



# **Training on Summer Internship Training**

**Course Duration: Seven Days**

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## **INTRODUCTION**

In this competitive era having an academic certificate does not help. Understanding the applicability of knowledge is the key to success in getting the results. Production Engineering and management activities provide the base for application of knowledge.

This Internship program focuses upon the effective utilization of the acquired knowledge and applicability. Latest tools and techniques to improve the productivity, Quality will provide a winning edge over the competitor. This in turn will help in improving prospects for better employability. The methodologies are based on events aimed at implementing rapid improvements to a process using Lean methods.

## **OBJECTIVES**

- Understanding Production Engineering concepts.
- Interpret the concept of automotive quality management.
- Understanding & interpreting 6 sigma methodology and its application.
- Getting familiar with industry terminologies in the field viz. DMAIC, DMADV, DFSS, DFMEA, DOE, MSA, R&R, VOC, SIPOC, Sigma level, VOC, CTQ
- Improve employability of individuals.

## **COURSE CONTENTS**

- Introduction to Production Engineering.
- ISO/TS-16949 : Production Planning, APQP, PPAP, Quality Plan
- Six Sigma Green Belt: Understanding Six Sigma, DMAIC, DMADV, DFSS methodologies, Lean Concept, Value Stream Mapping, DFMEA & PFMEA,
- Voice Of Customer: Customer identification/ Customer data/ Customer requirements
- Project Selection & Management: Project charter/ Project scope/ Project metrics / Project planning tools/ Project documentation / Project risk analysis / Project closure

- Management and planning tools: affinity diagrams, interrelationship diagrams, tree diagrams, prioritization matrices, matrix diagrams, process decision program charts (PDPC), and activity network diagrams.
- Business results for projects: Process performance & Communication
- Process analysis and documentation using Mean, Mode, Median, Range, Standard Deviation, Introduction to Normal Distribution
- Six Sigma Matrices: DPM, TOP, DPO, DPMO, PPM, Yield
- Types of Data: Variable, attribute, Data Collection Techniques and plan, Data Sampling Methods
- ACCURACY / BIAS: Measurement system analysis (MSA), Repeatability & reproduce ability (R&R)
- Process & Performance Capability: Process performance vs. process specifications, Process capability studies, Process capability ( $C_p$ ,  $C_{pk}$ ) and process performance ( $P_p$ ,  $P_{pk}$ ) indices, Short-term vs. long-term capability and sigma shift
- Correlation and Regression, Exploratory data analysis, Multi-vari studies,
- Hypothesis testing: Basics, Tests for means, variances, and proportions
- Design of experiments (DOE)
- Root cause analysis, cause and effect diagrams, relational matrices, and other problem-solving tools to identify the true cause of a problem.
- Improvement Tools: 5S, Kaizen, Poka-Yoke, Visual Management, GEMBA
- 5 Principles of Lean.
- Waste Management: Waste Transportation, Inventory, Motion, Waiting, Overproduction, Over processing, Defect, Non-utilized people Transportation
- Cycle Time Study, Lead Time Study, Takt Time, JIT

- **Exposure to working on Minitab statistical software**

Learning Methodology

The learning involves following steps :

- Lectures
- Self study
- Assignments
- Implementing a real-life project (optional)
- The interactive games/ exercises are included to facilitate learning.
- Examination will be conducted at the end of the whole program & successful candidates will be issued the certificates. Passing criterion: 70% score in both Assignment and exam.

**Industrial Visit is one of the unique features of this training.**

### **CERTIFICATE**

**Participants qualifying written examination shall be awarded following three certificates of successful completion of the course.**

- 1. Six Sigma Green Belt**
- 2. ISO/TS16949**
- 3. Production Internship**

### **WHO SHOULD ATTEND**

- Students, Graduates and post graduates from Production Engineering and Mechanical Engineering streams.
- Managers / Executives / Professionals / Supervisors from
  - Production
  - Planning
  - Quality
  - Administration/Commercial

### **About us**

Shreyas Quality Management System is a Consultancy Development Centre(CDC), Govt. of India Accredited, and IMS(ISO9001QMS,14001EMS & OHSAS18001) certified Training & Consultancy Organization focused on organizational performance improvement through the globally accepted tools such as ISO 9001, ISO14001 EMS, ISO5001EnMS,TS16949,NABL ISO 17025,ISO15189,ISO 27001 ISMS, OHSAS 18001, SIX SIGMA, 5 S/Kaizen, TQM, quality costs, design of experiments(DOE) etc. It has helped many organizations both from manufacturing and service sectors to analyze and improve their performance through well-established systems. It has team members possessing a wide spectrum of professional qualifications, experience and expertise which could effectively and efficiently address improvement issues which are of importance to your business / organization. It has provided consultancy to more than 200 organizations both from manufacturing and service organizations for quality improvement.

### **Organised by-**

### **SHREYAS QUALITY MANAGEMENT SYSTEM (SQMS)**

(Consultancy Development Centre, Govt. of India Accredited, and IMS certified Training & Consultancy Organization)

### **Training & Consultancy for-**

- Six Sigma, TQM - Quality Award, Quality Cost, TPM, SQC
- ISO 9001QMS; ISO 14001 EMS, QS 9000, OHSAS 18001, ISO 27001 ISMS, ISO 5001 EnMS
- ISO 17025/15189 (NABL Accreditation), NABH, HACCP, SEI-CMM,

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