



# ***Six Sigma Black Belt Training***



**18 - 28 September 2018**  
**MIMOS @ Technology Park Malaysia**  
**Fee: 9,250/pax**



## **Overview**

Business operations either from manufacturing or service sector exist in an environment of increasing challenge. Rising raw material & labour cost and the pressure from customer to deliver higher quality product/service faster at lower cost are just some of the key challenges which drive the need to seek operational improvement.

In today's business, Six Sigma is a proven methodology for pursuing breakthrough or continuous improvement in customer satisfaction and profit growth. This includes revenue improvement, cost reduction, cycle time reduction, increased customer satisfaction and any other performance improvements critical to the company. Practically, Six Sigma applies various quality/statistical tools to solve problem effectively which directly improve operating efficiency. In addition, the implementation of Six Sigma will engage and encourage employees to contribute to problem solving in their works routine.

This course is designed to develop Black Belt competencies which are required to address critical problems originated from business operations. This easy-to-follow course concentrate on application of Six Sigma DMAIC methodology and related Quality/Statistical tools to ensure defined problems are resolved and improvement project goal is sustainable. The ultimate goal of this course is to develop Black Belts who serve as effective Project Leaders in accomplishing improvement projects.

## Learning Outcome

Upon completion, participants should be able to demonstrate/understand each of the following:

- A structured problem solving methodology (DMAIC) for business process improvement
- A set of intermediate and advanced Tools (Quality & Statistical) in problem solving/ project accomplishment

## Methodology:

The methods used here are the combination of lecture + interactive discussion + group exercise. If required, a Pre and Post Test can be arranged to assess how much knowledge has been acquired by participants in the end of training. The assessment results will be used as key criteria for certification as Black Belt.

The course is primarily conducted in a class room. Each participant will be provided with a set of course materials.

## Target Group:

Executives, Engineers and Managers from any organizations including Core Operation/Support/ Transactional group either in manufacturing or service industries.

## Pre-requisite:

*(Prior knowledge required to participate in this programme, if any)*

A sound technical background and minimum 5 years of working experience in any business operation discipline or Six Sigma Green Belt certified.

## System Requirement:

Each participant need to download trial version of latest Minitab Statistical Software.

## Outline/Contents:

Phases	Modules	Key Objective	Key Techniques/Tools
Define	Focus Area for Improvement	Identify customer voice & critical customer requirements	Voice of customer analysis
	Project Charter	Draft effective project charter	Business case, problem statement, project goal, project scope, project timeline & team
	Process Mapping	Map high/low level processes to be improved	SIPOC, Top down chart, Functional deployment process map, Value analysis

Phases	Modules	Key Objective	Key Techniques/Tools
Measure	Variables for Measurement	Identify key variables for measurement/ data collection	Input; process & output analysis, Data collection plan
	Basic Data Analysis	Conduct preliminary analysis on data collected	Basic statistics, Histogram, Box plot, Dot plot, Run chart, Scatter plot/Matrix plot, Pareto chart
Measure	Measurement System Analysis	Assess measurement system for improvement	Gage Repeatability & Reproducibility study, Bias & Linearity study, Stability study, Attribute Agreement Analysis
	Baseline Performance Establishment	Determine baseline performance statistically	DPU, DPMO, DPPM, Sigma Level, Cp, Cpk, Pp, Ppk
Analyse	Potential Root Causes Identification	Determine potential root causes and sources of variation	Multi-vari analysis, Why-why analysis, Cause & Effect analysis
	Root Causes Validation	Conduct statistical test & analysis to validate root causes	Central Limit Theorem, Confidence Interval, Parametric tests, ANOVA, Power & sample size, Non-parametric tests, Correlation analysis, Simple Linear & Multiple Regression
	Optimization	Conduct Design of Experiment for process optimization	Fractional & Full Factorial design, Response Surface Methodology
Improve	Solutions Generation & Selection	Identify idea for solutions & prioritize them for implementation	Brainstorming, Lateral thinking, Six thinking hats, Theory of Inventive Problem Solving (TRIZ)
	Pilot Run Plan & Change Management	Plan to implement selected solutions & manage changes	Implementation plan, Comparative methods
	Failure Mode & Effect Analysis (FMEA)	Analyse & mitigate risks in new improved process	Process FMEA
Control	Control Plan	Generate a control plan for handover process	Control Plan
	Control Methods	Use effective control methods to maintain the gain	Standard Operating Procedure, Statistical Process Control Charts, Mistake Proofing
	Project Closure & Summary	Evaluate results for project closure and outline potential opportunities for standardization & replication	Standardization & Replication plan

## Instructor Profile:



### Lee Kah Yaw

Lee has 19 years of experience in Electronics/Semiconductors industries and over 7 years in Applied Research & Development field where he has held various positions including Engineer, Lead Engineer, Staff and Senior Staff Engineer of Quality.

In last 13 years of his career, Lee is devoted to delivering Six Sigma breakthrough improvement and championing Six Sigma deployment program in manufacturing and product development. He first became full time Six Sigma Certified Black Belt in Flextronics who led and completed 3 assigned projects successfully with cumulative saving close to USD 1 million. He then joined NXP Semiconductor

as Senior Statistical Specialist who was responsible for deployment of local/external Six Sigma program and statistical support in critical problem solving for operation excellence. His Six Sigma Master Black Belt Certification was obtained in MIMOS Berhad where he continued to lead local Six Sigma program with key focus in transforming researchers/engineers to become statistical thinker in problem solving.

To date, Lee has coached more than 80 Green Belt/Black Belt projects in which more than 70% of them accomplished with meeting project goal. He has practiced, designed, developed training curriculum and taught Six Sigma problem solving methodology & tools (Quality/Statistical). In addition, more than 100 classes/workshops had been delivered successfully with satisfactory response from participants. He is a certified PSMB trainer, registered with the Ministry of Human Resource, Malaysia.

Lee holds a Diploma in Electronics Engineering from TAR College, Malaysia and Master of Science in Manufacturing System Engineering from University of Hertfordshire, UK.



# Register Now!

(Limited seats available)



## REGISTRATION FORM

**Six Sigma Black Belt Training**

**MIMOS @ Technology Park Malaysia**

**18 - 28 September 2018 (9 am - 5 pm)**

Please complete this form and fax or email to us

COURSE FEE	Fee per participant
<input type="checkbox"/> Standard Registration	RM 9,250.00
<input type="checkbox"/> Group Discount	RM 9,050.00
<input type="checkbox"/> Universities & Colleges	RM 8,950.00

No	PARTICIPANT DETAILS	CONTACT INFORMATION	MEAL PREFERENCE
1	Name: Designation:	Email: Mobile No.:	<input type="checkbox"/> Vegetarian <input type="checkbox"/> Non-Vegetarian
2	Name: Designation:	Email: Mobile No.:	<input type="checkbox"/> Vegetarian <input type="checkbox"/> Non-Vegetarian
3	Name: Designation:	Email: Mobile No.:	<input type="checkbox"/> Vegetarian <input type="checkbox"/> Non-Vegetarian
4	Name: Designation:	Email: Mobile No.:	<input type="checkbox"/> Vegetarian <input type="checkbox"/> Non-Vegetarian
5	Name: Designation:	Email: Mobile No.:	<input type="checkbox"/> Vegetarian <input type="checkbox"/> Non-Vegetarian

Organisation : .....

Postal Address : .....

Tel : ..... Fax : .....

Contact Person : ..... Position : .....

Email : .....

### AUTHORISATION

I understand and agree to MIMOS Berhad terms and conditions (Signatory must be authorised to sign on behalf of the Organisation)

Name of the Authorised Person : .....

Position : ..... Date : .....

Signature and Company Stamp:

### Terms & Conditions:

#### Enquiries & RSVP:

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MIMOS Berhad  
Technology Park Malaysia  
57000 Kuala Lumpur

Call : +603-8995 5000 ext. 55279 (Fara)  
55642 (Amy)

Email : faradaya.machmud@mimos.my  
letchumy@mimos.my

- 1) Upon received of this registration form (MIMOS), we will invoice to the contact-person for payment processing.
- 2) Payment is required within 30 days upon receipt of the invoice. All payment must be received 7 working days prior to the training date. The fee shall includes luncheon, coffee/tea breaks and training materials.
- 3) This quotation includes Government Service Tax (GST).
- 4) Mode of Payment - **Cheque** or **Bank Drafts** to be made payable to **MIMOS Berhad**.
- 5) Cancellation or postponement - Any cancellation must be made in writing and to reach us no later than 10 working days prior to the training date. If written notice is received in less than 10 working days, 100% of total fees is chargeable. A substitute delegate with similar background and competencies, is always welcome at no additional charge.
- 6) Our instructor(s) and topics are confirmed at the time of this print. However, circumstances beyond the control of the organizers' may occur and MIMOS Berhad reserves the rights to alter or modify the advertised speakers/ topics if necessary.

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