The Institution of Engineers, Malaysia

2 DAYS HYBRID COURSE ON "TECHNICAL KNOWLEDGE ON INDUSTRIAL CONCRETE FLOORS".

Organised By:

Civil & Strutural Engineering Technical Division, IEM

Applying

HRD CORP CLAIMABLE

COURSE DETAILS

DATE

18th & 19th June 2025

TIME

9am - 5.30pm

VENUE

Malakoff Auditorium
Ground Floor, Wisma IEM, PJ
& ZOOM - Virtual Platform

Speakers

Dr. Zack Lim Eng Hock

Dr. Yeo Shih Horng

BEM APPROVED CPD HOURS : REF NO. : APPLYING

REGISTRATION FEES - Physical

	ONLINE FEES (RM)	NORMAL FEES (RM)
STUDENT MEMBER	200.00	300.00
GRADUATE MEMBER	400.00	500.00
CORPORATE MEMBER	800.00	900.00
NON MEMBER	1600.00	1700.00

REGISTRATION FEES - Online

	ONLINE FEES (RM)	NORMAL FEES (RM)
STUDENT MEMBER	100.00	200.00
GRADUATE MEMBER	200.00	300.00
CORPORATE MEMBER	400.00	500.00
NON MEMBER	800.00	900.00

DAY 1

9.00am - 10.15am

PART 1 – Types of floor specifications
·What is flatness and levelness and their importance?
·What are the types of international floor standards.
·How to select the right floor specification.
·Can superflat floors be built on elevated slabs?
·Your client's expectation of a good concrete floor.

10.15.am - 10.30am

Tea Break

Part 2 - How to build concrete floors successfully.
·What are the factors to consider when building a super flat floor.
·Slab-on-grade/ground. Slab-on-piles. Elevated slabs. Post-tensioned slabs.

12.30pm - 1..30pm

Lunch

PART 3 – Joints on slab
·What is the purpose of joints?
·What are the types of floors joint?
·Dilemmas in floor joints. Case studies on why floor joints failed.

3.30pm - 3.45pm

Tea Break

3.45pm - 5.30pm

PART 4 – Importance of floor finishes
·Types of common floor finishes - smooth finish, burnished finish, polished finish.
·Why and when are dry shake floor hardener needed?
·How to achieve high abrasion resistance for slabs.
·Select the right sealant for contraction joints.

DAY 2

9.00am - 10.15am	Part 5 – UNDERSTANDING CONCRETE KNOWLEDGE RELATED TO INDUSTRIAL FLOOR SLAB · Fundamental knowledge of concrete components for floor slab. · Importance of concrete mix design for floor slab – The right mix proportion.
10.15.am - 10.30am	Breakfast
	· Understanding of batching concrete using Ordinary Portland Cement, pulverized fly ash, slag, waterproofing admixture and shrinkage compensating admixture. · Challenges of obtaining good and consistent concrete. · Is more cement or higher-grade concrete better?
12.30pm - 1..30pm	Lunch
	PART 6 - Floor cracks · What causes floor cracks? · Types of floor cracks. How to mitigate floor cracks. Are floor cracks normal or defects? · When and how to repair cracks. Is there any way to build a crack-free floor slab?
3.30pm - 3.45pm	Tea Break
	Part 7 Floor distress/defects and how to avoid. · Concrete problems, weather, workmanship, · Types of common floor defects. Why and what are the causes of floor delamination.
3.45pm - 5.30pm	· Forensic on floor defects. How to repair delaminated and undulating floors.

SPEAKERS PROFILE

Zack Lim is an experienced and respected figure in the construction industry, specializing in industrial flooring. He earned his BSc in Mechanical Engineering from The City University in London in 1981. Later, in 2018, he completed his PhD in Civil Engineering at the IIC University of Technology in Cambodia. In 2000, Zack founded Zacklim Flat Floor Specialist to address a significant gap in Asia: the lack of expertise in constructing super flat floors. Over the years, he has successfully led numerous projects, establishing a strong reputation for delivering world-class industrial floors across the region.

With more than 43 years of experience in construction, Zack continues to contribute to the industry by sharing his knowledge at seminars throughout Asia. He advises young engineers and contractors and advocates for best practices in concrete floor construction. His dedication to excellence in industrial flooring has made him a recognized leader in the field.

Zack has also been an influential figure in various professional organizations. He served as President of the American Concrete Institute (ACI) Malaysia Chapter for two terms, from 2012 to 2016, and as Past Vice President of the Concrete Society of Malaysia. In 2014, he founded the Academy of Concrete Technology (AoCT) and a certified HRDF Trainer, with the mission of promoting practical concrete and construction seminars and offering field technician certifications, ultimately fostering regional integration within the concrete and construction communities. In 2018, Zack Lim was honoured with the CIDB Fellowship Award, a recognition of his significant contributions to the construction industry. Currently, he is a committee member with JKR-REAM developing on "Best practices for fixed form concrete pavement".

Dr. Yeo Shih Horng is a distinguished expert in high-performance concrete and forensic analysis, with a strong track record in innovative concrete mix design and troubleshooting. As the founder of YSH Concrete Technology Sdn. Bhd., he has contributed significantly to the development of specialized concrete solutions for complex construction projects. His expertise spans a variety of applications, including fast-track construction in harsh environments. Notably, he played a pivotal role in designing a concrete mix for a FAB project in Dalian, China, where the mix achieved over 25 MPa within 24 hours despite freezing temperatures without conventional heat curing. His involvement in the Changi Airport expansion project demonstrates his ability to consult on large-scale projects, advising on mix design, site quality control, and troubleshooting. Dr. Yeo has successfully developed high-performance concrete mixes tailored to specific needs, including low-heat, high-strength C60/75 concrete for data centers in Singapore and ultra-high early strength concrete capable of reaching 20 MPa within just 8 hours for specialized repair applications. Beyond mix design, he is deeply involved in concrete forensics, investigating structural integrity issues, cracking in concrete sleepers, delayed ettringite formation, tunnel lining defects, and other critical problems in construction. His forensic expertise has helped resolve complex concrete failures across various industries.

Dr. Yeo's contributions extend to professional associations, having served as a committee member for the American Concrete Institute (ACI) – Malaysia Chapter and The Institution of Engineers, Malaysia (IEM). His dedication to advancing concrete technology continues to impact the industry, shaping innovative solutions for construction challenges worldwide.