



Gujarat Council of Vocational Training Gandhinagar



1. Name of Course:

Lab Technician of Ceramic Body Preparation

N.C.O. No. for Skills Covered:
(Please refer National Classification of
Occupations -2004 available
on www.dget.nic.in)

3116

3116.10

8138

8138.20

2. Engineering OR Non-engineering: **Engineering**

3. No. of students per batch: **16+05=21**

4. Duration in Hours. : **240**

5. Duration in Month: _____ @ 42 hours/Week.

Duration in Month: **3 Month @ 22 hours/Week.**

6. Examination Scheme:

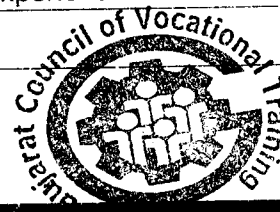
No.	Name of Subject	Teaching Hours during full course.	Maximum Marks. (Excluding Sessional)	Minimum Marks required for Passing (Excluding Sessional).	Sessional Marks if any.
Subject-1	Theory	120	100	40	
Subject-2	Practical	120	300	180	
Subject-3					
Subject-4					
Subject-5					

7. Entry qualification for Trainee:

Minimum entry qualification (Essential):	8 th Pass (Priority should given 10th,9th,8th)
Desirable:	

8. Minimum qualification for Trainer:

Minimum qualification (Essential):	Diploma in Ceramic Engineering with 03 Year experience or Degree in Ceramic Engineering or B.Sc.(Chemistry) with 03 Year experience
Desirable:	





Gujarat Council of Vocational Training
Gandhinagar



कौरालम बलम

9. Syllabus Committee Member:

Sr. No.	Name	Organization	Designation	Technical Qualification	Experience in Years	Signature
1.	P.B. Jadeja	Parsuram Pottery Works Ltd. Morbi	Retired Production Manager	B.Sc.(Chemistry)	25 Years	
	P.D. Jadeja	L.E. College Morbi	Lecturer	Diploma in Ceramic Engineering	24 Years	Jadji 10
	J.V. Makwana	Parsuram Pottery Works Ltd. Morbi	Retired Production Manager	B.Sc.(Chemistry)	26 Years	
	N.M. Joint	Parsuram Pottery Works Ltd. Morbi	Retired Production Manager	M.Sc.(Chemistry)	28 Years	
	R.R. Halvadiya	Ceramic Industries, Morbi	Consultant	Diploma in Ceramic Eng., Gold Medalist	30 Years	
	Prafulbhai Kaila	Favorite Ceramics, Morbi	Director	B.E. (Electrical)	20 Years	
	Rajubhai Dhamasana	FACE Ceramics, Morbi	Director of FACE / Chairman, IMC of ITI Morbi	B.E. (Chemical)	20 Years	
	R.J. Kaila	Principal ITI Morbi	Member Secretary, IMC of ITI Morbi	B.Sc.(Maths), PGDCA	22 Years	

10. Terminal Skills of trainee: (Should be well defined and having reference to NCO):

The trainee, after successful completion of training, will have following skills...

**As per attach Page No. 01 To 02
Of Lab Technician of Ceramic Body Preparation Syllabus**

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

(please attach separate page is required)





**Gujarat Council of Vocational Training
Gandhinagar**



कौशलम् बलम्

11. Approximate cost of Tools
/ Equipments / Machinery for
starting one batch of the course:

Rupees
500000/-

Reference Year
2014-15

12. Area required for practical / Workshop for one batch.

70 Sq. Meter

13. Minimum Power connection required

3.45 K.W.

14.1 No of items in Standard list of Machinery :

06

14.1.1. Page NO from 3 to 3.

14.2 No of items in Standard list of Shop outfit :

03

14.2.1. Page NO from 3 to 3.

14.3 No of items in Standard list of Trainee Toll-Kit :

10

14.1.1. Page NO from 3 to 3.

***** FOR OFFICIAL USE *****

Approved by GCVT in Governing Body meeting on

7-10-2014

Syllabus implemented w.e.f. admission session

Next session

Revision History :

1. Revision No..... Revision Date.
2. Revision No..... Revision Date.
3. Revision No..... Revision Date.





Gujarat Council of Vocational Training
Gandhinagar



Standard List of Machinery - Equipment / Shop-outfit / or Trainee Toolkit
for Trade of Lab Technician of Ceramic Body Preparation.

Sr. No.	Description of Item with detailed specifications	Item type i.e. Machinery / Equipment OR Shop Outfit OR Trainee Toolkit	Quantity Required per one Batch of Students	Quantity Required per one Batch of Students for Instructor	Total Quantity Required (Total of previous two columns)
1.	Hand Press	Machinery	01 Nos.	--	01 Nos.
2.	Convection Microwave Ovens (28 Liters)	Machinery	01 Nos.	--	01 Nos.
3.	Pot Mill Set (Sample Grinding)	Machinery	01 Nos.	--	01 Nos.
4.	Sieve Analyzer Machine	Machinery	01 Nos.	--	01 Nos.
5.	Modulus Of Ruptchur (MOR) Testing Machine	Machinery	01 Nos.	--	01 Nos.
6.	Electronics Balance (Small & Medium Size)	Machinery	01 Nos.	--	01 Nos.
7.	Veneer Calipers (Small & Big Size)	Equipment	01 Nos.	01 Nos.	02 Nos.
8.	T.D.S. Meter	Equipment	01 Nos.	01 Nos.	02 Nos.
9.	Ph Meter	Equipment	01 Nos.	01 Nos.	02 Nos.
10.	Ford Cup	Toolkit	08 Nos.	01 Nos.	09 Nos.
11.	Density Pot	Toolkit	08 Nos.	01 Nos.	09 Nos.
12.	Burette	Toolkit	08 Nos.	01 Nos.	09 Nos.
13.	Kiln Sampling Dish (Perforated)	Toolkit	08 Nos.	01 Nos.	09 Nos.
14.	Sieve – Mesh 8#, 16#, 30#, 40#, 50#, 60#, 80#, 100#, 150#, 200#, 240#, 300#	Toolkit	08 Nos.	01 Nos.	09 Nos.
15.	Steel Bowls	Toolkit	08 Nos.	01 Nos.	09 Nos.
16.	Steel Plates	Toolkit	08 Nos.	01 Nos.	09 Nos.
17.	Steel Utensil	Toolkit	08 Nos.	01 Nos.	09 Nos.
18.	Steel Spoons	Toolkit	08 Nos.	01 Nos.	09 Nos.
19.	Liquid Measurement Pot (01 ltrs)	Toolkit	08 Nos.	01 Nos.	09 Nos.

(As many sheets as required should be used to accommodate all items)



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SYLLABUS FOR SHORT TERM COURSE OF

LAB TECHNICIAN OF CERAMIC BODY PREPARATION

Redesigned in 2014

by

Department of Labour and Employment,
Directorate of Employment and Training, Gandhinagar, Gujarat State

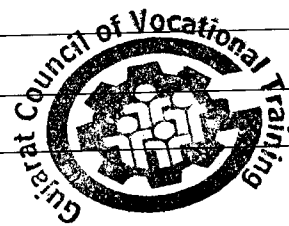
// GENERAL INFORMATION //

1. Name of the Short Term Course : Lab Technician of Ceramic Body Preparation
2. Duration of Course Training : 3 Month
3. Power Norms : 3.45 KW
4. Space Norms : 70 Sq.mt.
5. Entry Qualification : Passed 8th class examination
6. Unit strength : 16 + 5 = 21 Trainees
7. Instructors Qualifications :
Diploma in Ceramic Engineering with 03 Year experience in ceramic industries. or
Degree in Ceramic Engineering or
B.Sc.(Chemistry) with 03 Year experience in ceramic industries.
8. Skill Covered / Job Scope:
 - 3116 - Chemical Engineering Technicians
 - 3116.10 - Laboratory Assistant, Glass and Ceramics
 - 8138 - Supervisors and Foremen, Glass, Ceramics and Related Plant Workers
 - 8138.20 - Supervisor and Foreman, Ceramics and Related Activities



Syllabus for Lab Technician of Ceramic Body Preparation

Week No.	Name of Topic	Theory Hrs.	Practical Hrs.
1	પ્રસ્તાવના	20	0
	કાચા માલની ઓળખ અને પ્રાપ્તી સ્થળો		
	બોલ કલે, ચાઈના કલે		
	ફેલ્સપાર, કેલ્સાઈટ, ડોલોમાઈટ, વોલાસ્ટોનાઈટ, ટાલ્ક,		
	ક્વાર્ટઝ, ગ્રોગ, ઝીરકોનીયમ, સોડાએશ, STPP, સોડીયમ સીલીકેટ		
2-5	રો-મટીરીયલ્સ (કાચા માલ) ના ગુણધર્મો	40	40
	<ul style="list-style-type: none"> ▪ ગ્રીટ (કાંકરી)નું પ્રમાણ અને કલર ▪ વોટર ઓફ પ્લાસ્ટીસીટી (ચિકાસ) ▪ ફાયર સ્ટ્રેન્થ કાચી સુકાયેલી અવસ્થામાં મજબુતાઈ ▪ ફાયર શીકેજ કાચી સુકાયેલી સ્થિતિમાં સંકોચન ▪ માટી હોય તો તેના રાબડાની પ્રવાહીતતા ▪ ફાયર સ્ટ્રેન્થ પકાવ્યા પછી ની મજબુતાઈ ▪ ફાયર શીકેજ પકાવ્યા પછી નું સંકોચન ▪ ફાયર કલર ▪ લોસ ઓન ઇઝીશન (પકાવ્યા પછી વજનમાં ઘટાડો) ▪ એસીડટેસ્ટ (મંદ HCl), ઊભરો(CO₂), ક્વાર્ટઝ, ફેલ્સપાર, કેલ્સાઈટ, ડોલોમાઈટ, વોલાસ્ટોનાઈટ, ટાલ્ક માટે ▪ મટીરીયલ્સમાં આલ્કલાઈન, K₂O, Na₂O નું પ્રમાણ 		
6-7	બોડીમાં મટીરીયલ્સનું ફંક્શન (કાર્ય ઉપયોગીતા)	20	20
8-9	બોડી દ્વારા ઉદભવતી ક્ષતિઓ-Faultsની ઓળખ અને નિવારણ	20	20
10-11	રો-મટીરીયલ્સના લેબોરેટરી ટેસ્ટીંગ, સાધનોની ઓળખ અને રીત	20	20
12	સુપરવીઝન અને મેનેજમેન્ટ	10	10
	મટીરીયલ મેનેજમેન્ટ, લેબર મેનેજમેન્ટ, મશીનરી મેનેજમેન્ટ, ગુણવત્તા મેનેજમેન્ટ, શેફટી મેનેજમેન્ટ.		
13	ઇન્ડસ્ટ્રીયલ વિઝીટ / ઓન-જોબ ટ્રેનીંગ		
	ટેસ્ટ		
		130	110



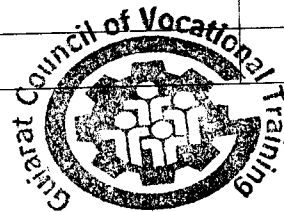
List of Tools / Equipments / Machinery

9

Sr. No.	Details	Unit	GM/GS/Tools
1	Hand Press	01 Nos.	GM
2	Convection Microwave Ovens (28 Liters)	01 Nos.	GM
3	Pot Mill Set (Sample Grinding)	01 Nos.	GM
4	Sieve Analyzer Machine	01 Nos.	GM
5	Modulus Of Ruptchur (MOR) Testing Machine	01 Nos.	GM
6	Electronics Balance (Small & Medium Size)	01 Nos.	GM
7	Vanier Calipers (Small & Big Size)	02 Nos.	GS
8	T.D.S. Meter	02 Nos.	GS
9	Ph Meter	02 Nos.	GS
10	Ford Cup	09 Nos.	Tools
11	Density Pot	09 Nos.	Tools
12	Burette	09 Nos.	Tools
13	Kiln Sampling Dish (Perforated)	09 Nos.	Tools
14	Sieve – Mesh 8#, 16#, 30#, 40#, 50#, 60# 80#, 100#, 150#, 200#, 240#, 300#	09 Nos.	Tools
15	Steel Bowls	09 Nos.	Tools
16	Steel Plates	09 Nos.	Tools
17	Steel Utensil	09 Nos.	Tools
18	Steel Spoons	09 Nos.	Tools
19	Liquid Measurement Pot (01 ltrs)	09 Nos.	Tools

List of Raw Materials

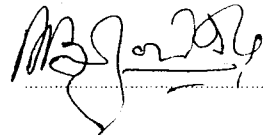
Sr. No.	Details	Unit
1	Ball Clay Lumps (Santalpur Clay & Bikaner Clay)	40 Kg Each
2	China Clay Lumps (Body Kutch)	40 Kg Each
3	Feldspar (Potash) Powder	50 Kg Each
4	Quartz Powder	50 Kg Each
5	Calcite Powder	50 Kg Each
6	Dolomite Powder	50 Kg Each
7	Talc Powder	50 Kg Each
8	S.T.P.P.	02 Kg
9	Sodium Silicate	02 Kg
10	Soda Ash	02 Kg
11	Zirconium Powder	02 Kg
12	Red Clay	50 Kg



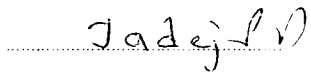
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Member of Syllabus Design Committee for Lab Technician of Ceramic Body Preparation

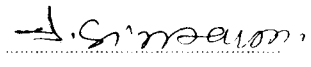
(P.B. Jadeja)
B.Sc.(Chemistry)
Retired Production Manager, Parsuram Pottery Works Ltd. Morbi.



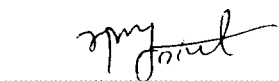
(P.D. Jadeja)
Diploma in Ceramic Engineering
Lecturer, L.E. College Morbi.



(J.V. Makwana)
B.Sc.(Chemistry)
Retired Production Manager, Parsuram Pottery Works Ltd. Morbi.



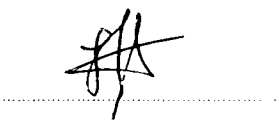
(N.M. Joint)
M.Sc.(Chemistry)
Retired Production Manager, Parsuram Pottery Works Ltd. Morbi.



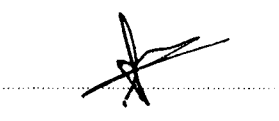
(R.R. Halvadiya)
Diploma in Ceramic Eng., Gold Medalist
Consultant of Ceramic Industries, Morbi.



Prafulbhai Kaila
B.E. (Electrical)
Director, Favorite Ceramis, Morbi.



(Rajubhai Dhamasana)
B.E. (Chemical)
Chairman of IMC of ITI Morbi & Director of Face Ceramics, Morbi.



R.J. Kaila
B.Sc.(Maths) & PGDCA
Member Secretary, IMC of ITI Morbi. & Principal of ITI Morbi.



