

Glass and Ceramics Decorative Master Craftsman(GCDCA)

Syllabus

(Safety Practices 25 Hrs, Theory 100 Hrs, Practical 450 Hrs, Employability Skill 75 Hrs)

Sl. No	CONTENT	DETAILS	HOURS
1	Examine the type of material and material productivity standards		65
	Theory	<ol style="list-style-type: none"> 1. Explain the importance of discussing the Job order with supervisor 2. Discuss the various properties of the materials used in making the decorative artefacts 3. Describe the various types of pattern, bases structure and techniques required to make the decorative artefacts 	25
	Practical	<ol style="list-style-type: none"> 1. Apply the standard operating procedures in order to analyze the job specifications based on the parameters based on size, shape, pattern and art work design 2. Select the design pattern, structure and SOPs required to make the design and sketch on the glass and ceramic objects 3. Collect the tools and equipment and raw materials from the designated location in prescribed quantities as per the Job Sheet 4. Perform the process of examine the physical and chemical properties of the colour and oxides formations 	40
2	Collect tools and equipment as per the SOPs		65
	Theory	<ol style="list-style-type: none"> 1. Ensure appropriate handling and utilizing of materials, tools, and equipment along with preventive and precautionary measures 2. Identify the standard organizational procedures required for storing the tools and equipment safely after their use 3. Discuss the importance of marking/coding/ labelling/ numbering while maintaining reports and records 	20
	Practical	<ol style="list-style-type: none"> 1. List the functions of different hand tools like hammer, spanner, files, chisels, needle, etc. 2. Check if the equipment/machine is functioning normally before commencing work and rectify wherever required 3. Demonstrate usage of tools and equipment for further processing 4. Perform standard operating procedures to be followed while collecting raw materials and ingredients in prescribed quantities from the designated storage location 5. Demonstrate the organizational SOPs required to place the raw materials and ingredients at workplace for further processing 6. Apply the standard procedures to be followed while delivering the remaining and unused material at the designated storage location 	45
3	Prepare the colour samples and oxides while mixing them in a prescribed quantities		70
	Theory	<ol style="list-style-type: none"> 1. Select the suitable PPE based on the prescribed Job Sheet at the workplace 2. List the common defects and faults that can be rectified during the creation of artefacts 3. Describe the importance of using PPE at the time of handling tools and equipment at workplace 	20

		<ol style="list-style-type: none"> Discuss the importance of visual inspection on the prepared solution based on the physical and chemical properties 	
	<u>Practical</u>	<ol style="list-style-type: none"> Apply the SOPs required to make base colour to design as per the design specifications and nature of the surface Place the raw materials and ingredients in an appropriate quantities required to make glass articles Demonstrate the process of preparing the colour formulation required for ceramic artefacts Follow the SOPs required to mix the raw materials and ingredients in a container as per the prescribed quantities for manual mixing techniques Place the appropriate amount of varnish on the ceramic clay art as per the SOPs Demonstrate the standard operating procedures to be followed while removing or unloading the colour formulation from the container Perform visual inspection required to examine the prepared solution and surface finishing as per SOPs Prepare a sample format /template to collect information during inspection based on colour viscosity, oxide granules, nature of hue and colour saturation range Ensure that work area and tools are cleaned and inspected according to workplace procedures 	50
<u>4</u>	Demonstrate the sketching and painting process on decorative artefacts		100
	<u>Theory</u>	<ol style="list-style-type: none"> Explain the importance of working in a ventilated and lit place to avoid potential risks and threats explain the standard organizational parameters that are followed to examine the productivity standards Prepare the list of processes as per the SOP required for colouring on the article as per design requirement and nature of material Determine the surface and design defects based on unevenness, chipped glass, holes on surface, rough texture, etc. that need to be examine while making the artefacts 	20
	<u>Practical</u>	<ol style="list-style-type: none"> Demonstrate the process of preparing the design on the surface of the article based on the selection of the material List the procedural parameters as per the SOPs required for colouring the article as per the design specifications Determine the number coats required on the surface of the object based on primer coats, intermediate coats and final coats Apply SOPs to be followed while using OHP sheets in order to achieve complete traceability of the design on the surface Demonstrate the sample testing on the raw pieces to examine the colour formulation and its properties Prepare the clay solution while mixing the Ceramic powder and araldite required for further processing Perform SOPs required to prepare the sculpture on the 	80

		<p>surface of the artefact as per the approved job sheet</p> <ol style="list-style-type: none"> 8. Demonstrate the process of tracing the final structure on the surface while using the prescribed tools and equipment 9. Allow the final artefact to dry in a room temperature for at least 2 to 3 hours for ensuring the durability and sustainability of the object 10. Apply the final coat of varnish on the surface of the object to achieve smoothness and shininess 	
5	Check colour quality and colour productivity standards		70
	Theory	<ol style="list-style-type: none"> 1. Discuss the parameters that indicate deviation in the prepared colour solution based on their physical and chemical properties 2. Explain the standard organizational parameters that are followed to examine the colour productivity standards 	20
	Practical	<ol style="list-style-type: none"> 1. Demonstrate the SOPs that are required to check the prepared solution during the process based on its colour saturation properties 2. Perform the visual inspection on the colour formation and sketch outline as per the design specifications 3. Determine the pastel colours formation while applying on the ceramic artefacts 4. Examine the viscosity and adhesiveness properties of the decorative article on the surface of the object such as glass and ceramic 5. Prepare the sample template that indicate all the standard results achieved during this operation 6. Review the periodic schedules based on that production rate can be evaluated after the regular interval of time as per SOP. 	50
6	Maintain product packaging SOPs		50
	Theory	<ol style="list-style-type: none"> 1. Identify the parameters of wrapping and labelling the packages as per SOPs 2. Discuss the importance of marking/coding/ labelling/ numbering while maintaining reports and records of packaging 	20
	Practical	<ol style="list-style-type: none"> 1. Demonstrate the process of mentioning the proper dimensions and type of materials as per export SOPs 2. Apply the SOPs required to match the packaging material with the invoice to avoid duplicacy 3. Perform the packaging SOPs while packing the delegate items such as glass and other sensitive artefacts 4. Demonstrate the process of placing the prescribed bar codes on the items as per the periodic schedule of packaging 	30
7	Practice of E-commerce activities		30
	Theory	<ol style="list-style-type: none"> 1. Explain the importance of analyzing the different cues from the market 2. Explain the importance of following standard operating procedures to make the product more productive, reliable and cost effective 3. List down the activities related to advertising and marketing 	10

		for product promotion	
	<u>Practical</u>	<ol style="list-style-type: none"> 1. Apply the standard organizational procedures to ensure the products are made based on the existing market demand and trends 2. Ensure proper placing and labeling required for the IEC and HSN codes on the products 3. Carry out the practices related to DIY activities 	20
<u>8</u>	Ensure workplace safety		25
	<u>Theory</u>	<ol style="list-style-type: none"> 4. Describe the health and safety related instructions applicable to the workplace 5. Explain how to monitor the workplace and work processes for potential risks and threats 6. Discuss workplace hygiene, sanitation and job specific safety procedures 	09
	<u>Practical</u>	<ol style="list-style-type: none"> 1. Demonstrate how to clean and maintain the cleanliness of the work area using approved sanitizers to keep it free from dust, waste, and spillage 2. Carry adequate safety measures while handling materials, chemicals, and tools 3. Apply standard operating procedures to clean the tools and equipment used with recommended sanitizers following specifications and organizational standards 4. Report any accidents, incidents or problems without delay to the supervisor and take necessary immediate 5. Participate actively in employee work groups on 5s and encourage team members for active participation 	16
<u>9</u>	Maintain Workplace Security		15
	<u>Theory</u>	<ol style="list-style-type: none"> 1. Explain how to speak and behave in a calm way while dealing with accidents and emergencies 2. Follow organization procedures for evacuation when required 3. Comply with health, safety and security related instructions applicable to the workplace 	06
	<u>Practical</u>	<ol style="list-style-type: none"> 1. Follow environment management system related procedures 2. Monitor the workplace and work processes for potential risks and threats 3. Take action based on instructions in the event of fire, emergencies or accidents 4. Participate mock drills/evacuation procedures based on organizational standards and procedures in case of an emergency 5. Follow organization procedures for evacuation when required 	09
<u>10</u>	Carry adequate waste management		40
	<u>Theory</u>	<ol style="list-style-type: none"> 1. Describe the importance of disposing waste in the designated area at workplace 2. List the important preventive measures in order to preserve the resources at workplace 3. Discuss the safety measures to be followed while handling and 	10

		moving waste and debris	
	<u>Practical</u>	<ol style="list-style-type: none"> 1. Demonstrate the SOPs while disposing the used PPEs and other aids at designated locations 2. Perform the SOPs to segregate the waste and debris in selected colour bins 3. Apply the SOPs while segregating the recycled and non-recycled waste and debris 4. Demonstrate the standard sanitization protocols with alcohol based disinfectants at the designated location where waste are disposed at regular interval of time 	30
<u>11</u>	Maintain practices for Personal Hygiene at workplace		45
	<u>Theory</u>	<ol style="list-style-type: none"> 1. Explain the importance of organizing cyclic sessions at the workplace to create awareness on the usage of appropriate health-related equipment in case of any emergency 2. Identify common types of injuries that might occur and affect the participant's at the workplace emergencies at work 3. Identify basic health concerns like fever, cold & cough, etc. for self, colleague and other family members 4. Discuss the importance of using a dust mask at the workplace to prevent mouth and nose from dust particles and dangerous bacteria 	10
	<u>Practical</u>	<ol style="list-style-type: none"> 1. Discuss the importance of using gloves as per the materials used for working printing operations to avoid blisters; scratches and cuts 2. Demonstrate different ways in case of an emergency at home and use of emergency helpline numbers etc. 3. Follow SOPs at workplace related to health and hygiene such as social distancing, sanitization and cleanliness 4. Apply the SOPs to organize the preventive health check-ups at regular interval of time 5. Demonstrate the appropriate SOPs required to clean the work place, tools and equipment, machines, uniforms etc. at regular interval of time in order to avoid any injury or infection 	35
<u>12</u>	Understand and practice soft skills		25
	<u>Theory</u>	<ol style="list-style-type: none"> 1. Describe the significance of working with cooperation, coordination, communication, and collaboration among the team members at the workplace 2. Illustrate the importance of displaying courteous and helpful behaviour to others at the workplace 3. Distinguish the ways to enhance the level of empathy across genders while assisting colleagues at the workplace 	05
	<u>Practical</u>	<ol style="list-style-type: none"> 1. Carry and follow the standard organizational procedures to avoid conflicts situations and ensure smooth workflow 2. Demonstrate the SOPs to resolve doubts on design, usage of material & tools, quality & standards compliance, etc. to team members at the workplace 3. Practice different ways of communicating with the supervisor for maintenance and repair schedules at the workplace 4. Comprehend the ways to intensify the level of empathy 	20

		across genders while assisting colleagues at the workplace	
13	Demonstrate knowledge of concept and principles of basic arithmetic and financial calculation, and apply knowledge of specific area to perform practical operations		25
	<u>Theory</u>	<ol style="list-style-type: none"> 1. Differentiate between Wage employment, Self-employment and Entrepreneurship 2. Explain standard operating procedures to prepare periodic working schedules based on the current market preference 3. Discuss the importance of collecting information about banking, loan, procurement and subsidiaries etc. from the designated person at workplace 	10
	<u>Practical</u>	<ol style="list-style-type: none"> 1. Maintain simple books of accounts and prepare financial statement for small business 2. Apply SOPs to devise a simple marketing and sales strategies and plan for a small business 3. Maintain the bills and record the prices of procurement for future reference 4. Prepare the sample template of basic accounting such as cost of materials & labour and basic concepts of profit/loss 5. Carry out the standard procedures required to execute basic day to day banking activities 	15
14	Explain time management, entrepreneurship and manage/organize related task in day to day work for personal & social growth		25
	<u>Theory</u>	<ol style="list-style-type: none"> 1. Describe the significance of analyzing the different cues from the market 2. Illustrate the importance of following standard operating procedures to make the product more productive, reliable and cost-effective 3. Address the importance of preparing the inventory of raw materials based on the recommended working schedule to enhance productivity at the workplace 	15
	<u>Practical</u>	<ol style="list-style-type: none"> 1. Apply organizational standard measures to establish proper coordination among the team members to increase the productivity at the workplace 2. Apply the standard organizational procedures to ensure the products are made based on the existing market demand and trends 3. Maintain necessary documents as per local government and regulatory requirement take necessary approvals from GST /Shop act/MSME for export related activities 4. List the activities are essential for DIY and related to advertising and marketing for product promotion 	10

Detail of Employability Skills Syllabus

Sl. No.	Content	Details
1.	English Literacy & Communication Skills	<p>Accentuation (mode of pronunciation) on simple words, Diction (use of word and speech)</p> <p>Transformation of sentences, Voice change, Change of tense, Spellings. Reading and understanding simple sentences about self, work and environment. Construction of simple sentences, Writing simple English.</p> <p>Speaking with preparation on self, on family, on friends, classmates, on know, picture reading gain confidence through role-playing . Taking messages, passing messages on and filling in message forms Greeting and introductions office hospitality, Resumes or curriculum vita essential parts, letters of application reference to previous communication.</p> <p>Communication and its importance, Principles of Effective communication, Types of communication – verbal, non verbal, written, email, talking on phone. Non verbal communication –characteristics, components-Para-language,</p> <p>Body – language,</p> <p>Barriers to communication and dealing with barriers.</p> <p>Handling nervousness/ discomfort.</p> <p>Self awareness, Importance of Commitment, Ethics and Values, Ways to Motivate Oneself, Personal Goal setting and Employability Planning.</p> <p>Manners, Etiquettes, Dress code for an interview, Do's & Don'ts for an interview, Problem Solving, Confidence Building, Attitude.</p>
2.	I.T. Literacy	<p>Introduction, Computer and its applications, Hardware and peripherals, Switching on-Starting and shutting down of computer.</p> <p>Basics of Operating System, WINDOWS, The user interface of Windows OS, Create, Copy, Move and delete Files and Folders, Use of External memory like pen drive, CD, DVD etc, Use of Common applications.</p> <p>Basic operating of Word Processing, Creating, opening and closing Documents, use of shortcuts, Creating and Editing of Text, Formatting the Text, Insertion & creation of Tables. Printing document.</p> <p>Basics of Excel worksheet, understanding basic commands, creating simple worksheets, understanding sample worksheets, use of simple formulas and functions, Printing of simple excel sheets</p> <p>Internet, Concept of Internet (Network of Networks),</p> <p>Meaning of World Wide Web (WWW), Web Browser, Web Site, Web page and Search Engines. Accessing the Internet using Web Browser, Downloading and Printing Web Pages, Opening an email account and use of email. Social media sites and its implication.</p> <p>Information Security and antivirus tools, Do's and Don'ts in Information Security, Awareness of IT – ACT, types of cyber crimes.</p>
3.	Entrepreneurship Skills	<p>Entrepreneurship vs. management, Entrepreneurial motivation. Performance & Record, Role & Function of Entrepreneur, Qualities of a good Entrepreneur, SWOT and Risk Analysis. Concept & application of PLC, Sales & distribution Management. Different Between Small Scale & Large Scale Business, Market Survey, Method of marketing, Publicity and advertisement, Marketing Mix.</p> <p>Preparation of Project. Role of Various Schemes and Institutes for self-employment i.e. DIC, SIDA, SISI, NSIC, SIDO, Idea for financing/ non</p>

		<p>financing support agencies to familiarizes with the Policies /Programmes & procedure & the available scheme.</p> <p>Project formation, Feasibility, Legal formalities i.e.,Shop Act, Estimation & Costing, Investment procedure – Loan procurement – Banking Processes.</p>
4.	Productivity & Quality Tools	<p>Definition, Necessity, Meaning of GDP.</p> <p>Personal / Workman – Incentive, Production linked Bonus, Improvement in living standard. Industry Nation.</p> <p>Skills, Working Aids, Automation, Environment, Motivation. How improves or slows down.</p> <p>Banking processes, Handling ATM, KYC registration, safe cash handling, Personal risk and Insurance.</p> <p>Meaning of quality, Quality characteristic. Definition, Advantage of small group activity, objectives of quality Circle, Roles and function of Quality Circles in Organization, Operation of Quality circle. Approaches to starting Quality Circles, Steps for continuation Quality Circles.</p> <p>Idea of ISO 9000 and BIS systems and its importance in maintaining qualities.</p> <p>Purpose of Housekeeping, Practice of good House keeping. Basic quality tools with a few examples</p>

Outcomes

Outcomes to be assessed	Assessment criteria for the outcome
1. Examine the type of material and material productivity standards	1.1. Receive the job order and instructions from supervisor as per the SOP
	1.2. Explain the different types of materials and their properties used for decorative artefacts
	1.3. Identify the type of canvas for glass painting based on structure, pattern and technique
	1.4. Prepare the job sheet based on the weight, size and design pattern of the prescribed material
	1.5. List the parameters required for analyzing appropriate mixing proportion based on color viscosity, oxides granules, nature of hue, and color saturation range
	1.6. select the SOPs for manual or mechanical method based on prescribed job sheet
2. Collect tools and equipment as per the SOPs	2.1. Collect the artefact as per the prescribed design pattern and specifications based on the type of material
	2.2. Differentiate between various types of oxides that are required to generate requisite color as per end product
	2.3. Arrange raw materials in appropriate quantities as per the standard procedures based on color mixing formulation sheet
	2.4. Place the raw materials prior to the mixing stage by utilizing appropriate tools
	2.5. deliver the remaining raw material and ingredients at designated location as per the SOP with proper labelling that ensures traceability and identification
3. Prepare the colour samples and	3.1. Select the appropriate PPE for performing the operations

oxides while mixing them in a prescribed quantity	3.2. Use approved procedures to inspect articles visually for any possible defects as per required standard parameters prior to work
	3.3. Prepare the base colour to design on the surface of the article
	3.4. Collect glass colour and glass liners with water and oxides in an appropriate quantity for glass articles
	3.5. Prepare the colour formulation for ceramic artefacts while mixing acrylic paints, araldite and chalk powder
	3.6. Mix the raw materials and ingredients in the container of prescribed volume and size for manual mixing technique
	3.7. Use appropriate amount of varnish for clay art for a magnifying look
	3.8. Examine the prepared colour composition based on color viscosity, oxides granules, nature of hue, and color saturation range
	3.9. Clean tools and equipment after their use to prevent colour spots, stains and rust
4. Demonstrate the sketching and painting process on decorative artefacts	4.1. Ensure perform painting in a ventilated and lit place
	4.2. Examine the surface defects based on Unevenness, chipped glass, holes on surface, rough texture, etc.
	4.3. Prepare the design on the surface of the article with base colour
	4.4. List the step by step colouring process on the article as per design requirement
	4.5. Calculate the number coats required on the surface based on primer coats, intermediate coats and final coats
	4.6. Use OHP sheet to achieve complete traceability of the design on the surface by glass liner
	4.7. Perform the sample testing of colours on the raw piece to check the colour formulation and its properties
	4.8. Collect the clay solution of Ceramic powder and Araldite
	4.9. Prepare the sculpture on the surface of the artefact
	4.10. Use appropriate hand tools and equipment for tracing the final structure on the surface
	4.11. Apply the SOPs required to make the artefact dry in room temperature for at least 2 to 3 hours
	4.12. Place the varnish on the surface of the artefacts for smooth finishing and shininess
5. Check colour quality and colour productivity standards	5.1. Compare the colour as per the colour quality standards as per design pattern and specifications
	5.2. Maintain records of inspection results and tests as per prescribed job sheet
	5.3. Review the periodical targets set by the supervisor
6. Maintain product packaging SOPs	6.1. Carefully wrap and label the packages
	6.2. Ensure mentioning of proper dimensions and type of materials as per export SOPs
	6.3. Discuss the importance of marking/coding/ labelling/ numbering while maintaining reports and records

	6.4. Match the packaging material with the invoice to avoid duplicacy
	6.5. Interpret about HSN and other export related codes
7. Practice of E-commerce activities	7.1. Maintain the documents for placing product Online
	7.2 Follow the practices related to DIY activities
	7.3. Explain the importance of placing and labelling the IEC and HSN codes on the products
	7.4. List down the activities related to advertising and marketing for product promotion
8. Ensure workplace safety	8.1 Outline the health, safety and security policies at workplace to avoid workplace for potential risks and threats
	8.2 Follow adequate safety standards while handling materials, chemicals, tools, and electrical equipment
	8.3 Sanitize hands at regular intervals using hand wash & alcohol-based sanitizers
	8.4 Clean the workplace using sanitizers and keep it free from dust, waste and spillage
	8.5 Ensure that personal protective equipment is available at the workplace at all time
	8.6 Follow first procedures during emergencies situations at the workplace
9. Maintain Workplace security	9.1 Practice the appropriate measures to make yourself in a calm way while dealing with accidents, emergencies and in illness, fires or any other natural calamity
	9.2 Participate in the evacuation and mock drills procedures based on organizational standards and procedures in case of an emergency
	9.3 interpret the SOPs related to workplace security and emergencies protocols
10. Carry adequate waste management	10.1. Employ standard procedures of waste disposal and waste storage in the proper containers as per SOP
	10.2. Place the used PPEs in a designated bag, sealed and labelled as contagious waste
	10.3. Segregate the recycled and non-recycled wastes as per SOP
11. Maintain practices for Personal Hygiene at workplace	11.1 Take appropriate health and hygiene procedures at the workplace to avoid injuries and health issues
	11.2 Maintain social distancing in social gatherings at the workplace
	11.3 Use mask at the workplace to prevent mouth and nose from dust particles and dangerous bacteria
	11.4 Identify health concerns like fever, cold & cough, etc. for self, colleague and other family members

	11.5 Report any flu-like symptoms, fever, diarrhoea, sore throat, constant sneezing, coughing, runny nose and vomiting to the supervisor
	11.6 Undergo preventive health check-ups at regular intervals as per the SOP
12. Understand and practice soft skills	12.1 Assessor will rate the trainee on his ability to practice soft skills, including clear and concise communication, in day to day work with team and with higher authority
13. Demonstrate knowledge of concept and principles of basic arithmetic and financial calculation and apply knowledge of specific area to perform practical operations.	13.1. Apply basic arithmetic calculations for arriving dimensional parameters as per drawing. 13.2 Apply basic financial calculation to understand cost of materials & labour and basic concepts of profit/loss, 13.3 Engage in basic banking transactions as customer
14. Explain time management, entrepreneurship and manage/organize related task in day to day work for personal & social growth.	14.1 Ascertain appropriate time for the assigned task. 14.2. Execute the assigned task within time frame. 14.3. Manage own work within specified time. 14.4. Explain importance & factors affect the development of entrepreneurship. 14.5. Identify service providers for developing entrepreneur/business establishment.