



GEMSTONE CARVING EXPERT CURRICULUM

DURATION: 6 Months



Technical Training for Polio-affectees

The United Nations Industrial Development Organization (UNIDO) is the specialized agency of the United Nations mandated to promote industrial development and global industrial cooperation.

UNIDO's Education Programme strives to promote industry-relevant education and training for the sustainable industrial development of Pakistan.

The UNIDO Education Programme, in collaboration with the National Vocational & Technical Training Commission (NAVTTTC) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), has developed ten curricula as part of its Polio-Plus Initiative.

Amongst its main objectives, the United Nations' Polio-Plus Initiative is intended to aid in the rehabilitation of working-age disabled individuals by means of technical training programs in employable skills. With such training, it is projected that these individuals may then positively contribute, both socially and economically, within their respective communities.

In December 2013, teachers of selected Technical Educational & Vocational Training Authority (TEVTA) centres from the priority districts underwent such technical training for the specified ten curricula.

NAVTTTC delivered competency-based training to trainers of selected TEVTAs from several high-priority polio districts. The competency standards developed and validated during the curricula development process, now certified as National Standards, are to be used during the training of polio-affected individuals. The workshop was markedly interactive in nature, focusing on group work and presentations while highlighting the intended goal of applicability in such competency-based trainings.

One notable trainer recounted his own experiences working with thousands affected by Polio in Pakistan. Noting their often absence from rigorous economic participation, he referred to these individuals as Pakistan's 'untapped resources'. The trainer also placed special emphasis on the work of disabled working-age individuals in the carpet industry and urged the other trainers to use this as an example during their own training to ensure the successful streamlining of polio-affectees into Pakistan's workforce.

In order to sensitize participants and raise awareness on the matter, participants shared individual experiences linked to polio-affecteds and working-age individuals. Most of the high-priority TEVTAs are located in smaller districts of Pakistan where trainers aimed to raise awareness through word-of-mouth. Additionally, they spoke of success stories and considered using these experiences as sources of inspiration during their own trainings for polio-affecteds. Trainers were quick to suggest several untapped avenues to maximize the potential of this training.

It is imperative to note that although polio-affecteds may require special attention and training, it must be delivered without compromising their dignity and self-esteem.

The idea is to train polio-affecteds and equip them with the ability to earn a respectable living. The TEVTAs of these high-priority districts will carry out these trainings through the coordination and support of NAVTTC.

The pattern of the training is such that it will aim to merge the training of Life Skills Curriculum into the training polio-affecteds will receive. Earlier in 2012, the Education Programme at UNIDO along with GIZ and NAVTTC developed a Curriculum on Life Skills.

The Life Skills component of this training will impart knowledge on the use of ‘soft skills’. This will result in employees who have:

Effective communication skills	A knack for internal and external customer care	Plain “common sense”	A good work ethic	Flexible attitude and are self-driven
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Since polio-affecteds are disconnected from the mainstream workforce, their inclusion through the use of Life Skills Curriculum will make their transition into Pakistan’s mainstream workforce smoother. If trainings consist of five sessions per week, three will consist of technical training for polio-affecteds while the other two will incorporate ‘Life Skills’ trainings, thereby making it more effective and successful.

UNIDO hopes that the creation of these curricula will serve the purpose for which they were made i.e. the rehabilitation of working-age disabled individuals through technical training programs in employable skills, so that they may contribute socially and economically in their respective communities.

Furthermore, it is hoped that this training will serve to educate and sensitize local communities, particularly illiterate people & workers, on measures for prevention against fatal diseases and the benefits of early intervention while also mobilizing support in local communities for the polio eradication drive.

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Introduction

- **Name of course**

GEMSTONE CARVING EXPERT

- **Overall objective of course:**

The overall objective of this course is to give students the ability to understand marketing techniques and the ability to build their own businesses carving stones, by imparting knowledge in the identification of carving stones, and the basic skills of stone carving.

Competencies gained after completion of course:

1. Students will be able to operate carving machinery.
2. Students will gain knowledge of proper use of carving tools.
3. Students will be able to take orders from customers.
4. Competent students will also be able to initialize their own businesses in the gemstone market
5. After completing the course, students will be able to make Gemstone jewellery, figures, decoration pieces etc.

Job opportunities available immediately and in the future:

- Employment in government sector
- Self funded business establishment
- Private firms and industries
- Places available in the national and International job markets in the field of gem stones.

- **Trainee entry level**

Matriculation / Gemstone traders

- **Minimum qualification of trainer**

Graduation & Certificate in gemstone carving with three years of experience.

Basic proficiency in sketching, designing, and drawing on paper.

- **Medium of Instruction i.e. language of instruction**

- English / Urdu/Local language

- **Sequence of the modules**

Module 1:- Machinery and tools used for Carving & Selection of carving stones.

Module 2:- Designing and pattern making for carved products.

Module 3:- Trimming, Grinding, Carving, Sanding and Polishing.

Module: 4:- Performing Marketing Activities.

Module: 5:- Communicating with Clients and Customers.

- **Overview of the program – Curriculum for Gemstone Carving Expert**

Module Title and Aim	Learning Units	Theory Days/hours	Workplace Days/hours	Timeframe of modules
Machinery and tools used for Carving & Selection of carving stones.	Testing stone Quality Importance of colours Hard and Soft stones Source of Material Using Carving Machinery Water Supply in Carving Diamond Tools	20 hours	178 hours	40 days
Designing and pattern making for carving items	Taking customer orders Design History (Regional design aspects) Preparing manual designs Preparing computerized designs Tracing designs on stone	30 hours	192 hours	35 days
Trimming, Grinding, Carving, Sanding and Polishing.	Applying designs to stone. Enhancing design features. Performing sanding Performing Polishing	20 hours	266 hours	35 days
Performing Marketing Activities	Packaging Pricing Advertising Distribution	47 hours		11 days
Communicating With	Customer Relations	47		11 days

Clients and Customers	Worker supervision	hours		
	Following Instructions			
	Supply management			

• **Carving Curriculum Contents (Teaching and Learning Guide)**

Module: 1:- (Machinery and tools used for Carving & Selection of carving stones.)

Duration:- **198 hours**

Theory:- **20 hours**

Practice:- **178 hours**

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
M1: Machinery & Tools used for Carving Stone.	<ul style="list-style-type: none"> - Learner will be introduced to all machinery used in carving -Learner will be able to select appropriate carving stones 	<p><u>Knowledge of:</u></p> <p>using Carving Machinery And Carving Tools</p> <p><u>Ability to:</u></p> <p>Operate Carving machinery using carving techniques.</p> <p>Use appropriate methods to change different tools.</p> <p>Adjust speed of carving machinery as required by the hardness of the stone being used.</p>	36 hours	<p>Stone material</p> <ol style="list-style-type: none"> 1. 1.serpentine 2. 2.jade 3. 3.lapis 4. 4.onyx 	Class room & lapidary
M1: Selection of stone for carving	<p>The learner will Be able to determine whether a stone is suitable for carving by observing:</p> <ul style="list-style-type: none"> - colour - clarity 	<p><u>Knowledge of:</u></p> <p>selecting gemstones; 4c's criteria</p>	30 hours	<ol style="list-style-type: none"> 1. .Light source 2. Immersion in water 	Class room & lapidary

		<p><u>Ability to:</u></p> <p>select gemstones of proper:</p> <ul style="list-style-type: none"> - Colour - Clarity - Weight <p>use proper light source.</p> <p>Know of internal fractures</p>			
M1: Identification of Hard and Soft stones	The learner will be able to distinguish between hard & soft stones used in carving.	<p><u>Knowledge of:</u> Different types of hard stones.</p> <p>Different types of soft stones.</p> <p>Handling stones according to their properties.</p> <p><u>Ability to:</u> differentiate between different types of stones.</p> <p>Use moh's scale of hardness</p>	36 hours	Gemstone Moh's scale of hardness set	Class room & lapidary

M1:Source of Material for Gemstone Carving	The learner will be able to purchase good quality stones for carving, as per customer requirement in the concerned market.	<u>Knowledge of:</u> The Availability of Gemstones in - The local Gemstone market, - Mining areas - The International market. <u>Ability to:</u> Purchase quality carving stones. Procure Gemstones from sourcing area.	24 hours	1. Local market 2. Sourcing areas of gemstone (Mines)	Concerned markets & sites.
M1:Using Carving Machinery with Diamond tools	The learner will be able to operate the carving machines using different carving tools	<u>Knowledge of:</u> Importance of adjusting RPM of Carving machine. The procedures to operate Carving machines. Methods of changing Carving tools on the carving machine. Importance of provision of water supply during the carving process. Safety precautions. <u>Ability to:</u>	72 hours	1. Trim saw 2. Dual grinder 3. Carving machine (manual) 4. Flexible Shaft machine	Class room & labs

		<p>Select appropriate carving tools for stone carving.</p> <p>Ensure the tools and machines are in appropriate condition for use.</p> <p>Explain the properties of the stone in terms of hardness and softness.</p> <p>Describe the correct procedure of adjustment of RPM of carving machines.</p> <p>Adjust the RPM of the carving machine as required by the hardness of the stone.</p> <p>Hold the stone piece properly to avoid damage.</p> <p>Ensure the supply of water for stone cutting is adequate.</p> <p>Ensure the traced design is followed properly.</p> <p>Carry out work in line with standard operating</p>			
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		<p>procedures.</p> <p>Apply safety precautions during work to avoid unwanted accidents.</p>			
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Module: 2:- Design and pattern making for carved items

Duration:- 222 hours

Theory:- 30 hours

Practice:- 192 hours

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
M2: Gemstone carving Skill: Marketing	The learner will successfully be able to cater to customer demands as per acquired skills'	<p><u>Knowledge of:</u></p> <p>Importance of clear and concise language.</p> <p>Product line and types of different material.</p> <p>Basic writing skills.</p> <p>Types and characteristics of different stones.</p> <p>Procedures and processes involved in manufacturing gemstone products.</p> <p>Basic terminology used in the gemstone industry.</p> <p><u>Ability to:</u></p> <p>Initiate positive communication to establish a rapport</p>	66 hours	<p>1:Pattern design</p> <p>2:pen</p> <p>3:paper</p> <p>4:samples</p> <p>5:catalogues</p>	Class room

		<p>with customers.</p> <p>Use clear and concise language to communicate with customers.</p> <p>Show different samples of products offered by the learner's company to customers.</p> <p>Inform customers about a product line.</p> <p>Explain the procedures and processes involved in manufacturing gemstone products.</p> <p>Write down the requirements of, and specifications provided by, a customer.</p>			
M2: Prepare Manual Designs	The learner will be able to prepare a design for a product, on paper, to meet customer specification.	<p><u>Knowledge of:</u></p> <p>Sketching on paper by hand.</p> <p>Drawing the product on paper.</p> <p>Evaluation techniques i.e. weighing, measuring etc.</p> <p>Basic knowledge of computer operations.</p> <p>Use of the Internet.</p> <p><u>Ability to:</u></p> <p>Review and understand the customer requirement for design and development of a</p>	42 hours	<p>1:pencil 2:rubber 3:Trimplates 4:scale 5:Vernier calipers 6:Tracing paper</p>	Class room

		<p>product.</p> <p>Select and use the appropriate media, technique and technology for producing designs.</p> <p>Research the relative information and records to meet the customer's design requirement.</p> <p>Explain the procedure of preparing designs using computer applications.</p> <p>Ensure all the design features and elements are accurate, in terms of size and quantity.</p> <p>Produce clear visuals.</p> <p>Prepare supporting information of the design in a way that is understandable to customers.</p> <p>Record and implement the amendments suggested by customers in the design visual.</p> <p>Present the product's design visual to customer for finalization/confirmation.</p>			
M2:Prepare computerized designs	The learner will be able to prepare designs for gemstone products using computer applications.	<p><u>Knowledge of:</u></p> <p>Computer operation</p> <p><u>Ability to:</u></p> <p>-use a Computer, - use a computer for</p>	72 hours	1.Computer 2.Printer	Class room

		search purposes - create printouts			
M2:Trace Design On Stones	The learner will able to trace the customer's design on stone surfaces, in the required scale.	<u>Knowledge of:</u> Type and quality of stones. The procedure of weighing stones. The procedure of measuring the size of stones. The method of tracing designs on stones. <u>Ability to:</u> Select stones suitable for a customer's preference (in terms of type, weight and the quality for tracing designs) Identify surfaces of stones appropriate for the purpose of tracing a design. Draw designs on the surfaces of stones using appropriate tools. Demonstrate the correct procedure of tracing designs on the surfaces of stones. Verify that the design traced on the surface of a stone is as specified by the customer.	48 hours	1.waterproof pen 2.vicks pencil 3.scale 4.scissors 5.paper cutter	Lapidary

Module: 3:- Trimming, Grinding, Carving, Sanding and Polishing

Duration:- **286 hours**

Theory:- **20 hours**

Practice:- **266 hours**

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
M3: Trimming Gemstones	The learner will be able to use Trim Saw machines to trim gemstones as per design requirement.	<p><u>Knowledge of:</u></p> <p>Importance of adjusting the RPM of Trim saw cutting machine.</p> <p>Procedure of operating Trim saw machines.</p> <p>Method of changing blades of trim saw machine.</p> <p>Importance of provision of water supply during cutting process.</p> <p>Safety precautions</p> <p><u>Ability to:</u></p> <p>Ensure the Trim saw machines are in appropriate condition for use.</p> <p>Explain the properties of stones in terms of hardness and softness.</p> <p>Describe the correct procedure for blade adjustment of Trim Shaw machines, as required by the hardness of stones being used.</p> <p>Hold the stone piece properly to avoid damage.</p>	48 hours	<p>1.Trim Saw machine</p> <p>2.Safety goggles</p> <p>3.Safety cap</p> <p>4.Waterproof sheet</p> <p>5.Water supply system</p>	Lapidary

		<p>Ensure the supply of water for stone cutting is adequate.</p> <p>Ensure the traced design is followed properly.</p> <p>Carry out work in line with standard operating procedures.</p> <p>Practice safety precautions during work to avoid unwanted accidents.</p>			
M3: Grinding Gemstones	The learner will be able to use Grinding Machines as per design requirement	<p><u>Knowledge of :</u></p> <p>Importance of adjusting RPM of Grinding machine.</p> <p>Procedure of operating Grinding machines.</p> <p>Method of changing blades of Grinding machines.</p> <p>Importance of provision of water supply during the cutting process.</p> <p>Safety precautions</p> <p><u>Ability to:</u></p> <p>Ensure that Grinding machines are in appropriate condition for use.</p> <p>Describe the correct procedure of adjusting the Grinding Wheel of a Grinding machine.</p> <p>Hold a stone piece properly, to avoid</p>	48 hours	<p>1.Grinding machine</p> <p>2.Diamond Wheel</p>	Lapidary

		<p>damage.</p> <p>Ensure the supply of water for cutting the stone is adequate.</p> <p>Ensure the traced design is followed properly.</p> <p>Carry out work in line with standard operating procedures.</p> <p>Practice safety precautions during work to avoid unwanted accidents.</p>			
M3: Carving	The learner will be able to use carving machines with carving tools to carve the gemstones.	<p><u>Knowledge of :</u></p> <p>Importance of adjusting RPM of Carving machine.</p> <p>Procedure of operating Carving machines.</p> <p>Method of changing Carving tools on the carving machine.</p> <p>Importance of the provision of water supply during carving process.</p> <p>Safety precautions.</p> <p><u>Ability to:</u></p> <p>Select appropriate carving tools for carving a stone.</p> <p>Ensure that the tools and machines are in appropriate condition for use.</p> <p>Explain the properties of a stone in terms of its hardness and softness.</p> <p>Describe the correct</p>	66 hours	<p>1.Carving Machines</p> <p>2.Carving Tools</p> <p>4.Safety goggles</p> <p>5.Safety mask</p>	Lapidary

		<p>procedure of adjusting the RPM of carving machines.</p> <p>Adjust the RPM of a carving machine as required by the hardness of stones being used.</p> <p>Hold the stone piece properly, to avoid damage.</p> <p>Ensure the supply of water for cutting the stone is adequate.</p> <p>Ensure that the traced design is followed properly.</p> <p>Carry out work in line with standard operating procedures.</p> <p>Practice safety precautions during work to avoid unwanted accidents.</p>			
M3:Sanding Carved gemstones	The learner will be able use different kinds of sand paper.	<p><u>Knowledge of :</u></p> <p>Types and characteristics of different kinds of sand paper.</p> <p>Stone properties (hardness scale)</p> <p>Manual sanding technique.</p> <p>Procedure to operate flexible shaft machine for the purposes of sanding.</p> <p>Importance of provision of water supply during cutting process.</p> <p>Safety precautions</p>	48 hours	<p>1.Different kinds of sand paper</p> <p>2.Safety goggles</p> <p>3.Safety mask</p>	Lapidary

		<p><u>Ability to:</u></p> <p>Select appropriate tools for the job.</p> <p>Identify correct type of sand paper for sanding the surface of the stone.</p> <p>Explain the different procedures of sanding stones.</p> <p>Demonstrate sanding procedures correctly.</p> <p>Prepare surfaces: curves, edges and depths; smooth stones. (to enhance designs as per requirement.)</p> <p>Demonstrate proper use of safety goggles and mask during work.</p>			
M3:Performing polishing	The learner will be able to polish the carved stone (in accordance with the hardness of the stone)	<p><u>Knowledge of :</u></p> <p>Different types of polish media</p> <p>Stone properties (hardness scale)</p> <p>Buffing technique</p> <p>Polishing wheels and laps</p> <p>Procedure of operating a polishing machine.</p> <p>Using Polishing Liquids</p> <p>Adequate water supply</p> <p>Safety Precautions</p> <p><u>Ability to:</u></p> <p>Select proper tools and materials for polishing gemstones.</p>	76 hours	1.Polishing machine with polishing accessories	Lapidary

		<p>Identify the stone polish appropriate for the hardness of the selected stone.</p> <p>Ensure the surface of the gemstone is properly smoothed and ready to be polished.</p> <p>Explain the procedure of adjusting the speed of a polishing machine.</p> <p>Apply polishing material on all edges, curves and depths of a gemstone.</p> <p>Demonstrate correct use of the polishing machine.</p>			
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Module: 4:- Perform Marketing Activities

Duration:- **47 hours**

Theory:- **47 hours**

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
M4 : Product Packaging	The learner will learn to pack products in a presentable manner, labeling, and ensuring the safety of, the product.	<p><u>Knowledge of:</u></p> <p>Packing in accordance with international standards.</p> <p>Labeling products according to SOPs.</p> <p>Designing packaging material.</p> <p>Benefits of packaging</p> <p><u>Ability to:</u></p> <p>Determine packaging requirements of the specific product.</p> <p>Ensure safety of the product through packaging.</p> <p>Design packaging material specifically for a product.</p>	11 hours	<p>1.Packing material</p> <p>2.Labeling standards</p> <p>3.Labeling tags</p> <p>4. Labeling machine.</p> <p>5.Packing machine</p>	Lapidary
M4: Determine Pricing	The learner will learn price designation of products, considering cost and market values.	<p><u>Knowledge of</u></p> <p>Marketing skills.</p> <p>Price fluctuation in market.</p> <p>Determining value.</p> <p>Internet and social media.</p>	11 hours	<p>1. Internet</p> <p>2.Invoice</p> <p>3.Calculator.</p> <p>4.Computer</p> <p>5.Printer</p>	Class Room

		<p><u>Ability to:</u></p> <p>Evaluate price by considering cost.</p> <p>Perform correct calculations of price.</p> <p>Determine a price which is appealing to customers.</p> <p>Assess 4Cs of gems correctly</p>			
M4 : Perform Advertisement	The learner will be able to introduce his/her products into the market.	<p><u>Knowledge of :</u></p> <p>Advertisement cost.</p> <p>Advertisement standards.</p> <p>Marketing techniques.</p> <p>Proper update of product information.</p> <p><u>Ability to:</u></p> <p>Select effective media for promotion of products.</p> <p>Target the relevant group of customers with promotion campaigns.</p> <p>Promote products through the sharing of samples.</p> <p>Ascertain the need of products in potential markets.</p>	11 hours	<p>1.Laptop/computers</p> <p>2.Website/ internet</p>	Class Room
M4 : Arrange Distribution of Products	The learner will be able to distribute products to retailers and customers.	<p><u>Knowledge of :</u></p> <p>Channels of distribution.</p> <p>Distribution of</p>	11 hours	<p>1.Register</p> <p>2.Pen</p> <p>3.vehicles</p>	Class Room

		<p>products</p> <p><u>Ability to:</u></p> <p>Arrange an economical and effective distribution line for a product.</p> <p>Set distribution targets for products.</p> <p>Maintain distribution/sales record of different products.</p> <p>Maintain record of retailers and customers.</p>			
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Module 5:- Communicating With Clients and Customers

Duration:- **47 hours**

Theory:- **47 hours**

Learning Unit	Learning Outcomes	Learning Elements	Duration	Materials Required	Learning Place
M5: Build relations with customers	The learner will learn how to build good and permanent relationships with customers.	<p><u>Knowledge of:</u></p> <p>Maintaining data related to customers.</p> <p>4Ps and 4Cs of customers</p> <p><u>Ability to:</u></p> <p>Offer after-sales services.</p> <p>Keep customers updated about new products.</p> <p>Behave kindly and honestly with customers.</p> <p>Be polite to customers.</p> <p>Keep record of customers.</p> <p>Share details of new products with customers.</p>	11 hours	<p>1.Database of customers</p> <p>2.Mobile</p> <p>3.Computer</p> <p>4.Reference</p> <p>5.Chambers</p>	Lapidary
M5: . Supervise workers	The learner will learn to manage workers and other personnel that can help improve work quality and quantity.	<p><u>Knowledge of :</u></p> <p>Assigning of tasks</p> <p>Management skills</p> <p>Leadership qualities</p> <p>Team leadership</p> <p><u>Ability to:</u></p> <p>Perform duties with other team</p>	11 hours	<p>1.Notice board</p> <p>2.Schedule</p> <p>3.Web portal</p>	Class Room

		<p>members.</p> <p>Supervise work and achieve targets in minimum time.</p> <p>Give clear directions to workers.</p> <p>Monitor efficiency of workers/ team members.</p> <p>Motivate the workers in order to enhance efficiency.</p> <p>Make the work environment comfortable for workers.</p> <p>Evaluate workers on the basis of performance.</p>			
M5 : Follow instructions from seniors	The learner will learn to follow instructions from seniors to perform the job properly.	<p><u>Knowledge of :</u></p> <p>Using seniors as resources to enhance the efficiency of work.</p> <p>Value of senior suggestions and instructions.</p> <p><u>Ability to:</u></p> <p>Seek guidance from seniors.</p> <p>Follow instructions from seniors.</p> <p>Consult seniors in case of emergencies.</p>	11 hours	<ol style="list-style-type: none"> 1. Telephone 2. Computer 3. Internet 4. 4. Work specifications 	Lapidary
M5: Establish links with suppliers.	Develop good relationships and links with raw material suppliers.	<p><u>Knowledge of :</u></p> <p>Supply chain</p>	11 hours	<ol style="list-style-type: none"> 1.Record register 2.Pen 	Class Room

		<p>management.</p> <p>Maintaining record of suppliers.</p> <p><u>Ability to:</u></p> <p>Keep good relationships in order to receive supply of material on time.</p> <p>Maintain records of suppliers.</p> <p>Identify relevant suppliers</p>			
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- **Assessment Template**

Module 1: Machinery and tools used for Carving & Selection of carving stone

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
Machinery & Tools used for Carving and Selection of carving stones.	4 hours	36hours	Knowledge of basics of gemstones and carving; knowledge of selection of material.	THEORY & PRACTICAL.	
selection of stone for carving	4 hours	33 hours	Knowledge of basics of stone testing.	PRACTICAL	
Identification of Hard and Soft stones	4 hours	35 hours	Knowledge of difference between stones.	THEORY AND PRACTICAL.	
Source of Gemstone Carving Material	4 hours	30 hours	Knowledge of finding the source which supplies quality material.	THEORY AND PRACTICAL.	
Using Carving Machinery with Diamond tools	4 hours	44 hours	Knowledge of basics of usage of machinery in carving.	THEORY AND PRACTICAL.	

Module 2 (Sketching and Designing)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
Gemstone carving Skill Marketing	7 hours	53 hours	Knowledge of basic techniques to deal with customers.	THEORY	
Preparing manual designs	8 hours	45 hours	Knowledge of basic terminology of sketch and design.	PRACTICAL	
Preparing computerized designs	7 hours	56 hours	Knowledge of computer use in carving	THEORY AND PRACTICAL.	
Trace Design On Stone	8 hours	40 hours	Knowledge of practical implementation of tracing designs on stones.	PRACTICAL.	

Module 3 (Grinding, Sanding, polishing.)

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
Trimming Gemstone	4 hours	64 hours	Techniques of grinding and removing sharp edges.	THEORY & PRACTICAL	
Grinding Gemstones	4 hours	65 hours	Drawing & sketching	THEORY & PRACTICAL.	
Design Carving	4 hours	45 hours	Accurate design and proper sizing of carved products.	THEORY& PRACTICAL.	
Sanding Carved gemstones	4 hours	45 hours	Making the surface smooth for polishing.	THEORY & PRACTICAL.	
Performing polishing	4 hours	47 hours	Giving a product “luster” for completion	PRACTICAL.	

Module 4: Perform Marketing Activities

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
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Product Packaging	13 hours	nil	<ul style="list-style-type: none"> • Packing • Labeling • Designing packaging • Benefits of packaging 	THEORY	
Determining Price	10 hours	nil	<ul style="list-style-type: none"> • Marketing skills. • Price fluctuation in market. • Determining value. • Knowledge of internet and social media 	THEORY	
Perform Advertisement	10 hours	nil	<ul style="list-style-type: none"> • Advertisement cost. • Advertisement standards. • Marketing techniques. • updating information about products. 	THEORY	
Arrange Distribution of Products	14 hours	nil	<ul style="list-style-type: none"> • Channels of distribution. • Distribution of products 	THEORY	

Module 5: Communicating with Clients and Customers

Learning Units	Theory Days/hours	Workplace Days/hours	Recommended formative assessment	Recommended Methodology	Scheduled Dates
Building relations with customers	11 hours	nil	<ul style="list-style-type: none"> • Maintaining data related to customers. • 4Ps and 4Cs of customers 	THEORY	

Supervise workers	10 hours	nil	<ul style="list-style-type: none"> • Assignment of tasks • Management skills • Leadership qualities • Team leadership 	THEORY	
Follow instructions from seniors	10 hours	nil	<ul style="list-style-type: none"> • Using seniors to enhance the efficiency of work. • Receiving senior suggestions and instructions. 	THEORY.	
Establish links with suppliers.	14 hours	nil	<ul style="list-style-type: none"> • Supply chain management. • Maintaining records of suppliers. 	THEORY	

Supportive notes

- Assessment context

The students will be assessed on the basis of their qualifications. Students will fill pre-designed forms in order to be able to enroll in the course. Based on the forms, qualifications and personal interviews, suitable candidates will be selected for the course.

- Critical aspects

Advertisement to attract candidates, designing appropriate admission/application forms, pre-qualification of candidates, provision of appropriate meeting/interview space and the interest level of candidates.

- Assessment condition

Submission of admission forms with all relevant academic documents, willingness of the candidates and their interest in carving.

- Resources required for assessment

Computer, printer, meeting room/hall with tables and office chairs, office stationary and refreshment.

- **List of Tools, Machinery & Equipment**

Name of Trade	GEMSTONE CARVING
Duration	6 Months

S.No	Name of Item/ Equipment / Tools	Qty.
•	Machine Slab Saw Machine: Trim Saw Machine:	Par student 1+1
•	Dual Grinder Machine	03
•	Carving Machine	01
•	Flexible Shaft Machine	01
•	Tools Diamond Slab Saw Blade	03
•	Diamond Trim saw blade	12
•	Diamond grinding wheel	12
•	Diamond bits(carving tool):	Full kits
•	Diamond kits (carving tool):	Full kits
•	Carbide grinding wheel	12
•	Flexible shaft bits	Full kits
•	Sand paper(different number):	
•	Wooden dop stick	200
•	Super glue	12
•	• Polishing tools: • Cotton buff	06
•	• Wooden buff	06
•	• Leather buff	03
•	• Luster pink bar	12
•	• Diamond powder	100 carat
•	• Olive oil	02
•	• Oxides (different types)	06 kg

• **List of Consumable Supplies**

Name of Trade	GEMSTONE CARVING
Duration	6 Months

S. No	Name of Consumable Supplies
1.	Machine Slab Saw Machine: Trim Saw Machine:
2.	Dual Grinder Machine
3.	Carving Machine
4.	Flexible Shaft Machine
5.	Tools Diamond Slab Saw Blade
6.	Diamond Trim saw blade
7.	Diamond grinding wheel
8.	Diamond bits(carving tool)
9.	Diamond kits (carving tool)
10.	Carbide grinding wheel
11.	Flexible shaft bits
12.	Sand paper(different number)
13.	Wooden dope stick
14.	Super glue
15.	Polishing tools: Cotton buff
16.	Wooden buff
17.	Leather buff
18.	Luster pink bar
19.	Diamond powder
20.	Olive oil
21.	Oxides (different types