Engineering Fundamentals

APPLYING THEORY TO THE REAL WORLD

Young Engineers are bright, enthusiastic and highly competent in Engineering theory. Experienced Engineers have the years of experience in applying the theory to real problems and projects. It's a natural fit for a mentoring program. Nowadays, however, the competitive landscape forces firms to place such an emphasis on productivity, speed to market and getting projects done that they often can't spare the resources to coach and mentor young Engineers as effectively as they would like to. Compounding the problem—firms face a critical loss of know-how as their most experienced Engineers retire.

This workshop is designed to provide the application, practical tips and know-how that young Engineers hunger for. Customized for *your* processes and *your* equipment, the instructor will use a current problem or project (selected by you) throughout the workshop to illustrate application of Engineering theory. Visits to the factory floor for hands-on demonstrations will drive home the key topic learnings and make them real.

Included is:

- Instruction, coaching and individualized feedback for up to 20 learners.
- Workshop materials and exercises customized to incorporate local processes and unit operations.
- A sample site-specific problem or project to illustrate application of theory.
- A documented assessment for each learner.

Objectives

The goal of this workshop is to ensure that your technical team has the basic technical knowledge and understanding of your plant's processes & unit operations, allowing engineering & maintenance projects to be implemented effectively. Learners will:

- Understand key engineering & technical principles of your factory floor processes and unit operations.
- Develop core technical knowledge to establish a solid foundation base for job-related skills.
- Create design documents and specifications that capture practical and necessary operational aspects and communicate them effectively to vendors.
- Provide basic skill sets needed for effective Early Equipment Management activities, as part of Total Productive Manufacturing (TPM).
- Be certified through rigorous competency checks.

Customization

Engineering is too precise a field to be treated in broad strokes. We understand the value brought by focusing in.

The workshop can cover one topic in detail per day of classroom time from a menu that includes:
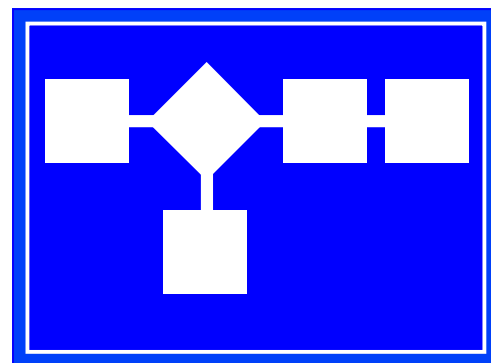
- Process Piping Design & Specifications
- Vessels & Agitators
- Pumps & Homogenizers
- Hygienic Systems Design
- Valves & Heat Exchangers
- Waste Water Handling & Treatment
- Specific process unit operations unique to your facility

Site-specific Adaptation

Your operation is unique and full of particulars, details of which cannot be found in any textbook.

Luminance staff will meet with your technical team, gain familiarity with your processes and technologies and incorporate your reality into course materials.

Use of a Local Project or Problem

Luminance will ask you to submit a sample problem/project beforehand. We will use that problem/project as a continuous thread throughout the workshop to illustrate how to apply each segment of the theory.

About the Instructor

Learners look for an instructor with credibility, depth, empathy and excellent communication skills. They also want someone who has "been there." Our instructor, Mo Babar, has:

- More than 20 years experience in process engineering in automotive, steel, chemical, personal product and foods applications.
- Trained technical staff in the USA, Mexico and Brazil.
- Been rated highest Engineering fundamentals instructor in Unilever's Supply Chain Capabilities group.

Sample Learner Feedback

- *The strength of his course was the practical application tips and the specifications he handed out.*
- *Made a huge difference to me as a young engineer.*
- *Other courses were interesting but didn't give me the help I needed in applying what I was learning to the projects I was responsible for. This did.*
- *You could just see the understanding in my staff as their eyes literally lit up.*

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