Revised 2025

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ISBN: 978-9912-750-22-7

This document should be cited as: Ministry of Education, Science and Technology. (2025). *Carpentry and Joinery with Metal works Syllabus for Ordinary Secondary Education Vocational Stream Form I–IV*. Vocational Education and Training Authority.

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# Abbreviations and Acronyms

BoQ	Bill of Quantity
CBET	Competence Based Education and Training
NGO	Non-Governmental Organisation
OHS	Occupational Health and Safety
OSHA	Occupational Health and Safety Authority
PPE	Personal Protective Equipment
TIE	Tanzania Institute of Education
VET	Vocational Education and Training
VETA	Vocational Education and Training Authority

## **Definition of Key Terms**

**Assessment:** The process of collecting evidence and making judgments on whether competency has been achieved, or whether specific skills and knowledge have been achieved that will lead to the attainment of competency.

**Circumstantial knowledge:** Detailed knowledge, which allows the decision-making in regard to different circumstances and cross cutting issues.

**Competency:** The ability to use knowledge, understanding, practical and thinking skills to perform effectively to the workplace standards required in employment.

**Element:** A sub-unit (step), which reflects learning sequence with the aim of achieving broad learning objectives of a unit.

**Performance criteria**: indicate the expected end results or outcome in form of evaluative statements.

**Standard**: A set of statements, which if proven right under working conditions, means that an individual meets an expected level and type of performance.

**Unit**: A statement of broad learning objectives, which prescribe the requirements of a standard in form of practical skills, knowledge and appropriate attitudes.

#### Acknowledgements

The writing of the Carpentry and joinery with metal work Syllabus for Ordinary Secondary Education Vocational Stream Form I – IV was a collaborative effort that involved the dedication and expertise of a wide range of organizations and individuals. Vocational Education and Training Authority (VETA) would like to thank all the organizations and experts who contributed to the development of this Syllabus. VETA appreciates the expertism from individuals, their time, effort, and resources that were devoted to this important task. Their contributions have been crucial in developing the Syllabus that is both relevant and comprehensive, aimed at equipping students with the skills necessary for success in their fields. Furthermore, valuable inputs from employers in both formal and informal sectors during labour market surveys are also acknowledged. Likewise, VETA thanks the Ministry of Education, Science and Technology in a special way for facilitating the preparation, printing and distribution of this Syllabus.

For and on behalf of:

# **Vocational Education and Training Authority**

CPA. Anthony M. Kasore Director General

#### **1.0 Introduction**

Carpentry and Joinery with metal work is one of the occupations taught in the Ordinary Secondary Education Vocational Stream. Learning Carpentry and joinery with metal works is essential because Tanzania is rich in forests and has a variety of indigenous and planted tree species. These resources can be leveraged to support the country's economy. Learning carpentry and joinery offers numerous benefits, whether as a career choice or as a personal skill. These trades are versatile and provide opportunities for both creative expression and practical application. Here are the key benefits; Career Opportunities whereby Skilled carpenters and joiners are always in demand in construction, renovation, and furniture-making industries. Also, another benefit is practical Skills whereby you gain valuable skills in working with wood, tools, and materials that can be applied to personal and professional projects. This will foster economic development, create jobs, promote environmental sustainability, and preserve cultural heritage.

Upon completion of the program, students will possess both theoretical and practical knowledge of carpentry and joinery with metal work, from raw material identification to advanced manufacturing procedures. They will be capable of operating woodworking machinery, producing wood products, and implementing sustainable practices in the industry, all while adhering to safety regulations. Additionally, students will be equipped with the business skills necessary for managing a carpentry and joinery with metal work enterprise, ensuring high standards of quality and innovation in all aspects of the wood industry.

A graduate of this occupation may be employed in both Government and private sectors such as ministries/departments, training institutions research institutions forest agencies and projects, self-employment, small, medium and large wood industries and in Non-Governmental Organizations (NGOs).

The Carpentry and joinery with metal work Syllabus is designed to guide the teaching and learning of Carpentry and joinery with metal work at Ordinary Secondary Education Form I-IV Vocational Stream in the United Republic of Tanzania. The syllabus interprets the competencies a student needs to develop while learning Carpentry and joinery with metal work. It contains valuable information that will enable teachers to effectively plan their teaching process and help learners to develop the intended competencies.

#### 2.0 Main Objectives of Education in Tanzania

The main objectives of education in Tanzania are to enable every Tanzanian to:

- (a) Develop and improve his or her personality so that he or she values himself or herself and develops self-confidence;
- (b) Respect the culture, traditions, norms and customs; cultural differences; dignity; human rights; attitudes and inclusive actions;
- (c) Advance knowledge and apply science and technology, creativity, critical thinking, innovation, cooperation, communication and positive attitudes for his or her own development and the sustainable development of the nation and the world at large;
- (d) Understand and protect national values, including dignity, patriotism, integrity, unity, transparency, honesty, accountability and the national language;
- (e) develop life and work-related skills to increase efficiency in everyday life;
- (f) Develop a habit of loving and valuing work to increase productivity and efficiency in production and service provision;
- (g) Identify and consider cross-cutting issues, including the health and well-being of the society, gender equality, as well as the management and sustainable conservation of the environment; and
- (h) Develop national and international cooperation, peace and justice per the Constitution of the United Republic of Tanzania and international conventions.

#### 3.0 General Competences for Ordinary Secondary Education Vocational Stream

The general competences for Ordinary Secondary Education, Form 1–IV, Vocational Education stream are to:

- (a) Apply the knowledge, skills and attitudes the student developed in the primary school stage to increase his/her understanding of technical skills;
- (b) Appreciate citizenship and national virtues;
- (c) Use language skills;
- (d) Demonstrate self-confidence in learning in various fields, including science and technology, technical knowledge and technical skills;
- (e) Apply technical knowledge and skills in designing, discovering and making various things to solve challenges in society, including cross cutting issues;
- (f) Appreciate procedures and safety rules in using technical tools correctly; and

(g) Apply the technical knowledge and skills acquired to develop oneself with vocational and technical education and join the workforce.

# 4.0 General Competences of the Occupation

General competences in this occupation include the ability to:

- (a) Interpret drawings and prepare members for the carpentry and joinery work;
- (b) Construct timber structures;
- (c) Construct temporary support in the building construction;
- (d) Supervise carpentry and joinery works;
- (e) Fabricate steel, aluminium/PVC works;
- (f) Adhere procedures and safety rules in using technical tools correctly; and
- (g) Apply the technical knowledge and skills acquired to develop oneself with vocational and technical education and join the workforce.

## 5.0 Main and Specific Competences

The main and specific competences to be developed are presented in Table 1

**Table 1:** Main and Specific Competencies for Form I – IV

Main co	ompetences	Specifi	c competences
1.0	Maintaining safety of	1.1	Maintaining healthy, safety, and
	workshop, occupation health,		environment at workshop
	and safety at workplace and	1.2	Handling accidents and incidents
	surroundings	1.3	Handling fire accidents
		1.4	Performing First Aid
		1.5	Maintaining environmental issues
2.0	Performing timber	2.1	Performing timber processing
	processing and treatment	2.2	Performing timber treatment
3.0	Constructing simple furniture	3.1	Performing timber preparation
		3.2	Making joints
		3.3	Making up right furniture
		3.4	Performing finishing work
4.0	Making frames	4.1	Making door frame and window frames
		4.2	Making corner frames
5.0	Constructing wooden door	5.1 Co	onstructing door shutters
	shutters & window shutters	5.2	Constructing window shutters
6.0	Constructing simple roofs	6.1 Co	onstructing lean-to roof
		6.2	Constructing gable roofs
7.0	Constructing temporary	7.1 Co	onstructing formwork
	support	7.2	Erecting scaffoldings
8.0	Fabricating and fixing	8.1 Fa	abricating aluminium/PVC partitions
	aluminium/PVC profile	8.2	Fabricating aluminium/PVC doors
	structures	8.3	Fabricating aluminium/PVC windows
		8.4	Fabricating aluminium/PVC show
			cases

Main co	mpetences	Specif	ic competences
9.0	Constructing temporary	9.1 C	onstructing shuttering
	supports	9.2	Erecting shoring
		9.3	Constructing centering
		9.4	Constructing timbering to trench
10.0	Constructing ceilings	10.1	Constructing ceiling frame
		10.2	Fixing ceiling boards
11.0	Constructing furniture	11.1	Constructing complex furniture
		11.2	Making sofa
		11.3	Performing wood turning
12.0	Performing site plan and	12.1	Setting out a building
	setting out	12.2	Making fence
13.0	Performing basic estimation	13.1	Estimating materials
	and costing	13.2	Performing costing
14.0	Constructing roofs	14.1	Constructing hipped roof
		14.2	Constructing eaves and bargeboard
		14.3	Constructing roof light
15.0	Performing timber structures	15.1	Constructing timber stairs
		15.2	Constructing timber walls
		15.3	Constructing timber floors
16.0	Managing workplace	16.1	Planning and laying out
			workshop/workplace
		16.2	Managing tools, equipment and
			materials
		16.3	Performing job estimation and billing
17.0	Managing safe work	17.1	Managing hazards
	environment	17.2	Carrying out risk assessment
		17.3	Managing environmental issues`
18.0	Managing preventive	18.1	Planning preventive maintenance
	maintenance	18.2	Supervising preventive maintenance

#### 6.0 The Roles of Teachers, Students and Parents in Teaching and Learning

Good relationship between a teacher, student and parent, or guardian is fundamental to ensuring successful learning. This section outlines the roles of each participant in facilitating effective teaching and learning of Carpentry and joinery with metal work.

#### 6.1 The Teacher

The teacher is expected to:

- (a) Help the student to learn and develop the intended competences in Carpentry and Joinery with metal works;
- (b) Use teaching and learning approaches that will allow students with different needs and abilities to:
  - (i) Develops the competencies needed in the 21<sup>st</sup> Century; and
  - (ii) Actively participate in the teaching and learning process.
- (c) Use student centered instructional strategies that make the student a centre of learning which allow them to think, reflect and search for information from various sources;

- (d) Create a friendly teaching and learning environment;
- (e) Prepare and improvise teaching and learning resources;
- (f) Conduct formative assessment regularly by using tools and methods which assess theory and practice;
- (g) Treat all the students according to their learning needs and abilities;
- (h) Protect the student from the risky environment while he or she is at school;
- (i) Keep track of the student's daily progress;
- (j) Identify individual student's needs and provide the proper intervention;
- (k) Involve parents/guardians and the society at large in the student's learning process; and
- (1) Integrate cross-cutting issues and ICT in the teaching and learning process.

## 6.2 The Student

The student is expected to:

- (a) Develop the intended competences by participating actively in various learning activities inside and outside the classroom; and
- (b) Participate in the search for knowledge from various sources, including textbooks, reference books and other publications in online libraries.

## 6.3 The Parent/Guardian

The parents/ guardian is expected to:

- (a) Monitor the child's academic progress in school;
- (b) Where possible, provide a child with the needed academic support;
- Provide a child with a safe and friendly home environment which is conducive for learning;
- (d) Keep track of a child's progress in behaviour;
- (e) Provide the child with any necessary materials required in the learning process; and
- (f) Instil in a child a sense of commitment and positive value towards education and work.

#### 7.0 Teaching and Learning Methods

The teaching and learning methods are instrumental in developing student's competences. This Syllabus suggests teaching and learning methods for each activity which includes but not limited to demonstration, practical/hands-on activities, observations, role play, simulation, group works, peer teaching/learning, discussions, presentations, field visits, research, and project works. However, a teacher is advised to plan and use other appropriate methods based on the environment or context. All the teaching and learning methods should be integrated with the everyday lives of students. The focus is expected to be on practical application and developing cognitive, affective, and psychomotor skills through learner-centred methods.

#### 8.0 Teaching and Learning Resources

The process of teaching and learning requires different resources. In that regard, both teacher and students should work together to collect or improvise alternative resources available in the school and home environment when needed. Teachers and students are expected to constantly seek for information from various sources to effectively facilitate the teaching and learning process. The list of approved textbooks and reference books shall be provided by the Tanzania Institute of Education (TIE).

#### 9.0 Assessment

Assessment is important in teaching and learning of Carpentry and Joinery with metal work occupation. It is divided into formative and summative assessments. Formative assessment informs both the teacher and students on the progress of teaching and learning, and in making decisions on improving the teaching and learning process. Teachers are therefore, expected to apply a wide range of formative assessment methods which include but not limited to demonstration, discussions, presentations, oral questions, experiments, observations, practical assignments and projects.

Summative assessment, on the other hand, will focus on determining student's achievement of learning. Teachers are expected to use a variety of summative assessments including Form Two National Assessment, terminal examination, annual examination, mock examination and project. The scores obtained from these assessments will be used as Continuous Assessment (CA). Therefore, the continuous assessments shall contribute 60% and the National Form IV Examination shall be 40% as indicated in Table 2.

#### 9.1 Project Work

Project work is a carefully planned and clearly defined task or problem that a student undertakes, either alone or in a group, to enhance and apply the skills and knowledge gained in the classroom, workshop, kitchen, or laboratory. It is based on the principles of "Learning by Doing" and "Learning by Living." In this context, the implementation of Project Work in secondary schools' vocational streams is essential. Projects in the vocational stream should be conducted in the core subject (occupation). To ensure its success, the supervision and assessment of student project work must be consistent with the established guidelines provided by National Examinations Council of Tanzania (NECTA).

Assessment Category	Weight (%)	National Examination
Form Two National Assessment (FTNA)	6.0	
Form Three Terminal Examination	5.0	
Form Three Annual Examination	5.0	
Form Four Mock Examination	7.0	
Project	7.0	40.0
Form Two Practical	10.0	
Form Three Practical	10.0	
Form Four Practical	10.0	
Total	60.0	

**Table 2:** Contribution of Continuous Assessment and National Examination in the final score

#### **10.0 Number of Periods**

The Carpentry and joinery with metal work Syllabus for Ordinary Secondary Education Vocational Stream Form I–IV provides time estimates for teaching and learning each specific competence. The estimates consider the complexity of the specific competencies and the learning activities. Eight (08) periods of 40 minutes each have been allocated per week, whereby two (02) periods will be used for theory and 6 for practical sessions which may require double periods (e.g., 80). Double periods will allow sufficient time for hands-on activities.

## 11.0 Teaching and Learning Contents

The contents of the Syllabus are organized into a matrix with seven (07) columns which are main competencies, specific competencies, learning activities, suggested teaching and learning methods, assessment criteria which are divided into (process assessment, products/service assessment and knowledge assessment), suggested teaching and learning resources and number of periods as presented in Table 3 to 6.

# Form One

# Table 3: Detailed contents for Form One

Module Title	Unit Title	Flements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
1.0 Maintaining Health, Safety and Environment at Workplace	1.1 Maintaining Health, Safety and Environment at Workshop	(a) Maintaining workshop safety rules and regulations	Discussion- Based Teaching: Guides discussions, to help the students define safety terms and identify safety rules and regulations Flipped Classroom: Assigns content (e.g., videos) for students to learn, using class time for problem- solving and safety discussions Practical activity: Demonstrates, and then	<ul> <li>The student should be able to:</li> <li>Select appropriate safety gear</li> <li>Maintain workshop safety measures</li> <li>Interpret and draw various safety signs in the workshop</li> <li>Ensure personal safety and hygiene</li> <li>Clean the workshop, tools, equipment, and surroundings</li> <li>Properly store tools,</li> </ul>	Safety of workshop and tools maintained as per safety rules and regulations	Detailed knowledge of:Method used: The student should be able to explain methods related to maintaining workshop safety rules and regulationsPrinciples: The student should explain principles related to maintaining workshop safety rules and regulationsPrinciples: The student should explain principles related to maintaining workshop safety rules and regulationsTheories: The students should explain tregulations	<ul> <li>The following equipment are to be available:</li> <li>Safety gear (PPE)</li> <li>Brooms</li> <li>Brushes</li> <li>Dust covers</li> <li>Dust covers</li> <li>Dustbins</li> <li>Other resources related to maintaining workshop safety rules and regulations</li> </ul>	63

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			organizes groups to identify accident-prone areas if safety rules are not followed	equipment, and safety gear • Use safety gear effectively		maintain workshop safety rules and regulations Circumstantial knowledge: The students should explain detailed knowledge related to maintaining workshop safety rules and regulations.		
		(b) Maintaining workshop environment	<b>Discussion- Based Teaching:</b> Leads discussions to help the students to define terms and methods for maintaining an organized workshop	<ul> <li>The student should be able to:</li> <li>Select relevant safety gear</li> <li>Maintain workshop environment</li> <li>Identify causes of health and safety hazards in a workshop</li> </ul>	Safety of workshop environment maintained as per OSHA regulations	Detailedknowledge of:Method used:The studentshould be able toexplain methodsrelated tomaintaining theworkshopenvironmentPrinciples: Thestudent should	<ul> <li>The following tools, equipment, and safety gear are to be available:</li> <li>Safety boots</li> <li>Gloves</li> <li>Overalls</li> <li>Cleaning materials</li> <li>Hoe</li> <li>Broom</li> <li>Brush</li> </ul>	

Module Title	Unit Title	Elements	Suggested	As	sessment Criter	ia	Training Requirements/	Number
(Main Competence) (Spo Compe	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested o Resources	of Periods per Unit
			Flipped Classroom: Students learn via videos, and class time focuses on solving workshop maintenance issues Practical Activity: Organizes groups to and assign the students the task of identifying areas that need better cleanliness and order	<ul> <li>and its surroundings</li> <li>Maintain a safe working environment</li> <li>Clean workshop, tools, equipment, and workshop surroundings</li> <li>Store tools, equipment, and safety gear</li> <li>Use safety gear</li> <li>Dispose of different types of wastes as per OSHA regulations</li> </ul>		explaintheprinciplesassociatedwithmaintainingtheworkshopenvironmentTheories:The studentsshouldexplaintheories:relatedtomaintainingthestudentsshouldenvironmentCircumstantialknowledge:Thestudentsshouldexplaindetailedknowledge:Thestudentsshouldexplaindetailedknowledgerelatedtomaintainingthestudentsshouldexplaindetailedknowledgerelatedtomaintainingthestudentsshouldexplaindetailedknowledgerelatedtomaintainingtheworkshop </td <td><ul> <li>Safety gear (PPE)</li> <li>Dust covers</li> <li>Dust mask</li> <li>Dustbins</li> </ul></td> <td></td>	<ul> <li>Safety gear (PPE)</li> <li>Dust covers</li> <li>Dust mask</li> <li>Dustbins</li> </ul>	
		(c) Maintaining personal safety	<b>Discussion-</b> <b>Based Teaching:</b> Guides discussions, to	The student should be able to:	Personal safety at workplace	Detailed knowledge of: Method used:	The following tools, equipment, and safety gears are to be available:	

Module Title	Unit Title	Elements	Suggested	As	sessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Specific Competencies)(Learning Activities)Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit	
			help the students define safety terms and state the importance of personal safety Flipped Classroom: Assigns content (e.g., videos) for students to learn, using class time for problem- solving and personal safety discussions Practical activity: Demonstrates proper safety practices and then organizes groups to identify accident-prone areas if personal safety is not followed	<ul> <li>Select appropriate safety gear</li> <li>Maintain workshop safety measures</li> <li>Interpret and draw various safety signs in the workshop area</li> <li>Ensure personal safety and hygiene</li> <li>Clean the workshop, tools, equipment, and surroundings</li> <li>Use safety gear effectively</li> </ul>	maintained as per OSHA	Thestudentshould be able toexplainmethodsrelatedformaintainingpersonal safetyPrinciples:Thestudentshouldexplainprinciplesrelatedtomaintainingpersonal safety.Theories:Thestudentsshouldexplaintheories:relatedtomaintainingpersonal safetyCircumstantialknowledge:Thestudentsshouldexplaindetailedknowledgerelatedto	<ul> <li>Safety boots</li> <li>Gloves</li> <li>Overalls</li> <li>Cleaning materials</li> <li>Hoe</li> <li>Broom</li> <li>Brush</li> <li>Safety gears (PPE)</li> <li>Dust covers</li> <li>Dust mask Dustbins</li> </ul>	

Module Title	Ile Title Main petence)Unit Title (Specific Competencies)Elements (Learning Activities)Suggested Teaching and Learning Methods	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)		Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit	
					~ ~	maintaining personal safety		
		(d) Using safety gear	Discussion- Based Teaching: Guides discussions, to help students define safety terms and state the importance of safety gear (PPE) Flipped Classroom: Assigns content (e.g., videos) for students to learn, using class time for problem- solving about using safety gear Practical activity: Demonstrates safety practices and organizes groups to identify	<ul> <li>The student should be able to:</li> <li>Select relevant safety gear</li> <li>Maintain workshop safety</li> <li>Interpret different safety signs in a workshop</li> <li>Draw safety signs</li> <li>Maintain a safe working environment</li> <li>Store tools, equipment, and safety gear</li> <li>Use safety gear</li> <li>Dispose of different types of wastes as per OHS</li> </ul>	Safety gear used as per OSHA rules and regulations	Detailed knowledge of: Method used: The student should be able to explain methods related to maintaining workshop safety rules and regulations Principles: The student should explain principles related to Using safety gears Theories: The students should explain theories associated with using safety gears	The following tools, equipment, and safety gear are to be available: • Safety boots • Gloves • Overalls, and other safety gear (PPE)	

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	Main npetence)Competencies)Literation (Learning Activities)Teaching and Learning Methods	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit	
			areas if safety gear is not used			<b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to using safety gears		
	1.2 Handling accidents and incidents	(a) Handling mechanical hazards	Discussion- Based Teaching: Guide discussions to help students define mechanical hazards, explain their importance, and encourage conversations about identifying and managing them - Guest speaker: – Invite an expert to share insights on managing mechanical	The student should be able to: • Identify hazardous materials • Locate first aid kits • Save victims and report to superiors • Record accidents • Inspect workshop and equipment periodically • Operate mechanical and electrical equipment safely	Machines, equipment and chemicals accidents and incidents handled according to workshop rules and regulations	Detailed knowledge of: Method used: The student should explain methods related to handling mechanical hazards Principles: The student should be able to explain principles related to handling mechanical hazards Theories: The students should	<ul> <li>The following tools, equipment, and safety gears should be available:</li> <li>Tool kit</li> <li>First Aid kit</li> <li>Fire extinguisher</li> <li>Power Machines</li> <li>Safety gear (PPE)</li> <li>Workshop rules and regulations guidelines</li> <li>Service manual</li> </ul>	63

Module Title	Unit Title	Unit Title Elements Suggested		As	Assessment Criteria			Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			hazards, engage students in participation, and have them write a report individually or in groups to present to the class <b>Field visits:</b> Organize site visits and guide the students to observe hazard safety practices <b>Practical/hands- on activities</b> - Engage the student in safe machinery use.	<ul> <li>Follow environmental practices</li> <li>Use and maintain safety gear</li> <li>Clean and store tools, equipment, and workplace</li> </ul>		explain theories related to handling mechanical hazards Circumstantial knowledge: The students should explain detailed knowledge related to handling mechanical hazards.		
		(b) Handling physical hazards	<b>Discussion-</b> <b>Based Teaching</b> Guide the students in discussions to	The student should be able to: • Provide first aid for physical	Physical hazards handled according to workshop	Detailed knowledge of: Method used: The student	<ul> <li>The following tools, equipment, and safety gear are to be available:</li> <li>Tool kit</li> </ul>	
			define physical hazards, and explain the	<ul><li>hazard accidents</li><li>Use service manuals and</li></ul>	rules and regulations	should be able explain methods	• Fire extinguisher	

Module Title	Unit Title	Elements	Suggested Assessment Criteria				Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			importance of handling them, and encourage talks on identifying and managing physical hazards <b>Guest speaker:</b> - Invite an expert to share insights on managing physical hazards <b>Field visits:</b> Visit sites to observe hazard safety practices to observe management of physical hazards and write the report in group or individual <b>Practical/hands- on activities:</b> Engage the student in safe machinery use	locate first aid kits • Report and record accidents • Inspect workshop and equipment regularly • Identify and handle hazardous materials • Follow colour codes and compressed air rules • Operate equipment safely • Use safety gear and maintain cleanliness • Store tools and equipment properly		related to handle physical hazards <b>Principles:</b> The student should explain principles related to handle physical hazards <b>Theories:</b> The students should explain theories related to handle physical hazards <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to handle physical hazards	<ul> <li>Powered Machines</li> <li>Safety gear (PPE)</li> <li>First aid kit</li> <li>First aid poster</li> <li>Workshop rules and regulations guidelines</li> <li>Service manual</li> </ul>	

Module Title	Unit Title	Elements	Suggested	As	sessment Criter	·ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
		(c) Handling chemical hazards	Discussion-Based Teaching:Guidesthestudenttodiscussionsonhandlingchemical hazardsHands-onDemonstrationsandExperiments:Superviseexperiments:wherestudentsidentify,label,andhandlechemicalssafely,usingreal-lifescenariostodemonstratepropersafetyequipmentuseInteractiveMultimediaPresentations:UseUsevideos,animations,andAugmented	<ul> <li>Ine student</li> <li>should be able</li> <li>to: <ul> <li>Carry out first aid to person involved in accidents related to chemical hazards</li> <li>Locate first aid kit</li> <li>Report to superiors</li> <li>Record accidents</li> <li>Make periodic inspection of chemicals, workshop area, and equipment</li> <li>Identify and handle hazardous materials</li> <li>Follow good environmental practices</li> </ul> </li> </ul>	Cnemicals hazards handled according to OSHA regulations	Detailedknowledge of:Method used:The studentshould be able toexplain methodsrelated tohandlingchemical hazardsPrinciples: Thestudent shouldexplainprinciples relatedto handlingchemicalhazards.Theories: Thestudents shouldexplain theoriesrelated tohandlingchemical hazards.Circumstantialknowledge:The studentsshould explain	<ul> <li>The following tools, equipment, and safety gear are to be available:</li> <li>Chemicals</li> <li>Fire extinguisher</li> <li>Power Machines</li> <li>Overalls</li> <li>Rubber gloves</li> <li>Gloves</li> <li>Safety gear (PPE)</li> <li>First aid kit</li> <li>Workshop rules and regulations guidelines</li> <li>Service manual</li> </ul>	

Module Title	Unit Title	Elements	Suggested	A	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			Reality (AR) to show chemical handling dangers and safety procedures in a virtual environment	<ul> <li>Use safety gear</li> <li>Clean tools, equipment and workplace</li> <li>Store tools and equipment</li> </ul>		detailed knowledge related to handling chemical hazards		
		(d) Handling electrical hazards	Discussion- Based Teaching: Guides the students in discussions on handling electrical hazards and states their importance Practical demonstrations: Show how to use basic electrical safety tools (e.g., insulated gloves, voltage testers), students practice such as turning off power sources before repairs	<ul> <li>The student should be able to:</li> <li>Use service manuals and follow workshop rules</li> <li>Locate first aid kits and assist victims</li> <li>Report and record accidents</li> <li>Inspect the workshop regularly</li> <li>Apply safety sign and handle electrical</li> </ul>	Electrical hazards are handled according to OSHA regulations	Detailed knowledge of: Method used: The student should be able to explain methods related to handling electrical hazards Principles: The student should explain principles related to handling electrical hazards Theories: The students should explain theories	The following tools, equipment, and safety gear are to be available: • Tool kit • Fire extinguisher • Powered Machines • Safety gear (PPE) • First aid kit • First aid poster • Service manual	

Module Title	Unit Title	Elements	Suggested	Assessment Criteria			Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
		(e) Handling ergonomic hazards	<b>Fractical</b> activities:Organizethestudentsinmanageablegroups to identifyareasthatcause accidents orincidentsifthesafetyrulesarenotfollowedoradhered toDiscussion-Based Teaching:Guidediscussionsonhowtohandleergonomichazards,andstatesthedisadvantagesofnotusingergonomicprinciplesGroupDiscussions andCase Studies:	<ul> <li>equipment safely</li> <li>Use safety gear and maintain cleanliness</li> <li>Store tools and equipment properly</li> <li>The student should be able to:</li> <li>React correctly and safely when faced with an emergency</li> <li>Identify and use all emergency equipment and supplies</li> <li>Locate good posture</li> <li>Clean tools, equipment</li> </ul>	Ergonomic hazards are handled as per OSHA regulations and guidelines	related to handling electrical hazards Circumstantial knowledge: The students should explain detailed knowledge related to handling electrical hazards Detailed knowledge of: Detailed knowledge of: Method used: The student should be able to explain methods related to handling ergonomic hazards. Principles: The student should explain principles related to handling	The following tools, equipment. and safety gears are to be available: • Work station • Power Machines • Overalls • Rubber gloves • Gloves • Safety boots • Safety clear glasses • First aid kit • First aid poster	

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			discussions about real-world examples of ergonomic hazards in workplaces, use case studies of individuals who suffered from poor ergonomics to highlight prevention strategies <b>Practical</b> <b>activities:</b> Students set up their own workspaces (desks, chairs, and tools) with ergonomic principles in mind. Conduct activities where students analyse and correct poorly designed workstations	<ul> <li>Store tools and equipment</li> </ul>		hazards. Theories: The students should explain theories related to handling ergonomic hazards. Circumstantial knowledge: The students should explain detailed knowledge related to handling ergonomic hazards	• workshop rules and regulations guidelines	

Module Title	Unit Title	Elements	Suggested	Assessment Criteria			Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
	1.3 Handling fire accident	(a) Handling firefighting equipment and materials	Discussion- Based Teaching: Guide discussions on handling firefighting equipment and materials and outline the firefighting equipment and materialsField Visits: Arrange visits to fire stations for students to see firefighting equipment in use and learn directly from firefighters, let students observe how professionals handle fire emergencies	<ul> <li>The student should be able to:</li> <li>Select tools, equipment, and safety gear</li> <li>Identify common classes of fire</li> <li>Use first aid kit</li> <li>React correctly and safely when faced with different types of fire</li> <li>Apply right class of fire extinguisher</li> <li>Handle different types of fire</li> <li>Apply right class of firefighting materials</li> </ul>	Firefighting equipment and materials are handled as per OHS	Detailed knowledge of:Methodused:Thestudentshould be able to explain explain methods related to handle firefighting equipment and materialsPrinciples:The student should explain principles related to handle firefighting equipment and materialsTheories:The students should explain to handle firefighting equipment and materialsTheories:The students should explain theories:Theories:The students should explain theories related to handle firefighting equipment and materials	<ul> <li>The following tools, equipment and safety gears are to be available:</li> <li>Firefighting rules and regulations</li> <li>Workshop rules and regulations</li> <li>Fire extinguishers</li> <li>Firefighting materials</li> <li>First aid kit</li> <li>Gloves</li> <li>Safety boots</li> <li>Overalls</li> <li>Clear safety glasses</li> </ul>	63

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number of Periods per Unit
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
				<ul> <li>Check and test fire extinguishers</li> <li>Store tools, equipment, and safety gear</li> </ul>		Circumstantial knowledge: The students should explain detailed knowledge related to handle firefighting equipment and materials		
		(b) Handling different types of fire	Discussion- Based Teaching: Guide the student in discussions on handling different types of fire and states the state the importance of handle different of fire Field Visits: Arrange visits to fire stations for students to see firefighting equipment in use and learn directly from firefighters,	<ul> <li>The student should be able to:</li> <li>Select tools, equipment, and safety gears</li> <li>Identify common classes of fire</li> <li>Use first aid kit</li> <li>Respond correctly and safely when faced with different types of fire</li> </ul>	Fire accidents handled as per rules and regulations	Detailed knowledge of: Method used: The student should be able to explain methods related to handle different types of fire Principles: The student should explain principles related to handle different types of fire	<ul> <li>The following tools, equipment, and safety gears are to be available:</li> <li>Firefighting rules and regulations</li> <li>Workshop rules and regulations</li> <li>Workshop rules and regulations</li> <li>Fire extinguishers</li> <li>Firefighting materials</li> <li>First aid kit</li> <li>Gloves</li> <li>Safety boots</li> <li>Overalls</li> <li>Clear safety glasses</li> </ul>	

Module Title	Unit Title	Elements	Suggested	aggested Assessment Criteria		Assessment Criteria Training Requirements/ Numb		Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			let students observe how professionals handle fire emergencies	<ul> <li>Apply right class of fire extinguisher</li> <li>Handle different types of fire</li> <li>Apply right class of firefighting materials</li> <li>Check and test fire extinguishers</li> <li>Clean up tools, equipment and working place</li> <li>Store tools, equipment and safety gears</li> </ul>		Theories: The students should explain theories related to handle different types of fire Circumstantial knowledge: The students should explain detailed knowledge related to handle different types of fire		
	1. 4 Performing first aid	(a) Performing artificial respiration	Brainstorm: Guide the students in defining respiration terms, identifying ways of respirations	<ul> <li>The student should be able to:</li> <li>Select tools and equipment for performing</li> </ul>	Artificial respiration performed as per medical procedure and regulations	Detailed knowledge of: Method used: The student should be able to explain methods related to	<ul> <li>The following tools, equipment, and safety gear are to be available:</li> <li>First aid Kit</li> <li>Stretcher</li> <li>Light blanket</li> </ul>	33

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	Training Requirements/	Number	
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			Interactive Videos and Tutorials: Use multimedia tools like instructional videos and animations to show proper techniques for artificial respiration	<ul> <li>artificial respiration</li> <li>Identify types of f artificial respiration Attend minor wounds</li> <li>Sterilize first aid tools</li> <li>Observe safety precautions</li> <li>Store first aid kit</li> </ul>		performing artificial respirationPrinciples:The studentstudentshould explain principlesprinciplesrelated to performing artificial respirationTheories:The studentsshould explaincircumstantial knowledge: The should explain detailed knowledge related to performing	<ul> <li>Sterilizer</li> <li>Towel</li> <li>Overalls</li> <li>Medical gloves</li> <li>Safety boots</li> </ul>	

Module Title	Unit Title	Elements Suggested		As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested o Resources	of Periods per Unit
						artificial respiration		
		(b) Performing first aid to minor wounds and scalpels	Brainstorming: Guide the students in defining terms, identifying types of wounds, and ways of treating wounds and scalpels Practical work: Guide the students on performing first aid to minor wound scalpels as per instructions	<ul> <li>The student should be able to:</li> <li>Select tools and equipment to perform first aid for minor wounds and scalpels</li> <li>Attend minor wounds</li> <li>Sterilize first aid tools</li> <li>Observe safety precautions</li> <li>Store first aid kit</li> </ul>	First aid to minor wounds and scalpels offered conforms to medical requirements	Detailed knowledge of: Method used: The student should be able to explain methods related to performing first aid to minor wound scalpels Principles: The student should explain principles related to performing first aid to minor wound scalpels Theories: The students should explain theories related to Performing first	The following tools, equipment, and safety gear are to be available: • First aid Kit • Stretcher • Light blanket • Sterilizer • Towel • Overalls • Medical gloves • Safety boots	

Module Title	Unit Title	Elements	Suggested	As	sessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
						aid to minor wound scalpels <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to Performing first aid to minor wound scalpels		
	1.5 Maintaining environmental issues	(a) Managing environment	Discussion- Based Teaching: Guide discussions on managing environment, and states the importance of managing environment Practical work: Assign the students the task of and managing environmental	<ul> <li>The student should be able to:</li> <li>Select relevant safety gears</li> <li>Maintain safe working environment</li> <li>Maintain personal safety</li> <li>Select proper waste disposal</li> </ul>	Environment managed as per required environmental management standards	Detailed knowledge of: Method used: The student should be able to explain methods related to managing environment Principles: The student should explain principles related	The following tools, equipment, and safety gear for environmental safety are to be available, but are not limited to: • Dustbin • Rack • Chalk board • White board • Pictures / charts • Containers • Goggles • Overall • Safety boots	48

Module Title	Unit Title (Specific Competencies)	Elements (Learning Activities)	Suggested Teaching and Learning Methods	As	ssessment Criter	Training Requirements/	Number	
(Main Competence)				Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			Practical Activity: Organize the students in manageable groups to identify areas that can cause accidents or incidents if the environment is not managed properly	<ul> <li>Select tools and equipment</li> <li>Maintain environment</li> <li>Observe safety precautions</li> <li>Clean and store tools at proper custody</li> </ul>		to managing environment Theories: The students should explain theories related to managing environment. Circumstantial knowledge: The students should explain detailed knowledge related to managing environment	<ul> <li>Bush knife</li> <li>Hoe</li> <li>Cleaning materials</li> <li>Broom</li> <li>Brush</li> <li>Safety gears (PPE)</li> <li>Dust covers</li> <li>Dust mask</li> </ul>	
		(b) Maintaining sustainable construction practice	Discussion- Based Teaching: Guide discussions on ways of maintaining sustainable construction practice, states the importance of	The student should be able to: • Select relevant safety gear • Maintain safe working environment	Sustainable construction practice maintained as per required standards	Detailed knowledge of: Method used: The student should be able to explain methods related to maintaining sustainable	The following tools, equipment, and safety gear for environmental safety are to be available, but are not limited to: • Dustbin • Rack • Chalk board	

Module Title (Main Competence)	Unit Title (Specific Competencies)	Elements (Learning Activities)	Suggested Teaching and Learning Methods	As	ssessment Criter	Training Requirements/	Number	
				Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			maintaining sustainable construction practice <b>Practical work:</b> Assign the students the task of how to maintaining sustainable construction practice	<ul> <li>Maintain personal safety</li> <li>Select proper waste disposal</li> <li>Select tools and equipment</li> <li>Maintain environment</li> <li>Observe safety precautions</li> <li>Clean and store tools at proper custody</li> </ul>		construction practice <b>Principles:</b> The student should explain principles related to maintaining sustainable construction practice <b>Theories:</b> The students should explain theories related to maintaining sustainable construction practice <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to maintaining sustainable	<ul> <li>White board</li> <li>Pictures/charts</li> <li>Containers</li> <li>Goggles</li> <li>Overalls</li> <li>Safety boots</li> <li>Bush knife</li> <li>Hoe</li> <li>Cleaning materials</li> <li>Broom</li> <li>Brush</li> <li>Safety gears (PPE)</li> <li>Dust covers</li> <li>Dust mask</li> </ul>	

Module Title	Unit Title (Specific Competencies)	Elements (Learning Activities)	Suggested Teaching and Learning Methods	As	ssessment Criter	Training Requirements/	Number	
(Main Competence)				Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
		(c) Maintaining safe waste disposal	Methods Discussion-Based Teaching: Guide the students to discuss ways/methods of maintaining sustainable construction practice, states the importance of maintaining safe waste disposal Practical work: Assign students the task on how to maintain safe waste disposal	Assessment Assessment The student should be able to: • Select relevant safety gear • Maintain safe working environment • Maintain personal safety	AssessmentAssessmentConstruction practiceSafe waste disposal maintained as per requiredDetailed knowledge of:Method used: The student should be able to explain methods related to maintaining safe waste disposalPrinciples: The student should explain principles related to maintaining safe waste disposalTheories: The students should explain principles related to maintaining safe waste disposal	Assessment construction practice Detailed knowledge of: Method used: The student should be able to explain methods related to maintaining safe waste disposal Principles: The	The following tools, equipment, and safety gear for environmental safety are to be available, but are not limited to: • Dustbin • Rack • Chalk board • White board • White board • Pictures / charts • Goggles • Overalls • Safety boots • Bush knife • Cleaning materials • Broom • Brush • Safety gears (PPE) • Dust covers • Dust mask	per Unit
				<ul> <li>Select proper waste disposal</li> <li>Select tools and equipment</li> <li>Maintain environment</li> <li>Observe safety precautions</li> <li>Clean and store tools at proper custody</li> </ul>		student should explain principles related to maintaining safe waste disposal <b>Theories:</b> The students should explain theories related to maintaining safe waste disposal		

Module Title (Main Competence)	Unit Title (Specific Competencies)	Elements (Learning Activities)	Suggested Teaching and Learning Methods	Assessment Criteria			Training Requirements/	Number
				Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
						Circumstantial knowledge: The students should explain detailed knowledge related to maintaining safe waste disposal		
2.0 Performing timber processing and treatment	2.1 Performing timber processing	(a) Logging timber	Discussion- Based Teaching: GuideGuidethe studentsstudentsin discussionsloggingtimberandexplaindifferenttypes of logging timberField Visits:Arrange visits to the forest industry to see timber processing and logging, let the students observe and learn how professionals are	<ul> <li>The student should be able to:</li> <li>Prepare tools &amp; materials</li> <li>Preserve timbers</li> <li>Dry timbers</li> <li>Store timbers</li> <li>Clean work place</li> <li>Store tools</li> </ul>	Timber logged as per technical specification	Detailed knowledge of: Method used: The student should be able explain methods related to logging timber Principles: The student should explain principles related to logging timber Theories: The students should explain theories	<ul> <li>The following tools, safety gear, and equipment are to be available:</li> <li>P/brush</li> <li>Safety boots</li> <li>Gloves</li> <li>Overalls</li> <li>Cleaning materials</li> <li>Spray gun</li> <li>Broom</li> <li>Moisture meter</li> <li>Safety gears (PPE)</li> <li>Dust covers</li> <li>Dust mask</li> </ul>	126
Module Title	Unit Title	Flements	Suggested	A	ssessment Criter	ia	Training Requirements/	Number
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(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			processing and logging timber			related to logging timber Circumstantial knowledge: The students should explain detailed knowledge related to logging timber		
		(b) Conversion of timber	<b>Discussion- Based Teaching:</b> Guide the student in discussions on conversion timber and states different types of conversion timber	<ul> <li>The student should be able to:</li> <li>Prepare tools and materials</li> <li>Preserve timbers</li> <li>Dry timbers</li> <li>Store timbers</li> <li>Clean work place</li> <li>Store tools</li> </ul>	Timber converted as per industry standards and methods	Detailed knowledge of: Method used: The student should be able to explain methods related to logging timber Principles: The student should explain principles related to conversion timber	<ul> <li>The following tools, safety gear, and equipment, are to be available:</li> <li>P/brush</li> <li>Safety boots</li> <li>Gloves</li> <li>Overalls</li> <li>Cleaning materials</li> <li>Spray gun</li> <li>Broom</li> <li>Moisture meter</li> <li>Safety gears (PPE)</li> <li>Dust covers</li> <li>Dust mask</li> </ul>	

Module Title (Main	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number of Periods per Unit
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
						Theories: The students should explain theories related to conversion timber Circumstantial knowledge: The students should explain detailed knowledge related to conversion timber		
	2.2 Performing timber treatment	(a) Timber seasoning	Discussion- Based Teaching: Guide the students in discussions on timber seasoning and states different types of seasoning timberField Visits: Arrange visits to the forest	<ul> <li>The student should be able to:</li> <li>Prepare tools and materials</li> <li>Preserve timbers</li> <li>Dry timbers</li> <li>Store timbers</li> <li>Clean work place</li> <li>Store tools</li> </ul>	Seasoned timber conforms to technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to timber seasoning Principles: The student should be able to explain	The following tools, safety gear, and equipment, are to be available: • P/brush • Safety boots • Gloves • Overalls • Cleaning materials • Spray gun • Broom • Moisture meter	114

Module Title	Unit Title	Elements	Suggested	As	Assessment Criteria			Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			industry to see how timber seasoning is performed. Let the students observe and learn from professionals about the timber seasoning process			<ul> <li>principles related to timber seasoning.</li> <li>Theories: The students should explain theories related to timber seasoning</li> <li>Circumstantial knowledge: The students should explain detailed knowledge related to timber seasoning</li> </ul>	<ul> <li>Safety gears (PPE)</li> <li>Dust covers</li> <li>Dust mask</li> </ul>	
		(b) Timbering treatment	Discussion- Based Teaching: Guide the students in discussions on timber treatment and states different types of timber treatmentField Visits:	<ul> <li>The student should be able to:</li> <li>Prepare tools and materials</li> <li>Preserve timbers</li> <li>Dry timbers</li> <li>Store timbers</li> <li>Clean work place</li> </ul>	Treated timber conform to technical specifications	Detailed knowledge of: Method used: The student should b able to explain methods related to timber treatment	<ul> <li>The following tools, safety gear, and equipment are to be available:</li> <li>P/brush</li> <li>Safety boots</li> <li>Gloves</li> <li>Overalls</li> <li>Cleaning materials</li> <li>Spray gun</li> </ul>	

Module Title	Unit Title	Elements_	Suggested	Assessment Criteria		Assessment Criteria Training Requirements/ Numb		
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			Arrange visits to the forest industry to see how timber are seasoned and let students observe and learn how professionals treat timber	• Store tools		Principles: The student should explain principles related to timber treatment Theories: The students should explain theories related to timber treatment Circumstantial knowledge: The students should explain detailed knowledge related to timber treatment	<ul> <li>Broom</li> <li>Moisture meter</li> <li>Safety gears (PPE)</li> <li>Dust covers</li> <li>Dust mask</li> </ul>	
3.0 Constructing	3.1 Performing	(a) Performing	Discussion-	The student	A workpiece	Detailed	The following tools,	171
furniture	preparation	sawing	Guide the	to:	timber	knowledge of:	equipment are to be	
			students	• Plane face	conforms to	Method used:	available:	
			discussions on	side straight	the given	The student	• Hand saw	
			performing	and flat	technical	should be able to	• G clamp	
			sawing and states		specifications	explain methods	Marking gauge	

Module Title	Unit Title	Elements	Suggested	As	sessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			different types of sawing timber <b>Practical</b> <b>demonstration</b> : Demonstrates a process, experiment, or skill for perform sawing while students are observing, and asking questions and answering <b>Practical</b> <b>activity</b> : Organize and provide the students with an operation sheet to perform sawing in the workshop	<ul> <li>Plane face edge straight and square to face side</li> <li>Gauge the thickness</li> <li>Gauge the width</li> <li>Check/control levelness, squareness, and straightness</li> <li>Cut to required size</li> <li>Clean work place</li> <li>Store work piece and tools</li> </ul>		related to maintain workshop safety rules and regulations <b>Principles:</b> The student should explain principles related to perform sawing <b>Theories:</b> The student should explain theories related to perform sawing <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to perform sawing	<ul> <li>Jack plane</li> <li>Overalls</li> <li>Broom</li> <li>Safety gears (PPE)</li> <li>Dust covers</li> <li>Dust mask</li> </ul>	

Module Title	Unit Title_	Elements_	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
		(b) Performing planning	Discussion- Based Teaching: Guide the students in discussions on performing planning for furniture making, highlighting different methods of planning timber Practical demonstration: Demonstrates a process, experiment, or skill for perform planning while students observe and asking questions and answering Practical activity: Distribute the operation sheet to students, guide them through the planning process,	<ul> <li>The student should be able to:</li> <li>Plane face side straight and flat</li> <li>Plane face edge straight and square to face side</li> <li>Gauge the thickness</li> <li>Gauge the width</li> <li>Check/control levelness, squareness and straightness</li> <li>Cut to required size</li> <li>Clean work place</li> <li>Store work piece and tools</li> </ul>	A prepared work piece A prepared work piece for planning conforms to the given technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to perform planning Principles: The student should explain principles related to perform planning Theories: The students should explain theories related to perform planning Circumstantial knowledge: The students should explain detailed knowledge	The following tools, safety gear, and equipment, are to be available: • Hand saw • G clamp • Marking gauge • Jack plane • Overalls • Broom • Safety gears (PPE) • Dust covers • Dust mask	

Module Title	Unit Title	Elements	Suggested	As	sessment Criter	Training Requirements/	Number	
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			and monitor their progress to ensure a smooth, even surface			related to perform planning		
	3.2 Making joints	(a) Constructing framing Joints	Discussion- Based Teaching: Guide the students in discussions on construct framing joints, and states different ways/methods of planning timber Practical demonstration: Demonstrates the process of constructing framing joints, and the students to observe, ask questions, and give correct answers	<ul> <li>The student should be able to:</li> <li>Draw joints</li> <li>Interpret drawing</li> <li>Calculate materials required</li> <li>Take measurements</li> <li>Set joint position</li> <li>Prepare joint members</li> <li>Assemble joints</li> <li>Perform general finishing</li> <li>Clean the workpiece and workplace</li> </ul>	Constructed framing joints conform to drawing and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to construct framing Joints Principles: The student should explain principles related to construct framing Joints Theories: The students should explain theories related to construct framing Joints	<ul> <li>The following tools, safety gear, and equipment are to be available:</li> <li>Bench</li> <li>Bench vice/bench hook</li> <li>Try square</li> <li>Tape measure Marking/mortice gauge</li> <li>Jack/smooth plane</li> <li>Tenon saw</li> <li>Hand saw</li> <li>Mallet hammer</li> <li>Claw hammer</li> <li>Chisels</li> <li>Safety boots</li> <li>Overall</li> </ul>	237

Module Title	Unit Title	Elements Suggested		As	Assessment Criteria			Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			<b>Practical</b> <b>activity:</b> Provide the students with an operation sheet and assign them to construct framing joints in the workshop while guiding them in the workshop	• Store the work piece, tools, and equipment to a safe place		Circumstantial knowledge: The students should explain detailed knowledge related to construct framing Joints		
		(b) Constructing lengthening Joints	Discussion- Based Teaching: Guide the students in discussions on construct lengthening Joints and states different ways/procedures of constructing lengthening Joints Practical demonstration: Demonstrates a	<ul> <li>The student should be able to:</li> <li>Draw joints</li> <li>Interpret drawing</li> <li>Calculate materials required</li> <li>Take measurements</li> <li>Set joint position</li> <li>Prepare joint members</li> <li>Assemble joints</li> </ul>	A workpiece constructed with lengthening joints conforms to the drawing and technical specifications	Detailed knowledge of: Method used: The student be able to should explain methods related to construct lengthening Joints Principles: The student should explain principles related to construct	<ul> <li>The following tools, safety gear, and equipment, are to be available:</li> <li>Bench</li> <li>Bench vice/bench hook</li> <li>Try square</li> <li>Tape measure</li> <li>Marking/mortice gauge</li> <li>Jack/smooth plane</li> <li>Tenon saw</li> <li>Hand saw</li> </ul>	

Module Title	Unit Title	Elements	Suggested	Assessment Criteria Training Requirements			Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			process, experiment, or skill for constructing lengthening Joints while students observe and asking questions, and given correct answers <b>Practical</b> <b>activity:</b> Provide the students with an operation sheet and assign them to construct lengthening joints in the workshop while guiding them	<ul> <li>Perform general finishing</li> <li>Clean the work piece and work place</li> <li>Store the work piece, tools, and equipment to a safe place</li> </ul>		lengthening Joints Theories: The students should explain theories related to construct lengthening Joints Circumstantial knowledge: The students should explain detailed knowledge related to construct lengthening Joints	<ul> <li>Mallet hammer</li> <li>Claw hammer</li> <li>Chisels</li> <li>Safety boots</li> <li>Overalls</li> </ul>	
		(c) Constructing widening Joints	Discussion- Based Teaching: Guide the students in discussions on construct	The student should be able to: • Draw joints • Interpret drawing	Widening joints constructed, conforms drawing and	Detailed knowledge of: Method used: The student should be able to	The following tools, safety gear, and equipment are to be available: • Bench	

Module Title	Unit Title_	Elements_	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			<ul> <li>widening Joints and states</li> <li>different ways of widening Joints</li> <li>Practical demonstration:</li> <li>Demonstrates the process of constructing</li> <li>widening Joints, and let the students to observe, ask questions and receive correct answers</li> <li>Practical activity:</li> <li>Provide the students with an operation sheet and assign them to construct</li> <li>widening joints in the workshop</li> <li>while guiding them</li> </ul>	<ul> <li>Calculate materials required</li> <li>Take measurements</li> <li>Set joint position</li> <li>Prepare joint members</li> <li>Assemble joints</li> <li>Perform general finishing</li> <li>Clean the work piece and work place</li> <li>Store the work piece, tools and equipment to a safe place</li> </ul>	technical specifications	explain methods related to construct widening Joints <b>Principles:</b> The student should explain principles related to construct widening Joints <b>Theories:</b> The students should explain theories related to construct widening Joints <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to construct widening Joints	<ul> <li>Bench vice/bench hook</li> <li>Try square</li> <li>Tape measure</li> <li>Marking/mortice gauge</li> <li>Jack/smooth plane</li> <li>Tenon saw</li> <li>Hand saw</li> <li>Mallet hammer</li> <li>Claw hammer</li> <li>Chisels</li> <li>Safety boots</li> <li>Overall</li> </ul>	

Module Title	Unit Title	Elements	Suggested	A	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
	3.3 Making up right furniture	(a) Making stool/table	Discussion- Based Teaching: Guide the student in discussions on how to make stool/table, and states procedure for making stool/table, and identify various types of joints used for making stool/table Practical demonstration: Demonstrates to student a process and procedures of making stool/table, while students observe and asking questions and receive correct answers a Practical activity:	<ul> <li>The student should be able to:</li> <li>Draw upright furniture</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> <li>Select tools equipment and materials</li> <li>Prepare members</li> <li>Set out joints</li> <li>Make joints</li> <li>Assemble the furniture</li> <li>Apply finishes</li> <li>Clean the work area</li> <li>Store the furniture and tools to their place</li> </ul>	Constructed stool/table conform to drawing and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to make stool/table Principles: The student should explain principles related to make stool/table Theories: The students should explain theories related to make stool/table Circumstantial knowledge: The students should explain detailed knowledge	The following tools, safety gear, and equipment are to be available: • Tyr square • Tape measure • Mortise gauge/making gauge • Bench planes • Tenon saw • Hand saw • Mallet hammer • Claw hammer • Claw hammer • Claw hammer • Chisels • Sash cramp • Bench vice • Bench hook • Overall • Safety boots • Painting brush • Gluing brush	237

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			Organize the students, distribute the operation sheet, and guide them in constructing a stool or table in the workshop			related to make stool/table		
		(b) Making bed	Discussion- Based Teaching: Guide the students in discussions on make stool/table, and states procedure for making bed, and identify joints used for making bed Practical demonstration: Demonstrate the process of making a bed while students observe, ask	<ul> <li>The student should be able to:</li> <li>Draw upright furniture</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> <li>Select tools equipment and materials</li> <li>Prepare members</li> <li>Set out joints</li> <li>Make joints</li> <li>Assemble bed</li> <li>Apply finishes</li> </ul>	The constructed bed conforms to drawing and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to make bed Principles: The student should explain principles related to make bed Theories: The students should explain theories	The following tools, safety gear, and equipment are to be available: • Tyr square • Tape measure • Mortise gauge/making gauge • Bench planes • Tenon saw • Hand saw • Mallet hammer • Claw hammer • Claw hammer • Chisels • Sash cramp • Bench vice • Bench hook • Overalls	

Module Title Unit Title		Elements Suggested	Suggested	As	sessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			receive correct answers Practical activity: Organize the students, distribute the operation sheet, and guide them in making a bed in the workshop	<ul> <li>Clean the work area</li> <li>Store the furniture and tools to their place</li> </ul>		related to make bed Circumstantial knowledge: The students should explain detailed knowledge related to make bed	<ul><li>Painting brush</li><li>Gluing brush</li></ul>	
		(d) Making shelf	Discussion- Based Teaching Guide the students in discussions on making shelf and states procedure for making shelf, and identify joints used for making shelfPractical demonstration: Demonstrate the process of making a shelf	<ul> <li>The student should be able to:</li> <li>Draw shelf</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> <li>Select tools equipment and materials</li> <li>Prepare members</li> <li>Set out joints</li> <li>Make joints</li> </ul>	The constructed shelf conforms to drawing and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to make shelf Principles: The student should explain principles related to make shelf.	The following tools, safety gear, equipment are to be available: Tyr square Tape measure Mortise gauge/making gauge Bench planes Tenon saw Hand saw Mallet hammer Claw hammer Chisels Sash cramp	

Module Title	Unit Title	Elements	Suggested	As	sessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			while students observe, asking questions, and receive correct answers Practical activity: Organize the students, distribute the operation sheet, and assign them to make a shelf while guiding them through the process in the workshop	<ul> <li>Assemble the shelf</li> <li>Apply finishes</li> <li>Clean the work area</li> <li>Store the shelf and tools to their place</li> </ul>		Theories: The students should explain theories related to make shelf Circumstantial knowledge: The students should explain detailed knowledge related to make shelf	<ul> <li>Bench vice</li> <li>Bench hook</li> <li>Overall</li> <li>Safety boots</li> <li>Painting brush</li> <li>Gluing brush</li> </ul>	
		(e) Making chair	Discussion- Based Teaching: Guide the students in discussions on how to make chair, and states procedure for making chairs, and identifying	<ul> <li>The student should be able to:</li> <li>Draw upright furniture</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> </ul>	Constructed chair conforms to drawing and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to make chair	<ul> <li>The following tools, safety gear, and equipment are to be available:</li> <li>Tyr square</li> <li>Tape measure</li> <li>Mortise gauge/making gauge</li> <li>Bench planes</li> </ul>	

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number of Periods per Unit
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resourcesof Peri per U	of Periods per Unit
			joints used for make chair <b>Practical</b> <b>demonstration</b> : Demonstrate the process of making a chair to the students while they observe, ask questions, and receive correct answers; then give them operation sheet <b>Practical</b> <b>activity:</b> Assign the task of making a chair to the students and guide them through the procedures in the workshop	<ul> <li>Select tools equipment and materials</li> <li>Prepare members</li> <li>Set out joints</li> <li>Make joints</li> <li>Assemble the furniture</li> <li>Apply finishes</li> <li>Clean the work area</li> <li>Store the furniture and tools to their place</li> </ul>		Principles: The student should explain principles related to make chair Theories: The students should explain theories related to make chair Circumstantial knowledge: The students should explain detailed knowledge related to make chair	<ul> <li>Tenon saw</li> <li>Hand saw</li> <li>Mallet hammer</li> <li>Claw hammer</li> <li>Chisels</li> <li>Sash cramp</li> <li>Bench vice</li> <li>Bench hook</li> <li>Overall</li> <li>Safety boots</li> <li>Painting brush</li> <li>Gluing brush</li> </ul>	
	3.4 Performing finishing work	(a) Painting wood surfaces	Discussion- Based Teaching: Guide the students in	The student should be able to:	Painted wood surfaces conform to	Detailed knowledge of:	The following tools, safety gear, and equipment are to be available:	150

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/ N Suggested of Resources p	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment		of Periods per Unit
			discussions on how to paint wood surfaces, and states procedure for paint wood surfaces, and identify joints used for paint wood surfaces <b>Practical</b> <b>demonstration</b> : Demonstrate the process and stages of painting wood surface to the students while they observe, ask questions, and receive correct answers, then provide them with the operation sheet <b>Practical</b> <b>activity:</b> Organize the students,	<ul> <li>Sand paper the surfaces for 1<sup>st</sup> coat (Primer)</li> <li>Apply 1<sup>st</sup> coat</li> <li>Fill up all cracks and holes</li> <li>Sand papering the surfaces for the 2<sup>nd</sup> and 3<sup>rd</sup> coats</li> <li>Apply 2<sup>nd</sup> and 3<sup>rd</sup> coats</li> <li>Clean the work place and tools</li> <li>Store the tools and equipment to their respective places</li> </ul>	technical specifications	Method used: The student should be able to explain methods related to paint wood surfaces <b>Principles:</b> The student should explain principles related to paint wood surfaces <b>Theories:</b> The students should explain theories related to paint wood surfaces <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to paint wood surfaces	<ul> <li>Chisels</li> <li>Scraper</li> <li>Overall</li> <li>Safety boots</li> <li>Painting brush</li> <li>Spray gun</li> <li>Air compressor</li> <li>Musk</li> <li>Safety goggles</li> </ul>	

Module Title	lule Title Unit Title Elements Suggested		As	ssessment Criter	ia	Training Requirements/	Number	
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			distribute the operation sheet, and assign them to paint wood surface while guiding them through the process in the workshop					
		(b) Varnishing wood surfaces	Discussion- Based Teaching: Guide the students in discussions on varnishing wood surfaces, and states procedure/steps for varnishing wood surfaces, and identify stages used for varnish wood surfaces Practical demonstration: Demonstrate the process and	<ul> <li>The student should be able to:</li> <li>Sand paper the surfaces for 1<sup>st</sup> coat (Primer)</li> <li>Apply 1<sup>st</sup> coat</li> <li>Fill up all cracks and holes</li> <li>Sand papering the surfaces for the 2<sup>nd</sup> and 3<sup>rd</sup> coats</li> <li>Apply 2<sup>nd</sup> and 3<sup>rd</sup> coats</li> <li>Clean the work place</li> </ul>	Varnished wood surfaces conform to technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to varnish wood surfaces Principles: The student should explain principles related to varnish wood surfaces Theories: The students should explain theories	This element can be achieved at workplace or training institution The following tools, safety gear, and equipment are to be available: Claw hammer Chisels Bench vice Scraper Overall Safety boots Painting brush Gluing brush Spray gun Air compressor	

Module Title	Unit Title	Flements	Suggested	A	ssessment Criter	ria	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			stages of varnishing wood surface to the students while they observe, ask questions, and receive correct answers, then provide them with the operation sheet <b>Practical</b> <b>activity:</b> Organize the students, distribute the operation sheet, and assign them to varnish wood surface while guiding them through the process in the workshop	Store the tools and equipment to their respective places		related to varnish wood surfaces Circumstantial knowledge: The students should explain detailed knowledge related to varnish wood surfaces		
		(c) Spraying wood surfaces	Discussion-Based TeachingGuidethestudentsin	should be able	surfaces conform to	knowledge of:	achieved at workplace or training institution	

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			discussions on spray surfaces, and states procedure for spraying wood surfaces, and identify stages used for spray wood surfaces <b>Demonstration:</b> Demonstrate the process and stages of spraying wood surfaces to the students while they observe, ask questions, and receive correct answers, then provide them with the operation sheet <b>Practical</b> <b>activity:</b> Organize the students, distribute the operation sheet,	<ul> <li>Sand paper the surfaces for 1<sup>st</sup> coat (Primer)</li> <li>Apply 1<sup>st</sup> coat</li> <li>Fill up all cracks and holes</li> <li>Sand papering the surfaces for the 2<sup>nd</sup> and 3<sup>rd</sup> coats</li> <li>Apply 2<sup>nd</sup> and 3<sup>rd</sup> coats</li> <li>Clean the work place and tools</li> <li>Store the tools and equipment to their respective places</li> </ul>	technical specifications	Method used: The student should be able to explain methods related to spray surfaces <b>Principles:</b> The student should explain principles related to spray surfaces <b>Theories:</b> The students should explain theories related to spray surfaces <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to spray surfaces	The following tools, safety gear, and equipment are to be available: Claw hammer Chisels Scraper Overall Safety boots Painting brush Gluing brush Spray gun Air compressor	

Module Title	Unit Title	Elements	Suggested	As	ssessment Criter	ia	Training Requirements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	LearningTeaching and LearningProce Activities)Activities)MethodsAssessn		Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			and assign them to spray wood surfaces while guiding them through the process in the workshop					

## Form Two

## **Table 4**: Detailed Contents for Form Two

Module Title	Unit Title	Elements	Suggested	Asse	ssment Criteria		Training	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	oi Periods per Unit
1.0 Making frames	1.1 Making door and window frames	(a) Making a door frame	Discussion-Based Teaching: Guide discussions on making door frame and states procedure for making door frames, and identify joints used for making door frames Demonstration: Demonstrates a process of making door frame, while students observe, ask questions and answer Practical activity: Organize, guide and give the students an operation sheet to make a door frame in the workshop	<ul> <li>The student should be able to:</li> <li>Draw door frames</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Cut and plane timber to required size/measurement</li> <li>Make rebate</li> <li>Mark/set joints position</li> <li>Chop mortises</li> <li>Cut tenon</li> <li>Assemble the frame</li> <li>Clean the work place and tools</li> <li>Store the frame and tool properly</li> </ul>	Door frames constructed as per the drawing and technical specifications	Detailed knowledge of: The student should be able to explain methods related to making door frames <b>Principles:</b> The student should explain principles for making a door frame <b>Theories:</b> The students should explain theories related to making a door frame <b>Circumstantial knowledge:</b>	The following tools, safety gears, equipment are to be available: Bench Measuring tape Try square Safety boot Overall Mortice chisel Mallet hammer Claw hammer Hand saw Rebate plane Bench hook/bench vice Bench planes	159

Module Title	Unit Title	Elements	Suggested	Asse	ssment Criteria		Training N Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
						The students should explain detailed knowledge related to make door frame		
		(b) Making window frames	Discussion-Based Teaching: Guide discussions on making window frames and states procedure for making window frames, and identify joints used for making window frames Practical demonstration: Demonstrates a process of making window frames while students observe, ask questions, and answer Practical activity:	<ul> <li>The student should be able to:</li> <li>Draw window frames</li> <li>Interpret the drawing</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Cut and plane timber to required size/measurement</li> <li>Make rebate</li> <li>Mark/set joints position</li> <li>Chop mortises</li> <li>Cut tenon</li> <li>Assemble the frame</li> </ul>	Window frames constructed as per the drawings and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to making window frames Principles: The student should explain principles related to making window frames Theories: The students should explain theories related to	The following tools, safety gear, equipment are to be available: Bench Measuring tape Try square Safety boot Overall Mortice chisel Mallet hammer Claw hammer Hand saw Rebate plane Bench hook/bench vice Bench planes	

Module Title	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Requirements/	Number
(Wall Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Organize, guide and give an operation sheet to the students to make a window frame in the workshop	<ul> <li>Clean the work place and tools</li> <li>Store the frame and tool properly</li> </ul>		making window frames Circumstantial knowledge: Workshop safety regulations		
		(c) Making door linings	Discussion-Based Teaching: Guide discussions on making door linings and state procedure for making door linings, and identify types of door linings Demonstration: Demonstrates a process of making door linings while students observe, ask questions, and answer Practical activity:	<ul> <li>The student should be able to:</li> <li>Draw door lining</li> <li>Interpret the drawing</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Cut and plane timber to required size/measurement</li> <li>Mark/set joints position</li> <li>Cut joints</li> <li>Assemble the door lining</li> <li>Clean the work place and tools</li> </ul>	Door linings constructed as per the drawing and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to making door linings Principles: The student should explain principles related to making door linings Theories: The students should explain theories	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Bench</li> <li>Measuring tape</li> <li>Try square</li> <li>Safety boot</li> <li>Overall</li> <li>Mortice chisel</li> <li>Mallet hammer</li> <li>Claw hammer</li> <li>Hand saw</li> <li>Rebate plane</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	Asse	Training Requirements/	Number		
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
				• Store the frame and tool properly		related to making door linings <b>Circumstantial knowledge:</b> The students should be able to explain detailed knowledge related to making door linings	<ul> <li>Bench hook/bench vice</li> <li>Bench planes</li> </ul>	
	1.2 Making corner frames	(a) Making notice board frames	Discussion-Based Teaching: Practical demonstration: Demonstrates a process of making window frames while students observe, ask questions, and answer Practical activity:	<ul> <li>The student should be able to:</li> <li>Draw corner frames</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Take correct measurements</li> </ul>	The constructed notice board conforms to drawing and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to making notice board frames <b>Principles:</b> The student should be able to explain	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Bench work</li> <li>Bench vices/ bench hooks</li> <li>Try squares</li> <li>Measuring tapes</li> <li>Hand saw/tenon saws</li> <li>Claw hammers</li> </ul>	156

Module Title	Unit Title	Elements	Suggested	Asse	ssment Criteria		Training Requirements/	Number
Competence)	(Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	or Periods per Unit
			Organize, guide and give an operation sheet to the students to make a notice board frame in the workshop	<ul> <li>Prepare member to the specified measurements</li> <li>Set out corner joints</li> <li>Make joints</li> <li>Assemble the frame</li> <li>Apply finishes</li> <li>Clean the work area</li> <li>Store the frame and tools in a safe place</li> </ul>		principles related to making notice board frames <b>Theories:</b> The students should be able to explain theories related to making notice board frames <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to making notice board	<ul> <li>Rebate plans</li> <li>Corner clamps</li> <li>Overall</li> <li>Safety boots</li> <li>Meter saw</li> </ul>	
		(b) Making picture frames	Discussion-Based Teaching	The student should be able to:	Picture frame conforms to drawings and	Detailed knowledge of:	The following tools, safety gear,	
			making picture frames and state procedure for making picture	<ul> <li>Interpret drawings</li> <li>Calculate materials required</li> </ul>	technical specifications	Method used: The student should be able to explain	<ul> <li>equipment are to be available:</li> <li>Bench work</li> <li>Bench vices/ bench hooks</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Bequirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			frames, and identify joints used in making a picture frame <b>Practical</b> <b>demonstration</b> : Demonstrates a process of making a picture frame, while students observe, ask questions and answer then give them operation sheet <b>Practical activity</b> : Organize, guide and give an operation sheet to the students to make a picture frame in the workshop	<ul> <li>Select tools and materials</li> <li>Take correct measurements</li> <li>Prepare member to the specified measurements</li> <li>Set out corner joints</li> <li>Make joints</li> <li>Cut rebate</li> <li>Assemble the frame</li> <li>Apply finishes</li> <li>Clean the work area</li> <li>Store the frame and tools in a safe place</li> </ul>		methods related to making picture frames <b>Principles:</b> The student should be able to explain principles related to making picture frame <b>Theories:</b> The students should explain theories related to making picture frames <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to making picture frame	<ul> <li>Try squares</li> <li>Measuring tapes</li> <li>Hand saw/tenon saws</li> <li>Claw hammers</li> <li>Rebate plans</li> <li>Corner clamps</li> <li>Overall</li> <li>Safety boots</li> <li>Meter saw</li> </ul>	

Module Title	Unit Title	Elements	Suggested	Asse	ssment Criteria		Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
2.0 Constructing door shutters and window shutters	2.1 Constructing door shutters	(a) Constructing battened or matchboard door shutters	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of matchboard door, and stating the procedure for constructing battened/matchboard door Practical demonstration: Demonstrates a process of constructing batten/matchboard door, while students observe, ask questions and answer Practical activity: Organize, guide and give an operation sheet to the students to construct a	<ul> <li>The student should be able to:</li> <li>Draw door shutters</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select materials</li> <li>Select tools equipment</li> <li>Prepare members</li> <li>Set joints</li> <li>Make joints</li> <li>Assemble door shutters</li> <li>Clean the workshop</li> <li>Store tools and equipment safely</li> </ul>	Battened or matchboard door shutters constructed as per the building standards and specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to constructing battened or matchboard doors Principles: The student should explain principles related to constructing battened or matchboard doors Theories: The students should explain theories related to constructing battened or	The following tools, safety gear, equipment are to be available: • Measuring tapes • Try square • Hand saw • Claw hammer • Bench plane • Portable Drill machine • Set of screw drivers • chisels • Safety gears • Sliding bevel • Concrete bit	276

Module Title	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			batten/matchboard door in the workshop			matchboard door shutters Circumstantial knowledge: The students should explain detailed knowledge related to constructing battened or matchboard doors		
		(b) Constructing a paneled door shutter	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of paneled door shutter, and stating the procedure for constructing paneled door shutters Practical demonstration: Demonstrates a process of constructing paneled	<ul> <li>The student should be able to:</li> <li>Draw door shutters</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select materials</li> <li>Select tools equipment</li> <li>Prepare members</li> <li>Set joints</li> <li>Make joints</li> </ul>	Panel door shutters constructed as per the building standards and specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to constructing paneled door shutters Principles: The student should explain	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Measuring tapes</li> <li>Try square</li> <li>Hand saw</li> <li>Claw hammer</li> <li>Bench plane</li> <li>Portable Drill machine</li> </ul>	

Module Title	Unit Title	Elements	Suggested	Assessment Criteria			Training Requirements/	Number
Competence)	(Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			door shutter, while students observe, ask questions and answer <b>Practical activity:</b> Organize, guide and give an operation sheet the students to construct a paneled door shutter in the workshop	<ul> <li>Assemble door shutters</li> <li>Clean the workshop</li> <li>Store tools and equipment safely</li> </ul>		principlesrelatedtoconstructingpaneleddoorshuttersTheories: Thestudents shouldexplain theoriesrelatedtoconstructingpaneleddoorshuttersCircumstantialknowledge:The studentsshould explaindetailedknowledgerelatedtoconstructingpaneleddoorshutter	<ul> <li>Set of screw drivers</li> <li>chisels</li> <li>Safety gears</li> <li>Sliding bevel</li> <li>Concrete bit</li> </ul>	
		(c) Constructing a flush door shutter	Discussion-Based Teaching:	The student should be able to:	Flush door shutters constructed as	Detailed knowledge of:	The following tools, safety gear,	

Module Title	Unit Title	Elements	Suggested	Asse	ssment Criteria		Training	Number
(Main Competence)	(Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			Guide the students in defining terms, identifying parts of flush door shutter, and stating the procedure for constructing paneled door shutters <b>Practical</b> <b>demonstration</b> : Demonstrates a process of constructing a flush door shutter, while students observe, ask questions and answer <b>Practical activity:</b> Organize, guide and give an operation sheet to the students to construct a flush door shutter in the workshop	<ul> <li>Draw door shutters</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select materials</li> <li>Select tools equipment</li> <li>Prepare members</li> <li>Set joints</li> <li>Make joints</li> <li>Assemble door shutters</li> <li>Clean the workshop</li> <li>Store tools and equipment safely</li> </ul>	per the building standards and specifications	Method used: The student should be able to explain methods related to constructing flush door shutters Principles: The student should explain principles related to constructing flush door shutters Theories: The students should explain theories related to constructing flush door shutters Circumstantial knowledge: The students should explain	<ul> <li>equipment are to be available:</li> <li>Measuring tapes</li> <li>Try square</li> <li>Hand saw</li> <li>Claw hammer</li> <li>Bench plane</li> <li>Portable Drill machine</li> <li>Set of screw drivers</li> <li>chisels</li> <li>Safety gears</li> <li>Sliding bevel</li> <li>Concrete bit</li> </ul>	

Module Title	Unit Title	Elements	Suggested	Asse	ssment Criteria		Training Boquiromonts/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
						detailed knowledge related to constructing flush door shutters		
	2.2 Constructing window shutters	(a) Constructing shutters for mosquito window	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of mosquito window shutter, and stating the procedure for constructing shutters for a mosquito window Practical demonstration: Demonstrates a process of constructing shutters for mosquito windows, while students observe, ask questions and answer	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select materials</li> <li>Select tools equipment</li> <li>Set joints</li> <li>Make joints</li> <li>Assemble the window</li> <li>Clean the site</li> <li>Store tools and equipment safely</li> </ul>	Mosquito window shutters constructed according to set standards and specifications	Detailed knowledge of: Method used: The student should be able to explain methods for constructing shutters for a mosquito window Principles: The student should explain principles for constructing shutters for mosquito window	The following tools, safety gear, equipment are to be available: • Measuring tapes • Try square • Hand saw • Claw hammer • Bench plane • Portable Drill machine • Set of screw drivers • chisels • Safety gears • Sliding bevel	150

Module Title	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Boquiromonts/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			<b>Practical activity:</b> Organize, guide and give an operation sheet to the students to construct shutters for mosquito windows in the workshop			Theories: The students should explain theories related to constructing shutter for mosquito windowsCircumstantial knowledge: The students should explain detailed knowledge related to constructing shutter for mosquito window		
		(b)Constructing battened window shutters	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of battened window shutter , and stating the procedure for	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select materials</li> </ul>	Battened window shutters constructed according to building standards and specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to constructing	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Measuring tapes</li> <li>Try square</li> <li>Hand saw</li> </ul>	

Module Title Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Boquinoments/	Number
Competence) (Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	or Periods per Unit
		construct battened window shutters <b>Practical</b> demonstration: Demonstrates a process of constructing a battened window shutter, while students observe, ask questions and answer <b>Practical activity:</b> Organize, guide and give an operation sheet to the students to construct a battened window shutter in the workshop	<ul> <li>Select tools equipment</li> <li>Set joints</li> <li>Make joints</li> <li>Assemble the window</li> <li>Clean the site</li> <li>Store tools and equipment safely</li> </ul>		battened window shutters <b>Principles:</b> The student should explain principles related to constructing battened window shutters <b>Theories:</b> The students should explain theories related to constructing battened window shutters <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge	<ul> <li>Claw hammer</li> <li>Bench plane</li> <li>Portable Drill machine</li> <li>Set of screw drivers</li> <li>chisels</li> <li>Safety gears</li> <li>Sliding bevel</li> </ul>	

Module Title	Unit Title	Elements	Suggested	Training Requirements/	Number			
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
						constructing battened window shutter		
		(c) Constructing glazed window shutters	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of glazed window shutters, and stating the procedure for constructing glazed window shutters Practical demonstration: Demonstrates a process of constructing a glazed window shutter, while students observe, ask, questions and answer Practical activity: Organize, guide and give an operation sheet to the students	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select materials</li> <li>Select tools equipment</li> <li>Set joints</li> <li>Make joints</li> <li>Assemble the window</li> <li>Clean the site</li> <li>Store tools and equipment safely</li> </ul>	Glazed window shutters constructed as per the set standards and specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to constructing glazed window shutters Principles: The student should explain principles related to constructing glazed window shutter Theories: The students should explain theories related to constructing	The following tools, safety gear, equipment are to be available: • Measuring tapes • Try square • Hand saw • Claw hammer • Bench plane • Portable Drill machine • Set of screw drivers • chisels • Safety gears • Sliding bevel	

Module Title	Unit Title	Elements	Suggested	Asse	Training Requirements/	Number		
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			to construct glazed window shutters in the workshop			glazed window shutters Circumstantial knowledge: The students should explain detailed knowledge related to construct glazed window shutter		
3.0 Constructing simple roofs	3.1 Constructing lean-to roof	(a) Constructing lean-to roof structure	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of lean-to roof structure, and stating the procedure for constructing lean-to roof structure Practical demonstration: Demonstrates a process of constructing lean-to	<ul> <li>The student should be able to:</li> <li>Draw Lean-to- roof structure</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select materials</li> <li>Select tools &amp; equipment</li> <li>Make and fix wall plates, rafters and purlins(battens)</li> </ul>	Lean-to roof structure constructed as per the set standards and specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to constructing lean-to roof structure Principles: The student should explain principles for	The following tools, safety gear, equipment are to be available: • Measuring tapes • Manila lines • Try square • Hand saw • Claw hammer • Claw bar • Overall • Safety boots • Safety helmet	126

Module Title	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Requirements/	Number
Competence)	(Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			roof, while students observe, and asking questions and answering then give the <b>Practical activity:</b> Organize, guide and give an operation sheet to the students to construct lean-to roof structures	<ul> <li>Clean the site</li> <li>Store tools and equipment safely</li> </ul>		constructing a lean-to roof structure Theories: The students should explain theories related to constructing a lean-to roof structure Circumstantial knowledge: The students should explain detailed knowledge related to construct lean- to roof structure	<ul> <li>Ladder</li> <li>Sliding bevel</li> </ul>	
		(b) Fixing roofing sheets or roof covering	<b>Discussion-Based</b> <b>Teaching:</b> Guide the students in defining terms, identifying types of roof covering materials, and stating the procedure	<ul> <li>The student should be able to:</li> <li>Draw Lean-to-roof</li> <li>Interpret working drawings</li> </ul>	Lean-to roof sheets fixed as per the set standards and specifications	Detailed knowledge of: Method used: The student should be able to explain methods related	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Measuring tapes</li> <li>Manila lines</li> <li>Try square</li> </ul>	
Module Title	Unit Title	Elements (Learning	Suggested	Asse	Training Requirements/	Number		
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Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			for fixing roofing sheets or roof covering <b>Practical</b> <b>demonstration</b> : Demonstrates a process of fixing roofing sheets or roof covering, while students observe, ask questions and answers <b>Practical activity:</b> Organize, guide and give an operation sheet to the students to fix roofing sheets or roof covering	<ul> <li>Calculate materials required</li> <li>Select materials</li> <li>Select tools &amp; equipment</li> <li>Fix corrugated iron sheets</li> <li>Clean the site</li> <li>Store tools and equipment safely</li> </ul>		to fixing roofing sheets or roof covering <b>Principles:</b> The student should explain principles for fixing roofing sheets or roof covering <b>Theories:</b> The students should explain theories related to fixing roofing sheets or roof covering <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to fix roofing sheets or roof covering	<ul> <li>Hand saw</li> <li>Claw hammer</li> <li>Claw bar</li> <li>Overall</li> <li>Safety boots</li> <li>Safety helmet</li> <li>Ladder</li> <li>Sliding bevel</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	3.2 Constructing a gable roof	(a) Constructing a gable roof structure	Discussion-Based Teaching: Guide the students in defining terms, identifying types of gable roof structures, and state the procedure for constructing a gable roof structure Practical demonstration: Demonstrates a process of constructing a gable roof structure, while students observe ask questions and answer Practical activity: Organize, guide and give an operation sheet to the students to constructing gable roof structures	<ul> <li>The student should be able to:</li> <li>Draw a gable roof</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Take measurements</li> <li>Select tools and materials</li> <li>Make trusses</li> <li>Make and fix wall plate</li> <li>Erect, fix and reinforce trusses</li> <li>Set, fix and reinforce purlins</li> <li>Collect the remaining material and store them safely</li> <li>Store tools and equipment to their respective place</li> </ul>	Gable roofs constructed as per the drawings and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to constructing gable roof structure Principles: The student should explain principles for constructing gable roof structures Theories: The students should explain theories related to constructing gable roof structures Circumstantial knowledge:	The following tools, safety gear, equipment are to be available: • Try square • Hand saws • Measuring tape • Manila lines • Drawing • Claw hammer • Claw bar • Overall • Safety boots • Safety helmet • Ladder • Sliding bevel	183

Module Title	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Doquinoments/	Number
(Wall Competence)	(Specific Competencies)	(Learning Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
						The students should explain detailed knowledge related to constructing gable roof structure		
		(b) Fixing roofing sheets	Discussion-Based Teaching: Guide the students in defining terms, identifying types of roof covering materials, and stating the procedure for fixing roofing sheets or roof covering for gable roofs Practical demonstration: Demonstrates a process of fixing roofing sheets or roof covering, while students observe, ask	<ul> <li>The student should be able to:</li> <li>Draw a gable roof</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Take measurements</li> <li>Select tools and materials</li> <li>Set, fix and reinforce purlins</li> <li>Fix fascia board</li> <li>Fix corrugated sheets</li> <li>Fix ridge cover</li> </ul>	Roofing sheets fixed as per the drawing and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to fixing gable roofing sheets Principles: The student should explain principles for fixing gable roofing sheets Theories: The students should avalain theories	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Try square</li> <li>Hand saws</li> <li>Measuring tape</li> <li>Manila lines</li> <li>Drawing</li> <li>Claw hammer</li> <li>Claw bar</li> <li>Overall</li> <li>Safety boots</li> <li>Safety helmet</li> <li>Ladder</li> <li>Sliding bevel</li> </ul>	

Module Title	Unit Title	Elements	Suggested	Asse	ssment Criteria		Training Bequirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			questionsandanswer <b>Practical activity:</b> Organize, guide andgive an operationsheet to the studentsto fix roofing sheetsor roof covering forgable roof	<ul> <li>Collect the remaining material and store them safely</li> <li>Store tools and equipment to their respective place</li> </ul>		related to fixing gable roofing sheets Circumstantial knowledge: The students should explain detailed knowledge related to fix gable roofing sheets		
4.0 Constructing temporary supports	4.1 Constructing formwork	(a) Constructing cast In-situ and Pre-cast formworks	Discussion-Based Teaching: Guide the students in defining terms, identifying types of formwork, stating difference between In-situ and pre-cast formwork and stating the procedure for constructing cast In-situ and Pre-cast formwork Practical demonstration:	<ul> <li>The student should be able to:</li> <li>Draw formworks</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> <li>Fix form work</li> <li>Level and reinforce form work</li> <li>Dismantle the form work</li> <li>Clean tools and work place</li> </ul>	Cast In-situ and Pre-cast formworks constructed as per the drawings and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to constructing cast In-situ and Pre-cast formworks Principles: The student should be able to	The following tools, safety gear, equipment are to be available: • Measuring tapes • Try square • Claw hammer • Claw bar • Spirit level • Overall • Safety boots • Safety helmet • Portable saw	135

Module Title	Unit Title	Elements	Suggested	Asse	ssment Criteria		Training Dequinements/	Number
(Mann Competence)	(Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	or Periods per Unit
			Demonstrates a process of constructing cast In- situ and Pre-cast formwork, while students observe, ask questions and answer <b>Practical activity:</b> Organize, guide and give an operation sheet to the students to constructing cast In-situ and Pre-cast formworks	• Store tools to a safe place		explain principles for constructing cast In-situ and Pre-cast formwork <b>Theories:</b> The students should be able to explain theories related to constructing cast In-situ and Pre-cast formworks <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to construct cast In-situ and Pre- cast formwork	<ul> <li>Leather glove</li> <li>Benches</li> <li>Safety masks</li> <li>Pencil</li> <li>Safety goggles</li> <li>Ladder</li> <li>String/manila line</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	Training Requirements/	Number			
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(b) Constructing column formwork	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of formwork, and stating the procedure for constructing a column formwork <b>Practical</b> demonstration: Demonstrates a process of constructing column formwork, while students observe, ask questions and answer <b>Practical activity:</b> Organize, guide and give an operation sheet to the students to constructing column formworks at site while observing safety	<ul> <li>The student should be able to:</li> <li>Draw a column formwork</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> <li>Erect props for form work</li> <li>Fix form work</li> <li>Level and reinforce form work</li> <li>Dismantle the form work</li> <li>Clean tools and work place</li> <li>Store tools to a safe place</li> </ul>	Column formworks constructed as per the drawings and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to constructing column formwork Principles: The student should explain principles for constructing column formworks Theories: The students should explain theories related to constructing column formworks Circumstantial knowledge:	The following tools, safety gear, equipment are to be available: • Measuring tapes • Try square • Claw hammer • Claw bar • Claw bar • Spirit level • Overall • Safety boots • Safety helmet • Portable saw • Leather glove • Benches • Safety masks • Pencil • Safety goggles • Ladder • String/manila line	

Module Title	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Nur Bequirements/	Number
Competence)	(Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
						The students should explain detailed knowledge related to constructing column formwork		
		(c) Constructing beam formwork	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of formwork, and stating the procedure for constructing beam formwork Practical demonstration: Demonstrates a process of constructing beam formwork, while students observe, ask questions and answer Practical activity:	<ul> <li>The student should be able to:</li> <li>Draw a beam formwork</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> <li>Erect props for beam formwork</li> <li>Fix beam formwork</li> <li>Level and reinforce form work</li> <li>Dismantle the form work</li> <li>Clean tools and work place</li> </ul>	Beam formworks constructed as per the drawing and technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to constructing beam formwork Principles: The student should explain principles for constructing beam formwork Theories: The students should explain theories	The following tools, safety gear, equipment are to be available: • Measuring tapes • Try square • Claw hammer • Claw bar • Spirit level • Overall • Safety boots • Safety helmet • Portable saw • Leather glove • Benches • Safety masks	

Module Title (Main	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training I Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Organize, guide, and give the students an operation sheet for constructing beam formworks at the site while observing safety.	• Store tools to a safe place		related to constructing beam formwork <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to constructing beam formwork	<ul> <li>Pencil</li> <li>Safety goggles</li> <li>Ladder</li> <li>String/manila line</li> </ul>	
	4.2 Erecting scaffolds	(a) Erecting putlog scaffolds	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of putlog scaffolding, and stating the procedure for erecting putlog scaffolds Practical demonstration: Demonstrates a process of erecting putlog scaffolds,	<ul> <li>The student should be able to:</li> <li>Draw scaffolds</li> <li>Prepare scaffold members</li> <li>Set out scaffold</li> <li>Erect scaffold members</li> <li>Reinforce scaffold</li> <li>Dismantle scaffold</li> <li>Clean the work place</li> <li>Store tools</li> </ul>	Putlog scaffolds erected as per the set specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to erecting putlog scaffolds Principles: The student should explain principles related to	The following tools, safety gear, and equipment are to be available: • Measuring tapes • Try squares • Claw hammers • Claw bars • Hand saws • Helmet • Safety boots • Overall	120

Module Title	Unit Title	Elements (Learning	Suggested	Asse	ssment Criteria		Training Requirements/	Number
Competence)	(Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			while students observe, ask questions and answer <b>Practical activity:</b> Organize, guide and give an operation sheet to the students to erecting putlog scaffolds at the site while observing safety			erecting putlog scaffolds Theories: The students should explain theories related to erecting putlog scaffolds Circumstantial knowledge: The students should explain detailed knowledge related to erecting putlog scaffolds	• Leather gloves Pencil	
		(b) Erecting Independent scaffolds	Discussion-Based Teaching: Guide the students in defining terms, identifying parts of independent scaffolding, and stating the procedure for erecting	<ul> <li>The student should be able to:</li> <li>Draw independent scaffolds</li> <li>Prepare scaffold members</li> <li>Set out scaffold</li> <li>Erect scaffold members</li> </ul>	Independent scaffolds erected as per specifications, safety rules and regulations	Detailed knowledge of: Method used: The student should be able to explain methods related to erecting	<ul> <li>The following tools, safety gear, and equipment are to be available:</li> <li>Measuring tapes</li> <li>Try squares</li> <li>Claw hammers</li> </ul>	

Module Title	Unit Title	Elements	Suggested	Asse	ssment Criteria		Training Nu Requirements/	Number
(Main Competence)	(Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	of Periods per Unit
			independent scaffolds <b>Practical</b> <b>demonstration</b> : Demonstrates a process of erecting independent scaffold while students observe and asking questions and answering then give them operation sheet <b>Practical activity</b> : Organize, guide and give an operation sheet to the students to erecting independent scaffolds at the site while observing safety	<ul> <li>Reinforce scaffold</li> <li>Dismantle scaffold</li> <li>Clean the work place</li> <li>Store tools</li> </ul>		independent scaffolds <b>Principles:</b> The student should explain principles related to erecting independent scaffolds <b>Theories:</b> The students should explain theories related to erecting independent scaffolds <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to erecting	<ul> <li>Claw bars</li> <li>Hand saws</li> <li>Helmet</li> <li>Safety boots</li> <li>Overall</li> <li>Leather gloves</li> <li>Pencil</li> </ul>	

Module Title (Main Competence)	Unit Title (Specific Competencies)	Elements (Learning Activities)	Suggested Teaching and Learning Methods	Asse: Process Assessment	ssment Criteria Product /Services Assessment	Knowledge Assessment	Training Requirements/ Suggested Resources	Number of Periods per Unit
						independent scaffolds		

## Form Three

## Table 5: Detailed Contents for Form Three

Module Title	Unit Title	Element Title	Suggested	A	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
1.0 Fabricating and fixing aluminium/P VC profile structure	aluminium/ PVC partitions	(a) Fabricating aluminium/ PVC partition frames	Discussion-BasedTeaching:Guidethestudentsindefining terms,identifyingpartsofpartition frame,and stating theprocedureforfabricatingaluminium/PVCpartitionframePracticaldemonstration:Demonstrates aprocessoffabricatingaluminium/PVCpartitionframe,studentsobserveandasking	<ul> <li>Draw</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set members</li> <li>Make joints</li> <li>Assemble window shutter</li> <li>Fix shutter and glasses</li> <li>Clean work place and tools</li> <li>Store tools to a safe place</li> </ul>	Aluminium and PVC door and window shutters fabricated as per the given technical specifications	Detailedknowledge of:Methodused:Thestudentshould be able toexplainmethodsrelatedtofabricatingaluminium/PVCpartition framePrinciples:Thestudentshouldexplainprinciplesrelatedtofabricatingaluminium/PVCpartition frameTheories:Thestudentsshouldexplaintheoriesrelatedtofabricatingaluminium/PVCpartitionframe	<ul> <li>The following tools, safety gear, machine, and equipment are to be available:</li> <li>Measuring tapes</li> <li>Try squares</li> <li>Rivet gun machine</li> <li>Aluminium mitre saw machine</li> <li>Hacksaw</li> <li>Screw driver</li> <li>Oil</li> <li>Power hand drilling machine</li> <li>Work bench</li> <li>Circular saw</li> <li>Clamps</li> <li>Safety boots</li> <li>Overall</li> </ul>	24

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	/ Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to fabricating aluminium/PV C partition frame			aluminium/PVC partition frame Circumstantial knowledge: The students should explain detailed knowledge related to fabricating aluminium/PVC partition frame	<ul> <li>Dust mask</li> <li>Safety glasses</li> <li>Marker pen</li> <li>The 6 the second seco</li></ul>	
		(b) Fabricating aluminium/ PVC doors for partition	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of partition frame, and stating the procedure for fabricating aluminium/PV C partition frame	<ul> <li>Draw</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set members</li> <li>Make joints</li> </ul>	Aluminium/ PVC doors shutters fabricated according to the given technical specifications	Detailed knowledge of: Method used: The student should be able to explain methods related to fabricating aluminium/PVC door for partition Principles: The student should explain principles	<ul> <li>The following tools, safety gear, machine, and equipment are to be available:</li> <li>Measuring tapes</li> <li>Try squares</li> <li>Rivet gun machine</li> <li>Aluminium mitre saw machine</li> <li>Hacksaw</li> </ul>	

Module Title	Unit Title	Element Title	Suggested Assessment Criteria			eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Practical demonstration: Demonstrates a process of fabricating aluminium/PV C partition frame, students observe and asking questions and answering then give them operation sheet Practical activity: Organize, guide and give operation sheet the students to fabricating aluminium/PV C door for partition	<ul> <li>Assemble window shutter</li> <li>Fix shutter and glasses</li> <li>Clean work place and tools</li> <li>Store tools to a safe place</li> </ul>		related to fabricating aluminium/PVC door for partition Theories: The students should explain theories related to fabricating aluminium/PVC door for partition Circumstantial knowledge: The students should explain detailed knowledge related to fabricating aluminium/PVC door for partition	<ul> <li>Screw driver</li> <li>Oil</li> <li>Power hand drilling machine</li> <li>Work bench</li> <li>Circular saw</li> <li>Clamps</li> <li>Safety boots</li> <li>Overall</li> <li>Dust mask</li> <li>Safety glasses</li> <li>Marker pen</li> </ul>	
	1.2 Fabricating	(a)	Discussion-	• Draw	Constructed	Detailed	The following	87
	aluminium/PVC	Fabricating	Based	• Interpret	aluminium/	knowledge of:	tools, safety	
	windows	aluminium/	Teaching:	drawings	PVC window		gear, machine,	
		PVC		_	frame		and equipment	

Module Title	Unit Title	Element Title	Suggested	Suggested Assessment Criteria			Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		window frames	Guide the students in defining terms, identifying parts of aluminium/PV C window frames, and stating the procedure for fabricating aluminium/PV C window frames <b>Practical</b> <b>demonstration</b> : Demonstrates a process of fabricating aluminium/PV C window frames, students observe and asking questions and answering then give them operation sheet	<ul> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set members</li> <li>Make joints</li> <li>Assemble window shutter</li> <li>Fix shutter and glasses</li> <li>Clean work place and tools</li> <li>Store tools to a safe place</li> </ul>	conform to given technical specifications	Method used: The student should explain methods related to fabricate aluminium/PVC window frames Principles: The student should explain principles related to fabricate aluminium/PVC window frames Theories: The students should explain theories related to fabricate aluminium/PVC window frames Circumstantial knowledge: The students should explain detailed knowledge related	<ul> <li>are to be available:</li> <li>Measuring tapes</li> <li>Try squares</li> <li>Rivet gun machine</li> <li>Aluminium mitre saw machine</li> <li>Hacksaw</li> <li>Screw driver</li> <li>Oil</li> <li>Power hand drilling machine</li> <li>Work bench</li> <li>Circular saw</li> <li>Clamps</li> <li>Safety boots</li> <li>Overall</li> <li>Dust mask</li> <li>Safety glasses</li> <li>Marker pen</li> </ul>	

Module Title	ule Title Unit Title Element Title T			А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(b)	Practical activity: Organize, guide and give operation sheet the students to fabricate aluminium/PV C window frames Discussion-		Fabricated	to fabricate aluminium/PVC window frames	The following	
		Fabricating aluminium/ PVC window shutters	Based Teaching: Guide the students in defining terms, identifying parts of aluminium/PV C window shutters, and stating the procedure for fabricating aluminium/PV C window shutters Practical demonstration:	<ul> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set members</li> <li>Make joints</li> <li>Assemble window shutter</li> <li>Fix shutter and glasses</li> </ul>	aluminium/P VC window shutters conform to given technical specifications	Nethodused:Thestudentshouldexplainmethods related tofabricatealuminium/PVCwindow shuttersPrinciples:Thestudentshouldexplainprinciplesrelatedtofabricatealuminium/PVCwindow shutters	<ul> <li>tools, safety gear, machine, and equipment are to be available:</li> <li>Measuring tapes</li> <li>Try squares</li> <li>Rivet gun machine</li> <li>Aluminium mitre saw machine</li> <li>Hacksaw</li> <li>Screw driver</li> <li>Oil</li> </ul>	

Module Title Unit Title		Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Demonstrates a process of fabricating aluminium/PV C window shutters, students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to fabricate aluminium/PV C window shutters	<ul> <li>Clean work place and tools</li> <li>Store tools to a safe place</li> </ul>		Theories: The students should explain theories related to fabricate aluminium/PVC window shutters Circumstantial knowledge: The students should explain detailed knowledge related to fabricate aluminium/PVC window shutters	<ul> <li>Power hand drilling machine</li> <li>Work bench</li> <li>Circular saw</li> <li>Clamps</li> <li>Safety boots</li> <li>Overall</li> <li>Dust mask</li> <li>Safety glasses</li> <li>Marker pen</li> </ul>	
	1.3 Fabricating	(a)	Discussion-	• Draw	Fabricated	Detailed	The following	63
	doors	aluminium/	Teaching:	Interpret     drawings	and PVC	knowledge of:	gear, machine	
	40015	PVC door	Guide the	Calculate	doors frames	Method used:	and equipment	
		frames	students in	materials	conform to	The student	are to be	
			defining terms,	required	given	should explain	available:	

Module Title	Unit Title	Element Title	Suggested Assessment Criteria				Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			identifying parts of aluminium/PV C door frames, and stating the procedure for fabricating aluminium/PV C door frames <b>Practical</b> demonstration: Demonstrates a process of fabricating aluminium/PV C door frames, students observe and asking questions and answering then give them operation sheet <b>Practical</b> activity: Organize, guide and give operation sheet	<ul> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set members</li> <li>Make joints</li> <li>Assemble door frames</li> <li>Clean work place and tools</li> <li>Store tools to a safe place</li> </ul>	technical specifications	methods related to fabricate aluminium/PVC door frames <b>Principles:</b> The student should explain principles related to fabricate aluminium/PVC door frames <b>Theories:</b> The students should explain theories related to fabricate aluminium/PVC door frames <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to fabricate	<ul> <li>Measuring tapes</li> <li>Try squares</li> <li>Rivet gun machine</li> <li>Aluminium mitre saw machine</li> <li>Hacksaw</li> <li>Screw driver</li> <li>Oil</li> <li>Power hand drilling machine</li> <li>Work bench</li> <li>Circular saw</li> <li>Clamps</li> <li>Safety boots</li> <li>Overall</li> <li>Dust mask</li> <li>Safety glasses</li> <li>Marker pen</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(b) Fabricating aluminium/ PVC door shutters	the students to fabricate aluminium/PV C door frames <b>Discussion-</b> <b>Based</b> <b>Teaching:</b> Guide the students in defining terms, identifying parts of aluminium/PV C door shutters, and stating the procedure for fabricating aluminium/PV C door shutters <b>Practical</b> <b>demonstration</b> : Demonstrates a process of fabricating aluminium/PV C door shutters	<ul> <li>Draw</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set members</li> <li>Make joints</li> <li>Assemble door shutter</li> <li>Fix shutter and glasses</li> <li>Clean work place and tools</li> <li>Store tools to a safe place</li> </ul>	Fabricated aluminium/P VC window shutters conform to given technical specifications	aluminium/PVC door frames Detailed knowledge of: Method used: The student should explain methods related to fabricate aluminium/PVC door shutters Principles: The student should explain principles related to fabricate aluminium/PVC door shutters Theories: The students should explain theories related to fabricate	The following tools, safety gear, machine, and equipment are to be available: • Measuring tapes • Try squares • Rivet gun machine • Aluminium mitre saw machine • Hacksaw • Screw driver • Oil • Power hand drilling machine • Work bench • Circular saw • Clamps	
			asking	•			<ul> <li>Safety boots</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to fabricate aluminium/PV C door shutter			aluminium/PVC door shutters Circumstantial knowledge: The students should explain detailed knowledge related to fabricate aluminium/PVC door shutters	<ul> <li>Overall</li> <li>Dust mask</li> <li>Safety glasses</li> <li>Marker pen</li> </ul>	1.5
	1.4 Fabricating aluminium/PVC showcases	(a) Fabricating aluminium/ PVC showcase frames	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of aluminium/PV C showcase frame, and stating the procedure for fabricating aluminium/PV	<ul> <li>Draw</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set members</li> <li>Make joints</li> <li>Assemble door shutter</li> </ul>	Fabricated aluminium/P VC showcase frame conform to given technical specifications	Detailed knowledge of:Methodused:Thestudentshouldexplainmethods related tofabricatealuminium/PVCshowcase framesPrinciples:Thestudentshouldexplainprinciplesrelatedtofabricateto	<ul> <li>The following tools, safety gear, machine, and equipment are to be available:-</li> <li>Measuring tapes</li> <li>Try squares</li> <li>Rivet gun machine</li> <li>Aluminium mitre saw machine</li> <li>Hacksaw</li> </ul>	15

Module Title	Unit Title	Element Title	Suggested	ested Assessment Criteria			Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			C showcase frame Practical demonstration: Demonstrates a process of fabricating aluminium/PV C showcase frame, students observe and asking questions and answering then give them operation sheet Practical activity: Organize, guide and give operation sheet the students to fabricate aluminium/PV C showcase	<ul> <li>Fix shutter and glasses</li> <li>Clean work place and tools</li> <li>Store tools to a safe place</li> </ul>		aluminium/PVC showcase frames Theories: The students should explain theories related to fabricate aluminium/PVC showcase frames Circumstantial knowledge: The students should explain detailed knowledge related to fabricate aluminium/PVC showcase frames	<ul> <li>Screw driver</li> <li>Oil</li> <li>Power hand drilling machine</li> <li>Work bench</li> <li>Circular saw</li> <li>Clamps</li> <li>Safety boots</li> <li>Overall</li> <li>Dust mask</li> <li>Safety glasses</li> <li>Marker pen</li> </ul>	
		(b) Fixing showcase glasses	Discussion- Based Teaching:	<ul> <li>Draw</li> <li>Interpret drawings</li> </ul>	Fixed aluminium/P VC showcase	Detailed knowledge of:	The following tools, safety gear, machine,	

Module Title	Unit Title	Element Title	Suggested Assessment Criteria			eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Guide the students in defining terms, identifying parts of aluminium/PV C showcase frame, and stating the procedure for fixing showcase glasses <b>Practical</b> <b>demonstration</b> : Demonstrates a process of Fixing showcase glasses, students observe and asking questions and answering then give them operation sheet <b>Practical</b> activity:	<ul> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set members</li> <li>Make joints</li> <li>Assemble door shutter</li> <li>Fix shutter and glasses</li> <li>Clean work place and tools</li> <li>Store tools to a safe place</li> </ul>	glasses conform to given technical specifications	Method used: The student should explain methods related to fix showcase glasses Principles: The student should explain principles related to fix showcase glasses Theories: The students should explain theories related to fix showcase glasses Circumstantial knowledge: The students should explain detailed knowledge related to fix showcase glasses	<ul> <li>and equipment are to be available:</li> <li>Measuring tapes</li> <li>Try squares</li> <li>Rivet gun machine</li> <li>Aluminium mitre saw machine</li> <li>Hacksaw</li> <li>Screw driver</li> <li>Oil</li> <li>Power hand drilling machine</li> <li>Work bench</li> <li>Circular saw</li> <li>Clamps</li> <li>Safety boots</li> <li>Overall</li> <li>Dust mask</li> <li>Safety glasses</li> <li>Marker pen</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crito	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
2.0 Constructing	2.1 Constructing	(a)	Organize, guide and give operation sheet the students to fixing showcase glasses <b>Discussion</b> -	The student	Constructed	Detailed	The following	45
temporary supports	shuttering	Constructin g balcony shuttering	Based Teaching: Guide the students in defining terms, identifying parts of balcony shuttering, and stating the procedure for constructing balcony shuttering Practical demonstration: Demonstrates a process of constructing balcony shuttering, while students observe and	<ul> <li>should be able to:</li> <li>Draw balcony shuttering</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> <li>Erect props for shuttering</li> <li>Fix shuttering</li> <li>Level and reinforce form work</li> <li>Dismantle the shuttering</li> </ul>	balcony shuttering conforms to drawing and technical specifications	knowledge of:Methodused:Thestudentshouldexplainmethods related toconstructingbalconyshutteringPrinciples:ThestudentshouldexplainprinciplesrelatedtoconstructingbalconyshutteringTheTheories:Thestudentsshouldexplaintheoriesrelatedtoconstructingshouldexplaintheoriesrelatedto	<ul> <li>tools, safety</li> <li>gear, equipment</li> <li>are to be</li> <li>available:</li> <li>Measuring</li> <li>tapes</li> <li>Try square</li> <li>Claw</li> <li>hammer</li> <li>Claw bar</li> <li>Spirit level</li> <li>Overall</li> <li>Safety boots</li> <li>Safety</li> <li>helmet</li> <li>Portable</li> <li>saw</li> <li>Leather</li> <li>glove</li> <li>Benches</li> <li>Safety</li> <li>masks</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crito	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to constructing balcony shuttering at site while observing safety	<ul> <li>Clean tools and work place</li> <li>Store tools to a safe place</li> </ul>		constructing column formwork <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to constructing balcony shuttering	<ul> <li>Pencil</li> <li>Safety goggles</li> <li>Ladder</li> <li>String/manil a line</li> </ul>	
		(b) Constructin g upper floor shuttering	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of upper floor shuttering, and stating the procedure for	<ul> <li>The student should be able to:</li> <li>Draw balcony shuttering</li> <li>Interpret the drawings</li> <li>Calculate materials required</li> </ul>	Constructed upper floor shuttering conforms to drawing and technical specifications	Detailed knowledge of: Method used: The student should explain methods related to constructing upper floor shuttering	The following tools, safety gear, equipment are to be available: • Measuring tapes • Try square • Claw hammer • Claw bar	

Module Title	Title Unit Title Element Title Suggested			А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			constructing upper floor shuttering <b>Practical</b> demonstration: Demonstrates a process of constructing upper floor shuttering, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> activity: Organize, guide and give operation sheet the students to constructing upper floor shuttering at site while observing safety	<ul> <li>Erect props for shuttering</li> <li>Fix shuttering</li> <li>Level and reinforce form work</li> <li>Dismantle the shuttering</li> <li>Clean tools and work place</li> <li>Store tools to a safe place</li> </ul>		Principles:The studentShould explain principles relatedto to constructing upperfloor shutteringTheories:The studentsThe studentsshould explainExplaintheories:The studentsrelatedto constructing upperfloor shutteringCircumstantial knowledge:Circumstantial explain detailed knowledge related to constructing upperfloor shuttering	<ul> <li>Spirit level</li> <li>Overall</li> <li>Safety boots</li> <li>Safety helmet</li> <li>Portable saw</li> <li>Leather glove</li> <li>Benches</li> <li>Safety masks</li> <li>Pencil</li> <li>Safety goggles</li> <li>Ladder</li> <li>String/manil a line</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	Assessment Criteria			Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(c) Constructin g stair shuttering	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of stair shuttering, and stating the procedure for constructing stair shuttering Practical demonstration: Demonstrates a process of constructing stair shuttering, while students observe and asking questions and answering then give them operation sheet	The student should be able to: Draw balcony shuttering Interpret the drawings Calculate materials required Erect props for shuttering Fix shuttering Level and reinforce form work Dismantle the shuttering Clean tools and work place Store tools to a safe place	Constructed stair shuttering conforms to drawing and technical specifications	Detailed knowledge of:Methodused:Thestudentshouldexplain methods related to constructing stair shutteringPrinciples:The studentstudentshould explain principles related to constructing stair shutteringTheories:The students should explain theories related to constructing stair shutteringTheories:The students should explain theories related to constructing stair shutteringCircumstantial knowledge: The should explain detailed	The following tools, safety gear, equipment are to be available: Measuring tapes Try square Claw hammer Claw bar Spirit level Overall Safety boots Safety helmet Portable saw Leather glove Benches Safety masks Pencil Safety goggles Ladder	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of Periods per Unit
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Practical activity: Organize, guide and give operation sheet the students to constructing stair shuttering at site while observing safety			knowledge related to constructing stair shuttering	• String/manil a line	
	2.2 Erecting shoring	(a) Erecting racking shoring	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of racking shoring, and stating the procedure for erecting racking shoring Practical demonstration: Demonstrates a process of	<ul> <li>The student should be able to:</li> <li>Prepare shoring members</li> <li>Calculate materials required</li> <li>Set /prepare shoring</li> <li>Erect shoring</li> <li>Reinforce shores</li> <li>Dismantle shores</li> </ul>	Constructed racking shores conform to technical specifications	Detailed knowledge of:Methodused:Thestudentshouldexplainmethods related toerectingrackingshoringPrinciples:Thestudentshouldexplainprinciplesrelated toerectingrackingshoring	The following tools, safety gear, and equipment are to be available: • Measuring tapes • Try squares • Claw hammers • Claw bars • Hand saws • Helmet • Safety boots • Overall • Leather gloves	30

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/ Number	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			erecting racking shoring, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to erect racking shore at site while observing safety	<ul> <li>Clean work area and tools</li> <li>Store tools at a safe place</li> </ul>		explain theories related to erecting racking shoring <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to erecting racking shoring	• Pencil	
		(b) Erecting flying shoring	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of flying shoring, and	The student should be able to: • Prepare shoring members • Calculate materials required	Constructed flying shores conform to technical specifications	Detailed knowledge of:Methodused:Thestudentshouldexplainmethodsrelated toerectingflyingshoringshoring	<ul> <li>The following tools, safety gear, and equipment are to be available:</li> <li>Measuring tapes</li> <li>Try squares</li> </ul>	

Module Title	Unit Title	Element Title	Suggested Assessment Criteria			eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			stating the procedure for erecting flying shoring <b>Practical</b> demonstration: Demonstrates a process of erecting flying shoring, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> activity: Organize, guide and give operation sheet the students to erect flying shore at site while observing safety	<ul> <li>Set /prepare shoring</li> <li>Erect shoring</li> <li>Reinforce shores</li> <li>Dismantle shores</li> <li>Clean work area and tools</li> <li>Store tools at a safe place</li> </ul>		<ul> <li>Principles: The student should explain principles related to erecting flying shoring</li> <li>Theories: The students should explain theories related to erecting flying shoring</li> <li>Circumstantial knowledge: The students should explain detailed knowledge related to erecting flying shoring</li> </ul>	<ul> <li>Claw hammers</li> <li>Claw bars</li> <li>Hand saws</li> <li>Helmet</li> <li>Safety boots</li> <li>Overall</li> <li>Leather gloves</li> <li>Pencil</li> </ul>	

Module Title	Unit Title	Unit Title Element Title Suggested		А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(c) Erecting dead shoring	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of dead shoring, and stating the procedure for erecting dead shoring Practical demonstration: Demonstrates a process of erecting dead shoring, while students observe and asking questions and answering then give them operation sheet Practical activity:	<ul> <li>The student should be able to:</li> <li>Prepare shoring members</li> <li>Calculate materials required</li> <li>Set /prepare shoring</li> <li>Erect shoring</li> <li>Reinforce shores</li> <li>Dismantle shores</li> <li>Clean work area and tools</li> <li>Store tools at a safe place</li> </ul>	Constructed dead shores conform to technical specifications	Detailed knowledge of:Methodused: The student should erecting dead shoringPrinciples:The student should explain principles related to erecting dead shoringPrinciples:The student should explain principles related to erecting dead shoringTheories:The students should explain theories related to erecting dead shoringCircumstantial knowledge: The should explain detailed knowledge related	<ul> <li>The following tools, safety gear, and equipment are to be available:-</li> <li>Measuring tapes</li> <li>Try squares</li> <li>Claw hammers</li> <li>Claw bars</li> <li>Hand saws</li> <li>Helmet</li> <li>Safety boots</li> <li>Overall</li> <li>Leather gloves</li> <li>Pencil</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Organize, guide and give operation sheet the students to erect dead shore at site while observing safety			to erecting dead shoring		
	2.3 Constructing centering	(a) Constructin g semi- circular centre	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of semi- circular centre, and stating the procedure for constructing semi-circular centre Practical demonstration: Demonstrates a process of constructing semi-circular	<ul> <li>The student</li> <li>should be able</li> <li>to: <ul> <li>Interpret</li> <li>drawings</li> <li>Calculate</li> <li>materials</li> <li>required</li> </ul> </li> <li>Prepare ribs <ul> <li>Prepare ribs</li> <li>Prepare laggings</li> <li>Fix lagging to ribs</li> </ul> </li> <li>Erect and reinforce centering</li> <li>Dismantling centering</li> <li>Clean work place and tools</li> </ul>	Constructed semi-circular centering conform technical specifications	Detailed knowledge of:Methodused:Thestudentshouldexplain methods related to constructconstructsemi- circular centrePrinciples:The studentshouldexplain principles relatedtoconstructsemi- circular centreTheories:The studentsstudentsshould explain theoriescircular centre	The following tools, safety gear, and equipment are to be available: • Measuring tapes • Try squares • Sliding bevel • Claw hammer • Hand saw • Bench planes • Chisels • Mallet hammer • Safety boots • Overall • Helmet	48

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			students observe and asking questions and answering then give them operation sheet <b>Practical</b> activity: Organize, guide and give operation sheet the students to construct semi- circular centre at site while observing safety	• Store tools to safe place		construct semi- circular centre Circumstantial knowledge: Safety rules and regulation	<ul> <li>Leather gloves</li> <li>Pencil</li> </ul>	
		(b) Constructin g segmental centre	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of segmental centre, and stating the	<ul> <li>The student should be able to:</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Prepare ribs</li> <li>Prepare laggings</li> </ul>	Constructed segmental centering conform technical specifications	Detailed knowledge of: Method used: The student should explain methods related to construct segmental centre	The following tools, safety gear, and equipment are to be available:- • Measuring tapes • Try squares • Sliding bevel	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			procedure for constructing segmental centre <b>Practical</b> demonstration: Demonstrates a process of constructing segmental centre, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> activity: Organize, guide and give operation sheet the students to construct segmental centre at site	<ul> <li>Fix lagging to ribs</li> <li>Erect and reinforce centering</li> <li>Dismantling centering</li> <li>Clean work place and tools</li> <li>Store tools to safe place</li> </ul>		Principles: The student should explain principles related to construct segmental centre Theories: The students should explain theories related to construct segmental centre Circumstantial knowledge: Safety rules	<ul> <li>Claw hammer</li> <li>Hand saw</li> <li>Bench planes</li> <li>Chisels</li> <li>Mallet hammer</li> <li>Safety boots</li> <li>Overall</li> <li>Helmet</li> <li>Leather gloves</li> <li>Pencil</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(c) Constructin g elliptical centre	while observing safety Discussion- Based Teaching: Guide the students in defining terms, identifying parts of elliptical centre, and stating the procedure for constructing elliptical centre Practical demonstration: Demonstrates a process of constructing elliptical centre, while students observe and asking questions and answering then give them operation sheet	The studentshould be ableto:•InterpretdrawingsCalculatematerialsrequired•Prepare ribs•Prepare ribs•Prepare alggings•Fix lagging•Erect andreinforcecentering•DismantlingcenteringClean workplace andtools•Store toolsto safe place	Constructed elliptical centering conform technical specifications	Detailed knowledge of::Method used: The student should explain methods related to construct elliptical centrePrinciples: The student should explain principles related to construct elliptical centreTheories: The students should explain theories related to construct elliptical centreTheories: related to construct elliptical centreCircumstantial knowledge:	The following tools, safety gear, and equipment are to be available: • Measuring tapes • Try squares • Sliding bevel • Claw hammer • Hand saw • Bench planes • Chisels • Mallet hammer • Safety boots • Overall • Helmet • Leather gloves • Pencil	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	2.4 Performing	(a) Performing	Practical activity: Organize, guide and give operation sheet the students to construct elliptical centre at site while observing safety Discussion-	The student	Perfomed	Safety rules and regulation	The following	39
	timbering to trench	vertical sheeting	Based Teaching: Guide the students in defining terms, identifying parts of vertical sheeting in timber to trench, and stating the procedure for performing vertical sheeting in timber to trench Demonstration	<ul> <li>should be able</li> <li>to:</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Prepare ribs</li> <li>Prepare laggings</li> <li>Fix lagging to ribs</li> <li>Erect and reinforce centering</li> <li>Dismantling centering</li> </ul>	vertical sheeting conform technical specifications	knowledge of:Methodused:Thestudentshouldexplainhow to performvertical shearingPrinciples:Thestudentshouldexplainprinciplesrelatedperformvertical shearingTheories:Thestudentsshouldexplainusesifvertical shearing	<ul> <li>tools, safety gears and equipment are to be available:</li> <li>Measuring tapes</li> <li>Try squares</li> <li>Sliding bevel</li> <li>Claw hammer</li> <li>Hand saw</li> <li>Bench planes</li> <li>Chisels</li> <li>Mallet hammer</li> </ul>	

Module Title	Module Title Unit Title Element T			А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			a process of performing vertical sheeting, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to perform vertical sheeting at site while observing	<ul> <li>Clean work place and tools</li> <li>Store tools to safe place</li> </ul>		Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Safety boots</li> <li>Overall</li> <li>Helmet</li> <li>Leather gloves</li> <li>Pencil</li> </ul>	
		(b) Performing	safety Discussion-	The student	Performed	Detailed	The following	
		box	Based	should be able	box sheeting	knowledge of:	tools, safety	
		sheeting	Teaching:	to:	conform	_	gear, and	
			Guide the	• Interpret	technical	Method used:	equipment are to	
			students in	drawings	specifications	The student	be available:	
			defining terms,	• Calculate		should explain	• Measuring	
			ıdentitying	materials		how explain how	tapes	
			parts of box	required			<ul> <li>Try squares</li> </ul>	
Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
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(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			sheeting in timber to trench, and stating the procedure for performing box sheeting in timber to trench <b>Demonstration</b> : Demonstrates a process of performing box sheeting, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to perform box sheeting at site	<ul> <li>Prepare ribs</li> <li>Prepare laggings</li> <li>Fix lagging to ribs</li> <li>Erect and reinforce centering</li> <li>Dismantling centering</li> <li>Clean work place and tools</li> <li>Store tools to safe place</li> </ul>		to perform box sheeting Principles: The student should explain principles related to performing box sheeting Theories: The students should explain theories related to performing box sheeting Circumstantial knowledge: Safety rules and regulation	<ul> <li>Sliding bevel</li> <li>Claw hammer</li> <li>Hand saw</li> <li>Bench planes</li> <li>Chisels</li> <li>Mallet hammer</li> <li>Safety boots</li> <li>Overall</li> <li>Helmet</li> <li>Leather gloves</li> <li>Pencil</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	Competencies)	(c) Performing sheet piling	Methods while observing safety Discussion- Based Teaching: Guide the students in defining terms, identifying parts of sheet piling in timber to trench, and stating the	Assessment The student should be able to: • Interpret drawings • Calculate materials required • Prepare ribs • Prepare laggings • Fix lagging	Assessment Constructed centering conform technical specifications	AssessmentDetailed knowledge of:Method used: The should how to perform sheet pilingPrinciples: student should explain principles: Sheet principles: The student should explain principles:	The following tools, safety gear, and equipment are to be available: • Measuring tapes • Try squares • Sliding bevel • Claw hammer	
			procedure for perform sheet piling in timber to trench <b>Demonstration</b> : Demonstrates a process of perform sheet piling, while students observe and asking questions and answering then	<ul> <li>to ribs</li> <li>Erect and reinforce centering</li> <li>Dismantling centering</li> <li>Clean work place and tools</li> <li>Store tools to safe place</li> </ul>		related to sheet piling Theories: The students should explain uses of sheet piling Circumstantial knowledge: workshop safety rules and regulations	<ul> <li>Hand saw</li> <li>Bench planes</li> <li>Chisels</li> <li>Mallet hammer</li> <li>Safety boots</li> <li>Overall</li> <li>Helmet</li> <li>Leather gloves</li> <li>Pencil</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(d) Performing stay bracing	give them operation sheet Practical activity: Organize, guide and give operation sheet the students to perform sheet piling at site while observing safety Discussion- Based Teaching: Guide the students in defining terms, identifying parts of stay bracing in timber to trench, and stating the procedure for performing stay bracing in timber to trench	The studentshould be ableto:• Interpret drawings• Calculate materials required• Prepare ribs• Prepare ribs• Prepare ribs• Fix laggings• Fix lagging to ribs• Erect and reinforce centering	Performed stay bracing conform to technical specifications	Detailed         knowledge of:         Method       used:         The       student         should       explain         how to construct       stay bracing         Principles:       The         student       should         explain       principles:         related       to         construction       of         bracing       bracing	The following tools, safety gear, and equipment are to be available: • Measuring tapes • Try squares • Sliding bevel • Claw hammer • Hand saw • Bench planes • Chisels	

Module Title	Unit Title	Element Title	Suggested	A	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Demonstration : Demonstrates a process of perform stay bracing, while students observe and asking questions and answering then give them operation sheet Practical activity: Organize, guide and give operation sheet the students to perform stay bracing at site while observing safety	<ul> <li>Dismantling centering</li> <li>Clean work place and tools</li> <li>Store tools to safe place</li> </ul>		Theories: The students should explain uses of bracing Circumstantial knowledge: Safety rules and regulations	<ul> <li>Mallet hammer</li> <li>Safety boots</li> <li>Overall</li> <li>Helmet</li> <li>Leather gloves</li> <li>Pencil</li> </ul>	
		(e)	Discussion-	The student	Performed	Detailed	The following	
		runner	Basea Teaching	snould be able	runner	knowledge of:	cools, safety	
		system	Guide the	• Interpret	conform	Method used:	equipment are to	
		2,200	students in	drawings	technical	The student	be available:	
			defining terms,		specifications	should explain	• Measuring	
			identifying			*	tapes	

Module Title	Unit Title	Element Title	Suggested Assessment Criteria				Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			parts of runner system in timber to trench, and stating the procedure for performing runner system in timber to trench <b>Demonstration</b> : Demonstrates a process of perform runner system, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to	<ul> <li>Calculate materials required</li> <li>Prepare ribs</li> <li>Prepare laggings</li> <li>Fix lagging to ribs</li> <li>Erect and reinforce centering</li> <li>Dismantling centering</li> <li>Clean work place and tools</li> <li>Store tools to safe place</li> </ul>		how to construct runner system Principles: The student should explain principles related to constructing runner system Theories: The students should explain uses of runner system Circumstantial knowledge: The students should explain detailed knowledge related to maintain workshop safety rules and regulations	<ul> <li>Try squares</li> <li>Sliding bevel</li> <li>Claw hammer</li> <li>Hand saw</li> <li>Bench planes</li> <li>Chisels</li> <li>Mallet hammer</li> <li>Safety boots</li> <li>Overall</li> <li>Helmet</li> <li>Leather gloves</li> <li>Pencil</li> </ul>	

Module Title	Unit Title	Element Title	Suggested Assessment Criteria				Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
3.0 Constructing ceilings	3.1 Constructing ceiling frame	(a) Constructin g ceiling structure/bl undering	perform runner system at site while observing safety <b>Discussion-</b> <b>Based</b> <b>Teaching:</b> Guide the students in defining terms, identifying parts of ceiling structure, and stating the procedure for constructing ceiling structure/blunde ring <b>Demonstration</b> : Demonstrates a process of constructing ceiling structure/blunde ring, while students observe and asking	<ul> <li>The student should be able to:</li> <li>Draw ceiling</li> <li>Interpret drawings</li> <li>Select materials and tools</li> <li>Set ceiling height</li> <li>Determine ceiling pattern</li> <li>Make ceiling frame</li> <li>Reinforce ceiling frame/blund ering</li> <li>Calculate quantity of</li> </ul>	Constructed ceiling frame conform to drawing and technical specifications	Detailed knowledge of:Method used: The student should explain how to construct ceiling structure/blunderi ngPrinciples: The student should explain principles related to Constructing ceiling structure/blunderi ngTheories: The students should describe different types of ceiling	The following tools, safety gear, and equipment are to be available: - • Try squares • Measuring tapes • Sliding bevel • Claw hammer • Hand saw • Overall • Safety boots • Helmet • Chisels • Mallet • Manila line • Spirit level • Ladder • Scaffold • Pencil	90
			questions and	Doards				

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to construct ceiling structure/blunde ring at site while observing safety	<ul> <li>Clean work place</li> <li>Store tools at a safe place</li> </ul>		structure/blunderi ng Circumstantial knowledge: Safety rules		
		(b) Constructin g decorative ceiling structure/bl undering	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of ceiling structure, and stating the procedure for constructing ceiling	<ul> <li>The student should be able to:</li> <li>Draw ceiling</li> <li>Interpret drawings</li> <li>Select materials and tools</li> <li>Set ceiling height</li> </ul>	Constructed ceiling frame conform to drawing and technical specifications	Detailed knowledge of:Methodused:Thestudentshouldexplainhow to constructdecorative ceilingstructure/blunderingPrinciples:Thestudentshouldexplainprinciples:	The following tools, safety gear, and equipment are to be available: • Try squares • Measuring tapes • Sliding bevel • Claw hammer • Hand saw	

Module Title	Unit Title	Element Title	Suggested Assessment Criteria			Training Requirements/	Number of	
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			structure/blunde ring <b>Demonstration</b> : Demonstrates a process of construct ceiling structure/blunde ring, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to construct decorative ceiling structure/blunde ring at site while observing safety	<ul> <li>Determine ceiling pattern</li> <li>Make ceiling frame</li> <li>Reinforce ceiling frame/blund ering</li> <li>Calculate quantity of boards</li> <li>Clean work place</li> <li>Store tools at a safe place</li> </ul>		related to constructing decorative ceiling structure/blunderi ng Theories: The students should explain importance of decorative ceiling structure/blunderi ng Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Overall</li> <li>Safety boots</li> <li>Helmet</li> <li>Chisels</li> <li>Mallet</li> <li>Manila line</li> <li>Spirit level</li> <li>Ladder</li> <li>Scaffold</li> <li>Pencil</li> </ul>	

Module Title	Unit Title	Element Title	Suggested Assessment Cr			eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	5.2 Fixing ceiling boards	(a) Fixing hardboard/ chipboard	Discussion- Based Teaching: Guide the students in defining terms, identifying sizes of ceiling boards, identifying ways of fixing boards and stating the procedure for fixing hardboard/ chipboard Demonstration : Demonstrates a process of fix hardboard/ chipboard, while students observe and asking questions and answering then give them operation sheet	<ul> <li>Ine student</li> <li>should be able</li> <li>to: <ul> <li>Draw</li> <li>ceiling</li> <li>boards</li> </ul> </li> <li>Prepare</li> <li>ceiling</li> <li>boards for</li> <li>fixing</li> <li>Calculate</li> <li>materials</li> <li>required</li> <li>Identify</li> <li>framing</li> <li>pattern</li> <li>Set first</li> <li>board</li> <li>Check</li> <li>accuracy of</li> <li>setting</li> <li>Fix boards</li> <li>Fix cornices</li> <li>Clean work</li> <li>place</li> <li>Store tools</li> <li>at a safe</li> <li>place</li> </ul>	boards conform to drawing and technical specifications	Detailedknowledge of:Methodused:Thestudentshouldexplainhowtofixhardboard/chipboardPrinciples:ThestudentshouldexplainprinciplesbehindFixinghardboard/chipboardTheories:ThestudentsshoulddescribedifferenttypesofhardboardsCircumstantialknowledge:Workshopsafetyrulesandregulations	<ul> <li>The following tools, safety gear, machine and equipment are to be available: -</li> <li>Try squares</li> <li>Measuring tapes</li> <li>Hand saw</li> <li>Claw hammer</li> <li>Screw driver</li> <li>Hacking knife</li> <li>Scraper knife</li> <li>Electrical drill</li> <li>Overall</li> <li>Safety helmet</li> <li>Safety boots</li> <li>Ladder</li> <li>Scaffolds</li> <li>Pencil</li> </ul>	81

(Specific			Assessment Criteria			Requirements/	Number of
nce) Competencies) Activities) Learning Methods Practical activity:	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	(b) Eiving T	Practical activity: Organize, guide and give operation sheet the students to fix hardboard/ chipboard at site while observing safety	The student	Tand C	Deteiled	The following	
	and G board	Based Teaching: Guide the students in defining terms, identifying sizes of ceiling boards, identifying ways of fixing T&G board and stating the procedure for fixing T&G board Demonstration	<ul> <li>should be able to:</li> <li>Draw ceiling boards</li> <li>Prepare ceiling boards for fixing</li> <li>Calculate materials required</li> <li>Identify framing pattern</li> <li>Set first board</li> </ul>	ceiling boards conform to drawing and technical specifications	Nethodused:Thestudentshouldidentifytoolsto beusedandandstateprocedures offixingT andGPrinciples:Thestudentshouldexplainprinciplesrelated tofixingT andGTheories:The	<ul> <li>tools, safety gear, machine and equipment are to be available:</li> <li>Try squares</li> <li>Measuring tapes</li> <li>Hand saw</li> <li>Claw hammer</li> <li>Screw driver</li> <li>Hacking knife</li> <li>Scraper knife</li> </ul>	
		(b) Fixing T and G board	(b) Fixing T       And G board         (b) Fixing T       And G board         (b) Fixing T       Cuide the students to fix hardboard/chipboard at site while observing safety         (b) Fixing T       Cuide the students in defining: Guide the students in defining terms, identifying sizes of ceiling boards, identifying ways of fixing T&G board and stating the procedure for fixing T&G board         (c) Demonstration       Cuide the students in defining terms, identifying sizes of ceiling boards, identifying ways of fixing T&G board and stating the procedure for fixing T&G board	Practical activity:         Organize, guide and give operation sheet the students to fix hardboard/ chipboard at site while observing safety       The student students to fix hardboard/ chipboard at site while observing safety         (b) Fixing T and G board       Discussion- Based Teaching: Guide the students in defining terms, identifying sizes of ceiling boards, identifying ways of fixing T&G board and stating the procedure for fixing T&G board       The student should be able to:         • Draw ceiling boards, identifying ways of fixing T&G board and stating the procedure for fixing T&G board       • Calculate materials required         • Demonstration : Demonstrates       • Set first board	Practical activity: Organize, guide and give operation sheet the students to fix hardboard/ chipboard at site while observing safety     The student should be able to:     T and G ceiling boards       (b) Fixing T and G board     Discussion- Based Teaching:     The student should be able to:     T and G ceiling boards       (b) Fixing T and G board     Discussion- Based Teaching:     The student should be able to:     T and G ceiling boards       (b) Fixing T and G board     Discussion- Based Teaching:     The student should be able to:     T and G ceiling boards       (b) Fixing T and G board     Draw defining terms, identifying sizes of ceiling boards, identifying T&G board and stating the procedure for fixing T&G board     O calculate materials required     Frequired Set first board       (c) Demonstration     Demonstration     Set first board     Set first board	Image: Construction of the students of the students to fix hardboard/ chipboard at site while observing safety       The student of the students in defining terms, identifying sizes of ceiling boards, identifying the statent for the students of the student stating the procedure for fixing T&G board       The student the student should the student shoul	Practical activity: Organize, guide and give operation sheet the students to fix hardboard/ chipboard at site while observing safety       Tand G to: Discussion- Based       Detailed to: Teaching: Guide the students in defining terms, identifying sizes of ceiling boards, identifying ways of fixing T&G board and stating the procedure for fixing T&G board       The student should be able to: Draw ceiling boards       T and G ceiling boards       Detailed to: Ceiling boards       The following tools, safety gear, machine and equipment are to be and state procedures of fixing T and G         (b) Fixing T and G board       Discussion- gear, machine to: Stating the procedure for fixing T &G board       The student should be able to: Draw ceiling boards       Tand G ceiling boards       Detailed knowledge of: tools to be used: and state procedures of fixing T and G       The following tools, safety gear, machine and equipment are to be and state procedures of fixing T and G         • Claculate materials board       • Prepare ceiling boards for identifying ways of fixing T &G board and stating the procedure for fixing T &G board       • Principles: The student should explain principles       • Hand saw explain principles         • Demonstration : Demonstrates       • Set first board       • Set first board       • Theories: The student should

Module Title	Unit Title	Element Title	Suggested	ggested Assessment Criteria			Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			a process of fix T&G board, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to fix T&G board at site while observing safety	<ul> <li>Check accuracy of setting</li> <li>Fix boards</li> <li>Fix cornices</li> <li>Clean work place</li> <li>Store tools at a safe place</li> </ul>		State the differences between T and G and other types of ceiling boards Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Electrical drill</li> <li>Overall</li> <li>Safety helmet</li> <li>Safety boots</li> <li>Ladder</li> <li>Scaffolds</li> <li>Pencil</li> </ul>	
		(c) Fixing gypsum board	Discussion- Based Teaching: Guide the	The student should be able to: • Draw	Fixed ceiling boards conform to drawing and	Detailed knowledge of: Method used:	The following tools, safety gear, machine, and equipment	
			students in defining terms, identifying properties of gypsum boards, identifying	<ul> <li>ceiling boards</li> <li>Prepare ceiling boards for fixing</li> </ul>	technical specifications	The student should describe gypsum boards, identify tools to be used and state procedures of	<ul> <li>are to be</li> <li>available:</li> <li>Try squares</li> <li>Measuring tapes</li> <li>Hand saw</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	Assessment Criteria			Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			ways of fixing gypsum boards and stating the procedure for fixing gypsum <b>Demonstration</b> : Demonstrates a process of fix gypsum board, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to fix gypsum board at site while observing safety	<ul> <li>Calculate materials required</li> <li>Identify framing pattern</li> <li>Set first board</li> <li>Check accuracy of setting</li> <li>Fix boards</li> <li>Fix cornices</li> <li>Clean work place</li> <li>Store tools at a safe place</li> </ul>		fixing gypsum boards <b>Principles:</b> The student should explain principles related to fixing gypsum boards <b>Theories:</b> The students should State the differences between gypsum boards and other types of ceiling boards <b>Circumstantial</b> <b>knowledge:</b> Workshop safety rules and regulations	<ul> <li>Claw hammer</li> <li>Screw driver</li> <li>Hacking knife</li> <li>Scraper knife</li> <li>Electrical drill</li> <li>Overall</li> <li>Safety helmet</li> <li>Safety boots</li> <li>Ladder</li> <li>Scaffolds</li> <li>Pencil</li> </ul>	

(Main Competence)(Specific Competencies)(Learning Activities)Teaching and Learning MethodsProcess AssessmentProduct /ServicesKnowledge AssessmentSuggested ResourcesPeriods per Unit(d) Fixing PVC ceiling sheet(d) Fixing PVC ceiling sheetDiscussion Based Teaching: Guide the students in defining terms, identifying mays of fixing gypsum boards, identifying mays of fixing gypsum boards and stating the procedure so fixing gypsum boardsProcess AssessmentProduct /ServicesKnowledge AssessmentThe following tools, safety gear, machine, and state procedures of fixing PVC sheetProids per UnitImage: the student should and stating the procedure fixing gypsum bardsDemonstration a process of fix gypsum boards and stating the procedure fixing gypsum bardsDemonstration a process of fix gypsum boards a process of fix gypsum boards a process of fix gypsum boardsProcess the fixing termProcess AssessmentKnowledge AssessmentThe following tools, safety gear, machine, and state procedures of fixing PVC sheetProcess tages tages tages tages tages tages tages tages tagesImage: the student stateDemonstration tages tages<	Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(d) Fixing PVC ceiling sheetDiscussion- should be able 	(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
observe and asking questions and answering then give them operation sheetobserve and asking questions and answering then give them operation sheetfixing PVC sheet• Overall • Safety helmetPractical activity:• Fix boards • Fix cornices• Circumstantial knowledge: vorkshop safety rules and regulations• Safety helmetPractical activity:• Fix cornices • Store tools at a safe place• Workshop safety rules and regulations• Ladder • Pencil			(d) Fixing PVC ceiling sheet	Discussion-BasedTeaching:Guidethestudentsindefining terms,identifyingpropertiesofgypsum boards,identifyingways of fixinggypsum boardsand stating theprocedureforfixing gypsumDemonstration:Demonstratesa process of fixgypsum board,whilestudentsobserveandaskingquestionsandanswering thengivethemoperation sheetPracticalactivity:	<ul> <li>should be able</li> <li>to:</li> <li>Draw ceiling boards</li> <li>Prepare ceiling boards for fixing</li> <li>Calculate materials required</li> <li>Identify framing pattern</li> <li>Set first board</li> <li>Check accuracy of setting</li> <li>Fix boards</li> <li>Fix cornices</li> <li>Clean work place</li> <li>Store tools at a safe place</li> </ul>	sheets conform to drawing and technical specifications	Detailedknowledge of:Methodused:Thestudentsshouldidentifytoolsto be usedandstateprocedures offixingfixingPVC sheetPrinciples:ThestudentshouldexplainprinciplesrelatedtofixingPVC SheetsTheories:ThestudentsshouldStatetheimportanceoffixingPVC sheetCircumstantialknowledge:Workshopsafetyrulesandregulations	<ul> <li>The following tools, safety gear, machine, and equipment are to be available:</li> <li>Try squares</li> <li>Measuring tapes</li> <li>Hand saw</li> <li>Claw hammer</li> <li>Screw driver</li> <li>Hacking knife</li> <li>Scraper knife</li> <li>Electrical drill</li> <li>Overall</li> <li>Safety helmet</li> <li>Safety boots</li> <li>Ladder</li> <li>Scaffolds</li> <li>Pencil</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(e) Fixing	Organize, guide and give operation sheet the students to fix gypsum board at site while observing safety <b>Discussion-</b>	The student	Suspended	Detailed	The following	
		suspended ceiling	Based Teaching: Guide the students in defining terms, identifying suspended boards, identifying ways of fixing suspended ceiling and stating the procedure for fixing suspended ceiling Demonstration : Demonstrates	<ul> <li>should be able</li> <li>to:</li> <li>Draw <ul> <li>ceiling</li> <li>boards</li> </ul> </li> <li>Prepare <ul> <li>ceiling</li> <li>boards for</li> <li>fixing</li> </ul> </li> <li>Calculate <ul> <li>materials</li> <li>required</li> </ul> </li> <li>Identify <ul> <li>framing</li> <li>pattern</li> </ul> </li> <li>Set first <ul> <li>board</li> <li>Check</li> <li>accuracy of</li> <li>setting</li> </ul> </li> </ul>	ceiling conform to drawing and technical specifications	Nethodused:Thestudentsshouldidentifytoolsto be usedandstateprocedures offixingfixingsuspendedceilingPrinciples:Principles:Thestudentshouldexplainprinciplesrelatedto fixingsuspendedceilingTheories:ThestudentsshouldStatetheimportanceof	<ul> <li>tools, safety</li> <li>gear, machine,</li> <li>and equipment</li> <li>are to be</li> <li>available: -</li> <li>Try squares</li> <li>Measuring</li> <li>tapes</li> <li>Hand saw</li> <li>Claw</li> <li>hammer</li> <li>Screw</li> <li>driver</li> <li>Hacking</li> <li>knife</li> <li>Scraper</li> <li>knife</li> <li>Electrical</li> <li>drill</li> <li>Overall</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	Suggested Assessment Criteria				Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			fixing suspended ceiling, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to fix suspended ceiling at site while observing safety	<ul> <li>Fix cornices</li> <li>Clean work place</li> <li>Store tools at a safe place</li> </ul>		fixing suspended ceiling Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Safety helmet</li> <li>Safety boots</li> <li>Ladder</li> <li>Scaffolds</li> <li>Pencil</li> </ul>	
4.0 Making furniture	4.1 Making complex furniture	(a) Making Armed and shaped chairs	Discussion- Based Teaching: Guide the students in defining terminologies used in making furniture,	<ul> <li>The student should be able to:</li> <li>Draw furniture</li> <li>Interpret drawings</li> </ul>	Armed shaped chair conforms to drawing and technical specifications	Detailed knowledge of: Method used: The students should describe how to make armed shaped chairs	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Measuring tape</li> <li>Type square</li> <li>Tenon saw</li> </ul>	243

Module Title	Unit Title	Element Title	Suggested	Α	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)     Teaching Learning Methods       identifying	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit	
			identifying standard size in making, identifying ways of making armed and shaped chairs and stating the procedure for making armed and shaped chairs <b>Demonstration</b> : Demonstrates a process of make armed and shaped chairs, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give	<ul> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set out members</li> <li>Make joints</li> <li>Assemble members</li> <li>Perform general finishing</li> <li>Apply finishes</li> <li>Clean work place tools and machines</li> <li>Store tools at safe place</li> <li>Store furniture at safe place</li> </ul>		<ul> <li>Principles: The student should state principles related to making armed shaped chairs</li> <li>Theories: The students should explain the uses of armed shaped chairs</li> <li>Circumstantial knowledge: Workshop safety rules and regulations</li> </ul>	<ul> <li>Hand saw</li> <li>Bench planes</li> <li>Bench saw</li> <li>Belt sander machine</li> <li>Thickness planer machine</li> <li>Surface planer machine</li> <li>Moulding machine</li> <li>Brace/hand drill</li> <li>Wood lath</li> <li>Circular saw</li> <li>Mortising machine</li> <li>Overall</li> <li>Safety boots, Mask, safety glass</li> <li>Templates</li> <li>Pencil</li> <li>Chisel</li> <li>Mallet</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			operation sheet the students to make armed and shaped chairs while observing safety				Hammer	
		(b) Making shaped table	Discussion- Based Teaching: Guide the students in defining terminologies used in making shaped table, identifying standard size in making shaped table, identifying ways of making shaped tables and stating the procedure for making shaped tables Demonstration	<ul> <li>The student should be able to:</li> <li>Draw furniture</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set out members</li> <li>Make joints</li> <li>Assemble members</li> </ul>	Shaped table made according to drawing and technical specifications	Detailedknowledge of:Methodused:Thestudentsshoulddescribehowtomakeshaped tablesPrinciples:Thestudentshouldstateprinciplesrelated tomakingshaped tablesTheories:Thestudentsshouldexplainimportanceimportanceofperforminggeneralgeneralfinishingtoproduced table	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Measuring tape</li> <li>Type square</li> <li>Tenon saw</li> <li>Hand saw</li> <li>Bench planes</li> <li>Bench saw</li> <li>Belt sander machine</li> <li>Thickness planer machine</li> <li>Surface planer machine</li> </ul>	
			: Demonstrates			•		

Module Title	Unit Title	Element Title	nent Title Suggested Assessment Crit		ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			a process of make shaped tables, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to make shaped tables while observing safety	<ul> <li>Perform general finishing</li> <li>Apply finishes</li> <li>Clean work place tools and machines</li> <li>Store tools at safe place</li> <li>Store furniture at safe place</li> </ul>		Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Moulding machine</li> <li>Brace/hand drill</li> <li>Wood lath</li> <li>Circular saw</li> <li>Mortising machine</li> <li>Overall</li> <li>Safety boots, mask, safety glass</li> <li>Templates</li> <li>Pencil</li> <li>Chisel</li> <li>Mallet</li> <li>Hammer</li> </ul>	
		(c) Making upholstered chair	Discussion- Based Teaching: Guide the students in defining terminologies used in making upholstered	<ul> <li>The student should be able to:</li> <li>Draw furniture</li> <li>Interpret drawings</li> </ul>	upholstered chair conforms to drawing and technical specifications	Detailed knowledge of: Method used: The students should describe how to make upholstered chair	The following tools, safety gear, equipment are to be available: • Measuring tape • Type square • Tenon saw	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			chairs, identifying standard size in making, identifying ways of making upholstered chairs and stating the procedure for making upholstered chairs <b>Demonstration</b> : Demonstrates a process of making upholstered chairs, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> activity:	<ul> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare members</li> <li>Set out members</li> <li>Set out members</li> <li>Make joints</li> <li>Assemble members</li> <li>Perform general finishing</li> <li>Apply finishes</li> <li>Clean work place tools and machines</li> <li>Store tools at safe place</li> <li>Store furniture at safe place</li> </ul>		Principles: The student should state principles related to making upholstered chair Theories: The students should state the uses of upholstered chairs Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Hand saw</li> <li>Bench planes</li> <li>Bench saw</li> <li>Belt sander machine</li> <li>Thickness planer machine</li> <li>Surface planer machine</li> <li>Moulding machine</li> <li>Brace/hand drill</li> <li>Wood lath</li> <li>Circular saw</li> <li>Mortising machine</li> <li>Overall</li> <li>Safety boots, Mask, safety glass</li> <li>Templates</li> <li>Pencil</li> <li>Chisel</li> <li>Mallet</li> </ul>	

(Main Competence)(Specific Competencies)Interning (Learning Activities)Process AssessmentProduct /Services AssessmentKnowledge AssessmentPeriods product Resources(Main Competencies)(Learning Activities)Organize, guide and give operation sheet the students to make upholstered chairs while observing safetyOrganize, guide and give operation sheet the students to make upholstered chairs while observing safetyProduct Process AssessmentKnowledge AssessmentPeriods pr Suggested ResourcesPeriods pr Unit(d)Making kitchenDiscussion- should be able to:The student should be able to:The constructed kitchenThe following tools, safety gear, equipment	r of	Number	Training Requirements/	eria	Assessment Crite	A	Suggested	Element Title	Unit Title	Module Title
Organize, guide and give operation sheet the students to make upholstered chairs while observing safety       -       Hammer         (d) Making kitchen cabinet       Discussion- Based       The student should be able to:       The       Detailed kitchen       The following tools, safety	Periods per Unit	Periods p Unit	Suggested Resources	Knowledge Assessment	Product /Services Assessment	Process Assessment	Teaching and Learning Methods	(Learning Activities)	(Specific Competencies)	(Main Competence)
(d) Making kitchen cabinetDiscussion- BasedThe student should be able to:The constructed kitchenDetailed tools, safety gear, equipment			• Hammer				Organize, guide and give operation sheet the students to make upholstered chairs while observing safety			
kitchen cabinetBasedshould be able to:constructedknowledge of:tools, safety gear, equipment			The following	Detailed	The	The student	Discussion-	(d) Making		
cabinet <b>Teaching:</b> to: kitchen gear, equipment			tools, safety	knowledge of:	constructed	should be able	Based	kitchen		
			gear, equipment		kitchen	to:	Teaching:	cabinet		
and Guide the • Draw cabinet and Method used: are to be			are to be	Method used:	cabinet and	• Draw	Guide the	and		
cupboard students in upright cupboards The students available:			available:	The students	cupboards	upright	students in	cupboard		
defining furniture conform to should describe • Tyr square			• Tyr square	should describe	conform to	furniture	defining			
terminologies Interpret the drawing and now to make I ape			• Tape	how to make	drawing and	• Interpret the	terminologies			
kitchen cabinet call the specifications and supported to the			measure	and cupboards	specifications	drawings	kitchen cabinet			
and curboard support for the specifications and curboards Mortise			• Mortise	and cupobalds	specifications	• Calculate	and curboard			
identifying required Principles: The pagauge			gauge/maki	Principles: The		materials	identifying			
standard size for Select tools Student should Bench			Bench	student should		Select tools	standard size for			
making kitchen equipment state principles planes			nlanes	state principles		equipment	making kitchen			
cabinet and and related to making Tenon saw			• Tenon saw	related to making		and	cabinet and			
cupboards, materials kitchen cabinet Hand saw			Hand saw	kitchen cabinet		materials	cupboards,			
identifying • Prepare and cupboards • Mallet			• Mallet	and cupboards		• Prepare	identifying			
ways of making members The aview The hammer			hammer	The		members	ways of making			
kitchen cabinet • Set out • Claw			• Claw	Incories: The		• Set out	kıtchen cabinet			
and cupboards joints students should hammer			hammer	identify different		joints	and cupboards			
nrocedure for • Make joints types of kitchen • Chisels			• Chisels	types of kitchen		Make joints	and stating the			

Module Title	Unit Title	Element Title	Suggested	ted Assessment Criteria		Training Requirements/	/ Number of	
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			making kitchen cabinet and cupboards <b>Demonstration</b> : Demonstrates a process of making kitchen cabinet and cupboards, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to make kitchen cabinet and cupboards while observing safety	<ul> <li>Assemble the furniture</li> <li>Apply finishes</li> <li>Clean the work area</li> <li>Store the furniture and tools to their place</li> </ul>		cabinet and cupboards Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Sash cramp</li> <li>Bench vice</li> <li>Bench hook</li> <li>Overall</li> <li>Safety boots</li> <li>Painting brush</li> <li>Gluing brush</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
4.2	2 Making sofa	(a) Making single sofa (English or club type)	Discussion- Based Teaching: Guide the students in defining terminologies used in making sofa (English type), identifying standard size in making single (English type), and stating the procedure for making single sofa (English or club type) Demonstration : Demonstrates a process of making single sofa (English or club type), while students observe and asking guestions and	<ul> <li>The student should be able to:</li> <li>Draw/sketch sofa</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare sofa members</li> <li>Set out members</li> <li>Set out members</li> <li>Make joint</li> <li>Assemble sofa frame</li> <li>Fix mattress cushion</li> <li>Fix sofa cover</li> <li>Clean workplace and tools</li> </ul>	Constructed sofa conforms to drawing and technical specifications	Detailed knowledge of: Method used: The students should describe different methods for making sofa Principles: The student should state principles related to making sofa Theories: The students should state procedures for making sofa, required tools and materials, and different types of sofas Circumstantial knowledge: Workshop safety rules and regulations	The following tools, safety gear, and equipment are to be available:- • Measuring tape • Type square • Claw hammer • Hand saws • Pincers • Heavy duty Staple machine • Cross pein hammer • Overall • Safety boots • Mask • Pencil	96

Module Title	Unit Title	le Element Title Suggested		А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(b) Making multifunct ional sofa	answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to make single sofa (English or club type) while observing safety <b>Discussion-</b> <b>Based</b> <b>Teaching:</b> Guide the students in defining terminologies used in making multifunctional sofa, identifying standard size in making multifunctional sofa, and stating the procedure	<ul> <li>Store tools and sofa to a safe place</li> <li>The student should be able to:</li> <li>Draw/sketch sofa</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> </ul>	Constructed sofa conforms to drawing and technical specifications	Detailed knowledge of: Method used: The students should describe different methods for making multifunctional sofa Principles: The student should state principles related to making	The following tools, safety gear, and equipment are to be available: • Measuring tape • Type square • Claw hammer • Hand saws • Pincers	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			for making multifunctional sofa <b>Demonstration</b> : Demonstrates a process of making multifunctional sofa, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to make multifunctional sofa while observing safety	<ul> <li>Prepare sofa members</li> <li>Set out members</li> <li>Make joint</li> <li>Assemble sofa frame</li> <li>Fix mattress cushion</li> <li>Fix framing</li> <li>Fix sofa cover</li> <li>Clean workplace and tools</li> <li>Store tools and sofa to a safe place</li> </ul>		multifunctional sofa Theories: The students should state the differences between multifunctional sofa, and other types of sofas Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Heavy duty Staple machine</li> <li>Cross pein hammer</li> <li>Overall</li> <li>Safety boots</li> <li>Mask</li> <li>Pencil</li> </ul>	

Module Title	Unit Title	Element Title	Suggested Assessment Criteria				Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	4.3 Performing wood turning	(a) Performin g face plate	Brainstorming : Guide the students in defining face plate, identifying safety rules and procedures for performing face plate Practical demonstration : Organise students into small groups and demonstrate to them on how to perform face plate Practical work: Guide the students to practice performing face plate using drawing,	<ul> <li>The student should be able to:</li> <li>Prepare drawing for wood turning</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare materials</li> <li>Fix work piece</li> <li>Perform turning</li> <li>Perform finishing</li> <li>Clean work place and tools</li> <li>Store work piece and</li> </ul>	Face plate conforms to drawing and technical specifications	Detailed knowledge of:Methodused: The students should describe how to perform face platePrinciples: The student should state principles related to performing face plateTheories: The students should explain uses of face platesCircumstantial knowledge: Workshop safety rules and regulations	The following tools, safety gear, machines and equipment are to be available: • Measuring tape • Try square • Bench saw machine • Wood lathe machine • Disc sander machine • Thickness planer machine • Circular saw machine • Turning chisels • Screw drivers • Spanners • Overall • Safety boots • Mask • Safety glass	60

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(b) Performin g spindle turning	workpiece, tools and operational sheet Brainstorming : Guide the students in defining spindle turning, identifying safety rules and procedures for performing spindle turning Practical demonstration : Organise students into small groups and demonstrate to them on how to perform spindle turning	tools at safe place The student should be able to: Prepare drawing for wood turning Interpret drawings Calculate materials required Select tools and materials Prepare materials Fix work piece Perform turning Perform finishing	Spindle turning conforms to drawing and technical specifications	Detailed knowledge of: Method used: The students should describe how to perform spindle turning Principles: The student should state principles related to performing spindle turning Theories: The students should explain importance of performing spindle turning	<ul> <li>Pencil</li> <li>The following tools, safety gear, machines and equipment are to be available:</li> <li>Measuring tape</li> <li>Try square</li> <li>Bench saw machine</li> <li>Wood lathe machine</li> <li>Disc sander machine</li> <li>Thickness planer machine</li> <li>Circular saw machine</li> <li>Turning chisels</li> <li>Screw</li> </ul>	
			Practical work:	8		knowledge:	<ul><li>drivers</li><li>Spanners</li></ul>	

Module Title	Module Title Unit Title Element Title Su			Assessment Criteria			Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Guide the students to practice performing spindle turning using drawing, workpiece, tools and operational sheet	<ul> <li>Clean work place and tools</li> <li>Store work piece and tools at safe place</li> </ul>		Workshop safety rules and regulations	<ul> <li>Overall</li> <li>Safety boots</li> <li>Mask</li> <li>Safety glass</li> <li>Pencil</li> </ul>	
5.0 Performing site plan and setting out	5.1 Setting out a building	(a) Setting rectangula r building	Discussion- Based Teaching: Guide the students in defining terminologies used set out buildings, identifying types of set out building, and stating the procedure for set out building Demonstration : Demonstrates a process of set out a building,	<ul> <li>The student should be able to:</li> <li>Prepare drawing for a building</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Identify building line</li> <li>Set 1<sup>st</sup> corner</li> <li>Set other corners</li> </ul>	Set out building conform to drawing and technical specifications	Detailed knowledge of:Methodused:ThestudentshoulddescribehowtosetabuildingPrinciples:ThestudentshouldexplainprinciplesrelatedtosettingoutbuildingsTheories:Thestudentsshouldexplainimportanceimportanceofadheringto	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Measuring tape</li> <li>Try square</li> <li>Claw hammer</li> <li>Club hammer</li> <li>Building Square</li> <li>Bush knife(panga)</li> <li>Manila line</li> <li>Overall</li> <li>Safety boots</li> </ul>	51

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	Specific (Learning npetencies) Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to set out a building while observing safety	<ul> <li>Check squareness</li> <li>Control levels</li> <li>Erect profile board</li> <li>Mark width of foundation</li> <li>Mark width of wall</li> <li>Check accuracy</li> <li>Clean tools and work place</li> <li>Store workplace and tools at safe place</li> </ul>		technical specifications when setting out a building <b>Circumstantial knowledge:</b> Workshop safety rules and regulations	<ul> <li>Spirit level</li> <li>Helmet</li> <li>Plumb bob</li> <li>Pencil</li> </ul>	
		(b) Setting L shaped building	Discussion- Based Teaching: Guide the students in defining terminologies used set out buildings,	<ul> <li>The student should be able to:</li> <li>Prepare drawing for a building</li> <li>Interpret drawings</li> </ul>	Set out building conform to drawing and technical specifications	Detailed knowledge of:Methodused:ThestudentshoulddescribehowtosetLshapedbuilding	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Measuring tape</li> <li>Try square</li> </ul>	

Module Title	Unit Title	Element Title	Suggested Assessment Criteria			Training Requirements/	Number of	
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			identifying types of set out building, and stating the procedure for set out building <b>Demonstration</b> : Demonstrates a process of set out a building, while students observe and asking questions and answering then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to set out a building while observing safety	<ul> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Identify building line</li> <li>Set 1<sup>st</sup> corner</li> <li>Set other corners</li> <li>Check squareness</li> <li>Control levels</li> <li>Erect profile board</li> <li>Mark width of foundation</li> <li>Mark width of wall</li> <li>Check accuracy</li> <li>Clean tools and work place</li> </ul>		Principles: The student should explain principles related to setting out L shaped buildings Theories: The students should explain importance of identifying building lines when setting out L shaped building Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Claw hammer</li> <li>Club hammer</li> <li>Building Square</li> <li>Bush knife(panga)</li> <li>Manila line</li> <li>Overall</li> <li>Safety boots</li> <li>Spirit level</li> <li>Helmet</li> <li>Plumb bob</li> <li>Pencil</li> </ul>	

Module Title	dule Title Unit Title Element Title Suggested				ssessment Crite	Training Requirements/	Number of	
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
				• Store workplace and tools at safe place				
	5.2 Making fence	(a) Erecting fence	Discussion- Based Teaching: Guide the students in defining terminologies used for erecting fence, identifying types of fence, and stating the procedure for erecting fence Demonstration : Demonstrates a process of erecting fence, while students observe and asking questions and answering then	<ul> <li>The student should be able to:</li> <li>Prepare drawing of fence</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare holes</li> <li>Prepare fencing poles</li> <li>Erect poles</li> <li>Prepare and fix rails/fencing wires</li> </ul>	Erected fence conforms to drawing and technical specifications	Detailed knowledge of:Methodused:Thestudentshoulddescribehow to erect fencePrinciples:Thestudentshouldexplainprinciplesrelated to erectingfenceTheories:ThestudentsshouldstatethereasonforcalculatingmaterialsbeforewhenerectingfenceCircumstantialknowledge:	The following tools, safety gear, equipment are to be available: • Measuring tape • Try square • Hand saw • Claw hammer • Claw bars • Screw driver • Chisels • Mallet hammer • Manila line • Pick axe • Bush knife • Hoe • Spirit level • Overall • Pencil	36

Module Title	Unit Title	Element Title	lement Title (Learning Activities) Suggested Teaching and Learning Methods	Α	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)		Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(b) Erecting	give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to erect fence while observing safety <b>Discussion-Based</b>	<ul> <li>Fix fencing boards/corru gated sheets</li> <li>Make fence gate</li> <li>Clean work place and tools</li> <li>Store tools at safe place</li> </ul>	Erected fence	Workshop safety rules and regulations	<ul> <li>Leather gloves</li> <li>Safety boots</li> <li>Helmet</li> </ul>	
		fence gates	Teaching: Guide the students in defining terminologies used for erecting fence gates, identifying types of fence gates, and stating the procedure for erecting fence gates Demonstration: Demonstrates a process of erecting fence gate, while students observe and asking questions and answering then give them operation	<ul> <li>should be able to:</li> <li>Prepare drawing of fence</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare holes</li> </ul>	conform to drawing and technical specifications	<ul> <li>knowledge of:</li> <li>Method used: The student should be able to explain how to erect gates</li> <li>Principles: The student should explain principles related to erecting gates</li> <li>Theories: The students should be able to identify</li> </ul>	<ul> <li>tools, safety</li> <li>gear, equipment</li> <li>are to be</li> <li>available:</li> <li>Measuring</li> <li>tape</li> <li>Try square</li> <li>Hand saw</li> <li>Claw</li> <li>hammer</li> <li>Claw bars</li> <li>Screw</li> <li>driver</li> <li>Chisels</li> <li>Mallet</li> <li>hammer</li> </ul>	

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crito	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			<b>Practical activity:</b> Organize, guide and give operation sheet the students to erect fence gate while observing safety	<ul> <li>Prepare fencing poles</li> <li>Erect poles</li> <li>Prepare and fix rails/fencing wires</li> <li>Fix fencing boards/corru gated sheets</li> <li>Make fence gate</li> <li>Clean work place and tools</li> <li>Store tools at safe place</li> </ul>		different types of gates Circumstantial knowledge: Workshop safety rules and regulations	<ul> <li>Manila line</li> <li>Pick axe</li> <li>Bush knife</li> <li>Hoe</li> <li>Spirit level</li> <li>Overall</li> <li>Pencil</li> <li>Leather gloves</li> <li>Safety boots</li> <li>Helmet</li> </ul>	
6.0 Performing basic estimation and costing	6.1 Estimating materials	(a) Identify required materials	Discussion- Based Teaching: Guide the students in defining units used for identify required materials, identifying ways of	The student should be able to: • Identify various materials • Identify material units	Estimated materials conform to technical specifications	Detailed knowledge of Method used: The student should be able to identify materials used in Carpentry and joinery works	The following tools, safety gear, equipment are to be available: • Measuring tape • Calculator • Writing pad • Pencil	39

Module Title	lule Title Unit Title Element Title Suggested		А	ssessment Crite	eria	Training Requirements/	Number of	
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			identifying materials <b>Demonstration</b> : Demonstrates on how to identify required materials, while students observe and asking questions and answering <b>Practical</b> <b>activity:</b> Organize, guide and give task the students to Identify required materials as per instruction given			Principles:The student should be able to describe principles related to different materials in Carpentry and JoineryTheories:The students should identify materials and their usesCircumstantial knowledge: Workshop safety rules and regulations	• ball pen	
		(b) Calculate	Discussion- Based	The student	Calculated	Underpinning knowledge of:	The following	
		materials	Teaching:	should be able	required	Kilowicugt UI.	gear, equipment	
			Guide the	to:	materials	Method used:	are to be	
			students in			The student	available:	

Module Title	Unit Title	Element Title	Suggested	Suggested Assessment Criteria			Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			defining units used for identify required materials, identifying ways of calculating materials <b>Demonstration</b> : Demonstrates on how to calculate required materials, while students observe and asking questions and answering <b>Practical</b> <b>activity:</b> Organize, guide and give task the students to calculate required	<ul> <li>Interpret drawings</li> <li>Take actual measuremen ts</li> <li>Identify various materials</li> <li>Identify material units</li> <li>Store tools at safe place Store tools at safe place</li> </ul>	conform to technical specifications	should explain methods related to calculate required materials <b>Principles:</b> The student should explain principles related to calculate required materials <b>Theories:</b> The students should explain theories related to identify required materials <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to identify required materials	<ul> <li>Measuring tape</li> <li>Calculator</li> <li>Writing pad</li> <li>Pencil</li> <li>ball pen</li> </ul>	

Module Title	Module Title Unit Title Element Title			А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			instruction given					
	6.2 Estimating materials	(a) Calculating materials cost	Discussion- Based Teaching: Guide the students in defining units used for identify required materials, identifying ways of calculating materials Demonstration : Demonstrates on how to calculate required materials, while students observe and asking questions and answering Practical activity:	<ul> <li>The student should be able to:</li> <li>Identify rate of various materials</li> <li>Calculate cost of materials</li> <li>Calculate profit</li> </ul>	Calculated cost of material conforms to technical specifications	Detailed knowledge of:Methodused:Thestudentshould be able to describe different methodsfor calculating material costsPrinciples:The student should be able to describe principles related to determining labour requirementsTheories:The students should be able to determine numberTheories:The students should be able to determine able to determine able to determine	The following tools, safety gear, equipment are to be available: • Measuring tape • Calculator • Writing pad • Pencil • ball pen • Overall	33

Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Organize, guide and give task the students to calculate required materials as per instruction given			between skilled and unskilled Circumstantial knowledge: Workshop safety rules and regulations		
		(b) Calculating labour and profit	Group Discussion: Guide students in small groups to discuss the reasons for calculating labour costs for any work and the disadvantages of ignoring the process Practical demonstration Show students step by step on how to calculate labour costs	<ul> <li>The student should be able to:</li> <li>Interpret drawings</li> <li>Identify rate of various materials</li> <li>Calculate cost of materials</li> <li>Calculate labour cost</li> <li>Calculate profit</li> <li>Clean work place and tools</li> <li>Store tools at safe place</li> </ul>	Calculated labour cost conforms to technical specifications	Detailed knowledge of: Method used: The student should be able to describe procedures for calculating labour costs Principles: The student should be able to describe a waste factor principle Theories: The students should be able to identify types of materials	The following tools, safety gear, equipment are to be available: • Measuring tape • Calculator • Writing pad • Pencil • ball pen • Overall	
Module Title	Unit Title	Element Title	Suggested	А	ssessment Crite	eria	Training Requirements/	Number of
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(Main Competence)	(Specific Competencies)	(Learning Activities)	Teaching and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Practical			needed and		
			work:			important aspects		
			Guide the			to consider when		
			students to			calculating costs		
			individually			of materials		
			calculate cost of					
			materials for			Circumstantial		
			constructing			knowledge:		
			armed shaped			Workshop safety		
			chair.			rules and		
						regulations		
						-		

## Form Four

## Table 6: Detailed Contents for Form Four

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	ssessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
1.0 Construct ing roofs	1.1 Constructing hipped roof	(a) Constructing multi- hipped/combinati on roof	Discussion- Based Teaching: Guide the students in defining terms, identifying types of hipped roof structures, and stating the procedure for constructing multi- hipped/combinati on roof Demonstration: Demonstrates a process of constructing a multi- hipped/combinati on roof, while students observe and ask questions and answer then	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Fix wall plate</li> <li>Make trusses</li> <li>Erect/fix trusses</li> <li>Set and fix purlins</li> <li>Cut ends of purlins</li> <li>Perform plumb cut of rafters</li> </ul>	Constructed hipped roof conform to technical specificatio ns	Detailed knowledge of: Method used: The students should be able to state procedures for constructing multi- hipped/combinati on roof Principles: The student should state principles related to constructing multi- hipped/combinati on roof Theories: The students should state the differences between multi-	The following tools, safety gear, machines, and equipment are to be available: • Measuring tape • Try square • Hand saws • Portable saw • Claw hammer • Claw bar • Mallet hammer • Chisels • Manila line • Ladder • Brace and bits • Bench • Helmet • Overall • Safety boot • Leather gloves • Safety goggles • Spirit level	276

Module Title	Unit Title (Specific	Elements (Learning	Suggested	Assessment Criteria			Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			give them an operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet to the students to construct multi- hipped/combinati on roof at site	<ul> <li>Fix fascia boards</li> <li>Clean tools</li> <li>Store them at safe place</li> </ul>		hipped/combinati on roof <b>Circumstantial</b> <b>knowledge:</b> Workshop safety rules and regulations		
		(b) Fixing PVC and steel gutters	Discussion- Based Teaching: Guide the students in defining terms, identifying types of gutters, and stating the procedure for fixing gutters Demonstration: Demonstrates a process of fixing gutters, while students observe	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Fix wall plate</li> </ul>	PVC and steel gutters conform to technical specificatio ns	Detailed knowledge of: Method used: The students should be able to identify tools to be used and state procedures of fixing PVC and steel gutters Principles: The student should explain principles related to fixing	<ul> <li>The following tools, safety gear, machines, and equipment are to be available:</li> <li>Measuring tape</li> <li>Try square</li> <li>Hand saws</li> <li>Portable saw</li> <li>Claw hammer</li> <li>Claw bar</li> <li>Mallet hammer</li> <li>Chisels</li> </ul>	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	ssessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			and asking questions and answer then give them an operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet to the students to fix gutters to the roof at the site	<ul> <li>Make trusses</li> <li>Erect/fix trusses</li> <li>Set and fix purlins</li> <li>Cut ends of purlins</li> <li>Perform plumb cut of rafters</li> <li>Fix fascia boards</li> <li>Clean tools</li> <li>Store them at safe place</li> </ul>		PVC and stell guttersTheories:The studentsshouldStateimportanceof fixingPVC and steel guttersCircumstantial knowledge: Workshop safety	<ul> <li>Manila line</li> <li>Ladder</li> <li>Brace and bits</li> <li>Bench</li> <li>Helmet</li> <li>Overall</li> <li>Safety boot</li> <li>Leather gloves</li> <li>Safety goggles</li> <li>Spirit level</li> </ul>	
	1.2 Constructing eaves and bargeboard	(a) Constructing open eaves	Discussion-Based Teaching:Guidethestudentsindefiningterms,identifyingpartsof open eave, andstatingtheprocedureforconstructopeneavesDemonstration:Demonstratesa	<ul> <li>The student should be able to:</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> </ul>	Constructed eave conform to technical specificatio ns	Detailed knowledge of: Method used: The students should be able to identify tools to be used and state procedures of Constructing open eave Principles: The student should be	The following tools, safety gear, equipment are to be available: • Try square • Tape measure • Sliding bevel • Hand saws • Claw hammer • Claw bar • Mallet hammer	90

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			processofconstructopeneaves,whilestudentsobserveandaskingquestionsandanswerthen givethemoperationsheetPracticalactivity:Organize, guideoperationsheetthe students toconstruct openeavesat sitewhileobservingsafetysafety	<ul> <li>Prepare materials</li> <li>Set and fix eave boards</li> <li>Fix eave covers</li> <li>Clean work place and tools</li> <li>Store tools in a safe place</li> </ul>		able to explain principles related to constructing open eave Theories: The students should be able to explain importance of open eave Circumstantial knowledge: Workshop safety	<ul> <li>Chisels</li> <li>Manila line</li> <li>Spirit level</li> <li>Ladder</li> <li>Pencil</li> <li>Safety boots</li> <li>Safety helmet</li> <li>Overall</li> </ul>	
		(b) Constructing closed eaves	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of closed eave, and stating the procedure for	<ul> <li>The student should be able to:</li> <li>Interpret drawings</li> <li>Calculate materials required</li> </ul>	Closed eave conform to technical specificatio ns	Detailed knowledge of: Method used: The students should be able to identify tools to be used and state procedures of constructing closed eave	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Try square</li> <li>Tape measure</li> <li>Sliding bevel</li> <li>Hand saws</li> <li>Claw hammer</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	As	sessment Crit	eria	Training Paguiromonts/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			construct closed eaves <b>Demonstration</b> : Demonstrates a process of construct closed eaves, while students observe and asking questions and answer then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to construct closed eaves at site while observing safety	<ul> <li>Select tools and materials</li> <li>Prepare materials</li> <li>Set and fix eave boards</li> <li>Fix eave covers</li> <li>Clean work place and tools</li> <li>Store tools in a safe place</li> </ul>		Principles: The student should be able to explain principles related to constructing closed eave Theories: The students should be able to explain importance of closed eave Circumstantial knowledge: Workshop safety	<ul> <li>Claw bar</li> <li>Mallet hammer</li> <li>Chisels</li> <li>Manila line</li> <li>Spirit level</li> <li>Ladder</li> <li>Pencil</li> <li>Safety boots</li> <li>Safety helmet</li> <li>Overall</li> </ul>	
		(c) Constructing flush eaves	Discussion- Based Teaching:	The student should be able	flushed eave	Detailed knowledge of:	The following tools, safety gear,	
			Guide the students in defining terms, identifying parts	<ul> <li>Interpret drawings</li> </ul>	contorms to technical specificatio ns	Method used: The students should be able to	<ul><li>equipment are to be available:</li><li>Try square</li><li>Tape measure</li></ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			of flush eave, and stating the procedure for construct flush eaves <b>Demonstration</b> : Demonstrates a process of construct flush eaves, while students observe and asking questions and answer then give them operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet the students to construct flush eaves at site while observing safety	<ul> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare materials</li> <li>Set and fix eave boards</li> <li>Fix eave covers</li> <li>Clean work place and tools</li> <li>Store tools in a safe place</li> </ul>		identify tools to be used and state procedures of constructing flush eave <b>Principles:</b> The student should be able to explain principles related to constructing flush eave <b>Theories:</b> The students should be able to explain importance of flush eave <b>Circumstantial</b> <b>knowledge:</b> Workshop safety	<ul> <li>Sliding bevel</li> <li>Hand saws</li> <li>Claw hammer</li> <li>Claw bar</li> <li>Mallet hammer</li> <li>Chisels</li> <li>Manila line</li> <li>Spirit level</li> <li>Ladder</li> <li>Pencil</li> <li>Safety boots</li> <li>Safety helmet</li> <li>Overall</li> </ul>	
		(d) Constructing	Discussion-	The student	Sprocket	Detailed	The following	
		sprocket eaves	Based Teaching:	should be able to:	eave conform to	knowledge of:	tools, safety gear,	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	ssessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Guide the students in defining terms, identifying parts of sprocket eave, and stating the procedure for construct sprocket eave <b>Demonstration</b> : Demonstration: Demonstrates a process of constructing a sprocket eave, while students observe and ask questions and answer then give them an operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet to the students to construct sprocket eave at	<ul> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare materials</li> <li>Set and fix eave boards</li> <li>Fix eave covers</li> <li>Clean work place and tools</li> <li>Store tools in a safe place</li> </ul>	technical specificatio ns	Method used: The students should be able to identify tools to be used and state procedures of constructing sprocket eave Principles: The student should be able to explain principles related to constructing sprocket eave Theories: The students should be able to explain importance of sprocket eave Circumstantial knowledge: Workshop safety	<ul> <li>equipment are to be available:</li> <li>Try square</li> <li>Tape measure</li> <li>Sliding bevel</li> <li>Hand saws</li> <li>Claw hammer</li> <li>Claw bar</li> <li>Mallet hammer</li> <li>Chisels</li> <li>Manila line</li> <li>Spirit level</li> <li>Ladder</li> <li>Pencil</li> <li>Safety boots</li> <li>Safety helmet</li> <li>Overall</li> </ul>	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(e) Fixing fascia board	the site while observing safety <b>Discussion-</b> <b>Based Teaching:</b> Guide the students in defining terms, and stating the procedure for fixing fascia board <b>Demonstration:</b> Demonstrates a process of fixing fascia board, while students observe and ask questions and answer then give them an operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet to the students to fix fascia board at	<ul> <li>The student should be able to:</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select tools and materials</li> <li>Prepare materials</li> <li>Set and fix eave boards</li> <li>Fix eave covers</li> <li>Clean work place and tools</li> <li>Store tools in a safe place</li> </ul>	Constructed eave conform to technical specificatio ns	Detailed knowledge of:         Method       used:         The       student         should       describe         fascia       boards,         identify       tools         be       used         ridentify       tools         be       used         fascia       boards,         identify       tools         be       used         procedures       of         fixing       fascia         boards       The         student       should         explain       principles:         related       to         fascia       boards         Theories:       The         students       should         State       the         differences       between         boards       and         gypsum       boards	The following tools, safety gear, equipment are to be available: • Try square • Tape measure • Sliding bevel • Hand saws • Claw hammer • Claw bar • Mallet hammer • Chisels • Manila line • Spirit level • Ladder • Pencil • Safety boots • Safety helmet • Overall	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	1.3 Constructing roof light	(a) Constructing patent glazing	the site while observing safety Discussion- Based Teaching: Guide the students in defining terms, identifying parts of patent glazing, and stating the procedure for construct patent glazing Demonstration: Demonstrates a process of construct patent glazing, while students observe	The student should be able to: • Interpret drawings • Calculate materials required • Select materials and tools • Set out roof light • Prepare members • Make joints	Assessment Roof lights conform to technical specificatio ns	Circumstantial knowledge: Workshop safety rules and regulations Detailed knowledge of: Method used: The student should be able to explain procedures for constructing patent glazing Principles: The student should explain principles related to constructing patent glazing	The following tools, safety gear, equipment are to be available: • Try square • Tape measure • Sliding bevel • Hand saws • Claw hammer • Mallet hammer • Chisels • Manila line • Ladder • Pencil • Overall	78
			and ask questions and answer then give them an operation sheet Practical activity:	<ul> <li>Fix roof light</li> <li>Clean work place and tools</li> <li>Store tools in a safe place</li> </ul>		Theories: The students should explain differences between patent	<ul><li>Safety boots</li><li>Safety helmet</li></ul>	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	(Specific Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Organize, guide and give operation sheet to the students to construct patent glazing at the site while observing safety			glazing and other types of roof Circumstantial knowledge: Workshop safety rules and regulations		
		(b) Construct latent glazing	Discussion-Based Teaching:Guidethestudentsindefiningterms,identifyingpartsoflatentglazing,andDemonstration:Demonstration:Demonstratesaprocessofconstructlatentglazing,whilestudentsobserveandask questionsandanswerthengivegivethemandansweroperationsheet	<ul> <li>Interstudent</li> <li>should be able</li> <li>to: <ul> <li>Interpret</li> <li>drawings</li> <li>Calculate</li> <li>materials</li> <li>required</li> </ul> </li> <li>Select <ul> <li>materials</li> <li>and tools</li> </ul> </li> <li>Set out roof light</li> <li>Prepare <ul> <li>members</li> </ul> </li> <li>Make joints</li> <li>Fix roof <ul> <li>light</li> </ul> </li> <li>Clean work <ul> <li>place and <ul> <li>tools</li> </ul> </li> </ul></li></ul>	constructed roof lights conform to technical specificatio ns	Detailedknowledge of:Methodused:Thestudentshould be able toexplainproceduresforconstructinglatent glazingPrinciples:Thestudentshouldexplainprinciplesrelatedtoconstructinglatent glazingTheories:Thestudentsshouldexplain	<ul> <li>Ine following tools, safety gear, equipment are to be available:</li> <li>Try square</li> <li>Tape measure</li> <li>Sliding bevel</li> <li>Hand saws</li> <li>Claw hammer</li> <li>Mallet hammer</li> <li>Chisels</li> <li>Manila line</li> <li>Ladder</li> <li>Pencil</li> <li>Overall</li> <li>Safety boots</li> <li>Safety helmet</li> </ul>	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
(Wain Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(c) Construct sky	Practical activity: Organize, guide and give operation sheet to the students to construct latent glazing at the site while observing safety Discussion-Based	Store tools in a safe place     The student	Skylights	importance of latent glazing Circumstantial knowledge: Workshop safety rules and regulations Detailed	The following	
		light	Teaching:Guide the students in defining terms, identifying parts of sky light, and stating the procedure for construct sky lightDemonstration:Demonstrates a process of construct sky light, while students observe and ask questions and answer then give them an operation sheetPractical activity: Organize, guide and give operation sheet to the students to construct sky light at	<ul> <li>should be able</li> <li>to: <ul> <li>Interpret</li> <li>drawings</li> <li>Calculate</li> <li>materials</li> <li>required</li> </ul> </li> <li>Select <ul> <li>materials</li> <li>and tools</li> </ul> </li> <li>Set out roof <ul> <li>light</li> <li>Prepare</li> <li>members</li> </ul> </li> <li>Make joints</li> <li>Fix roof <ul> <li>light</li> </ul> </li> </ul>	roof conform to technical specificatio ns	<ul> <li>knowledge of:</li> <li>Method used: The students should be able to identify tools to be used and state procedures of constructing sky light roof</li> <li>Principles: The student should be able to describe load bearing principle</li> </ul>	<ul> <li>tools, safety gear, equipment are to be available:</li> <li>Try square</li> <li>Tape measure</li> <li>Sliding bevel</li> <li>Hand saws</li> <li>Claw hammer</li> <li>Mallet hammer</li> <li>Chisels</li> <li>Manila line</li> <li>Ladder</li> <li>Pencil</li> <li>Overall</li> <li>Safety boots</li> <li>Safety helmet</li> </ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
(Main Competence)	Competencies)	(Learning Activities)	Learning And Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			the site while observing safety	<ul> <li>Clean work place and tools</li> <li>Store tools in a safe place</li> </ul>		Theories: The students should be able to explain important aspects to consider when constructing skylight roof of sky light roof Circumstantial knowledge: Workshop safety		
		(d) Construct dome window	Discussion- Based Teaching: Guide the students in defining terms, identifying parts of dome window, and stating the procedure for construct dome window Demonstration: Demonstrates a process of construct dome window, while students observe	<ul> <li>The student should be able to:</li> <li>Interpret drawings</li> <li>Calculate materials required</li> <li>Select materials and tools</li> <li>Set out roof light</li> <li>Prepare members</li> <li>Make joints</li> </ul>	Dome window conform to technical specificatio ns	Detailed knowledge of: Method used: The students should be able to identify tools to be used and state procedures of constructing dome window Principles: The student should be able to describe load distribution principle	The following tools, safety gear, equipment are to be available: • Try square • Tape measure • Sliding bevel • Hand saws • Claw hammer • Mallet hammer • Chisels • Manila line • Ladder • Pencil • Overall	

Module Title	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			and ask questions and answer then give them an operation sheet <b>Practical</b> <b>activity:</b> Organize, guide and give operation sheet to the students to construct dome window at the site while observing safety	<ul> <li>Fix roof light</li> <li>Clean work place and tools</li> <li>Store tools in a safe place</li> </ul>		Theories: The students should be able to explain important aspects to consider when constructing dome window Circumstantial knowledge: Workshop safety	<ul><li>Safety boots</li><li>Safety helmet</li></ul>	
2.0 Performi ng timber structures	2.1 Constructing timber stairs	(a) Constructing straight flight stair	Interactive simulation: Guide students through interactive simulation to visualize straight flight stair and explore how it is constructed Demonstration: Organize students into manageable groups and	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select tools and equipment</li> </ul>	Straight flight stair conforms to technical specificatio ns	Detailed knowledge of: Method used: The students should be able to identify tools to be used and state procedures of constructing straight flight stair Principles: The student should be	The following tools, safety gear, equipment are to be available: • Tape measure • Try square • Claw hammer • Chisels • Ladder • Safety boots • Spirit level • Overall • Helmet • Hand saws	75

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			demonstrate step by step on how to construct straight flight stair <b>Practical work:</b> Guide the students to practice constructing straight flight stair using operational sheet, drawing, and prepared tools and materials	<ul> <li>Set height to the first floor</li> <li>Calculate total rise and total going</li> <li>Prepare string handrail and balustrades</li> <li>Fixing rises and goings</li> <li>Apply finishes</li> <li>Clean work place</li> <li>Store tools to safe place</li> </ul>		able to describe riser and tread ratio Theories: The students should be able to explain important aspects to consider when constructing straight flight stair Circumstantial knowledge: Workshop safety	<ul> <li>Cramps</li> <li>Mallet hammer</li> <li>Drill/brace</li> <li>Bench planes</li> <li>Painting brush</li> </ul>	
		(b) Constructing quarter turn stair	Interactive simulation: Guide students through interactive simulation to visualize quarter turn stair and explore how it is constructed	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> </ul>	Quarter turn stair conforms to technical specificatio ns	Detailed knowledge of: Method used: The students should be able to identify tools to be used and state procedures of	<ul> <li>The following tools, safety gear, equipment are to be available:</li> <li>Tape measure</li> <li>Try square</li> <li>Claw hammer</li> <li>Chisels</li> <li>Ladder</li> </ul>	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Demonstration: Organize students into manageable groups and demonstrate step by step on how to construct quarter turn stair <b>Practical work:</b> Guide the students to practice constructing quarter turn stair using operational sheet, drawing, and prepared tools and materials	<ul> <li>Select tools and equipment</li> <li>Set height to the first floor</li> <li>Calculate total rise and total going</li> <li>Prepare string handrail and balustrades</li> <li>Fixing rises and goings</li> <li>Apply finishes</li> <li>Clean work place</li> <li>Store tools to safe place</li> </ul>		constructing quarter turn stair <b>Principles:</b> The student should be able to explain principles related to quarter turn stair <b>Theories:</b> The students should be able to explain important aspects to consider when constructing quarter turn stair <b>Circumstantial</b> <b>knowledge:</b> Workshop safety	<ul> <li>Safety boots</li> <li>Spirit level</li> <li>Overall</li> <li>Helmet</li> <li>Hand saws</li> <li>Cramps</li> <li>Mallet hammer</li> <li>Drill/brace</li> <li>Bench planes</li> <li>Painting brush</li> </ul>	
		(c) Constructing half turn stair	Interactive simulation:	The student should be able	Half turn stair	Detailed knowledge of:	This element can be achieved at	
			Guide students through interactive simulation to visualize half	<ul> <li>Interpret working drawings</li> </ul>	conforms to technical specificatio ns	Method used: The students should be able to identify tools to	workplace or training institution The following tools, safety gear,	

Module Title	Unit Title	Elements (Learning	Suggested	As	sessment Crit	eria	Training Dequinements/	Number
(Wall Competence)	(Specific Competencies)	(Learning Activities)	Learning and Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			turn stair and explore how it is constructed <b>Demonstration:</b> Organize students into manageable groups and demonstrate step by step on how to construct half turn stair <b>Practical work:</b> Guide the students to practice constructing half turn stair using operational sheet, drawing, and prepared tools and materials	<ul> <li>Calculate materials required</li> <li>Select tools and equipment</li> <li>Set height to the first floor</li> <li>Calculate total rise and total going</li> <li>Prepare string handrail and balustrades</li> <li>Fixing rises and goings</li> <li>Apply finishes</li> <li>Clean work place</li> <li>Store tools to safe place</li> </ul>		be used and state procedures of constructing half turn stair <b>Principles:</b> The student should be able to explain principles related to half turn stair <b>Theories:</b> The students should be able to explain important aspects to consider when constructing half turn stair <b>Circumstantial knowledge:</b> Workshop safety	equipment should be available: Tape measure Try square Claw hammer Chisels Ladder Safety boots Spirit level Overall Helmet Hand saws Cramps Mallet hammer Drill/brace Bench planes Painting brush	
	2.2 Constructing timber walls	(a) Constructing load bearing walls	Interactive simulation:	The student should be able to:	Load bearing timber wall	Detailed knowledge of:	The following tools, safety gear,	75

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Guide students through interactive simulation to visualize load bearing wall and explore how it is constructed <b>Practical</b> <b>Demonstration:</b> Organize students into manageable groups and demonstrate step by step on how to construct load bearing wall <b>Practical work:</b> Guide the students to practice constructing load bearing wall using operational sheet, drawing, and prepared tools and materials	<ul> <li>Interpret working drawings</li> <li>Select materials and tools</li> <li>Prepare members</li> <li>Make joints</li> <li>Fix vertical members</li> <li>Fix vertical members</li> <li>Fix horizontal members</li> <li>Reinforce the timber wall</li> <li>Calculate quantity of boards</li> <li>Fix boards</li> <li>Clean work place and tools</li> <li>Store tools and equipment</li> </ul>	conform to technical specificatio ns	<ul> <li>Method used: The students should be able to identify tools to be used and state procedures of constructing load bearing wall</li> <li>Principles: The student should be able to explain principles related to construction of load bearing wall</li> <li>Theories: The students should be able to explain important aspects to consider when constructing load bearing wall</li> <li>Circumstantial knowledge: Workshop safety</li> </ul>	equipment are to be available: Tape measure Spirit level Planes Claw hammer Chisels Mallet Manila line Overall Safety boots Hand saw Try square	

Module Title	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning	Process	Product /Services	Knowledge	Suggested	Periods
			Niethods	Assessment	Assessment		Kesources	per Unit
		(b) Constructing non load bearing walls	Group Discussion; Allow students into small groups to discuss and provide answers about the differences between non load bearing and load bearing wall Practical Demonstration: Organize students into manageable groups and demonstrate step by step on how to construct non load bearing wall Practice constructing non load bearing wall using operational	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Select materials and tools</li> <li>Prepare members</li> <li>Make joints</li> <li>Fix vertical members</li> <li>Fix vertical members</li> <li>Fix horizontal members</li> <li>Reinforce the timber wall</li> <li>Calculate quantity of boards</li> <li>Fix boards</li> <li>Clean work place and tools</li> </ul>	Constructed timber wall conform to technical specificatio ns	Detailed knowledge of:Methodused: The student shouldhestudent explain methodsmethodsrelated to maintain workshop safety rulesPrinciples:The student should explain principles related to maintain workshop safety rules and regulationsPrinciples:The student should explain principles related to maintain workshop safety rules and regulationsTheories:The students should explain theories related to maintain workshop safety rules and regulations	The following tools, safety gear, equipment are to be available: • Tape measure • Spirit level • Planes • Claw hammer • Chisels • Mallet • Manila line • Overall • Safety boots • Hand saw • Try square	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			sheet, drawing, and prepared tools and materials	• Store tools and equipment		Circumstantial knowledge: The students should explain detailed knowledge related to maintain workshop safety rules and regulations		
	2.3 Constructing timber floor	(a) Constructing single floor	Interactive simulation: Guide students through interactive simulation to visualize single timber floor construction Practical Demonstration: Organize students into manageable groups and demonstrate step by step on how to	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select tools</li> <li>Prepare members</li> <li>Prepare floor surface</li> <li>Set out members</li> <li>Make joints</li> </ul>	Single floor conforms to technical specificatio ns	Detailed knowledge of: Method used: The students should be able to identify tools to be used and state procedures of constructing Sigle timber floor Principles: The student should be able to explain principles related to construction of	<ul> <li>The following tools, safety gear, and equipment are to be available:</li> <li>Measuring tape</li> <li>Marking/morti ce gauge</li> <li>Tenon saw</li> <li>Claw hammer</li> <li>Mallet hammer</li> <li>Chisels</li> <li>Clamps</li> <li>Safety boots</li> <li>Safety glasses</li> <li>Overall</li> </ul>	60

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			construct single timber floor <b>Practical work:</b> Guide the students to practice constructing single timber floor wall using operational sheet, drawing, and prepared tools and materials	<ul> <li>Assemble timber floor members</li> <li>Apply finishes</li> <li>Clean the work area</li> <li>Store tools and equipment in a safe place</li> </ul>		single timber floor Theories: The students should be able to explain advantages of timber floor Circumstantial knowledge: Workshop safety	<ul> <li>Dust mask</li> <li>Hand saw</li> <li>Bench planes</li> <li>Portable sander</li> <li>Painting brush</li> </ul>	
		(b) Constructing double floor	Interactive simulation: Guide students through interactive simulation to visualize construction of double timber floor Practical Demonstration: Organize students into manageable groups and	The student should be able to: Interpret working drawings Calculate materials required Select tools Prepare members Prepare floor surface Set out members	Double timber floor conforms to technical specificatio ns	Detailed knowledge of:Methodused:Thestudentsshould be able toidentify tools toidentify tools tobe used and stateprocedures ofconstructingdoubletimberfloorPrinciples:Principles:Thestudent should beableabletoexplain	<ul> <li>The following tools, safety gear, and equipment are to be available:</li> <li>Measuring tape</li> <li>Marking/morti ce gauge</li> <li>Tenon saw</li> <li>Claw hammer</li> <li>Mallet hammer</li> <li>Chisels</li> <li>Clamps</li> <li>Safety boots</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	As	sessment Crit	eria Training Dequirements/		Number
(Wall Competence)	Competencies)	(Learning Activities)	Learning And Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			demonstrate step by step on how to double timber floor bearing wall <b>Practical work:</b> Guide the students to practice constructing load bearing wall using operational sheet, drawing, and prepared tools and materials	<ul> <li>Make joints</li> <li>Assemble timber floor members</li> <li>Apply finishes</li> <li>Clean the work area</li> <li>Store tools and equipment in a safe place</li> </ul>		principles related to construction of double timber floor Theories: The students should be able to explain important aspects to consider when constructing double timber floor Circumstantial knowledge: Workshop safety	<ul> <li>Safety glasses</li> <li>Overall</li> <li>Dust mask</li> <li>Hand saw</li> <li>Bench planes</li> <li>Portable sander</li> <li>Painting brush</li> </ul>	
		(c) Constructing triple floor	Interactive simulation: Guide students through interactive simulation to visualize construction of triple timber floor Practical Demonstration:	<ul> <li>The student should be able to:</li> <li>Interpret working drawings</li> <li>Calculate materials required</li> <li>Select tools</li> <li>Prepare members</li> </ul>	Triple timber floor conforms to technical specificatio ns	Detailed knowledge of: Method used: The students should be able to identify tools to be used and state procedures of constructing triple timber floor	<ul> <li>The following tools, safety gear, and equipment are to be available:</li> <li>Measuring tape</li> <li>Marking/morti ce gauge</li> <li>Tenon saw</li> <li>Claw hammer</li> <li>Mallet hammer</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested         Assessment Criteria         Training           Traching         Description         Description				Training Paguiromonts/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Organize students into manageable groups and demonstrate step by step on how to triple timber floor <b>Practical work:</b> Guide the students to practice constructing triple timber floor using operational sheet, drawing, and prepared tools and materials	<ul> <li>Prepare floor surface</li> <li>Set out members</li> <li>Make joints</li> <li>Assemble timber floor members</li> <li>Apply finishes</li> <li>Clean the work area</li> <li>Store tools and equipment in a safe place</li> </ul>		Principles: The student should be able to explain principles related to construction of triple timber floor Theories: The students should be able to explain important aspects to consider when constructing triple timber floor Circumstantial knowledge: Workshop safety	<ul> <li>Chisels</li> <li>Clamps</li> <li>Safety boots</li> <li>Safety glasses</li> <li>Overall</li> <li>Dust mask</li> <li>Hand saw</li> <li>Bench planes</li> <li>Portable sander</li> <li>Painting brush</li> </ul>	
3.0 Managin g workplac e	3.1 Planning and laying out workshop/ workplace	(a) Laying out machine shop	Brainstorm: Guide the students to: define machine layout, and identify steps to follow when performing machine layout, and factors	The student should be able to: • Interpret layout drawings • Take measuremen ts • Draw walkways	Laid out workshop machines conform to given technical specificatio ns	Detailed knowledge of: Method used: The student should explain procedures for Planning layout of machines	The following tools, safety gear, machine, and equipment are to be available: • Benches • Circular saw • Thickness machine • Band saw • Belt sander	57

Module Title	Unit Title	Elements	Suggested	As	ssessment Crit	eria	Training Dequinements/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			affecting machine layout <b>Practical</b> <b>Demonstration:</b> Demonstrate to the students how to layout machines available in Carpentry and Joinery workshop correctly <b>Practical</b> <b>Activity:</b> Organize the students in manageable groups to plan and layout machine in Carpentry and Joinery workshop	<ul> <li>Fix machines</li> <li>Clean the work place and tools</li> <li>Store tools in a safe place</li> </ul>		Principles: The student should explain the principle of laying out machines in workshops Theories: The student should explain the importance of machine layout and factors to consider when laying out machine in the workshop Circumstantial knowledge: Safety precautions	<ul> <li>Horizontal drill</li> <li>Cross cutting machine</li> <li>Drill machine</li> <li>Grinder</li> <li>Safety boots</li> <li>Leather gloves</li> <li>Overall</li> <li>Ruler</li> <li>Surface planer</li> <li>Spindle moulder</li> <li>Painting brush</li> <li>Straight edge</li> <li>Try square</li> </ul>	
		(b) Planning bench layout	<b>Brainstorm:</b> Guide the students to define bench layout, and identify steps to	The student should be able to:	Laid out workshop conform to given technical	Knowledge evidence: Method used: The student	The following tools, safety gear, machine, and equipment are to be available:	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			follow when performing bench layout Practical Demonstration: Demonstrate to students how to layout benches available in carpentry and joinery workshop correctly Practical Activity: Organize the students in manageable groups to plan and layout bench in carpentry and joinery workshop correctly	<ul> <li>Interpret layout drawings</li> <li>Take measuremen ts</li> <li>Draw walkways</li> <li>Fix machines</li> <li>Clean the work place and tools</li> <li>Store tools in a safe place</li> </ul>	specificatio ns	should explain procedures for laying out bench in a workshop <b>Principles:</b> The student should explain the principle of involved in laying out benches in a workshop <b>Theories:</b> The student should explain importance of emergency door walkway <b>Circumstantial knowledge:</b> Workshop safety rules and regulations	<ul> <li>Benches</li> <li>Circular saw</li> <li>Thickness machine</li> <li>Band saw</li> <li>Belt sander</li> <li>Horizontal drill</li> <li>Cross cutting machine</li> <li>Drill machine</li> <li>Grinder</li> <li>Safety boots</li> <li>Leather gloves</li> <li>Overall</li> <li>Ruler</li> <li>Surface planer</li> <li>Spindle moulder</li> <li>Painting brush</li> <li>Straight edge</li> <li>Try square</li> </ul>	
		(c) Arranging site work	Interactive simulation: Guide students through	The student should be able to:	Site arrangemen t conform	Detailed knowledge of:	The following tools, safety gear, machine, and	

Module Title	Unit Title (Specifie	Elements (Loorning	Suggested	As	sessment Crit	eria	Training Paguiromonts/	Number
Competence)	Competencies)	(Learning Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			interactive simulation to visualize different site works and thereafter discuss the importance of arranging site work Field Visit: Organize visits to site work where students can observe arrangement of the site in a real- world context	<ul> <li>Interpret layout drawings</li> <li>Take measuremen ts</li> <li>Draw walkways</li> <li>Fix machines</li> <li>Clean the work place and tools</li> <li>Store tools in a safe place</li> </ul>	to given standards	Method used: The student should explain how to manage physical and operational aspects of a construction site to ensure safety Principles: The student should describe principle to be applied when arranging site work Theories: The students should describe aspects to consider in arranging site work Circumstantial knowledge: OSHA rules and regulations	<ul> <li>equipment are to be available:</li> <li>Benches</li> <li>Circular saw</li> <li>Thickness machine</li> <li>Band saw</li> <li>Belt sander</li> <li>Horizontal drill</li> <li>Cross cutting machine</li> <li>Drill machine</li> <li>Grinder</li> <li>Safety boots</li> <li>Leather gloves</li> <li>Overall</li> <li>Ruler</li> <li>Surface planer</li> <li>Spindle moulder</li> <li>Painting brush</li> <li>Straight edge</li> <li>Try square</li> </ul>	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	3.2 Managing tools, equipment and materials	(a) Performing procurement duties	Brainstorm: Guide the students to define procurement and identify procedures in procurement duties Demonstration: Demonstrate to the students how to plan procurement of materials in carpentry and joinery materials workshop Practical Activity: Organize the students in manageable groups to practice planning procurement of materials in workshop	<ul> <li>The student should be able to:</li> <li>Purchase tools/materi als</li> <li>Categorize tools</li> <li>Store tools and equipment</li> <li>Keep records</li> <li>Issue tools/materi als</li> <li>Control ledger</li> </ul>	Managed tools, equipment and materials conform to workshop rules and regulations	Detailed knowledge of:Methodused: The student shouldshouldexplain methodsmethodsrelated to procurement of materialsin carpentryand joinery workshopPrinciples:The student should describe principlesprinciples:related to procurement of materialsin carpentryand joinery workshopPrinciples:The student should describe principlesprinciples:The student should ioinery workshopTheories:The students should explain importancematerialsin a workshop	The following tools, safety gear, and equipment are to be available: • Bin cards • Ledger books • Work bench • Tool kit • Coins • Safety boots • Gloves • Pencil	57

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number of
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(b) Performing	Brainstorm:	The student	Storing and	Circumstantial knowledge: Procurement planning and procedures	The following	
		storing and issuing duties	Guide the students to define storing and issuing, and identify procedures of managing store and issue. Practical Demonstration: Demonstrate to the students how to fill different books for storing and issuing of tools and materials in a workshop Practical Activity:	<ul> <li>should be able to:</li> <li>Purchase tools/materi als</li> <li>Categorize tools</li> <li>Store tools and equipment</li> <li>Keep records</li> <li>Issue tools/materi als</li> <li>Control ledger</li> </ul>	issuing of tools and materials conform to workshop rules and regulations	knowledge of:Methodused:ThestudentshouldexplainproceduresininvolvedinstoringandissuingofmaterialsinaworkshopPrinciples:Thestudentshouldexplainprinciplesrelatedissuingand storingTheories:Thestudentsshouldexplainimportanceoffillingdifferent	<ul> <li>tools, safety gear, and equipment are to be available: -</li> <li>Bin cards</li> <li>Ledger books</li> <li>Work bench</li> <li>Tool kit</li> <li>Coins</li> <li>Safety boots</li> <li>Gloves</li> <li>Pencil</li> </ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Organize the students in manageable groups to practice filling different books related to storing and issuing			books related tostoringandissuingCircumstantialknowledge:Procurementplanningandprocedures		
	3.3 Performing job estimation and billing	(a) Preparing quotations	Brainstorm: Guide the students to define quotation and identify procedures for preparing quotation Demonstration: Demonstrate to the students how prepare quotation in a carpentry and joinery workshop Practical Activity:	<ul> <li>The student should be able to:</li> <li>Give directives</li> <li>Coordinate activities</li> <li>Maintain discipline to subordinates</li> <li>Improve efficiency of work</li> <li>Rewards creative and innovative workers</li> <li>Keep records</li> </ul>	Job estimated and billed conform to technical specificatio ns	Detailed knowledge of:Methodused:ThestudentshouldexplainproceduresforpreparingquotationPrinciples:ThestudentshouldexplainprinciplesinvolvedinpreparingquotationTheories:Thestudentsshould	<ul> <li>The following tools, safety gear, machine, and equipment are to be available:</li> <li>By laws</li> <li>Ordinance</li> <li>Organization policy</li> <li>Work rules and regulations</li> <li>Job cards</li> <li>Work schedule sheets</li> <li>Disciplinary forms</li> <li>Physical resources</li> </ul>	57

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
(Main Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Organize the students in manageable groups to practice preparing quotations	<ul> <li>Delegates work</li> <li>Provides resources</li> <li>Control code of ethics</li> <li>Follow organization rules and regulations</li> <li>Guide subordinate</li> </ul>		importance of preparing quotations and factors to consider when preparing quotation Circumstantial knowledge: Procurement planning and procedures		
		(b) Preparing Bill of Quantity	Brainstorm: Guide the students to define bill of quantity (BoQ) and identify procedures for preparing quotation Demonstration: Demonstrate to the students how prepare bill of quantity	<ul> <li>The student should be able to:</li> <li>Give directives</li> <li>Coordinate activities</li> <li>Maintain discipline to subordinates</li> <li>Improve efficiency of work</li> <li>Rewards creative and</li> </ul>	Bill of quantity conforms to technical specificatio ns	Detailed knowledge of:Methodused:Thestudentshoulddescribeproceduresforpreparingbillsof quantityPrinciples:The studentshould describeprinciplesin	<ul> <li>The following tools, safety gear, machine, and equipment are to be available:</li> <li>By laws</li> <li>Ordinance</li> <li>Organization policy</li> <li>Work rules and regulations</li> <li>Job cards</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	As	ssessment Crit	eria	Training Boquiromonts/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Practical Activity: Organize the students in manageable groups to preparing bills of quantity using a sample of small project	<ul> <li>innovative workers</li> <li>Keep records</li> <li>Delegates work</li> <li>Provides resources</li> <li>Control code of ethics</li> <li>Follow organization rules and regulations</li> <li>Guide subordinate</li> </ul>		preparing bills of quantity Theories: The students should explain importance of preparing bills of quantities Circumstantial knowledge: Procurement planning and procedures	<ul> <li>Work schedule sheets</li> <li>Disciplinary forms</li> <li>Physical resources</li> </ul>	
4.0 Managin g safe work environm ent	4.1 Managing hazards	(a) Controlling mechanical hazards	Brainstorm: Guide students to understand and internalize the importance of workshop safety rules in preventing mechanical hazards	<ul> <li>The student should be able to:</li> <li>Interpret service manuals</li> <li>Select tools and equipment</li> </ul>	Mechanical hazards controlled according to OSHA's rules and regulations	Detailed knowledge of: Method used: The student should explain how to: Interpret OSHA rules and regulations and use safety gear	<ul> <li>The following tools, equipment, and safety gear are to be available:</li> <li>Electrical equipment</li> <li>Mechanical equipment</li> <li>Power machines</li> </ul>	21

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
(Main Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Interactive Simulation: Show videos or animations demonstrating hazard management techniques, such as proper lifting techniques or emergency response Demonstration: Step by step demonstrate safe operation procedures for various tools like in the workshop highlighting potential hazards and safety measures.	<ul> <li>Use OSHA rules and regulations</li> <li>Prepare workshop inspection report</li> <li>Prepare workshop colour code and safety signs</li> <li>Identify any safety hazard materials</li> <li>Handle hazards material</li> <li>Prepare preventive maintenance schedule</li> <li>Identify and apply all emergency equipment and supplies</li> </ul>		Principles: The student should explain the principles of: Preparing inspection check lists and warning signs and safety instructions Theories: The student should explain function of inspection check list, importance of posting warning sign and safety instructions and advantages of risk assessment Circumstantial knowledge Detailed knowledge about: Safety precautions while manage hazards	<ul> <li>Measuring tools</li> <li>Cutting tools</li> <li>First aid kit</li> <li>Fire extinguishers</li> <li>Service manuals</li> <li>OSHA rules and regulations</li> <li>Helmet</li> <li>Gloves</li> <li>Ear plug</li> <li>Mask</li> <li>Gloves</li> </ul>	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
				<ul> <li>Manage uses of safety gears</li> <li>Cleaning tools and equipment</li> <li>Storing tools and equipment</li> </ul>				
		(b) Controlling chemical hazards	Brainstorm: Guide students to define and identify examples of chemicals, discussing how these hazards occur and their potential effects on health and safety Practical Demonstration: show students how to properly handle chemicals including transferring	<ul> <li>The student should be able to:</li> <li>Interpret service manuals</li> <li>Select tools and equipment</li> <li>Use OSHA rules and regulations</li> <li>Prepare workshop inspection report</li> <li>Prepare workshop colour code</li> </ul>	Chemical hazards controlled according to OSHA's rules and regulations	Detailed knowledge of: Method used: The student should describe procedures for handling chemical hazardous materials Principles: The student should describe the principles of storing hazardous materials according to their	<ul> <li>The following tools, equipment, and safety gear are to be available:</li> <li>Electrical equipment</li> <li>Mechanical equipment</li> <li>Power machines</li> <li>Measuring tools</li> <li>Cutting tools</li> <li>First aid kit</li> <li>Fire extinguishers</li> <li>Service manuals</li> </ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number of
(Wall Competence)	Competencies)	(Learning Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Activity: Organise students into manageable groups to handle a simulated chemical hazard, such as cleaning up a spill or evacuating safely	<ul> <li>and safety signs</li> <li>Identify any safety hazard materials</li> <li>Handle hazards material</li> <li>Prepare preventive maintenance schedule</li> <li>Identify and apply all emergency equipment and supplies</li> <li>Conduct safety awareness training to sub- ordinates</li> <li>Monitor safety environment</li> <li>Manage uses of safety gears</li> </ul>		specific requirements Theories: The student should explain important aspects to consider when handling chemical hazardous materials Circumstantial knowledge Detailed knowledge about: Safety precautions while manage hazards	<ul> <li>OSHA rules and regulations</li> <li>Helmet</li> <li>Gloves</li> <li>Ear plug</li> <li>Mask</li> <li>Gloves</li> </ul>	

Module Title Uni	t Title Elements	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence) Comp	etencies) Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			<ul> <li>Cleaning tools and equipment</li> <li>Storing tools and equipment</li> </ul>				
	(c) Controlling physical hazard	<ul> <li>Brainstorm:</li> <li>Guide students to discuss types of physical hazards and the importance of controlling these hazards</li> <li>Demonstrations: Show students how to identify physical hazards in a practical environment</li> <li>Role-Playing: Organise students into manageable groups, provide them with a worksite scenario, and have them assess</li> </ul>	<ul> <li>The student</li> <li>should be able</li> <li>to: <ul> <li>Interpret</li> <li>service</li> <li>manuals</li> </ul> </li> <li>Select tools and <ul> <li>equipment</li> <li>Use OSHA</li> <li>rules and</li> <li>regulations</li> </ul> </li> <li>Prepare <ul> <li>workshop</li> <li>inspection</li> <li>report</li> </ul> </li> <li>Prepare <ul> <li>workshop</li> <li>colour code</li> <li>and safety</li> <li>signs</li> </ul> </li> <li>Identify any</li> </ul>	Physical hazards controlled according to OSHA's rules and regulations	Detailedknowledge of:Methodused:Thestudentshoulddescribeproceduresforcontrollingphysical hazardPrinciples:Thestudentshouldexplaintheprinciplesincontrollingphysical hazardsTheories:Thestudentshouldexplaintheprinciplesincontrollingphysical hazardsTheories:Thestudentshouldexplainimportanceimportanceofcontrollingphysical hazard	<ul> <li>The following tools, equipment, and safety gear are to be available: -</li> <li>Electrical equipment</li> <li>Mechanical equipment</li> <li>Power machines</li> <li>Measuring tools</li> <li>Cutting tools</li> <li>First aid kit</li> <li>Fire extinguishers</li> <li>Service manuals</li> <li>OSHA rules and regulations</li> </ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
(Wann Competence)	Competencies)	(Learning Activities)	Learning And Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			and apply physical hazard control measures, including the use of PPE and environmental adjustments, to improve safety	<ul> <li>hazard materials</li> <li>Handle hazards material</li> <li>Prepare preventive maintenance schedule</li> <li>Identify and apply all emergency equipment and supplies</li> <li>Conduct safety awareness training to sub- ordinates</li> <li>Monitor safety environment</li> <li>Manage uses of safety gears</li> <li>Cleaning tools and equipment</li> </ul>		Circumstantial knowledge Detailed knowledge about: • Safety precautions while manage hazards	<ul> <li>Helmet</li> <li>Gloves</li> <li>Ear plug</li> <li>Mask</li> <li>Gloves</li> </ul>	
Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
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Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	4.2 Carrying out risk assessment	(a) Controling risk	Brainstorm: Guide students to discuss risk identification, assessment, and control strategies, including elimination, what intring	<ul> <li>Storing tools and equipment</li> <li>The student should be able to:         <ul> <li>Interpret service manuals</li> <li>Select tools and</li> </ul> </li> </ul>	Assessment Risk controlled as per OSHA standard and automobile regulations	Detailed knowledge of: Method used: The student should explain how to conduct safety training for right control	The following tools, equipment, and safety gear are to be available: • Service manuals • OSHA regulations	27
			engineering controls, and PPE <b>Technology</b> <b>Integration:</b> Incorporate digital tools, such as simulations or virtual platforms, that present risk scenarios and allow students to experiment with control strategies <b>Demonstration</b> : Utilize practical	<ul> <li>Supervise practice safe workshop practices to protect yourself, other and properties</li> <li>React correctly and safely when faced with an emergency</li> <li>Identify and apply correctly all</li> </ul>		Principles: The student should explain the principles of reacting correctly and safely when faced with an emergency and identifying Theories: The student should explain importance of carry out risk assessment and	<ul> <li>Workshop rules</li> <li>Camera</li> <li>Risk assessment sheet</li> <li>Mask</li> <li>Ear plug</li> <li>Gloves</li> <li>Overall</li> <li>Safety boots</li> <li>Safety clear glasses</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/ Suggested Resources	Number of
(Main Competence)	Competencies)	Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment		Periods per Unit
			demonstrations where students observe and then replicate safe practices or risk control measures in real-time <b>Activity:</b> Organise students into manageable groups, provide them with a risk scenario, and have them develop and present a comprehensive risk control plan with practical solutions	<ul> <li>emergency equipment and supplies</li> <li>Make periodic inspections of workshop area and all equipment and prepare report</li> <li>Conduct safety training</li> <li>Identify any safety hazard material</li> <li>Handle hazard material correctly</li> <li>Prepare universal workshop colour codes and know what the colour represents</li> </ul>		conducting safety training Circumstantial knowledge Detailed knowledge about: Safety precautions while carrying out risk management		

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
(Main Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
				<ul> <li>Make out and file safe report</li> <li>Be aware of the dangerous of compressed air</li> <li>Ensure availability of personal protective equipment</li> <li>Supervise compressed air rules</li> <li>Monitor good environment al practices</li> <li>Clean tools and equipment</li> <li>Store tools and equipment</li> </ul>				
		(b) Managing safety gears	<b>Brainstorm</b> : Guide students to discuss the	The student should be able to:	Safety gears are managed as	Knowledge evidence:	The following tools, equipment,	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	ssessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			importance of safety gear in protecting workers from hazards, including types of safety gear (e.g., helmets, gloves, goggles, ear protection) and their proper use. <b>Practical</b> <b>demonstration</b> : Guide students in selecting appropriate safety gear for various tasks, ensuring that gear is properly maintained, and training them on correct usage and inspection procedures. <b>Group Activity</b> : Organise students	<ul> <li>Interpret service manuals</li> <li>Select tools and equipment</li> <li>Supervise practice safe workshop practices to protect yourself, other and properties</li> <li>React correctly and safely when faced with an emergency</li> <li>Identify and apply correctly all emergency equipment and supplies</li> <li>Make periodic inspections of workshop</li> </ul>	per OSHA standard and automobile regulations	Detailed knowledge of: Method used: The student should explain how to manage safety gears Principles: The student should explain the principles related to managing safety gears Theories: The student should explain importance of managing safety gears Circumstantial knowledge: • Safety precautions while carrying out risk management	<ul> <li>and safety gear are to be available: -</li> <li>Service manuals</li> <li>OSHA regulations</li> <li>Workshop rules</li> <li>Camera</li> <li>Risk assessment sheet</li> <li>Mask</li> <li>Ear plug</li> <li>Gloves</li> <li>Overall</li> <li>Safety boots</li> <li>Safety clear glasses</li> </ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crite	eria	Training Requirements/ Suggested Resources	Number
Competence)	Competencies)	(Learning Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment		Periods per Unit
			into manageable groups, provide them with different workplace scenarios, and have them select, inspect, and demonstrate the proper use of safety gear for each scenario	<ul> <li>area and all equipment and prepare report</li> <li>Conduct safety training</li> <li>Identify any safety hazard material</li> <li>Handle hazard material correctly</li> <li>Prepare universal workshop colour codes and know what the colour represents</li> <li>Make out and file safe report</li> <li>Clean tools and equipment</li> </ul>				

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(c) Managing workshop safety rules	Methods Brainstorming: Guide the students in defining safety terms, identifying safety rules and regulations, Practical work: Guide the students on implementing safety rules and regulations in the	<ul> <li>Store tools and equipment</li> <li>The student should be able to:         <ul> <li>Interpret service manuals</li> <li>Select tools and equipment</li> <li>React correctly and safely</li> </ul> </li> </ul>	Vorkshop safety rules maintained as per OSHA standard automobile regulations	Assessment Detailed knowledge of: Method used: The student should explain methods related to maintain workshop safety rules and regulations Principles: The	ResourcesThe following tools, equipment, and safety gear are to be available: -• Service manuals• OSHA regulations• Workshop rules• Camera• Risk	per Unit
			vorkshop Practical activity: Organize the students in manageable groups to identify areas that can cause accidents or incidents if the safety rules are not followed or adhered to	<ul> <li>when faced with an emergency</li> <li>Identify and apply correctly all emergency equipment and supplies</li> <li>Make periodic inspections of workshop area and all</li> </ul>		studentshouldexplain principlesrelatedtomaintainworkshopsafetyrulesandregulationsTheories:Thestudentsshouldexplainimportanceofmaintain	assessment sheet Mask Ear plug Gloves Overall Safety boots Safety clear glasses	

Module Title	Unit Title	Elements (Loorning	Suggested	As	sessment Crit	eria	Training Requirements/ Suggested Resources	Number
(Wann Competence)	Competencies)	(Learning Activities)	Learning And Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment		Periods per Unit
				<ul> <li>equipment and prepare report</li> <li>Identify any safety hazard material</li> <li>Handle hazard material correctly</li> <li>Prepare universal workshop colour codes and know what the colour represents</li> <li>Make out and file safe report</li> <li>Clean tools and equipment</li> <li>Store tools and equipment</li> </ul>		workshop safety rules and regulations Circumstantial knowledge: The students should explain detailed knowledge related to maintain workshop safety rules and regulations		

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
	4.3 Managing environment al issues	(a) Manage air pollution	Brainstorm: Guide students to discuss the sources of air pollution and the importance of managing air quality to protect health and the environment Role-Playing: Assign students roles, such as environmental activists, factory managers, or government officials, and have them simulate a discussion or decision-making process on managing air pollution Group Activities: Organise students	<ul> <li>The student should be able to:</li> <li>Select relevant safety gears</li> <li>Prepare preventive maintenance schedule</li> <li>Control air pollutions</li> <li>Control land pollutions</li> <li>Control land pollutions</li> <li>Control water pollutions</li> <li>Control environment al pollution</li> <li>Maintaining safety environment</li> <li>Managing safety personal environment</li> <li>Control tools, equipment</li> </ul>	Workshop environmen t managed as per rules and regulations	Detailed knowledge of: Method used: The student should describe how to manage air pollution Principles: The student should explain the principles related to managing air pollution Theories: The student should explain importance of safe work environment and control of different types of wastes that pollute air Circumstantial knowledge	The following tools, equipment, and safety gear are to be available: - • Tool kit • Sprit level • Safety boots • Overalls • Cleaning materials • Hoe • Broom • Brush • Dust bin • Wheel barrow • • • Safety gears • Dust covers • Dust mask •	87

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning And Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			into small groups and assign each group a specific air pollution source, such as transportation or industrial emissions. Have them research and present control measures, encouraging collaboration and deepening their understanding of different aspects of air pollution management	<ul> <li>and safety gears</li> <li>Control different types of wastes as per OSHA</li> <li>Conduct safety awareness training to subordinates</li> <li>Clean tools and equipment</li> <li>Store tools and equipment</li> </ul>		Detailed knowledge about: Safety knowledge while managing environmental		
		(b) Managing water pollution	<b>Brainstorm</b> : Guide students to discuss the sources of water pollution (e.g., industrial waste, agricultural runoff, sewage), and the importance of controlling water pollution to	<ul> <li>The student should be able to:</li> <li>Select relevant safety gears</li> <li>Prepare preventive maintenance schedule</li> <li>Control air pollutions</li> </ul>	Workshop environmen t managed as per rules and regulations	Detailed knowledge of: Method used: The student should explain how to explain methods for controlling water pollution	The following tools, equipment, and safety gear are to be available: • Tool kit • Sprit level • Safety boots • Gloves • Overalls • Cleaning materials	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods protect •	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			protect ecosystems and public health. Demonstrations: Conduct experiments that show the effects of pollutants, such as oil, detergents, or plastics, on water quality. Group Activities: Divide students into groups and assign each group a specific aspect of water pollution, such as point-source pollution, or waterborne diseases. Ask them to research and present	<ul> <li>Control land pollutions</li> <li>Control water pollutions</li> <li>Control environment al pollution</li> <li>Maintaining safety environment</li> <li>Managing safety personal environment</li> <li>Control tools, equipment and safety gears</li> <li>Control different types of wastes as per OSHA</li> <li>Conduct safety awareness training to subordinates</li> </ul>		Principles: The student should explain the principles of handling environmental safety at workplace Theories: The student should explain importance of safe work environment Circumstantial knowledge Detailed knowledge about: • Safety knowledge while managing environmenta l pollution	<ul> <li>Hoe</li> <li>Broom</li> <li>Brush</li> <li>Dust bin</li> <li>Wheel barrow</li> <li>Safety gears</li> <li>Dust covers</li> <li>Dust mask</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
(Main Competence)	Competencies)	(Learning Activities)	Learning And Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			potential management solutions, fostering collaboration and comprehensive learning. <b>Field Visits:</b> Organise visits to local rivers, lakes, or wastewater treatment facilities where students can observe real- world examples of water pollution management.	<ul> <li>Clean tools and equipment</li> <li>Store tools and equipment</li> </ul>				
		(c) Managing land pollution	Brainstorming: Guide students to discuss the causes of land pollution and the importance of managing land pollution to preserve the	The student should be able to: • Select relevant safety gears • Prepare preventive	Workshop environmen t managed as per rules and regulations	Detailed knowledge of: Method used: The student should explain how to how to manage land pollution	The following tools, equipment, and safety gear are to be available: • Tool kit • Sprit level • Safety boots • Gloves • Overalls	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
(Main Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			environment and reduce health risks. <b>Technology</b> <b>Integration:</b> Use digital tools or simulations to show students the impact of land pollution on the environment, degradation. <b>Group</b> <b>Activities:</b> Organise students into manageable groups and assign them different types of land pollution to find solutions, such as recycling, waste management, or sustainable land use practices, and then present their findings to the class.	<ul> <li>maintenance schedule</li> <li>Maintaining safety environment</li> <li>Managing safety personal environment</li> <li>Control tools,</li> <li>Control different types of wastes as per OSHA</li> <li>Conduct safety awareness training to subordinates</li> <li>Clean tools and equipment</li> <li>Store tools and equipment</li> </ul>		Principles: The student should explain the principles involving handling different types of wastes Theories: The student should explain the importance of safe work environment importance of preparing environmental impact assessment schedule Circumstantial knowledge Safety knowledge while managing environmental pollution	<ul> <li>Cleaning materials</li> <li>Hoe</li> <li>Broom</li> <li>Brush</li> <li>Dust bin</li> <li>Wheel barrow</li> <li>Safety gears</li> <li>Dust covers</li> <li>Dust mask</li> </ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
5.0 Managing preventive maintenan ce	5.1 Planning preventive maintenance	(a) Preparing schedules of preventive maintenance of tools, machines and equipment	Brainstorming: Guide the students in get students to recall and share their prior knowledge about preventive maintenance before diving into the specifics. Practical work: Guide the students on Using presentations, diagrams, and charts to explain the importance of preventive maintenance, the various types of maintenance (e.g., daily, weekly, monthly), and the components involved in creating a schedule	<ul> <li>The student should be able to:</li> <li>Interpret service manuals</li> <li>Read and apply workshop rules and regulations</li> <li>Select tools and equipment</li> <li>Make schedule for maintenance of tools, machines and equipment</li> <li>Prepare workshop inspection report of tools and equipment</li> <li>Prepare preventive</li> </ul>	Planned Preventive maintenanc e conforms to workshop standards	Detailed knowledge of:Methodused: The student should explain methods related to Planning preventive maintenancePrinciples: The student should explain principles: related to Prepare schedules of preventive maintenance of tools, machines and equipmentTheories: The students should explain theories: related to old s, machines and equipment	<ul> <li>The following tools, equipment, and safety gear are to be available:</li> <li>General hand tool kit</li> <li>Workshop tools, equipment and machines</li> <li>Service manuals</li> <li>Workshop rules and regulations manuals</li> <li>Gloves</li> <li>Overall</li> <li>Safety boots</li> <li>Safety glasses</li> <li>Helmet</li> <li>Mask</li> <li>Ear plug</li> </ul>	60

Module Title	Unit Title	Elements (Learning	Suggested	As	sessment Crit	eria	Training Paguiroments/	Number
(Main Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Practical activity: Divide students into small groups and assign each group a specific tool, machine, or equipment to prepare a preventive maintenance schedule for. Provide a set of instructions, and ask groups to outline tasks, determine frequency, and assign responsible personnel.	<ul> <li>maintenance programmes</li> <li>Prepare workshop preventive maintenance schedule</li> <li>Prepare and use workshop colour code and safety signs</li> <li>Plan and Prepare workshop inventory</li> <li>Clean tools and equipment</li> <li>Store tools and equipment</li> </ul>		Circumstantial knowledge: The students should explain detailed knowledge related to Preparation of schedules of preventive maintenance of tools, machines and equipment		
		(b) Preparing	Brainstorming:	The student	Inspection	Detailed	The following	
		inspection checklist of	Guide students to discuss the key	should be able	checklist of tools.	knowledge of:	tools, equipment, and safety gear are	
		tools, equipment	elements of an	• Interpret	equipment	Method used:	to be available: -	
		and machines	inspection	service	and	The student	• General hand	
			checklist,	manuals	machines	should explain	tool kit	
			including safety		performed	methods related		

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
(Wain Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			checks, functionality, wear and tear, and compliance with operational standards. <b>Demonstrations:</b> Demonstrate how to prepare an inspection checklist by walking through an example tool or piece of equipment. <b>Role-Playing:</b> Have students take turns acting as maintenance inspectors and use a sample checklist to inspect different tools, equipment, or machines <b>Group Activity:</b> Organize students into manageable groups, assign those different	<ul> <li>Read and apply workshop rules and regulations</li> <li>Select tools and equipment</li> <li>Make periodic inspection of workshop area and all equipment</li> <li>Prepare workshop inspection report of tools and equipment</li> <li>Plan and Prepare workshop inventory</li> <li>Clean tools and equipment</li> <li>Store tools and equipment</li> </ul>	as per workshop standard	to Preparation of inspection checklist of tools, equipment and machines <b>Principles:</b> The student should explain principles related to Prepare inspection checklist of tools, equipment and machines <b>Theories:</b> The students should explain theories related Prepare inspection checklist of tools, equipment and machines <b>Circumstantial</b> <b>knowledge:</b> The students should explain detailed knowledge related to Prepare inspection checklist of tools,	<ul> <li>Workshop tools, equipment and machines</li> <li>Service manuals</li> <li>Workshop rules and regulations manuals</li> <li>Gloves</li> <li>Overall</li> <li>Safety boots</li> <li>Safety glasses</li> <li>Helmet</li> <li>Mask</li> <li>Ear plug</li> <li>Checklist sheet</li> </ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
(Wall Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			tools, equipment, or machines, and have them develop an inspection checklist, then practice using it to conduct a mock inspection.			equipment and machines		
		(c) Preparing schedule of preventive maintenance of buildings	Classroom Instruction with Visual Aids: Guide students Using presentations, diagrams, and charts to explain meaning of preventive, its importance and components to be included in the schedule Group Work: Divide the class into groups and assign each group a specific area of building	<ul> <li>The student should be able to:</li> <li>Interpret service manuals</li> <li>Read and Understand Building Maintenanc e Requiremen ts</li> <li>Develop a Preventive Maintenanc e Plan</li> <li>Prioritize Maintenanc e Tasks</li> </ul>	Preventive maintenanc e schedule prepared as per workshop standards	Detailed knowledge of: Method used: The student should explain methods related to preparation of schedule of preventive maintenance of buildings Principles: The student should explain principles related to preparation of schedule of preventive maintenance of buildings	<ul> <li>The following tools, equipment, and safety gear are to be available:</li> <li>General hand tool kit</li> <li>Workshop tools, equipment and machines</li> <li>Service manuals</li> <li>Workshop rules and regulations</li> <li>Gloves</li> <li>Overall</li> <li>Safety boots</li> <li>Safety glasses</li> <li>Helmet</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	As	sessment Crit	eria	Training Boguiromonts/	Number
(Main Competence)	(Specific Competencies)	(Learning Activities)	Learning and Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			maintenance to explore and present findings, on the similarities and differences in scheduling needs <b>Study Tour:</b> Take students on a field trip to a building or facility where they can observe real maintenance tasks being carried out.	<ul> <li>Monitor and Track Preventive Maintenanc e Activities</li> <li>Review and Update Maintenanc e Schedules</li> <li>Allocate Resources for Preventive Maintenanc e</li> <li>Prepare preventive maintenance programmes</li> <li>Prepare workshop preventive maintenance schedule</li> <li>Prepare and use workshop colour code and safety signs</li> </ul>		Theories: The students should explain theories related to preparation of schedule of preventive maintenance of buildings Circumstantial knowledge: The students should explain detailed knowledge related to preparation of schedule of preventive maintenance of buildings	<ul> <li>Mask</li> <li>Ear plug</li> </ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested	As	ssessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services	Knowledge Assessment	Suggested	Periods
			Witthous		Assessment		Resources	per onte
	52 Supervising preventive maintenance	(a) Performing preventive maintenance of tools equipment and machines	Video Presentation: Use slides or visual aids to explain various types of preventive maintenance (e.g., cleaning, lubricating, adjusting, inspecting) and how these tasks contribute to the overall efficiency and safety of tools and machines.	<ul> <li>Plan and Prepare workshop inventory</li> <li>Clean tools and equipment</li> <li>Store tools and equipment</li> <li>The student should be able to: The student should be able to:</li> <li>Interpret service manuals</li> <li>Read and apply rules and regulations</li> <li>Prepare and apply workshop inspection</li> </ul>	Preventive maintenanc e of tools, equipment, machines and building are performed as per workshop standards	Detailed knowledge of: Method used: The student should explain methods related to performing preventive maintenance of tools equipment and machines Principles: The student should explain principles related to parforming	The following tools, equipment, and safety gear are to be available: • General hand foot kit • Workshop tools, equipment and machines • Service manuals • Workshop rules and regulations • Gloves • Overall	60
			Hands-On Demonstrations	Prepare and use safety		preventive maintenance of	• Safety boots	

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			Guide students by demonstrating on how to perform preventive maintenance on a machine or tool. For example, demonstrate how to clean a power tool, lubricate a machine, or inspect equipment for wear Group Activities and Peer Learning: Divide students into groups and assign each group a specific machine or tool to maintain. Each group is responsible for identifying maintenance tasks, performing the maintenance,	<ul> <li>signs and colour code</li> <li>Prepare and apply workshop preventive maintenance schedule</li> <li>Plan and conduct preventive maintenance training</li> <li>Practice correct hand tools and equipment safety</li> <li>Practice correct lift and jack safety</li> <li>Practice good electrical safety</li> <li>Monitor good and environment al practices</li> </ul>		tools equipment and machines Theories: The students should explain theories related to performing preventive maintenance of tools equipment and machines Circumstantial knowledge: The students should explain detailed knowledge related to performing preventive maintenance of tools equipment and machines	<ul> <li>Safety clear glasses</li> <li>Helmet</li> <li>Mask</li> <li>Ear plug</li> </ul>	

Module Title	Unit Title	Elements (Learning	Suggested	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
		(b) Derforming	and presenting their findings	<ul> <li>Clean tools and equipment</li> <li>Store tools and equipment</li> </ul>	Droventive	Datailad	The following	
		preventive maintenance of working environment	Guide the students in describing various aspects of preventive maintenance such as cleaning; organizing, inspecting tools and equipment, maintaining proper lighting, ensuring ventilation, and checking safety features like fire extinguishers and emergency exits. Hands-On Demonstrations Demonstrate how to perform simple	<ul> <li>should be able</li> <li>Interpret service manuals</li> <li>Read and apply rules and regulations</li> <li>Prepare and apply workshop inspection report</li> <li>Prepare and use safety signs and colour code</li> <li>Prepare and apply workshop preventive</li> </ul>	maintenanc e of tools, equipment, machines and building are performed as per workshop standards	Nethodused:ThestudentshouldexplainmethodsrelatedtoperformingpreventivemaintenancemaintenanceofworkingenvironmentPrinciples:Thestudentshouldexplainprinciplesrelatedtoperformingpreventivemaintenanceofworkingenvironment	<ul> <li>tools, equipment, and safety gear are to be available:</li> <li>General hand foot kit</li> <li>Workshop tools, equipment and machines</li> <li>Service manuals</li> <li>Workshop rules and regulations</li> <li>Gloves</li> <li>Overall</li> <li>Safety boots</li> <li>Safety clear glasses</li> <li>Helmet</li> <li>Mask</li> <li>Ear plug</li> </ul>	

Module Title	Unit Title (Specific	Elements (Learning	Suggested Teaching and	As	sessment Crit	eria	Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			preventive maintenance tasks in the workshop such as maintaining fire extinguishers, inspecting machinery for safety issues, and ensuring proper organization of tools Interactive Activities and Group Work: Divide students into small groups and assign them the task of performing a workplace inspection. Simulation of Emergency Situations: Conduct mock emergency drills where students	<ul> <li>maintenance schedule</li> <li>Plan and conduct preventive maintenance training</li> <li>Practice correct hand tools and equipment safety</li> <li>Practice correct lift and jack safety</li> <li>Practice good electrical safety</li> <li>Monitor good and environment al practices</li> <li>Clean tools and equipment</li> </ul>		Theories: The students should explain theories related to performing preventive maintenance of working environment Circumstantial knowledge: The students should explain detailed knowledge related to performing preventive maintenance of working environment		

Module Title (Main	Unit Title (Specific	Elements (Learning	Suggested Assessment Criteria				Training Requirements/	Number
Competence)	Competencies)	Activities)	Learning Methods	Process Assessment	Product /Services Assessment	Knowledge Assessment	Suggested Resources	Periods per Unit
			respond to simulated situations (e.g., fire, chemical spill, electrical failure) and apply their knowledge of maintaining a safe work environment to resolve or prevent the issue	• Store tools and equipment				

## Bibliography

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VETA (2023) Curriculum for Carpentry and Joinery with metal works: Vocational Education and Training Authority