

Name of ICD Programme: Mechanical Engineering (DME)  
 Name of Certificate Programme: Foundry and Forging (CFF)

Title of the course : TRADE SPECIFIC TRAINING-1  
 Subject Code : QPME 201

L	T	P	Credits	Weekly Load
0	0	8	1	8 Hours

**COURSE OUTCOMES:**

After successful completion of the course, the students should be able to

- CO1: Perform operations with basic foundry tools.
- CO2: Prepare a molding sand sample and conduct sand testing.
- CO3: Design the gating and riser system.
- CO4: Develop green sand mold (Cope & Drag).

CO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO1	3	1	1	3	3	1	2	3	3
CO2	3	3	3	3	3	3	3	3	3
CO3	3	2	2	3	3	2	2	3	3
CO4	3	2	2	3	3	2	2	3	3
Avg.	3	2	2	3	3	2	2.25	3	3

**List of Activities**

1. Draw a general layout of the foundry shop.
2. Sketching of basic foundry tools.
3. Preparation of molding sand and a standard specimen.
4. Conduct sieve analysis of base sand.
5. Conduct permeability test of molding sand.
6. Determination of clay content in molding sand.
7. Preparation of green sand mold (Cope & Drag).
8. Preparation of core and core reinforcement, painting, and venting.
9. Preparation of Gating, Risers, and Feeding System.
10. Identification of Molding Defects and repairing them.


  
 Sh. Ram Shabad Ram, Tech.      Sh. Taar Singh, Tech.
   
 Sh. Ravinder Singh Bedi
   
 Sh. Akram      Sh. K. S.      Sh. S. M.      Sh. S. M.



Name of ICD Programme: Mechanical Engineering (DME)  
 Name of Certificate Programme: Foundry and Forging (CFF)

Title of the course : TRADE SPECIFIC TRAINING-3  
 Subject Code : QPME 301

L	T	P	Credits	Weekly Load
0	0	8	1	8

**COURSE OUTCOMES:**

After successful completion of the course, the students should be able to

CO1: Draw various views of the guide, Flange, Pin bearing, collar bracket, and machine handle.

CO2: Design and develop solid patterns.

CO3: Design and develop split patterns.

CO4: Identify various types of forging defects.

CO's	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO1	2	2	1	3	3	1	2	3	3
CO2	1	2	2	3	3	2	1	3	3
CO3	1	2	2	3	3	1	2	3	3
CO4	1	2	3	3	3	1	2	3	3
Avg.	1.25	2	2	3	3	1.25	1.75	3	3

**List of Activities**

1. Sketch different views of the flange (Front, side, and top views) using a scale of 1:1.
2. Draw different views of the Collar Bracket Scale (Front, side, top views) using scale 1:1.
3. Sketch different views of the Machine Handle (Front, side, top views) using a scale 1:1.
4. Development of v-block pattern.
5. Preparation of a pin block pattern.
6. Development of a cross block solid pattern.
7. Development a machine block split pattern.
8. Practice of slotted guide split pattern.
9. Practice of making 2D pattern on 3D CNC machine.
10. Practice of making 3D pattern on 3D CNC machine.

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- 12/03/2021
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