National R&D Centre in ICT

MIMOS

Semiconductor Wafer Fabrication Process Training

MIMOS Berhad
Technology Park Malaysia

MSSB's 5-day Wafer Fab Processing training programme provides basic but powerful information about the intricate semiconductor manufacturing process. Additional hands-on training in each process module helps in developing the technical skills of the participants.

HRDF
MALAYSIA

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www.mimos.my

LEARNING OUTCOMES

Upon completion of the training programme, participants should be able to

- Understand the basic semiconductor wafer processing steps in each process modules: diffusion, thin film, lithography and etch.
- Learn the fundamentals of each processing step and the reason it is use in the industry today.
- Understand the evolution of each processing techniques, previous and current generation IC's.
- Understand the basic processes of a CMOS device (from device level until back end processes).
- Failure Analysis Principles and Procedures
- Package Level Testing
- Equipment and Hardware Maintenance

METHODOLOGY

This course will utilize a combination of lecture and practical/hands-on lessons in cleanroom.

TARGET GROUP

Managers, engineers, and technicians working in the semiconductor industry, undergraduates/post-graduates students in related filed.

PRE-REQUISITE:

Foundation in physics.

DAY 1

Overview of Wafer Fabrication

- Safety and Hazard in Wafer Fabrication
- Introduction to IC Design
- Introduction to Semiconductor Materials and Devices
- Fabrication Process Technology overview

DAY 2

Process Theory

- Process Integration
  - ¬ Wafer Fabrication Technology Overview
  - ¬ Process Modules
    - – Thin Film
    - – Diffusion
    - – Lithography
    - – Dry Etching
- Fabrication Process Flow

DAY 3

Process Module

- Basic cleanroom protocol and safety includes gowning/de-gowning
- Diffusion processes
- Thin film processes

DAY 4

Process Module

- Photo-lithography processes
- Etching processes

DAY 5

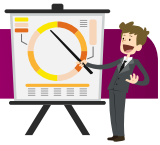
Wafer Level Testing

- Introduction of Semiconductor Electrical Testing
- Discrete Device Testing & Auto DC Parametric

– Agilent 4080 Tester & B1500 IV Tester

- Analog and Power Device Tester – LTXC ASL1000 Tester
- Functional Mixed Signal Tester – LTXC D10 Tester

INSTRUCTOR PROFILE



Khairil Mazwan is a Senior Engineer in Research & Development in Advanced Devices & Nanoelectronics R&D. He received his Bachelor's Degree Chemical and Process Engineering from Universiti Kebangsaan Malaysia (UKM). He has more than 16 years working experience in MIMOS R&D and Semiconductor. Khairil's past experience include diffusion module, process integration module and MEMS/ microelectronics. He is a master trainer in training and assessment (cert IV Internationally recognised by Australia Qualification Framework (AQF). Khairil is also a Principal trainer for Diffusion Furnace and is also a trainer for Integration and Statistical Process Control (SPC) and obtain train the trainer certificate (TTT/SHEQ/13/0667).

Muhamad Amri received his bachelor's degree in Communication and Computer Engineering from Universiti Kebangsaan Malaysia (UKM) in 2000 and master's degree in Electrical Engineering from Universiti Teknologi Malaysia (UTM) in 2009. His past experiences include research and development in semiconductor device model extraction for circuit simulations, characterization of statistical mismatch model, process and device simulations with Technology Computer Aided Design (TCAD) tool, qualification of Process Design Kit (PDK) as well as development of discrete trench power devices. He is currently works on the research and development of graphene field effect transistor (GFET) from simulation and modeling to actual device fabrication in supporting nanomaterial technology platform. He has delivered trainings to the participants from universities and industries on the topics of integrated circuit (IC) design and device modeling.

Azhar Idris is a Senior Engineer in Test Development and Characterization. He received his Bachelor's Degree in Computer & Communication from Universiti Sains Malaysia(USM). He has more than 15 years working experience in MIMOS R&D and Semiconductor. Azhar's past experience are in electronics product design & manufacturing, CAD software, parametric and functional semiconductor device testing at wafer and package level, semiconductor analysis software. Trained many engineers and related customer in digital functional testing.

Nurul Ainie Binti Ismail is a Test Engineer in Test Development and Characterization. She received her bachelor's degree in Electrical Engineering from University of Technology Malaysia. Nurul Ainie's past experience are in quality assurance focusing in ISO9001:2008. In 2001, she move to testing department and her responsibility are in testing wafer level ranging from parametric, functional, power devices and reliability. She led team of parametric catering to high volume and high focus on wafer acceptance testing and development of the test programs prior to production release. She has groomed and trained many engineers on testing, namely parametric and wafer level reliability. Nurul Ainie's is a PSMB/HRDF certified trainer. She is the principal trainer for MIMOS Test Development & Characterization.

REGISTRATION FORM Semiconductor Wafer Fabrication Process Training

MIMOS @ Technology Park Malaysia 23 - 27 March 2020 (early bird 29 February 2020), 20 - 24 July 2020 (early bird 30 June), 19 - 23 October 2020 (early bird 30 September 2020)

Please complete this form and fax or email to us

COURSE FEE	Fee per participant	Fee inclusive SST
☐ **Early Bird Registration** (date as above)	RM5,000.00	RM 5,300.00
☐ **Standard Registration**	RM5,200.00	RM5,512.00
☐ **Group Discount** (3 participants above)	RM 4,800.00	RM5,088.00
☐ **Universities & Colleges**	RM4,500.00	RM4,770.00

HRDF MALAYSIA
Claimable under HRDF Scheme-SBL

No	PARTICIPANT DETAILS	CONTACT INFORMATION	MEAL PREFERENCE
1	Name: Designation:	Email: Mobile No.:	☐ Vegetarian ☐ Non-Vegetarian
2	Name: Designation:	Email: Mobile No.:	☐ Vegetarian ☐ Non-Vegetarian
3	Name: Designation:	Email: Mobile No.:	☐ Vegetarian ☐ Non-Vegetarian
4	Name: Designation:	Email: Mobile No.:	☐ Vegetarian ☐ Non-Vegetarian

Preferred date of training : ☐ 23 - 27 March 2020 ☐ 20 - 24 July 2020 ☐ 19 - 23 November 2020

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:

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 include luncheon, coffee/tea breaks and training materials.*
3. *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.*
4. *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.*

To register & more information:

Business Development (MSSB), MIMOS Berhad

Call : +603-8995 5000 ext. 55279 (Fara), 55642 (Amy) Email : faradaya.machmud@mimos.my, letchumy@mimos.my