



Front Line Supervisor Apprenticeship – 3 Modules

Online or onsite: 150 hours total; 12 months; 12+ hours/month; optimum class size 8-10 students. All Related Technical Instruction courses will be delivered in 4-hour blocks. Instructor will be available after each class for mentoring.

Training Overview and Description:

The Front Line Supervisor Apprenticeship Program consists of three modules: Leadership Skills, Manufacturing Principles and Problem Solving. The training is designed to provide awareness and education through classroom instruction coupled with actual “hands-on” exercises carried out by students in their work environment. These exercises focus on the transfer of knowledge and successful implementation of the training that will have immediate and long-term impact on the employee/students and their companies. Emphasis is given to the Scientific Methods of problem solving, team building and conflict resolution. These competency-based skills will be evaluated by both trainers and managers to determine students’ level of competence throughout the apprenticeship period. Front Line Supervisor Apprenticeship training is designed for supervisors and work leaders who coordinate activities and who are responsible for production workers, inspectors, machine setters, assemblers, fabricators, and maintenance in manufacturing environments.

Training Format and Delivery:

Each topic is presented as a four-hour slide, video, and interactive presentation between instructor and class. Each one includes an overview of the classes in the module and how they build on one another. On the spot exercises, review of pre-class assignments, quizzes, and reading activities are also part of each class. A pre-class assignment for the next class is provided, as well as after class time for the instructor to meet with students.

Module 1 - Leadership Skills – 13 Classes - 60 hours

In this module the trainees discover that associates and supervisors require an improved understanding of human behavior, relationships, and effective communication to meet company objectives. The students will learn to understand that supervision is a team-based activity that follows a process.

- 1. Overview of Supervisory Training and Personal Supervisory Expectations:** What does your manager or supervisor expect you to gain from this course? What do you as a supervisor expect to gain from the course? Elements of Success, Transitioning to New Role, Earning Respect, Relating to Managers and Employees, General Expectations, Plan for Success.
- 2. Understanding and Documenting Expectations of Direct Reports:** Employee expectations-general expectations, safety, training, productivity, and quality expectations. Earning respect, Trust, Employee success within the company. Earning and measuring success. Employee Success Plan. On the spot exercises. SMART goal process explained, Questionnaire to develop SMART goals, SMART goals identified.

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3. **Communications and Relationships:** Effective Communication, Identifying and Overcoming Barriers, Attitude, Using Humor, Treating Everyone Equally, Conflict Resolution, How People Learn, Creating Positive Relationships at Work.
4. **Motivation and Delegation:** Motivation: How is it defined? What Motivates Your Staff? Positive Feedback, Corrective Feedback, Giving Recognition, Employee Reviews and Performance Evaluations, Level of Need, How to Motivate, When to Train, Discipline, Consequences, Accountability, Ways to Motivate, Delegation, When and Who to Delegate, Things You Can't Delegate.
5. **Unconscious Bias: Creating a Diverse and Inclusive Culture:** Class taught by MassMEP partner, Associated Industries of Massachusetts. This interactive program respectfully explores sensitive, useful, and important information for any manager or supervisor who has employees from different cultural or generational backgrounds. It goes beyond the cliché of 'understanding' differences and offers realistic tips for effectively leveraging unique differences among employees to boost morale, engagement, and the bottom line.
6. **8 7 6 Method for On-boarding New Employees:** Welcoming New Employees to the Company. 8-7-6-Method, What Happens in the First 8 Hours (company overview, policies, values, why you were hired), the First 7 Days (More detail as to how a new employee is familiarized with new workplace, processes, tools, safety, time sheets, housekeeping), and the First 6 Weeks (What takes place to get the new employee up to speed and productive- training, expectations, quality, procedures).
7. **Safety #1- OSHA Compliance:** The first of two classes taught by MassMEP partner, Safety Trainers, in Module 1. OSHA training teaches compliance that is vital for the safety of workers. Occupational Safety and Health Administration (OSHA) was established to create and enforce workplace safety and health standards with regular inspections, modifications, and training information. Blood-borne Pathogens, Eye Protection and First Aid, Fire Extinguisher Training, COVID Preparedness/ Prevention & PPE, Lock out Tag Out Procedures, New Hire Training, Electrical Safety, Explosive and Hazardous Materials.
8. **Team Building - Session 1:** Approaches to Team Building, Communication, Connecting to Employees, Skills Needed, Organization and Structure, Team Building Exercises, What is a Successful Team? Review of pre-class assignments quizzes and reading activities.
9. **Team Building - Session 2:** Why Change Doesn't Stick, Implementing Change, Teams and Tools for Success, Vision, Mission, Strategic Objective, Effective Meetings, Consensus. Follow up Review of pre-class assignments quizzes and reading activities.
10. **Safety #2 – Accident Prevention:** The second class in Module 1 taught by MassMEP Partner, Safety Trainers. With the right tools, training, and tips you can prevent many workplace accidents.

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Identifying Problem Areas. Assessing Situations, Resources, Creating Procedures and Putting Them into Place, Employee Buy-In and Training.

- 11. Today's Legal Environment:** Taught by Associated Industries of Massachusetts (AIM). In this class, students will review the basics of primary federal and state employment laws, discuss how these laws relate to your day-to-day duties as a manager or supervisor, recognize situations that pose a legal risk to the organization, describe how your perceptions, attitudes and opinions impact decision making, and explain your responsibility for minimizing risk by responding promptly and appropriately to prevent workplace discrimination and harassment.
- 12. Skills Matrix for Direct Report Employees- Session 1:** What is a Skills Matrix, Identifying Skill Level, Establishing Interest, Reviewing Benefits, Developing Assessments, Exercises, where to begin? Review of pre-class assignments quizzes and reading activities.
- 13. Skills Matrix for Direct Report Employees – Session 2:** Continue to Develop Matrix, Identify Needed Skills, Identify Skill Level, Document Results, Exercises, Using SMART Goals Tool for Skill Matrix, Improve Process. Review of pre-class assignments quizzes and reading activities

Once the student has completed all class and homework assignments, they have earned their certificate of completion for Module 1.

Module 2 - Manufacturing Principles – 11 Classes - 45 hours

Students will learn to understand that managing is a team-based activity that follows a process. The leaders will be trained on the essentials in the basic manufacturing disciplines needed for success.

- 1. Understanding Cost and Capacity/Demand:** Understanding Costs, Company Profits, Controlling and Reducing Costs, People and Machines, Methods and Exercises, Understanding Capacity and Demand.
- 2. Production Planning:** Important Scheduling Tasks, Material Ordering, Equipment, Human Resources, Bottlenecks, Creating the Plan, Communicating the Plan, Visuals Scheduling and Controls.
- 3. Inventory Management:** Inventory Philosophy, Continuous Improvement Tools, Identifying Waste, Lead Time, Down Time, Push System vs Pull System, What Drives Your Inventory? WIFM? What is in it for me? Kanban and Visual Scheduling, Supermarkets, GEMBA Walks.
- 4. Standard Work Training:** “No Standard, No Problem?”, Components of Standardized Work-Space-Time-Technology, Stability of Resources, Structure of Standardized Work, What Should be the Standard? Culture, Four Elements- Content-Sequence-Timing-Expected Outcome, Exercises, Identify Areas in need of Improvement, Exercise-Implementing Standard Work. Foundation of Continuous Improvement. Impact of Standard Work.

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5. **Writing Work Instructions:** Writing Clear Work Instructions/SOP's, Importance, Results of Poor Instructions, TWI (Training Within Industry), Knowledge of the Work and the Responsibilities of Job, Task Information, Job Breakdown, Visuals (pictures and training aids), Why Visuals? Creating SOP's, Words.
6. **Developing Instructions on the Shop Floor:** Shop Floor Instructions, Clear- Simple/Specific-Visual, Practice Developing Instructions for Shop Floor, Test, Review, Input, Refine, Important Steps, Key Point, Reasons and Pictures.
7. **Safety Instruction #3 - Accident Investigation:** Taught by MassMEP Partner, Safety Trainers. Why Do Accidents Happen? Procedures to Investigate Accidents, Preventative Measures, Reporting and Documents, Training Employees- Cause and Effect in the Workplace, Videos and discussion.
8. **Overall Equipment Effectiveness (OEE):** Overall Equipment Effectiveness, Keys to Improvement- Machine Availability, Performance and Quality, Addressing What You Can't See, Continuous Improvement, Value, Wastes, Downtime, Equipment Losses, Changeover, Time Study Exercises, Layout, Performance & Availability, Your Role. Tools for Visual Management, Root Cause, Pareto Analysis.
9. **Machine Maintenance & Preventative Maintenance:** Review Machine Data Collected at Workplace, TPM- Total Productive Maintenance, History and Evolution of TPM, Maintenance to Avoid Repair and Downtime, Responsibilities Management, Engineers, Operators, Maintenance, Predictive/Preventative, Tools and Schedules, Training, Goal & Benefits, Using OEE, Inspections, Establishing Baseline Conditions, Take it to the Floor, Ask the Experts, 5S to Clean, Organize and Inspect, Cases Studies, Visuals and SOP's, Your Role, Autonomous Maintenance, Maintenance Excellence, Develop Procedures/Train People, Sustain Improvements, Develop Standard Operations, Culture Change, Performance Metrics and Corrective Action, Checklists.
10. **Developing Your People:** Taught by AIM. Create an inventory of your team's strengths and improve on their areas of opportunity, discover how to address problems associated with underperforming staff effectively, explore approach to handle unexpected turnover of your best performers, review best practices on how to develop, coach, and support your employees, describe the difference between coaching and training, and when to use each, review how to identify sources of possible performance issues and corrective action strategies for each, identify steps to conduct a corrective action discussion, examine steps to conducting an effective performance appraisal.
11. **"Learning to See" Lean Concepts:** Traditional Lean, History of Lean Tools and Concepts, Applying Lean Tools and Concepts, Tenets of a Lean Organization, Critical Success Factors, Related Activities, Value Added Vs Non-Value Added, Development Wastes, Mapping Value Streams, Charts and Graphs.

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Once the student has completed all class and homework assignments, they have earned their certificate of completion for Module 2.

Module 3 - Problem Solving – 11 Classes - 45 hours

Students will be introduced to tools that will be used as a basis to solve problems on the floor. PLAN-DO-CHECK-ACT (PDCA) and the 10-step Improvement Process will be used as the platform for training that supervisors will use for Continuous Improvement projects. These techniques of deliberate practice make scientific thinking a teachable skill that students can learn and apply.

- 1. Problem Solving for Supervisors – Session 1:** Identifying and Measuring a Problem, Identifying Potential Causes, What Causes Waste in Processes, Identifying Root Cause, Root Cause/Corrective Action, Root Cause/Possible Solutions.
- 2. Lean Basics – 5S & Visual Work Areas:** House of Lean, 6S Workplace Orientation, Define Current Situation, Sort, Set in Order, Shine, Standardize, Sustain, Visual Controls, 6S Guidelines and Checklists.
- 3. Overview of PDCA, a 10-Step Process – Session 1, PLAN:** The Plan-do-check-act cycle is a four-step model for carrying out change. Just as a circle has no end, the PDCA cycle should be repeated again and again for continuous improvement. The PDCA cycle is considered a project planning tool. Session 1 will cover PLAN and how to recognize and opportunity and plan a change.
- 4. Quality at the Source & Mistake Proofing (Poka-Yoke):** What is Error Proofing, Errors vs Defects, 10 Causes of Errors, Detecting Errors, Implementing Error Proofing, The 3 Checks, Correction Function, Manual and Automated Systems, Error Proofing PDCA – 9 Steps.
- 5. Overview of PDCA, a 10-Step Process – Session 2, DO-CHECK-ACT:** This second session will cover: DO – test the change and carry out a small-scale study; CHECK – review the test, analyze the results, and identify what you’ve learned; ACT – take action based on what you learned in the study step. If the change did not work, got through the cycle again with a different plan. If you were successful, incorporate what you learned from the test into wider changes. Use what you learned to plan new improvements, beginning the cycle again.
- 6. Safety Instruction #4 - Safety Audits:** The sixth class in Module 3 is taught by MassMEP partner, Safety Trainers. It covers making sure that the company is compliant: what to look for, how to track and document, checklists, storage, proper labeling, and training employees.
- 7. Balanced Work Flow:** Stability is a Pre-Requisite, Structure of Lean Standardized Work, What is Cellular Flow?, 5 Steps to Cellular Manufacturing, Evaluation Tools, Visualize the Ideal Situation, Group Technology, Considerations for Product Groupings, Understand Customer Demand, TAKT Time, Cell Design Criteria, Tools for Brainstorming, Design for Flow, Work Balance Chart, Develop an Implementation Plan, Workstation Design, Guidelines for Standardization.

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- 8. Problem Solving for Supervisors – Session 2:** Scientific Method Defined, Hypothesis, Experiment, Measure, Adjust and Repeat Experiment, Learning Scientific Skills, Applying to Continuous Improvement, Intended Process Outcomes, Improvement Activities – 4-Step Method, What is a Target Condition, Obstacles, Three Kinds of PDCA Experiments.
- 9. Emotional Intelligence – Taught by AIM:** Successful, self-aware employees understand the powerful link between intellect, education, experience, and emotional intelligence (EQ). They leverage their rational and emotional brains to bring out the best in others and themselves. This program explores the concept of emotional intelligence in personal and interactive ways. Participants will develop a heightened awareness of their preferred approach to their role. Situational leadership – an ability to flex personal style and emotions to fit a situation – is a key focus. When a company values and reinforces thoughtful, self-aware, and respectful teamwork, strong results follow.
- 10. Front Line Supervisor Awareness Review.** At the start of Module 3, students were asked to select a machine, opportunity, or process at their workplace. Throughout the training students have been gathering data on this particular machine issue or process as well as identifying and applying tools and processes they have learned that will bring about improvement. During this class, students will put all the pieces together to show that they have learned to identify issues, apply tools and processes for corrective action and can outline their ideas for an implementation strategy.
- 11. Presentation to Site Managers & Graduation. Three parts.** These plans become like a final exam for graduation as they show that students have learned the tools, know how to use them correctly and effectively, and how to implement the changes and improvement.
 - a. Students demonstrate what they have learned and how to apply it. Share Success Stories.
 - b. Students have plans for what they would like to change/improve in the future which will benefit their organization. They have created an action plan and a project plan.
 - c. Capstone Project - Presentation to their management, a project plan, a plan for implementation and any results if implementation has begun.

Once the students have completed all class and homework assignments, they have earned their certificate of completion for Module 3. After presenting their Capstone project they will graduate from the program.

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