



# Gujarat Council of Vocational Training Gandhinagar



1. Name of Course:

Kiln & Dryer Operator

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

8131

8131.75

8131.77

8131.79

8131.90

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 <sup>th</sup> 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



### 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	
	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 Kiln & Dryer Operator Syllabus**

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

(please attach separate page if more space is required)





**Gujarat Council of Vocational Training  
Gandhinagar**



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

Rupees  
150000/-

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 :

02

14.1.1. Page NO from 3 to 3.

14.2 No of items in Standard list of Shop outfit :

00

14.2.1. Page NO from 3 to 3.

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

02

14.1.1. Page NO from 3 to 3.

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

Approved by GCVT in Governing Body meeting on

7-10-2017

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.

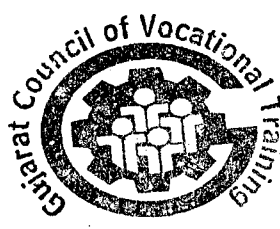




Standard List of Machinery - Equipment / Shop-outfit / or Trainee Toolkit  
for Trade of Kiln & Dryer Operator.

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.	Convection Microwave Ovens ( 28 Liters)	Machinery	01 Nos.	--	01 Nos.
2.	Electronics Balance ( Small & Medium Size)	Machinery	01 Nos.	--	01 Nos.
3.	Veneer Calipers ( Small & Big Size)	Toolkit	08 Nos.	01 Nos.	09 Nos.
4.	Dial Meter / Sphero Meter ( Thickness Meter)	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  
**KILN & DRYER OPERATOR**

Redesigned in 2014

by

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

**// GENERAL INFORMATION //**

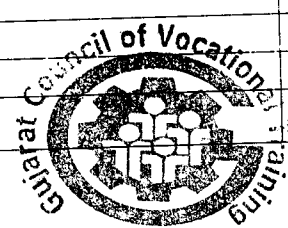
1. Name of the Short Term Course : Kiln & Dryer Operator
2. Duration of Course Training : 3 Month
3. Power Norms : 3.45 KW
4. Space Norms : 70 Sq.mt.
5. Entry Qualification : Passed 8th class examination
6. Unit strength : 16 + 4 = 21 Trainees
7. Instructors Qualifications :  
Diploma in Ceramic Engineering 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:
  - 8131 - Glass and Ceramics Kiln and Related Machine Operators
  - 8131.75 - Kilnman, Brick and Tile
  - 8131.77 - Kiln Loader, Brick and Tile
  - 8131.79 - Bricklayer (Brick & Tile)
  - 8131.90 - Glass and Ceramics Kiln and Related Machine Operators, Other
  - 8138 - Supervisors and Foremen, Glass, Ceramics and Related Plant Workers
  - 8138.20 - Supervisor and Foreman, Ceramics and Related Activities



## Syllabus for Kiln & Dryer Operator

(9)

Week No.	Name of Topic	Theory Hrs.	Practical Hrs.
1	Introduction	10	10
2-3	Basic Information	20	20
	Temperature Management & Control		
	Heat Exchange & Combustion		
	Drying Rate		
	Relative Humidity & Air Velocity		
	Water Inside Body		
	Ideal Cycle		
	Pressure Management Gas & Air		
	Burners		
	Fans – Combustion & Exhaust		
	Rollers		
	Moisture		
	Modulus Of Ruptchur (MOR)		
4-5	Drying & Dryer	20	20
	Purpose of Drying		
	Stage of Drying		
	** Constant Role Period		
	** Falling Role Period		
	Type Dryers		
	** Horizontal Dryer		
	** Vertical Dryer		
	** Tunnel Dryer		
6-7	Firing Process	20	20
	Type of Firing		
	** Single Firing		
	** Double Firing		
	Pre-Healing, Healing, Soaking, Cooling		
	Wall Tiles Firing		
	** Biscuit Firing		
	** Ghost Firing		
	Vitrified Tiles Firing		
8-9	Kiln	20	20
	Type of Kilns		
	-- Tunnel Kiln		
	-- Shuttle Kiln		
10-11	Defects Fault Finding & Solving	20	20
	Drying Defects		
	Firing Defects		
12	Managements	10	10
	-- Material Management		
	-- Labour Management		
	-- Machinery Management		
	-- Quality Management		
	-- Safety Management		
13	Industrial Visit / On-job Training		
	Examination	120	120



List of Tools / Equipments / Machinery

Sr. No.	Details	Unit	GM/GS/Tools
1	Convection Microwave Ovens ( 28 Liters)	01 Nos.	GM
2	Electronics Balance ( Small & Medium Size)	01 Nos.	GM
3	Vanier Calipers ( Small & Big Size)	09 Nos.	Tools
4	Dial Meter / Sphero Meter ( Thickness Meter)	09 Nos.	Tools

List of Raw Materials

Sr. No.	Details	Unit
1	Methyl blue	10 Ltrs
2	Spunj Peaces	20 Nos.

**Member of Syllabus Design Committee for Kiln & Dryer Operator**

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

*P.B. Jadeja*

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

*P.D. Jadeja*

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

*J.V. Makwana*

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

*N.M. Joint*

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

*R.R. Halvadiya*

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

*Prafulbhai Kaila*

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

*Rajubhai Dhamasana*

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

*R.J. Kaila*

