



Organised by **FMM INSTITUTE** (475427-W) **Perak Branch**
Centre For Professional Development



SCIENCE & ART FOR MANUFACTURING IMPROVEMENT VIA SIMULATION

📅 **October 5 & 6, 2022 (Wednesday & Thursday)**

🕒 **8.45 am – 5.00 pm** 🖥️ **Remote Online Learning via Zoom**

Industries need quality improvement of manufacturing process as it helps to decrease the operation cost, to improve product quality, etc. Quality improvement can be established by controlling quality of raw material. A technique that can be used to do this task is simulation. The training mainly focuses upon one of the case study of the quality improvement of company production with simulation technique. The present and the proposed model are simulated and best results are selected between the present and proposed in order to improve the manufacturing process.



Simulation has become one of the method to improve production and rapidly gaining the industry confident nowadays. Simulation is a very helpful and valuable work tool in manufacturing. It can be used in industrial field allowing the systems behavior to be learnt and tested. Simulation provides a low cost, secure and fast analysis tool. It also provides benefits, which can be reached with many different system configurations.

OBJECTIVES

- Investment risk reduction
- Waste Minimization
- Efficiency Improvement
- Reduce energy consumption and save resources.
- Detects risks, thereby protecting human lives

LEARNING OUTCOMES

Upon completion of the course, participants will be able to:

- Understand the functioning of the machinery in their unit under severe conditions.
- Take precautionary measures for the safety of human lives and the machinery as virtual system simulation allows their organisation to carry out tests for the most extreme situation, without putting health and safety of human lives at risk.
- Gain better insight into what their organisation's operation needs that would enable them to save time and use the right resources at the right time.

WHO SHOULD ATTEND

Operational Managers, Engineers, Executives, Supervisors and Technicians from Production, Engineering, Maintenance, Quality, Purchasing, HR and Finance.

TRAINING METHODOLOGY

- ✓ Lecture with slides presentations
- ✓ Case studies
- ✓ Video
- ✓ Group discussion

Enquiries – please contact **Ms Nicole / Ms Divya / Pn Eda / Ms Harvindar**
☎️ (05) 548 8660 📠 (05) 548 8221 ✉️ fmmperak@fmm.org.my

COURSE CONTENTS

MODULE 1 – INTRODUCTION TO SIMULATION

- Steps in a Simulation Model
 - Problem Definition - The initial step involves defining the goals of the study and determining what needs to be solved.
 - Project Planning.
 - System Definition.
 - Model Formulation.
 - Input Data Collection & Analysis.
 - Model Translation.
 - Verification & Validation.
 - Experimentation & Analysis.
- Concepts of Discrete Event Simulation
 - The process of codifying the behavior of a complex system as an ordered sequence of well-defined events. In this context, an event comprises a specific change in the system's state at a specific point in time.

MODULE 2 – MATHEMATICAL AND STATISTICAL MODELS IN SIMULATION

- Queueing Models
 - Queueing models provide the analyst with a powerful tool for designing and evaluating the performance of queueing systems.
 - Typical measures of system performance.
 - Server utilization, length of waiting lines, and delays of customers.
 - For relatively simple systems: compute mathematically.
- Input Modeling
 - Collect and analyze input data so that the simulation can be fed with appropriate data. This is a very

important task. Without proper input data, the good simulation model won't generate correct, appropriate result.

MODULE 3 – DISCRETE EVENT SIMULATION – KEY FEATURES

- Simulation of Time-Sharing System
 - The development of new large scale time-sharing systems has raised a number of problems for computation center management. Not only is it necessary to develop an appropriate hardware configuration for these systems, but appropriate software adjustments must be made. Unfortunately, these systems often do not respond to changes in the manner that intuition would suggest, and there are few guides to assist in the analysis of performance characteristics

MODULE 4 – BEHAVIOR MODELING AND ROLE-PLAY AND SIMULATION TRAINING METHODS

- Behavioral modeling results in significant improvements in knowledge and skill learning but it is on actual job behavior.
 - Method in which either amateur or professional roleplayers improvise with learners as part of a simulated scenario. Roleplay is designed primarily to build first-person experience in a safe and supportive environment. Roleplay is widely acknowledged as a powerful technique across multiple avenues of training and education.

TRAINER

MR VIJASHANKAR A/L MURUGESU, a certified trainer registered with PSMB, holds a Bachelor Degree in Science (Universiti Sains Malaysia), a Diploma in Mechanical Engineering (Politeknik Seberang Perai) and he is currently pursuing Master Degree in Engineering Mathematics. Mr Vijashankar has more than 15 years of experience in electronic field and heavy duty industry with a strong record of academic and hand-on work performance. He began his career as a Technician and gradually ascended to the position of Production Manager.

MR VIJASHANKAR has conducted many courses in areas such as Quality Assurance, Process Re-engineering, Plant Management and Manufacturing Management specialising in Lean Manufacturing, Just-in-Time (JIT) Production, Kaizen, Total Quality Management (TQM), 5S, Failure Mode and Effects Analysis (FMEA), Production/ Operations and Supervisory Skills for organisations such as Silterra Malaysia, First Solar, Osram, Latexx Partners and others. Results-driven, he has the track record of devising and implementing continuous process improvements to minimize waste and reduce costs while maximizing quality and yield. He has also established effective quality control and safety programmes, encouraging proactive participation across the manufacturing floor.

..... COURSE DETAILS.....

Date **October 5 & 6, 2022 (Wednesday & Thursday)**
 Time **8.45am - 5.00pm**
 Platform **Remote Online Learning via Zoom**
 Medium of Instruction **English**
 CPD **14 hours**
 Fees **Members RM689.00/pax**
Non-Members RM848.00/pax
(Fees inclusive of Service Tax at 6%, Downloadable Course Materials and Certificate of Attendance)

- ❖ *Download and install ZOOM app on your laptop/desktop before the programme*
- ❖ *Good Internet / Wi-Fi connectivity*
- ❖ *Access Links will be provided upon confirmation of the programme*

..... ADMINISTRATIVE DETAILS.....

HRD CORP CLAIMABLE COURSE DETAILS

- Training Provider: **FMM Institute Perak**
- MyCoID : **475427W_PERAK**
- HRD Corp Programme No: **Provided upon confirmation**

DISCLAIMER

The FMM Institute reserves the right to change the facilitator, date and to vary / cancel the course should unavoidable circumstances arise. All efforts will be taken to inform participants of the changes.

REGISTRATION

- Upon **Faxing/Mailing** the completed **Registration Form** to FMM Institute, you are **deemed** to have read and **accepted** the terms and conditions. The **course** would also be **deemed** as **confirmed** unless informed otherwise.
- Will be based on **First-Come-First served** basis.

PAYMENT

- **Cheques** made in favour of "FMM Institute" should be forwarded to FMM Institute Perak.
- For **SBL-KHAS Scheme**, an **Attendance of 100% is a must**, in any case, **employers will be billed in full**.
- FMM Institute SST Registration No. **W10-1901-32000105**

CANCELLATION

- Must be in **Writing with Reasons**
- **7 days** before the course – **No payment** charged
- **3 – 6 days** before the course - **50% payment** charged
- **< 3 days** before the course – **Full payment** charged
- Participants who did not turn-up will be charged **full payment**
- Replacements can be accepted at **no additional cost**

~ Registration Form ~

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**Closing Date:
SEPTEMBER 28, 2022**

FMM Institute
 No 1, Lorong Raja DiHilir, 30350 Ipoh, Perak

Fax: 05-5488221

Dear Sir / Madam, please register the following participant(s) for the above programme.

1.	Name	Designation
	NRIC	HP No
		Email
2.	Name	Designation
	NRIC	HP No
		Email
3.	Name	Designation
	NRIC	HP No
		Email

(Please attach a separate list if space is insufficient)

We hereby confirmed that *(Please tick (✓) in appropriate box):-*

We **will be claiming under SBL-Khas Scheme** and full payment would made to FMM Institute in the event that no disbursement from HRDF under any circumstances

We will **NOT BE CLAIMING under SBL-Khas Scheme**. Enclosed cheque/bank draft No _____ for RM _____ being payment for _____ participant(s) made in favour of the "FMM Institute".

Submitted by:

Name: _____ Designation: _____
 Company: _____ Tel: _____ Fax: _____
 Address: _____
 Email: _____ FMM Membership No _____