Skill Development Centre (SDC)
by
Hosur Industries Association

Skill Need in Hosur..

- Hosur, an industry hub having diverse 1500 + registered industries with IOF.
- Need for Skilled manpower in Hosur MSME Industries is high
- Unemployment in youth due to lack of skill.
- Demand for skill manpower in both Product & Service sectors.
- There is no proximate Skill development center in Hosur.

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Need Identification

HIA has interaction & study

- Placement services – white collar and blue collar jobs
- Electrical contractor requirements
- HIA, HOSITA
- Inspector of factories engagement
- Visit to other skill development centers
- Titan Sustainability department
- Internet research

Skill – Modules

Suggestion from CSR Team Titan

Sl.	Trade	Suggested knowledge partner / Advisor	Category	Industry	Entrepreneurship	Domestic
1	Welding	NTTF and Welding Research Institute	Production	√	√	√
2	Fitter / Turner / Machinist	NTTF	Production	√	√	×
3	CNC Operation	NTTF and Siemens	Production	√	√	×
4	Electrical	Tata Power	Service/ Maintenance	√	√	√
5	Plumbing	Jaguar	Service/ Maintenance	√	√	√
6	CAD	Autodesk	Service/ Maintenance	√	√	×
7	Refrigeration & Air conditioning	Voltas	Service/ Maintenance	√	√	√
8	Accounting software + basic accounting	Tally Solutions Pvt. Ltd	Service/ Maintenance	√	√	×
9	Pneumatics & Hydraulics		Service/ Maintenance	√	√	×
10	Plant / Machine Maintenance		Service/ Maintenance	√	√	×

Note:
All the above course module will include Basics of Computers, Communicative English, Soft & Life skills & Basics on Personnel Finance.

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Discussion outcome

- Data entry operator requirements
- Female candidate preference on HR, accounts and data mgmt.
- Skill on wheel can be a good initiative for village students.
- Combo quality pack for Electrical employee (welding, drilling, fitting and plumbing)
- Preferred employability sector in Hosur industry:
  - Welding – Customize the requirement
  - CNC operations
  - Tally and tailoring - Women
  - Fitter, Press operations / Fork lift operator / crane operator
  - Buffing operator – Titan and TVS
- With Basic skills on English & Computer knowledge

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Why HIA should have SDC..

- Having proximity & centralized organization for all industries in Hosur
  - Members strength - HIA – 114 , HOSTIA – 876
- Have credibility and acceptability in Hosur , pioneer of many initiatives for Hosur, over the last three decades.
- Industries can offer value to the curriculum, provide much needed academic-industry collaboration
- Need for basic skilling for fresher , re skilling , up skilling of current employee base across industries.
- Provide opportunity for on the job learning
- Captive demand within its members for employment and entrepreneurship.

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SDC by HIA - Phase I

- In Phase I HIA is planning to start skill training in following module:
  - Welding.
  - CNC Turning & Milling Operations.
  - Accounting Software – ERP & Computer skills.
- The ideal batch size for each module : 25 – 30 students
- Course duration is 400 – 500 hours (As per NSDC Guidelines)
- Basic English, Interview and soft skills will be part of each module

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Welding – Trade Overview

Trade	**Welding**
Sector	Manufacturing
Industry	Automotive & Other MSME
Role Description	Operator/ welder in joining various types of metallic frames, structures, jigs, plates etc using heating and melting process created through electrical power and gaseous discharge, loading & unloading the welding assembly and complete documentation as required
Type of Welding	MIG & Co2 Type Welding
Minimum Education Qualification	Class X
Training(Theory & Practical)	Different Welding techniques used in organization Health, Safety & 5S Basic Computer, Communication & soft skills, Life Skill & Basic Financial management
Training Duration	**60 days**
Idle Batch Size	**25 Students**
Assessment Criteria	**Theory - 25% , Practical - 75%**
Standards	**NOS(National Occupational Standards)**
Reference	**NSDC(National Skill Development Corporation)**
Source	**CGSC(Capital Goods Skill Council)**

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Welding – Trade Overview

Performance/ Assessment Criteria					
S.no	**Category**	**Criteria**	**Theory**	**Lab**	**Total**
1	Core Skill / Technical Knowledge	Understanding on Welding Jobs & Related processes	30	70	100
2		Preparing the welding machine for Welding process	25	75	100
3		Support the welder in the welding process	25	75	100
4		Handling the Finished goods and storage	25	75	100
5		Inspection & Maintennace of Product quality	25	75	100
6	Health and Safety Practices	Maintain Safe & Health working Environment	25	75	100
7	5S at Work	Regular cleaning and Equipment Maintenance	25	75	100
8		Maintain 5S at Work Premises	25	75	100

Welding – Trade Overview

Capex – Machines & Tools

In Rs. L

S.No	Category	Requirement	Qty	Unit Value	Total Value
1	Machine	Welding simulator/ Machine	4	12.0	48.0
2	Software	Welding simulator software	4		
3	Lab	Welding Testing Lab	1		
4	Hardware	PC with UPS back up	4		
4	Furniture	Class room chairs with table top	25	0.1	1.9
5		Teacher tale & Board	1	0.2	0.2
6	General	Miscellaneous	1	1.0	1.0
		Total			**51.0**

Note:

Facility for both Welding simulator and Practical welding with Testing Lab Facility

Welding – Trade Overview

Operating Cost

Manpower cost - Welding								
S.No	Category	Qty in no's					Rs. in L	
		Office	Trainer	LAB	General	Qty	Monthly salary	Monthly Total
1	Placement officer	0.4				0.4	0.25	0.10
2	Office assistant	0.4				0.4	0.1	0.04
3	House keeping				1	1	0.1	0.10
4	Trainer Welding		2	1		3	0.2	0.60
	Total - A	**0.8**	**2**	**1**	**1**	**4.8**		**0.84**
Operating Cost								
1	EB cost					0.4	0.30	0.12
2	Office Expenses					0.4	0.10	0.04
3	Water cost					0.4	0.10	0.04
4	Maintenance cost					0.4	0.05	0.02
5	Tools & Consumables					0.4	0.20	0.08
6	Travelling cost					0.4	0.50	0.20
7	Food cost					0.4	0.23	0.09
8	Other					0.4	0.10	0.04
	Total - B							**0.63**
	Total Cost per Batch = 3A + 2B						**Rs. In L**	**3.78**
	Number of students per Batch						**No's**	**25**

Annual operating cost for 4 batches - Rs. 15.12 Lakh

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CNC Turning & Milling

Trade Overview

Trade	**CNC Turning & Milling**
Sector	Manufacturing
Industry	Machine Tools, Dies, Moulds and Press Tools, Plastics Manufacturing Machinery, Textile Manufacturing Machinery, Process Plant Machinery, Electrical and Power Machinery, Light Engineering Goods
Role Description	Operation of Computer Numerically Controlled (CNC) machines - in order to perform **turning & milling** operations on metal components, as per specifications provided
Minimum Education Qualification	Class X & No Previous Training required
Training(Theory & Practical)	Basic Turning & Milling techniques used in organization Health, Safety & 5S Basic Computer, Communication & soft skills, Life Skill & Financial management
Training Duration	**60 days**
Idle Batch Size	**25 Students**
Assessment Criteria	**Theory - 25% , Practical - 75%**
Standards	**NOS(National Occupational Standards)**
Reference	**NSDC(National Skill Development Corporation)**
Source	**CGSC(Capital Goods Skill Council)**

Learn a skill and Earn a living...

CNC Turning & Milling

Trade Overview

Performance/ Assessment Criteria				
S.No	**Criteria**	**Theory**	**Lab**	**Total**
1	Perform turning & Milling operations on metal components using Computer Numerically Controlled (CNC) machines	22	78	100
2	Use basic health and safety practices at the workplace	36	64	100
3	Work effectively with others	30	70	100

CNC Turning & Milling

Trade Overview

Capex Machines & Tools

S.no	Category	Requirement	Qty	Unit value	Total Value
1	Machine	CNC Milling machine	1	25.0	25.0
2	Machine	CNC turning machine	1	15.0	15.0
3	Accessories	Attachment and fixtures	2	3.0	6.0
4	Tools	Tools and Trolley	2	1.0	2.0
5	Furniture	Class room chairs with table top	25	0.1	1.9
		Teacher table & Board	1	0.2	0.2
6	General	Miscellaneous	1	1.0	1.0
		Total			**51.0**

CNC Turning & Milling

Trade Overview - Operating Cost

Manpower cost - CNC Turning & Milling								
S.No	Category	Qty in no's					Rs. in L	
		Office	Trainer	LAB	Gen	Total	Monthly salary	Monthly Total
1	Placement officer	0.4				0.4	0.25	0.10
2	Office assistant	0.4				0.4	0.1	0.04
3	House keeping				1	1	0.1	0.10
4	Trainer CNC Trade		2	1		3	0.2	0.60
	Total - A	**0.8**	**2**	**1**	**1**	**4.8**		**0.84**
Operating Cost								
1	EB cost					0.4	0.3	0.12
2	Office Expenses					0.4	0.1	0.04
3	Water cost					0.4	0.1	0.04
4	Maintenance cost					0.4	0.1	0.02
5	Tools & Consumables					0.4	0.2	0.08
6	Travelling cost					0.4	0.5	0.20
7	Food cost					0.4	0.2	0.09
8	Other					0.4	0.1	0.04
	Total - B						**1.6**	**0.63**
	Total Cost per Batch = 3A + 2B						**Rs. in L**	**3.78**
	Number of students per Batch						**No's**	**25**

Annual operating cost for 4 batches - Rs. 15.12 Lakh

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Accounting Software - ERP

Trade Overview

Trade	**Tally ERP**
Sector	Finance & Accounting
Industry	Any organization
Role Description	Basic knowledge to meet the accounting requirements of the industry/organisation
Minimum Education Qualification	Class XII & No Previous Training is required
Training(Theory & Practical)	Basic Tally Training on Accounting, Billing , Payroll, Inventory management, Banking, Taxation(GST,TDS & TCS) Basic Computer, Communication & soft skills, Life Skill & Financial management
Training Duration	**60 days**
Idle Batch Size	**25 Students**
Assessment Criteria	**Theory - 25% , Practical - 75%**

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Accounting Softwares - ERP

Trade Overview – Capex

In Rs. L

S.No	Category	Requirement	Qty	Unit value	Total Value
1	Account S	Softwares	25	0.5	12.5
2	Computer	PC with login	25	0.8	18.8
3	Furnitures	PC Table	25	0.1	2.5
4	Furnitures	Chairs	25	0.07	1.8
5	General	Miscellaneous Items	1	1.0	1.0
		Total			**36.5**

Accounting Software - ERP – Trade Overview

Manpower cost - Tally								
S.no	Category	Qty in no's					Rs. in L	
		Office	Trainer	LAB	Gen	Total	Month salary	Total
1	Placement officer	0.2				0.2	0.25	0.05
2	Office assistant	0.2				0.2	0.1	0.02
3	House keeping				1	1	0.1	0.10
4	Trainer Tally		1	1		2	0.2	0.40
	Total - A	**0.4**	**1**	**1**	**1**	**3.4**		**0.57**
Operating Cost								
1	EB cost					0.2	0.3	0.06
2	Office Expenses					0.2	0.1	0.02
3	Water cost					0.2	0.1	0.02
4	Maintenance cost					0.2	0.1	0.01
5	Tools & Consumables					0.2	0.2	0.04
6	Travelling cost					0.2	0.5	0.10
7	Food cost					0.2	0.2	0.05
8	Other					0.2	0.1	0.02
	Total - B						**1.6**	**0.32**
	Total Cost per Batch = 3A + 2B						**Rs. in L**	**2.34**
	Number of Students per Batch						**No's**	**25.0**

Annual operating cost for 4 batches - Rs. 9.36 Lakh

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Capex - Overview

In Rs. L

Category	Value	Trade		
		Welding	CNC Operation	Tally / Computer
Civil Construction Work	414.4	165.8	165.8	82.9
Interior Work	55.7	22.3	22.3	11.1
Machines & Tools	138.6	51.0	51.0	36.5
Service Items	138.0	55.2	55.2	27.6
Office Items	40.1	16.0	16.0	8.0
Miscellaneous/ Solar Plant	20.0	8.0	8.0	4.0
Total	**806.8**	**318.3**	**318.3**	**170.1**

Opex - Overview

Manpower cost											
S.No	Category	Qty in no's					Rs. in L			CNC Opn	Tally
		Office	Trainer	LAB	Gen	Total	Month Salary	Total	Welding		
4	Placement officer	1				1	0.25	0.25	0.10	0.10	0.05
5	Office assistant	1				1	0.10	0.10	0.04	0.04	0.02
6	House keeping				3	3	0.10	0.30	0.10	0.10	0.10
7	Trainer 1 Welding		2	1		3	0.20	0.60	0.60		
8	Trainer 3 CNC operation		2	1		3	0.20	0.60		0.60	
9	Trainer 4 Tally		1	1		2	0.20	0.40			0.40
	Total - A	**2**	**5**	**3**	**3**	**13**		**2.25**	**0.84**	**0.84**	**0.57**
Operating Cost											
1	EB cost					1	0.30	0.30	0.12	0.12	0.06
2	Office Expenses					1	0.10	0.10	0.04	0.04	0.02
3	Water cost					1	0.10	0.10	0.04	0.04	0.02
4	Maintenance cost					1	0.05	0.05	0.02	0.02	0.01
5	Tools & Consumables					1	0.20	0.20	0.08	0.08	0.04
6	Travelling cost					1	0.50	0.50	0.20	0.20	0.10
7	Food cost					1	0.23	0.23	0.09	0.09	0.05
8	Other					1	0.10	0.10	0.04	0.04	0.02
	Total - B						**1.58**	**1.58**	**0.63**	**0.63**	**0.32**
	Total Cost per Batch							**9.90**	**3.78**	**3.78**	**2.34**

Batch Size : 25 Students

Batch Duration : 60 days

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Salient Features

- G + 2 with space – 9000 Sq.ft
- Conference Hall – 250 People Capacity
- Welding, CNC Operations & Tally/Accounting Class and Lab facility
- Employability
- Dining facility

- Green Building
- Renewable Energy with Roof Top Solar – 20kW

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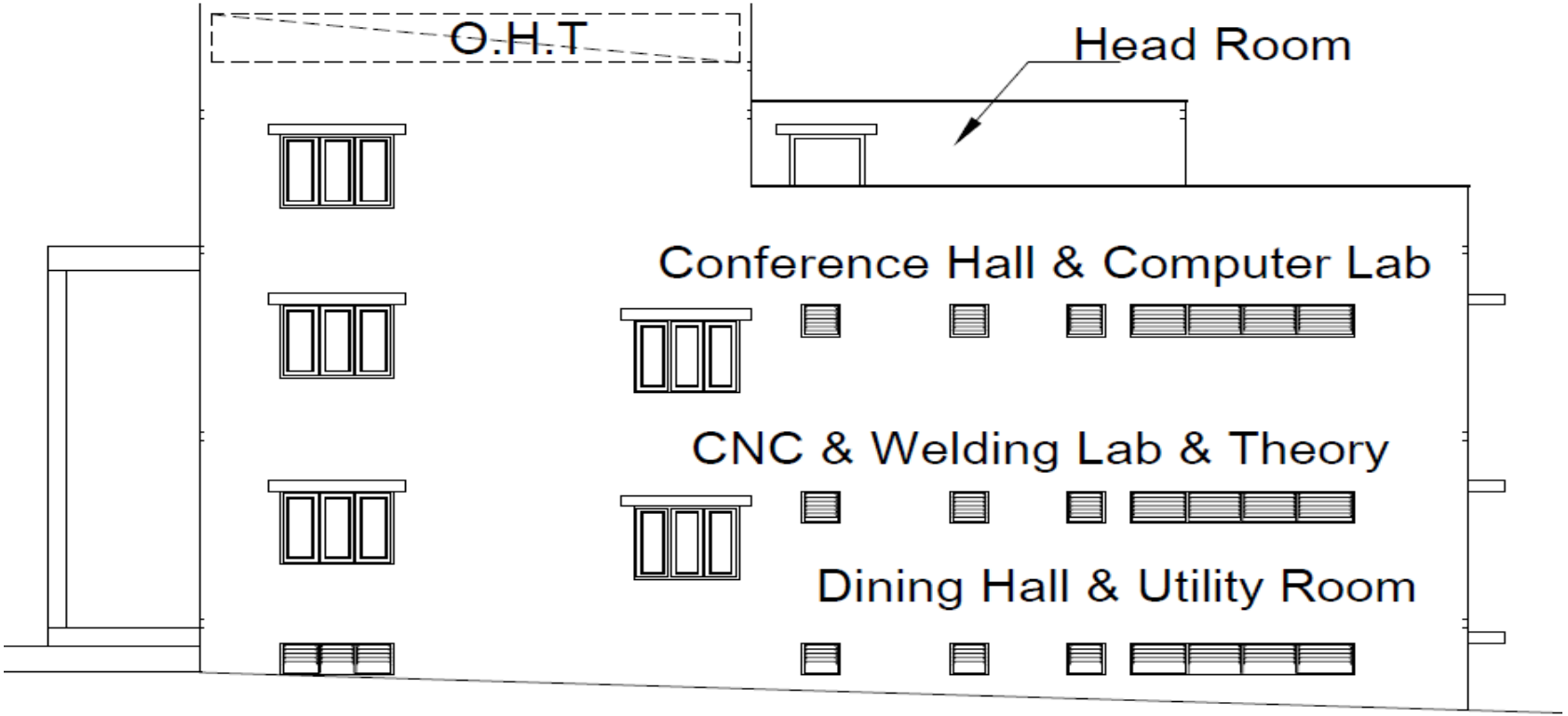
HIA Building Overview



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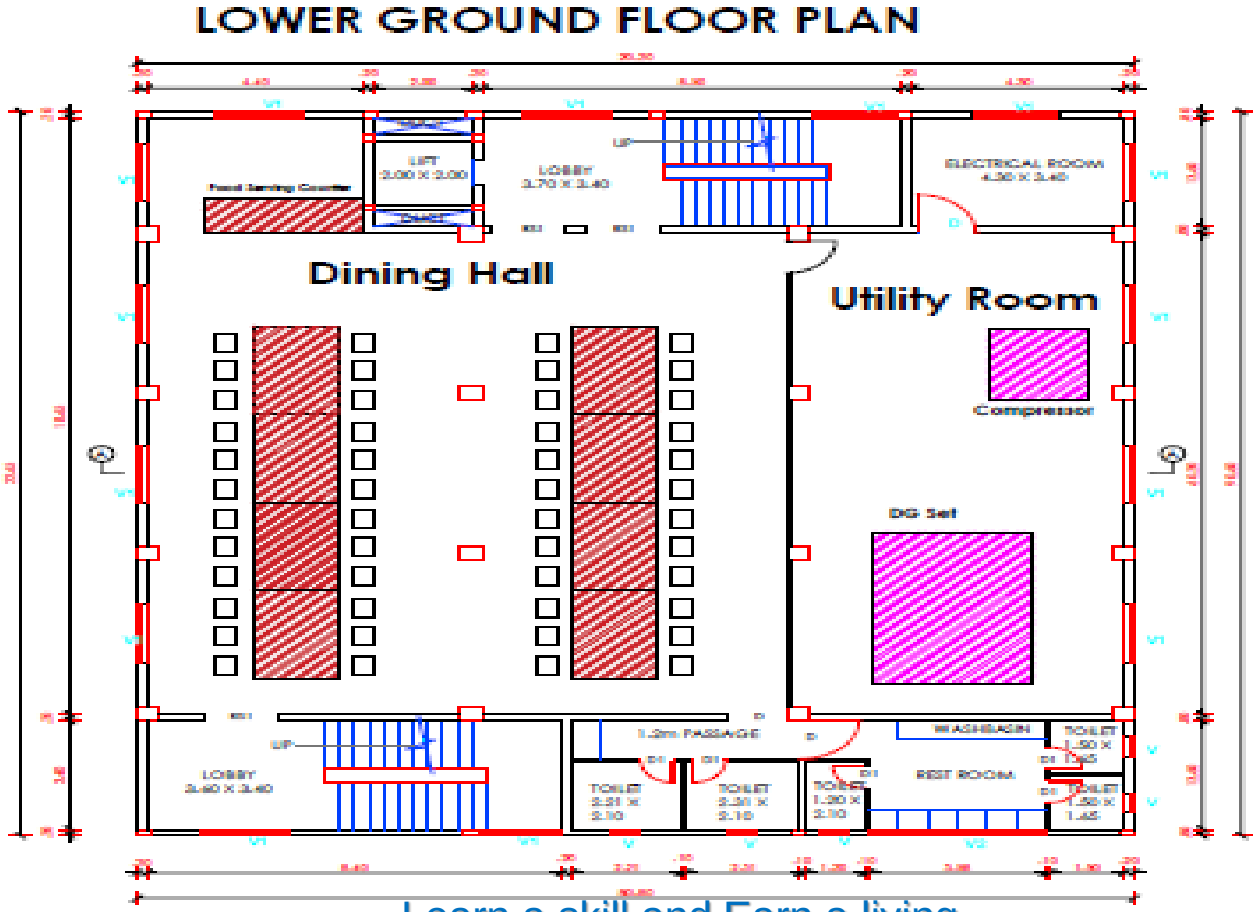
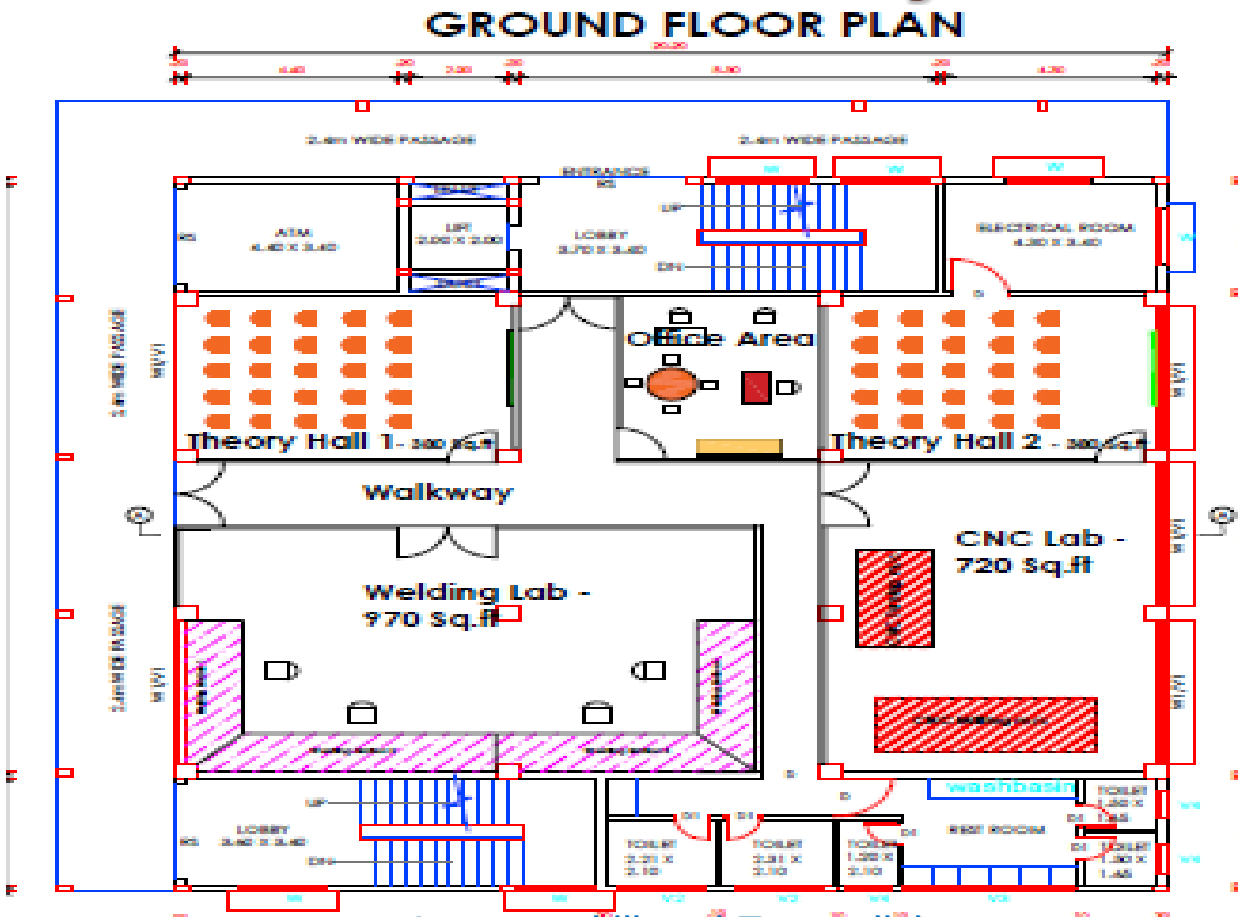
HIA SDC : Layout – Lr. G Floor



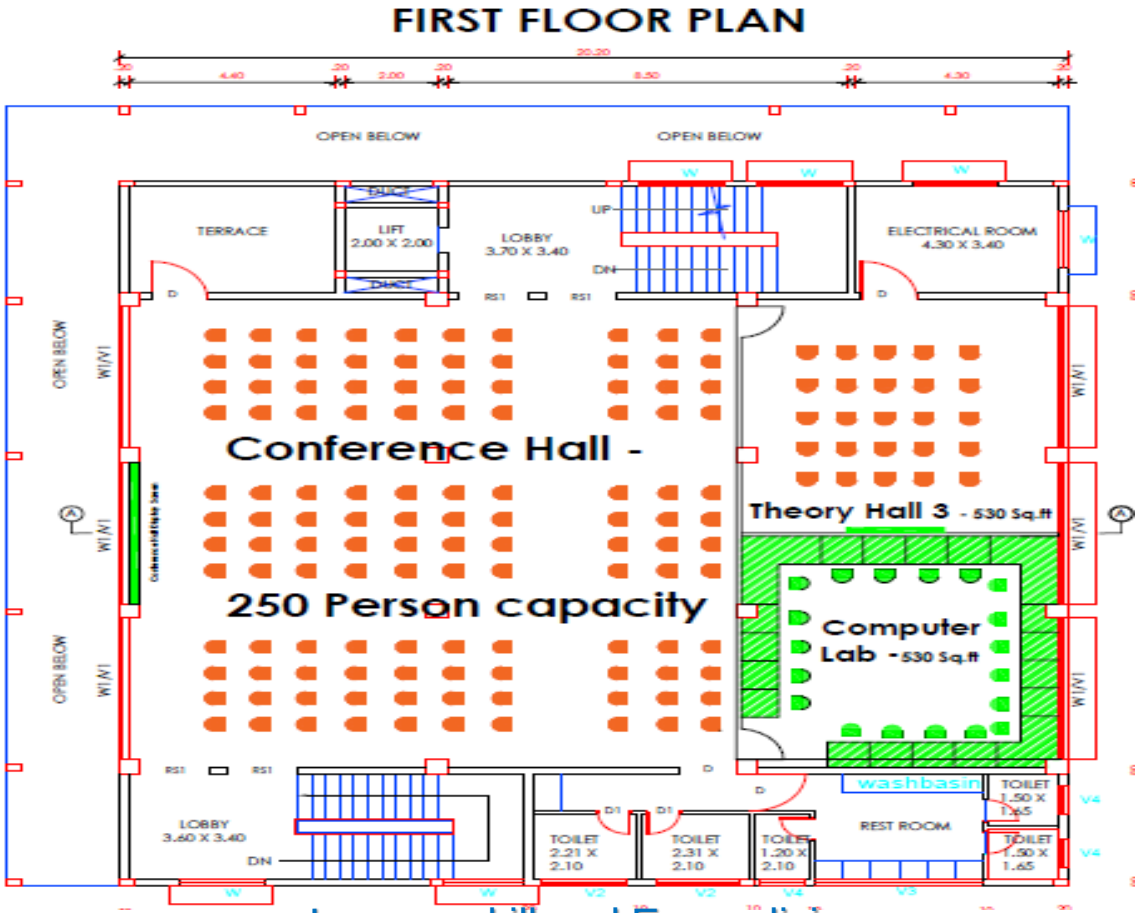
Learn a skill and Earn a living...

HIA SDC : Layout G Floor



Learn a skill and Earn a living...

HIA SDC : Layout I Floor



Learn a skill and Earn a living...

Areas to evolve and refine

- Knowledge partner
  - Lesson planning
  - Soft skill, Safety and life skill
  - Focused soft and safety
  - Skill committee
  - Basic Level of lesson – Micro / Mini / Medium
  - Specific to industry and sector
  - Up skilling and re skilling
- Recruitment
- Certification /Affiliation

Areas to evolve and refine

- Revenue model
  - Apprentice model - Short duration
  - PMKY
  - NSDC(TNSDC)
  - Up skilling
  - Re-skilling
  - self-sustaining through rental and pay for training
  - HIA subscription
  - Apprentice Model
- Industry contribution - In what forms
- Employment
- Bosch bench mark
- Team lease model
- NTTF Mr. Anilkumar - Partner willing to fund

Thank you !

Learn a skill and Earn a living...

Performance Criteria - Welding

Category	Assessment Criteria	Theory	Practical
Understand Welding Job requirements & related processes	PC1.understand the work order (work output) required from the process and discuss the same with the operator		10
	PC2.refer all engineering drawings and sketches related to the work output to understand the measurement and shape of the required work output		13
	PC3.clearly understanding the does and don'ts of the manufacturing process as defined in SOPs/ Work Instructions or defined by supervisors		12
	PC4. refer the queries to the Operator/ Welder if they cannot be resolved by the assistant welder on own discuss and conclude		10
	PC5.obtain help or advice from specialist if the problem is outside his/her area of competence or experience		13
	PC6.confirm self - understanding to the Operator once the query is resolved so that all doubts & queries can be resolved before the actual process execution		12
	All KA, KB for the NOS	30	
		30	**70**

Performance Criteria - Welding

Category	Assessment Criteria	Theory	Practical
Prepare the welding machine for the welding process	PC1. discuss with the operator right welding methodology and process to be adopted for completing the work order		6
	PC2. discuss the various welding parameters like temperature, pressure, electrode type, electrode distance (gap), Welding current, voltage, process time etc. before starting the welding process		6
	PC3. discuss the material required and the equipment availability for executing the activity with the team members		5
	PC4 discuss with the operator on the type of electrode material and thickness, filler material and flux to be used for the welding process		6
	PC5.ensure that the required material is procured from the store before starting the welding process		5
	PC6. clean the surface of the electrodes and the welding gun and remove dust or any other impurities		5
	PC7.clean other welding machine auxiliaries(Welding Transformer, Gas Discharge unit, Flux wire) before the initiation of the welding process		5
	PC8. setup the welding apparatus as per process standard and the work instruction		6
	PC9.clean the surface to the metal parts (work pieces) which need to be joint		5
	PC10.remove any extra material, sharp edges etc. which might impact the final welded product		5
	PC11. ensure the work pieces available for welding is in line with the product drawing/ sketches available with the operator		6
	PC12.in case the parts are not as per the given measurements, remove extra material by using chippers, grinders etc.		5
	PC13.immediately refer the queries to a operator and the supervisor		5
	PC14.confirm self-understanding to the operator once the query is resolved so that all doubts & queries can be resolved before the actual process execution		5
	All KA, KB for the NOS	25	
		25	**75**

Performance Criteria - Welding

Category	Assessment Criteria	Theory	Practical
Support the welder in the welding process	PC1.hold the parts which need to be welded together using a clamp and align them with the electrodes as per the job requirement so that the work pieces do not fall down/ turn		9
	PC2. install the work pieces on the Welding apparatus keeping in mind the electrodes distance, contact area, pressure, temperature application etc. as specified in the Welding process/work instructions		8
	PC3. check for operation of core welding equipment like welding gun, welding transformer, gas cylinders, gas discharge units as per welding process/work instructions		7
	PC4.support the operator in conducting destructive and non-destructive test activity		7
	PC5.support the operator in the Gas Discharge welding by holding the Welding Gun and the Filler material/ Gas discharge		7
	PC6. help the welder in monitoring the welding process parameters (Pressure, Temperature, gas discharge flow, electrode force, electrode distance etc.) by observing various instrument and gauges and correct if not within standards		8
	PC7.measure the final welded piece and compare the dimensions as prescribed in the work order engineering drawing		8
	PC8.in case the parts are not as per the given measurements, remove extra material by using chippers, grinders etc.		7
	PC9.if there are any bulges, then hammer the bulges and give the work pieces the desired shape		7
	PC10.keep the operator informed of any inconsistency in the welding process, quality issues etc. so that the same can be dealt immediately		7
	All KA, KB for the NOS	25	
	Total	**25**	**75**

Performance Criteria - Welding

Category	Assessment Criteria	Theory	Practical
Remove the finished goods and store them in the designated place	PC1. depending on the shape/weight of the output select a suitable method for movement		11
	PC2.clamp the product and lift the output object using suitable equipment like hoist, lifts, crane etc.		10
	PC3.ensure that there is no damage to the lifted work pieces		11
	PC4.carry the output product to the designated area using hangars, conveyor belts, cranes, forklifts etc.		11
	PC5.post inspection process, tag the right quality pieces for future identification		10
	PC6. carry the tagged pieces to the storage areas using suitable method of movement means		11
	PC7.keep a record of the finished goods along with the storage identification numbers for easy sorting		11
	All KA, KB for the NOS	25	
	Total	**25**	**75**

Performance Criteria - Welding

Category	Assessment Criteria	Theory	Practical
Maintain a safe and healthy working environment	PC1.identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals ,loud noise		7
	PC2.inform the concerned authorities about the potential risks identified in the processes, workplace area/ layout, materials used etc		7
	PC3.inform the concerned authorities about damages which can potentially harm man/ machine during operations		7
	PC4.create awareness amongst other by sharing information on the identified risks		7
	PC5.follow the instructions given on the equipment manual describing the operating process of the equipments		6
	PC6.follow the Safety, Health and Environment related practices developed by the organization		6
	PC7.operate the machine using the recommended Personal Protective Equipments (PPE)		7
	PC8.maintain a clean and safe working environment near the workplace and ensure there is no spillage of chemicals, production waste, oil, solvents etc		7
	PC9.maintain high standards of personal hygiene at the work place		7
	PC10.ensure that the waste disposal takes place in the designated area as per organization SOP		7
	PC11.inform appropriately the medical officer/ HR in case of self or an employee's illness of contagious nature so that preventive actions can be planned for others		7
	All KA, KB for the NOS	25	
		25	**75**

Performance Criteria - Welding

Category	Assessment Criteria	Theory	Practical
Conduct quality checks and inspection of the finished metal cast products	PC1.measure the specifications of the finished product using devices like micrometers, vernier calipers, gauges, rulers, weighing scales and any other inspection equipment and compare with the parameters given in the work order		13
	PC2.compare texture, color, surface properties, hardness and strength with the given product specifications		13
	PC3.note down the observations of the basic inspection process and identify pieces which are OK and also not meeting the specified standards		13
	PC4.separate the defective pieces into two categories – pieces which can be repaired/ modified and pieces which are beyond repair		12
	PC5.discard the pieces which are beyond repair and repair the ones which need minor modifications/ rework		12
	PC6.maintain records of each category of work outputs		12
	All KA, KB for the NOS	25	
		25	**75**

Performance Criteria - Welding

Catgeory	Assessment Criteria	Theory	Practical
Conduct regular cleaning and maintenance of the equipment	PC1.arrange all equipment in a proper order as indicated in the equipment manual		7
	PC2.store equipment auxiliaries and spare parts in proper designated Areas		7
	PC3.clearly tag process related equipment parts/ spare parts as per part number or serial number so that sorting of equipment becomes easy		7
	PC4.cover equipment so that there is limited dust collection and moisture contact		7
	PC5.regularly clean the equipment and process auxiliaries to remove any dust, moisture, waste material which would have got collected on the equipment		6
	PC6.regularly open the equipment and clean the internal parts of the Equipment		6
	PC7.regularly clean the working area under the process and create a healthy, clean and safe working environment		6
	PC8.check the working of all bearing, rollers, shafts etc. and oil all moving parts of the equipment on a periodic basis		7
	PC9.check the working of non-moving parts and periodically conduct preventive maintenance to prevent machine failure		7
	PC10.periodically check the equipment calibration and report any errors to the maintenance teams for rectification		7
	PC11.prepare periodic log sheets of equipment maintenance dates, maintenance schedules and maintenance activity conducted on the equipment		8
	All KA, KB for the NOS	25	
		25	**75**

Performance Criteria - Welding

Catgeory	Assessment Criteria	Theory	Practical
Maintain 5S at the work premises	PC1.follow the sorting process and check that the tools, fixtures & jigs that are lying on workstations are the ones in use and un-necessary items are not cluttering the workbenches or work surfaces		3
	PC2.ensure segregation of waste in hazardous/ non Hazardous waste as per the sorting work instructions		3
	PC3.follow the technique of waste disposal and waste storage in the proper bins as per SOP		3
	PC4.segregate the items which are labeled as red tag items for the process area and keep them in the correct places		3
	PC5.sort the tools/ equipment/ fasteners/ spare parts as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions		3
	PC6.ensure that areas of material storage areas are not overflowing		2
	PC7.properly stack the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required		3
	PC8.return the extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area		3
	PC9.follow the floor markings/ area markings used for demarcating the various sections in the plant as per the prescribed instructions and standards		3
	PC10.follow the proper labeling mechanism of instruments/ boxes/ containers and maintaining reference files/ documents with the codes and the lists		3
	PC11.check that the items in the respective areas have been identified as broken or damaged		3
	PC12.follow the given instructions and check for labeling of fluids, oils. lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.		3
	PC13.make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions		3
	PC14.check whether safety glasses are clean and in good condition		2
		25	**75**

Performance Criteria

CNC Operations

Elements	Performance criteria	Theory	Practical
Work Safely	PC1. comply with health and safety, environmental and other relevant regulations and guidelines at work adhere to procedures and guidelines for personal	1	1
	PC2. protective equipment (PPE) and other relevant safety regulations while performing CNC turning operations	1	2
	PC3. read and understand safety instructions, warning signs on the machine	0	2
	PC4. work following laid down procedures and instructions	1	1
	PC5. ensure work area is clean and safe from hazards	0	1
	PC6. ensure that all tools and equipment are in a safe and usable condition	0	1
		3	**8**

Performance Criteria

CNC Operations

Elements	Performance criteria	Theory	Practical
Prepare for Performance of Turning & Milling Operations using CNC machine	PC7. obtain job specification from a valid and approved source	0	1
	PC8. read and establish job requirements from the job specification document accurately	1	1
	PC9. report and rectify incorrect and inconsistent information in job specification documents as per organization procedures	1	2
	PC10. prepare the work area for the turning operations as per procedure or operational specification	1	1
	PC11. perform daily maintenance of machine according to defined checklist, at the beginning of day's shifts.	1	2
	PC12. ensure that the components used are free from foreign objects, dirt or other contamination	0	1
	PC13. conduct a preliminary check of the readiness of the CNC turning machine	0	2
	PC14. obtain correct work-pieces/raw materials and consumables as per job requirements	1	1
	PC15. obtain appropriate cutting tools and hand tools and measuring tools as per job requirements	1	1
	PC16. ensure that all measuring equipment is calibrated and approved for usage	0	2
	PC17. set work pieces as per job requirements using appropriate positioning and/or holding devices and support mechanisms	1	2
	PC18. seek necessary instruction/training on the operation of the machine where required from appropriate sources	0	2
	PC19. check that the operating program is at the correct start point and the tool is at a safe position clear of the part	0	2
	PC20. perform basic daily maintenance activities as per the checklist given	1	1
		8	**21**

Performance Criteria

CNC Operations

Elements	Performance criteria	Theory	Practical
Health & safety	PC1. use protective clothing/equipment for specific tasks and work conditions	2	3
	PC2. state the name and location of people responsible for health and safety in the workplace	1	2
	PC3. state the names and location of documents that refer to health and safety in the workplace	1	2
	PC4. identify job-site hazardous work and state possible causes of risk or accident in the workplace	2	3
	PC5. carry out safe working practices while dealing with hazards to ensure the safety of self and others state methods of accident prevention in the work environment of the job role	2	2
	PC6. state location of general health and safety equipment in the workplace	2	1
	PC7. inspect for faults, set up and safely use steps and ladders in general use	2	3
	PC8. work safely in and around trenches, elevated places and confined areas	2	3
	PC9. lift heavy objects safely using correct procedures	2	3
	PC10. apply good housekeeping practices at all times	2	2
	PC11. identify common hazard signs displayed in various areas	2	3
	PC12. retrieve and/or point out documents that refer to health and safety in the workplace	1	2
		21	**29**

Performance Criteria

CNC Operations

Elements	Performance criteria	Theory	Practical
Fire Safety	PC13. use the various appropriate fire extinguishers on different types of fires correctly	1	3
	PC14. demonstrate rescue techniques applied during fire hazard	1	3
	PC15. demonstrate good housekeeping in order to prevent fire hazards	1	2
	PC16. demonstrate the correct use of a fire extinguisher	1	3
		4	**11**
Elements	**Performance criteria**	**Theory**	**Practical**
Emergencies, rescue and first aid procedures	PC17. demonstrate how to free a person from Electrocution	1	3
	PC18. administer appropriate first aid to victims where required eg. in case of bleeding, burns, choking, electric shock, poisoning etc.	1	3
	PC19. demonstrate basic techniques of bandaging	1	2
	PC20. respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments	1	3
	PC21. perform and organize loss minimization or rescue activity during an accident in real or simulated environments	1	2
	PC22. administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases	1	2
	PC23. demonstrate the artificial respiration and the CPR Process	1	2
	PC24. participate in emergency procedures	2	1
	PC25. complete a written accident/incident report or dictate a report to another person, and send report to person responsible	1	3
	PC26. demonstrate correct method to move injured people and others during an emergency	1	3
		11	**24**
	Total B	**36**	**64**
		100	

Performance Criteria

CNC Operations

Elements	Performance criteria	Theory	Practical
Work Effectively with others	PC1. accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required	3	7
	PC2. accurately pass on information to authorized		
	persons who require it and within agreed timescale and confirm its receipt	3	7
	PC3. give information to others clearly, at a pace and in a manner that helps them to understand	3	7
	PC4. display helpful behaviour by assisting others in performing tasks in a positive manner, where required and possible	3	7
	PC5. consult with and assist others to maximize	3	7
	effectiveness and efficiency in carrying out tasks		
	PC6. display appropriate communication etiquette while working	3	7
	PC7. display active listening skills while interacting with others at work	3	7
	PC8. use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism	3	7
	PC9. demonstrate responsible and disciplined behaviours at the workplace	3	7
	PC10. escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict	3	7
	Total C	**30**	**70**
		100	

SDC by HIA in Phase I

- In Phase I HIA is planning to start skill training in following module:
  - Welding
  - CNC Turning & Milling Operations
  - Tally & Computer skills

- The ideal batch size for each module is 25 – 30 students
- Course duration is 400 – 500 hours(As per NSDC Guidelines)
- Basic English, Interview skills and soft skills will be part of each module

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