

LEAN MANUFACTURING PRACTICES PROGRAM



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Lean Manufacturing Practices: A Program of National Importance

During 2005, **Prof. Shoji Shiba**, a distinguished professor from the Massachusetts Institute of Technology (MIT), Boston, was invited to India by the then President of India, **Dr. A. P. J. Abdul Kalam**, to help transform the country's manufacturing sector. This fast-growing sector required an innovative and efficient approach to enhance productivity. Prof. Shiba's subsequent visits resulted in the launch of the **Visionary Leaders for Manufacturing (VLFM) Program** which was aimed at creating visionary leaders across different industry sectors. An offshoot of this program viz. Visionary SME (VSME) program was designed to revolutionize small and medium-scale industries in India. While these programs successfully achieved their objectives of industry transformation, new challenges emerged, leading to reduced gains of the transformation efforts such as the attrition of trained workforce.

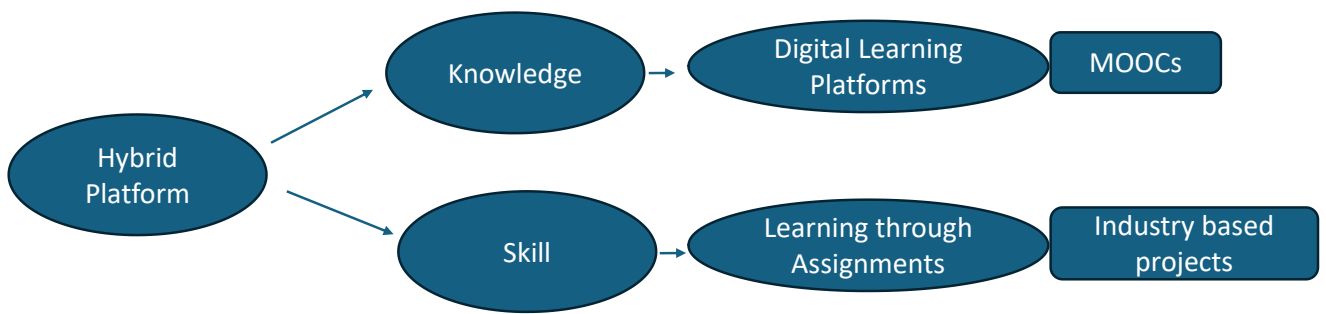
To address these challenges, an idea of creating a pipeline of industry-ready talent through engineering colleges, led to the establishment of the Visionary Learning Community of India (VLCI) in 2017, which was later renamed as **Lean Manufacturing Practices (LMP) Program**. This program is conceptualized to form a joint venture between learning communities of **SMEs (Industry)**, **Engineering Colleges (academia)**, **Engineering College Faculty** and **Students** to create industry ready Engineering talent who can directly work with these SMEs in their transformative journey.

In 2023, the **Mizuho India Japan Study Centre (MIJSC)** at the **Indian Institute of Management Bangalore (IIMB)** emerged as an academic hub to support the Lean Manufacturing Practices (LMP) Program. This program aims to develop industry-ready engineers and equip faculty to serve as consultants. The goal is to foster collaboration between engineering colleges and industries through **skill-based learning** and **practical application**, benefiting Indian industries across sectors. The courses under LMP, delivered in a 30% self-study and 70% practice mode, focuses not only on the application of tools and techniques of Lean Management but also on deeper understanding of the counter-intuitive elements of Lean Management philosophy. This would result in students becoming skilled in these practices and therefore be industry ready. A **Japanese language course** to help build conversational competency in these students, would also be available as an additional option, thereby making them Japan Industry ready.

A Unique Hybrid Learning Platform

To ensure effective knowledge transmission with minimal communication loss, a Hybrid Platform has been designed for the delivery of the LMP courses. In this structure, course content is delivered via digital learning platforms such as MOOCs, while the application of knowledge takes place through assignments conducted in physical mode, emphasizing learning through projects. This hybrid model not only facilitates knowledge acquisition but also promotes skill development through the application of concepts in industry-linked projects.

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LMP Program Structure

The LMP Program is delivered in 2 phases.

- a) **Phase 1:** LMP Faculty Development Program
- b) **Phase 2:** LMP Student Skill Development Program

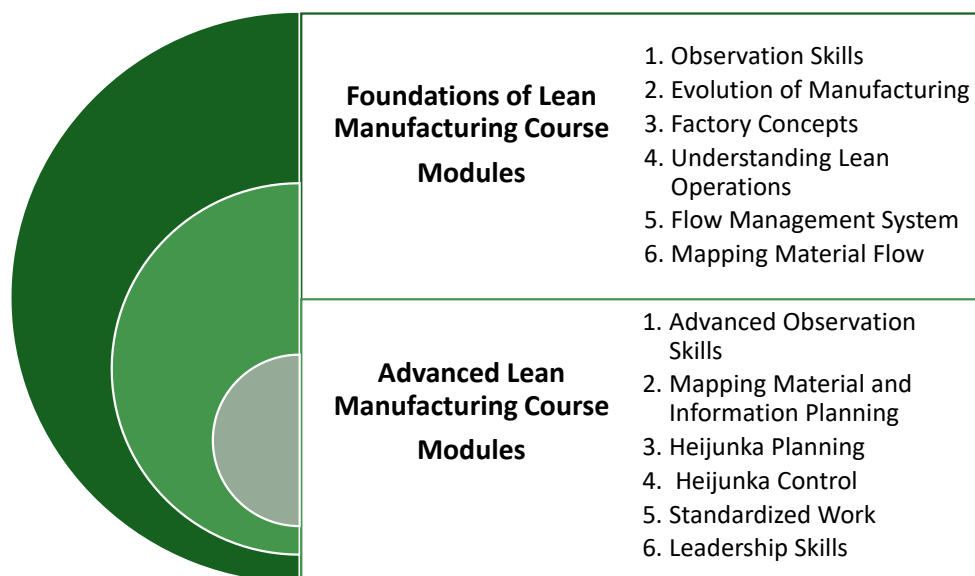
Phase 1 training focuses on skilling faculty in the **Lean philosophy** and application of **Lean Management tools and techniques**. At the end of the program, faculty will be certified as **Lean Experts**. To ensure continuity and sustenance of the initiative, we expect a minimum of **5 to 6 faculty members** from each college to join this phase of the program.

Fee: **12,000/-** per faculty, payable to **MIJSC**.

In **Phase 2**, the trained and certified faculty (**Lean Experts**) would then train students to enhance their hard and soft skills, enabling them to tackle modern industry challenges through the application of Lean Principles. Students trained in Lean tools and techniques will have the opportunity to be absorbed by the industry after completing their internships.

Fee: No fees payable to **MIJSC** during this phase of the program.

LMP Course Content



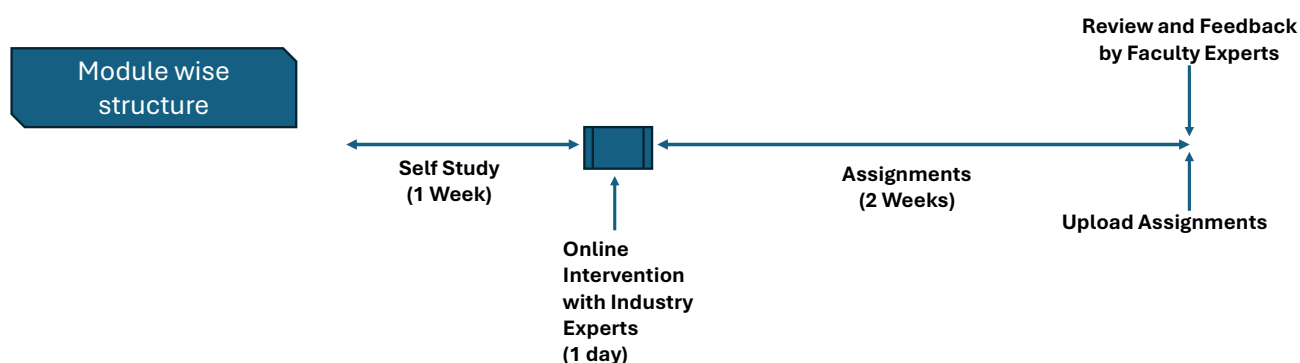
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Phase 1: LMP Faculty Development Program

- **Facilitator:** MIJSC at IIMB
- **Timeline:** 9 months
- **Mode of Delivery:** Self Learning (MOOCs) + Expert Interventions + Immersive Learning at IIMB + Industry Projects.
- **Outcome:** Engineering College Faculty as Experts in Lean Principles.
- **Key Benefits:** Faculty developed as Lean Experts.

Course	Content	Months								
		1	2	3	4	5	6	7	8	9
Foundations of Lean Manufacturing Practices	6 Modules of Self Learning + Industry Expert Interventions + Industry Application Projects					Exam			Conclave @ IIMB	Exam & Certification
Advanced Lean Manufacturing Practices	6 Modules of Self Learning + Industry Expert Interventions + Industry Application Projects									

Program Structure



The **1-week** Self-study through **MOOCs** platform is followed by **1 Day** Online intervention by Industry Experts. During this intervention, the agenda will focus on case studies related to the concepts, discussions, doubt clearance, and assignments, which are to be submitted by the end of the third week. These assignments are reviewed and graded by the Module Directors for performance assessment and improvement.

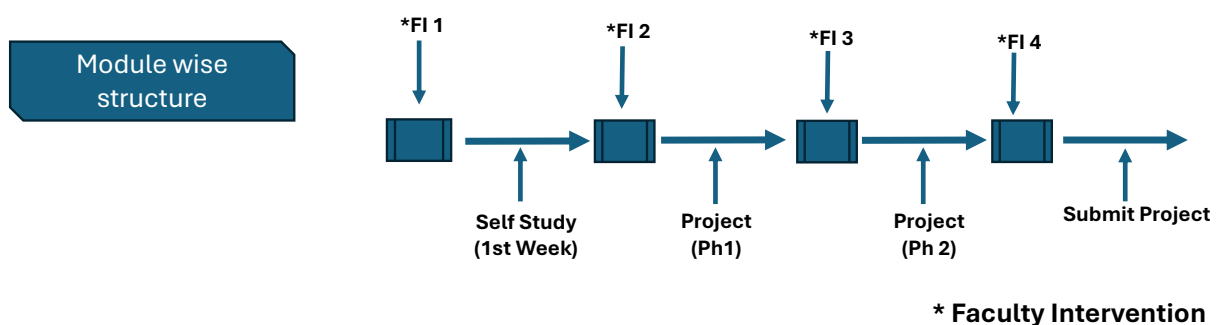
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Phase 2: LMP Student Skill Development Program

- **Facilitator:** Engineering College
- **Timeline:** Recommended FLMP in 5th Sem & ALMP in 6th Sem
- **Mode of Delivery:** Self Learning (MOOCs) + Faculty Interventions (Classroom Learning) + Industry Application Projects
- **Outcome:** Students trained and skilled in State - of - Art Lean Practices
- **Key Benefits:** Students become industry ready

Course	Content	Semesters			
		5	6	7	8
Foundations of Lean Manufacturing Practices	6 Modules of Self Learning + Faculty Interventions + Industry Application Projects	MOOCs	Exam & Certification		
Advanced Lean Manufacturing Practices	6 Modules of Self Learning + Faculty Interventions + Industry Application Projects		MOOCs	Exam & Certification	
Internships & Projects	Industry Projects with a focus on lean manufacturing tools and techniques				

Program Structure



- FI 1: Importance, Highlights
- FI 2: Check understanding, share experience, assignment project
- FI 3: Mid-project review & feedback
- FI 4: Project assessment & feedback

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LMP Conclave

LMP Conclave at IIMB

- Sessions by IIMB Faculty – Outside -in Perspective
- Industry Visits - Lean implementation perspectives
- Workshops - Hands-on experiences linked to industry visits
- Industry Experts' Interactions

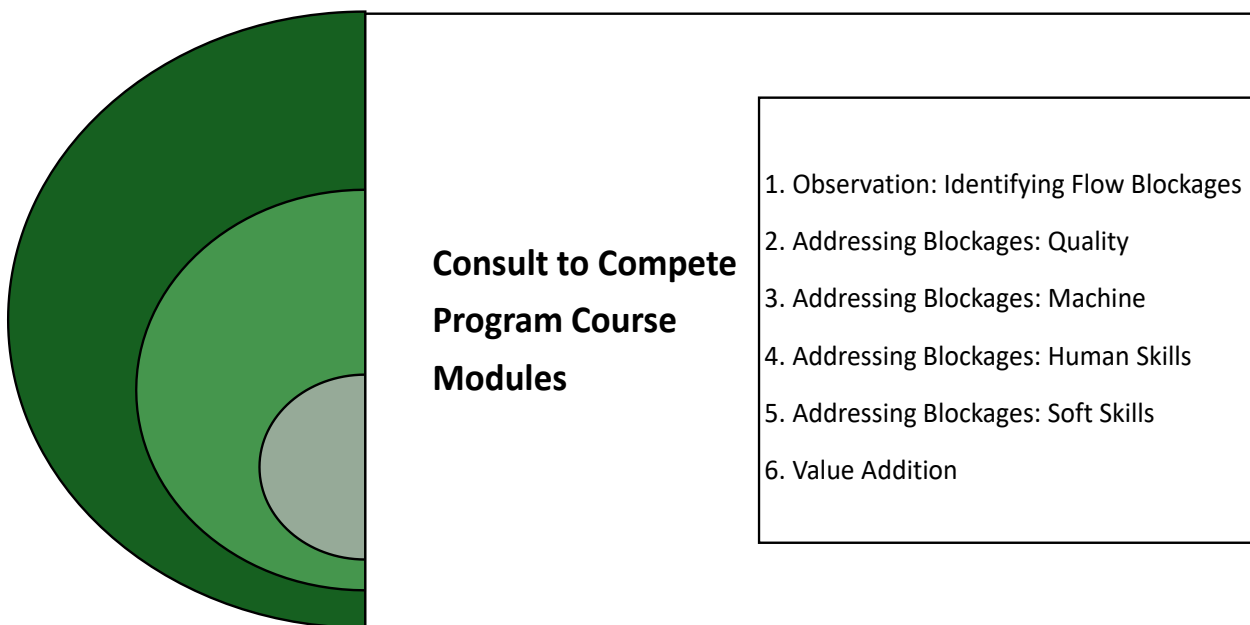


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Additional Courses from MIJSC

LMP Consultancy Program

- **Facilitator:** MIJSC @ IIMB
- **Delivered by:** Industry Experts
- **Timeline:** 6 Months
- **Mode of Delivery:** Expert inputs + Industry Consultancy Projects
- **Outcome:** Engineering College Faculty as Industry Consultants to help address industry challenges, especially at SMEs.

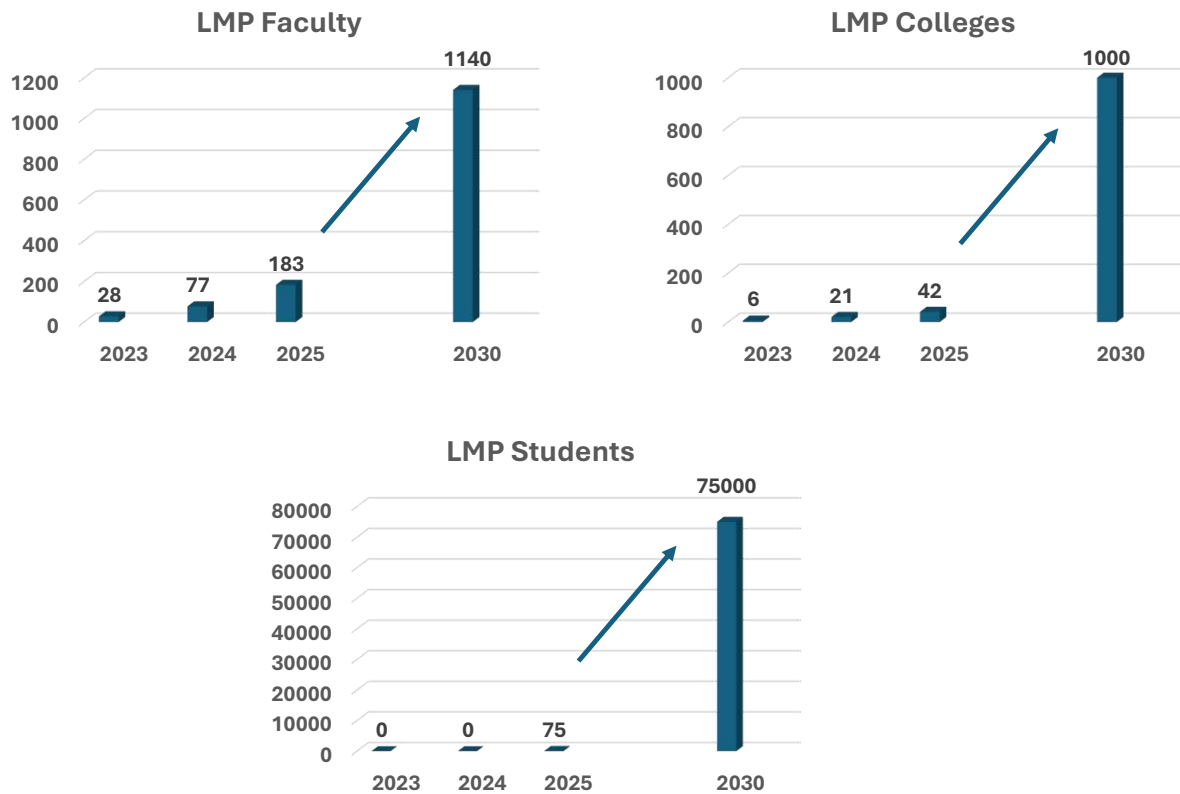


JLCC Program for Students

- **Facilitator:** MIJSC @ IIMB
- **Program:** Japanese Language, Conversation and Business Culture Course
- **Delivered by:** Certified Agencies
- **Timeline:** 1 year each for JLCC 1 & JLCC 2 (Recommended from 3rd to 6th Sem)
- **Mode of Delivery:** Expert (Online)+ Student Groups/ Workshops (Online)
- **Outcome:** Students attain conversational competency to speak Japanese Language at the Foundational level. They also attain proficiency to attend JLPT N5 / N4 test.

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Current Status and Goals



Key Benefits of LMP Program

- Student Skill Development through Projects
- Strengthened industry- academia engagement
- Enhanced Employability of Students
- Industry Gain through waste reduction

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