

Definition

The Industrial Manufacturing Technician apprenticeship program offers related supplement instruction in accordance to the California Division of Apprenticeship Standards.

Staff

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Program Description

Entry Level Industrial manufacturing technicians operate industrial production related equipment, work with manufacturing related tools, and perform work processes related to a wide variety of manufacturing settings. Industrial manufacturing technician apprentices will learn to set up, operate, monitor, and control production equipment. They will also help improve manufacturing processes and schedules to meet customer requirements. This apprenticeship training program combines on-the-job learning with related instruction in a classroom to prepare apprentices for journey level work after they complete the program.

Career Options

Industrial Manufacturing Technician (Sheet Metal Worker).

Program Learning Outcomes

Industrial Manufacturing Technician Apprenticeship

1. Deliver orally, a set of instructions to another individual, write a technical memo, and communicate a technical process to a small group.
2. Apply math skills to manufacturing processes and problems
3. Perform quality manufacturing through the interpretation and verification of measurements taken from blueprints and mechanical drawings. Using mathematical calculations and precision measurements for tolerances.
4. Read and interpret blueprints during manufacturing processes
5. Apply machine control and automation, lean manufacturing principles, and problem-solving to high-performance manufacturing.

Certificate Program

This apprenticeship training program combines on-the-job learning with related instruction in a classroom to prepare apprentices for journey level work after they complete the program.

Industrial Manufacturing Technician Apprenticeship

Required Courses (15 units):

IMTA 110, Industrial Manufacturing Technician Apprentice I	6
IMTA 210, Industrial Manufacturing Technician Apprentice II	6
IMTA 112, Mathematics for the Machine Trades [420-711]	2
IMTA 212, Communications for Apprentices [420-712]	2
IMTA 255, Transition to Trainer: Your role as a journey worker [455-455]	0.5
Total	16.5

Industrial Manufacturing Courses

IMTA 110 *INDUSTRIAL MANUFACTURING TECHNICIAN APPRENTICE I

6 units

6 hours weekly

Advisory: Concurrent enrollment in IMTA 112.

Orientation to the trade of manufacturing, followed by the MSSC safety and quality modules. OSHA 10 certification, blueprint reading, visual inspection, measurement, first aid and CPR training. Manufacturing concepts will be introduced and applied in a variety of manufacturing settings. MSSC modules 1 and 2 are aligned with the learning plans for this course along with the MATC course - Machine Trades Math. (AVC)

IMTA 112 *MATHEMATICS FOR THE MACHINE TRADES

2 units

2 hours weekly

Advisory: Concurrent enrollment in IMTA 110.

Applied mathematics instruction from a review of basic arithmetic, basic algebra, applications based on geometry, right triangle trigonometry, oblique angle trigonometry and compound angles. (AVC)

IMTA 210 *INDUSTRIAL MANUFACTURING TECHNICIAN APPRENTICE 2

6 units

6 hours weekly

Second semester of related instruction includes MSSC manufacturing processes and production and maintenance awareness modules, along with communication, lean manufacturing, problem solving, and frontline leadership. Manufacturing related concepts will be applied to a variety of industrial settings. The course wraps up with an examination of emerging trends and technologies and future directions for manufacturing. MSSC learning objectives in modules 3 and 4 are aligned with the learning plans for this course. (AVC)

IMTA 212 *COMMUNICATIONS FOR APPRENTICES [420-712]

2 units

2 hours weekly

Advisory: Concurrent enrollment in IMTA 210.

Prerequisite: Completion of IMTA 110.

Introduces the apprentice to basic communication concepts relating to the workplace. It is designed specifically for the apprentice to acquire the necessary skills of giving instruction, writing a technical memo, and explaining a technical process. Throughout the course, the apprentice will brainstorm, write, edit, revise, and use one-on-one communication delivery in a small group. The course combines lecture and hands-on activities utilizing information which the apprentice brings from the workplace. (AVC)

IMTA 255 *TRANSITION TO TRAINER: YOUR ROLE AS A JOURNEY WORKER [455-455]

0.5 units

8 Hours total

Advisory: *Concurrent enrollment in IMTA 212 and IMTA 210.*

Apprenticeship training is a collaborative partnership: employer, employee associations, government, and educational institutions each play a part. In reality, most learning takes place through the daily interaction between an apprentice and co-workers. Surveys have shown that the apprentices are least satisfied with the on-the-job portion of their training - particularly the ability of journey-level workers and supervisors. You have already learned to use the tools of your chosen trade. In this workshop, you will be introduced to a new set of basic tools - the tools of a job site trainer. You will explore the skills that are necessary to be an effective trainer, discover how to deliver hands-on-training, and examine the process for giving useful feedback. During the workshop, you will build a Training Toolkit to take back to your work on the job. (AVC)