

Course Title	CALIBRATION OF MECHANICAL MEASURING INSTRUMENTS & GAUGES (Vernier calliper, Micrometer, Dial gauges, Filler gauges)		
Purpose	Upgrading skill in measurement by using mechanical measuring instruments		
Eligibility	Degree/Diploma in relevant branch of engineering or NTC/NAC with 2-3 years relevant trade experience		
Duration	01 weeks		
Location	ADVANCED TRAINING INSTITUTE, MUMBAI		
Learning outcomes	After completion of training the candidate will <ol style="list-style-type: none"> 1. Able to know about function, measuring concept, parts, working ability of Mechanical Measuring Instruments (Vernier caliper, micrometer, dial test indicator, gauges, Vernier height gauge) 2. Have upgraded skill in functions of measuring instruments, Gauges. Working principle of measuring instruments. Knowing about inspection test standard & calibration. 		
Teaching methods	<ol style="list-style-type: none"> 1 Lectures in class room. 2 Practice sessions 3 Group exercises 4 Demonstrations. 5 Valediction sessions. 		
Assessment methods	faculty is assessing the candidates- 1 Means for continual assessment-Factors of assessment- 2 means of final assessment Distribution of marks for the above.)		
Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSION (1.30 pm – 5.30)
	1	Admission/ Introduction of the course subject	Introduction of various Measuring Instruments
	2	Inspection test standard & calibration	practical
	3	Requirements of Calibration And Criteria For Instrument Calibration	Practical
	4	NABL Requirements for Calibration	Practical
	5	Calibration & Test	Feedback / Validation
AIDS	LCD projector, white board, Measuring instruments/machines/material for practice sessions, laptop.		
Instruction material	Softcopy of course material		

Course Title	INTRODUCTION TO 3D CO-ORDINATE MEASURING MACHINE		
Purpose	Upgrading skill in Metrology, Measurement, functions, Concept of 3D co-ordinate measuring machine		
Eligibility	Degree/Diploma in relevant branch of engineering or NTC/NAC with 2-3 years relevant trade experience		
Duration	01 weeks		
Location	ADVANCED TRAINING INSTITUTE, MUMBAI		
Learning outcomes	<p>After completion of training the candidate would be able to</p> <ol style="list-style-type: none"> 1. Measure the job by using of 3D co-ordinate Measuring Machine. 2. Measure the geometrical & cylindrical job and also upgrade in inspecting geometric tolerances using a Roundness/cylindrical geometric measuring instrument. 3. Upgrade skill in functions of CMM, Fundamental concepts of CMM, Calibration of CMM, CMM practical's. 		
Teaching methods	<ol style="list-style-type: none"> 1 Lectures in class room. 2 Practice sessions 3 Group exercises . 4 Demonstrations. 5 Valediction sessions. 		
Assessment methods	<p>faculty is assessing the candidates-</p> <ol style="list-style-type: none"> 1 Continual assessment 2 Final assessment 		
Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSION (1.30 pm – 5.30)
	1	ADMISSION/ INTRODUCTION OF THE SUBJECT	METROLOGY CONCEPT , CO-ORDINATE WITH METROLOGY
	2	WORKING PRINCIPLE OF CMM, TYPES OF CMM	TERMS AND DEFINITION USED , CMM-COMPONENTS AND DESCRIPTION, CMM PRACTICALS
	3	CARE AND MAINTENANCE OF CMM, CMM APPLICATION SOFTWARES	TYPES OF PROBES, PROBE HEADS AND PROBING, GEOMETRICAL FEATURES, CMM PRACTICALS
	4	FORM ERRORS , EVALUTION OF FORM ERRORS, FORM MEASUREMENT ON CMM, CALIBRATION OF CMM	CMM- TECHNICAL DATA, SELECTION OF CMM, CMM PRACTICALS
	5	PERFORMANCE TEST ON CMM,	FEEDBACK / VALIDATION
AIDS	Projector, White board, Laptop, Printers, Machines & Instruments.		
Instruction material	Soft copy of course content.		

Course Title	Concept of Project Management		
Purpose	After completion of the training the candidate will have basic knowledge of project management.		
Eligibility	Degree/Diploma in relevant branch of engineering or NTC/NAC with 2-3 years relevant trade experience		
Duration	01 weeks		
Location	ADVANCED TRAINING INSTITUTE, MUMBAI		
Learning outcome	After completion of training the candidate will Able to draw PERT and CPM network diagram and calculate optimum time required for completion of project.		
Teaching methods	1 Lectures in class room. 2 Case study. 3 Group exercises. 4 Demonstrations. 5 Valediction sessions.		
Assessment methods	faculty is assessing the candidates- 1 Means for continual assessment-Factors of assessment- 2 means of final assessment Distribution of marks for the above.)		
Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSION (1.30 pm- 5.30 pm)
	1	Admission, Introduction, Awareness about Subject	Introduction to project management ,Difference between operation management & Project management Role of project management
	2	Project life cycle, Planning – Project	Planning – Finance, quality Planning – Risk, communication
	3	Contract supplier, review Problem on inventory	Problem solving on PERT, case study
	4	Execution of project, Build..., monitoring & control of project	Problem solving on CPM, case study
	5	Clouse of project – Procedure Review of Project on completion	Feedback / discussion / valediction session
AIDS	Projector, White board, Laptop, Printer.		
Instruction material	Soft copy of Course Material		

Course Title	SIX SIGMA CONCEPT		
Purpose	Having awareness of SIX SIGMA , upgrade skill in quality control.		
Eligibility	Degree/Diploma in relevant branch of engineering or NTC/NAC with 2-3 years relevant trade experience		
Duration	01 weeks		
Location	ADVANCED TRAINING INSTITUTE, MUMBAI		
Learning outcomes	After completion of training the candidate will be <ol style="list-style-type: none"> 1. Having awareness in SIX SIGMA METHODOLOGY 2. Able to Assist in doing documentation in SIX SIGMA Project 3. Knowing the concept of preparation of Project Charter 		
Teaching methods	<ol style="list-style-type: none"> 1 Lectures in class room. 2 Case studies. 3 Group exercises. 4 Demonstrations. 5 Valediction sessions. 		
Assessment methods	faculty is assessing the candidates- <ol style="list-style-type: none"> 1 Means for continual assessment-Factors of assessment- 2 means of final assessment Distribution of marks for the above.)		
Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSION (1.30 pm- 5.30 pm)
	1	Admission / Introduction to the course subject	Introduction to Six Sigma, History Of Six Sigma, What is Six Sigma?, Why is it so popular?, Industries that Use Six Sigma, Six Sigma Methodology.
	2	Implementation roles, Statistical meaning of Six Sigma, Deming's PDCA Cycle, DMAIC Model, Six Sigma Tools	Define Phase , Project Charter, VOC and CTQ, House Of Quality, Process Mapping
	3	Measure Phase , Root Cause Analysis, Ishikawa or Fishbone Diagram, 5 Whys Technique, FMEA, Measurement system Analysis ,Process Performance and Capability	Analyse Phase , ANOVA, Hypothesis Testing
	4	Improve Phase , Seven Deadly Wastes, Five S ,Benchmarking, Correlation and Regression Analysis, Design of Experiments.	Control Phase , Control Charts, Red Bead Experiment, Types of Control Charts, Variable Control Charts, Attribute Control Charts.
	5	Case Study involving all the phases	Feedback / discussion / valediction session
AIDS	Projector, White board, Laptop, Printers, Machines & Instruments.		
Instruction material	Soft copy of Course Material		

Course Title	INTEGRATED MANAGEMENT SYSTEM		
Purpose	Upgrading skill in functions of fundamental concepts of ISO 9001:2008,ISO 14001,ISO 18001		
Eligibility	Degree/Diploma in relevant branch of engineering or NTC/NAC with 2-3 years relevant trade experience		
Duration	01 weeks		
Location	ADVANCED TRAINING INSTITUTE, MUMBAI		
Learning outcomes	After completion of training the candidate will <ol style="list-style-type: none"> 1. Able to Have knowledge of QMS,EMS,OHSAS 2. Have upgraded skill in functions of fundamental concepts of statistical concepts in quality assurance, Environment Health Safety. 		
Teaching methods	<ol style="list-style-type: none"> 1 Lectures in class room. 2 Practice sessions or practical. 3 Group exercises or projects. 4 Demonstrations. 5 Valediction sessions. 		
Assessment methods	faculty is assessing the candidates- 1 Means for continual assessment-Factors of assessment- 2 means of final assessment Distribution of marks for the above.)		
Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSTION (1.30 pm – 5.30)
	1	Admission/ Introduction to the course subject	What is IMS,Importance of IMS in the Manufacturing Sector.
	2	Introduction to ISO 9001:2008,Principles of Quality management.	ISO 9001:2008 Clauses and Guidelines
	3	Introduction to EMS ISO 14000 Series, ISO 14001 standard, Basic principles and methodology	Conformity Assessment, ISO 14001 and EMAS ,Complementarities and Differences
	4	Introduction to ISO 18000 Series ,ISO 18001 standard, Benefits of OHSMS	Introduction to Health and Safety Manual including Health and Safety procedures, Risk Assessment, H&S policies, Codes of Practice, Employee Guides ,Hazard Tables.
	5	Introduction to Advanced House Keeping Concepts like Five S (WPMS)	Feedback / discussion / valediction session
AIDS	Projector, White board, Laptop, Printers, Machines & Instruments.		
Instruction material	Softcopy of course material		

Course Title	ISO 9001:2008		
Purpose	Having awareness of ISO 9001:2008, upgrade skill in quality control.		
Eligibility	Degree/Diploma in relevant branch of engineering or NTC/NAC with 2-3 years relevant trade experience		
Duration	01 weeks		
Location	ADVANCED TRAINING INSTITUTE, MUMBAI		
Learning outcomes	After completion of training the candidate will <ol style="list-style-type: none"> 1. Having awareness in ISO 9001:2008 2. Able to do documentation in ISO system. 3. Knowing the concept of preparation of quality manual. 		
Teaching methods	<ol style="list-style-type: none"> 1 Lectures in class room. 2 Case study. 3 Group exercises. 4 Demonstrations. 5 Valediction sessions. 		
Assessment methods	faculty is assessing the candidates- <ol style="list-style-type: none"> 1 Means for continual assessment-Factors of assessment- 2 means of final assessment Distribution of marks for the above.)		
Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSION (1.30 pm- 5.30 pm)
	1	Admission / Introduction to the course subject.	ISO 9001:2008, Background and introduction, why to go for certification, benefits, The ideology of ISO 9001:2008, prerequisites of becoming ISO 9001:2008 compliants, quality, an organization as a network, quality definition and management, action planning check sheet, evaluation of quality system, documentation of quality system, audit, ISO family, Expansion, challenges, summery.
	2	ISO- what you need to know, standard of ISO, How did ISO get started, ISO organization, documentation, elements of standards, importance of ISO, steps in registration six elements of registration.	What is ISO? How it is implemented today, how it can be used in business, parts of ISO, ISO 9001:2008 structure chart, cost of registration for ISO, other ISO programmes, summery.
	3	Objectives of ISO9001-2008, model, Principle of new standard, process approach, system requirement, Q.M.S., management responsibility, resource management, human resource, production realization, measurement analysis and improvements, criteria for measurement, challenges in implementation, transition process.	Case Study/Role play in a Mock Audit.
	4	Introduction to QC-9001:2008, QS awareness and information, basic responsibility, documentation, QS interrelationship, controlled documentation, types of records, record management activities, preparation, registration, audit, types of audit, things to do.	Case study/Role play in a Mock Audit.

	5	ISO-9001:2008, tips and, life saving techniques for ISO implementation, steering team, management review, rules to be followed.	Feedback / discussion / valediction session.
AIDS	Projector, White board, Laptop, Printers, Machines & Instruments.		
Instruction material	Soft copy of Course Material		

Course Title	METROLOGY AND ENGINEERING INSPECTION		
Purpose	Upgrading skill in functions of metrology & engineering inspection		
Eligibility	Degree/Diploma in relevant branch of engineering or NTC/NAC with 2-3 years relevant trade experience		
Duration	02 weeks		
Location	ADVANCED TRAINING INSTITUTE, MUMBAI		
Learning outcomes	After completion of training the candidate would be able to <ol style="list-style-type: none"> 1. Measure the job by using Vernier Caliper, Micrometer, Dial test indicator, Vernier height gauge. 2. Have upgraded skill in functions of fundamental concepts of metrology, various shapes measurement and their limit, fit, tolerance. climatic condition for measuring instrument. 		
Teaching methods	<ol style="list-style-type: none"> 1 Lectures in class room. 2 Practice sessions or practical. 3 Group exercises or projects. 4 Demonstrations. 5 Valediction sessions. 		
Assessment methods	faculty is assessing the candidates- <ol style="list-style-type: none"> 1 Means for continual assessment-Factors of assessment- 2 means of final assessment Distribution of marks for the above.)		
Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSION (1.30 pm – 5.30)
	1	ADMISSION/ INTRODUCTION TO THE COURSE SUBJECT .	INTRODUCTION TO METROLOG, TERMILOGY USED IN METROLOGY.
	2	STANDARD OF LENGTH, TRACEABILITY, CARE USE AND MAINTENANCE OF INSTRUMENT.	GAUGE BLOCK AND ACCESSORIES, SOURCES OF ERRORS IN MEASUREMENTS.
	3	TAPER ANGLE MEASUREMENT, THREADS MEASUREMENT .	LIMITS, FITS, TOLERANCE, GEOMETRICAL FEATURES.
	4	QUALITY CONTROL, INSPECTION AND INSPECTION TECHNIQUE, MEASUREMENT OF GEARS.	ASSESSMENT OF SURFACE ROUGHNESS, CALIBRATION AND CALIBRATION OF VERNIER CALIPER & MICROMETER.
	5	CLIMATIC CONDITIONS OF TESTING & CALIBRATION LABORATORIES, LIST OF INDIAN STANDARD.	FEEDBACK VALIDATION.
AIDS	Projector, White board, Laptop, Printers, Machines & measuring Instruments.		
Instruction material	Soft copy of course material		

Course Title	PRODUCTION PLANNING AND CONTROL		
Purpose	Upgrading skill in functions of PPC, Materials Management, Inventory Management, H.R. planning and also Material Handling.		
Eligibility	Degree/Diploma in relevant branch of engineering or NTC/NAC with 2-3 years relevant trade experience		
Duration	01 weeks		
Location	ADVANCED TRAINING INSTITUTE, MUMBAI		
Learning outcomes	After completion of training the candidate will 1. Able to do planning for production activity and decide where to put controlling point 2. Able to calculate demand by forecasting method.		
Teaching methods	1 Lectures in class room. 2 Case Study 3 Group exercises or projects. 4 Demonstrations. 5 Valediction sessions.		
Assessment methods	faculty is assessing the candidates- 1 Means for continual assessment-Factors of assessment- 2 means of final assessment Distribution of marks for the above.)		
Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSION (1.30 pm – 5.30)
	1	Admission/ Introduction to the course subject	Function of PPC
	2	Material Management and Inventory control	Network Technique, CPM, PERT
	3	Forecasting	Case problems on PERT-CPM
	4	Planning process, Loading and scheduling	Case problems on inventory and forecasting
	5	Plant Layout, Material Handling	Feedback / discussion /valediction session
AIDS	Projector, White board, Laptop, Printers, Machines & Instruments.		
Instruction material	Softcopy of course material.		

Course Title	TOTAL QUALITY MANAGEMENT (TQM)		
Purpose	Upgrading skill in functions of fundamental concepts of quality control and management		
Eligibility	Degree/Diploma in relevant branch of engineering or NTC/NAC with 2-3 years relevant trade experience		
Duration	01 weeks		
Location	ADVANCED TRAINING INSTITUTE, MUMBAI		
Learning outcomes	After completion of training the candidate will 1. Able to Have knowledge of quality management. 2. After completion of the training the candidate will be able to work in the TQM Environment” in the industry / organization.		
Teaching methods	1 Lectures in class room. 2 Practice sessions or practical. 3 Group exercises or projects. 4 Demonstrations. 5 Valediction sessions.		
Assessment methods	faculty is assessing the candidates- 1 Means for continual assessment-Factors of assessment- 2 means of final assessment Distribution of marks for the above.)		
Course schedule	DAY	FORENOON SESSION (9.00 am – 1.00 pm)	AFTERNOON SESSION (1.30 pm – 5.30)
	1	Admission/ Introduction to the course subject	Means of TQM, Productivity & TQM, Basic tenets of TQM, Aspect of TQM, Continues improvement quality throughout, The TQM system
	2	Basic elements of TQM, definition, tools of TQM, what is quality? Dimensions of quality, Cost of quality, Quality philosophy, Deming’s of 14 points, summery ideas of TQM	Various definition of quality, YQM emphasis, Root of quality, Inspection, philosophers of TQM
	3	Basic of TQM, History of quality cost, Productivity, connection of productivity and quality, Impact on productivity, Levels of quality, Definition of customer & quality, Continues improvement, Problem solving system, Phases of TQM, TQM-journey	Case study & presentation “AIM OF TQM” “ what are the way of TQM?”
	4	Introduction to Total Quality System, Quality improvement in modern business environment, Quality engineering, History of quality improvement, SQC, other aspect of QC improvement, legal aspect of quality, Implementing quality improvement	Case study & presentation “FOCUS on customers with reference to TQM”
	5	Kaizen concept, Continuous improvement, Necessity of kaizen, Salient feature of kaizen, Kaizen & innovation difference, Improvement, Idea generation for Kaizen, Steps for implementation, example of kaizen	Feedback / Discussion / Valediction session
AIDS	Projector, White board, Laptop, Printers, Machines & Instruments.		
Instruction material	Softcopy of course material		