

AIRFIELD PAVEMENT ENGINEERING

COURSE DESCRIPTION

Planning, design, construction and maintenance of airfield pavements, monitoring of aircraft-pavement interactions, and safety and impact assessment of aircraft operations on airfields require specialized knowledge. Such knowledge and appreciation are important to achieve efficient, safe, and cost-effective airfield operations.

This programme is aimed at civil engineers, airport and airfield contractors and consultants who wish to acquire specialised knowledge in airfield engineering; and airport and airfield maintenance professionals, who already have working experience in airfield and aircraft operations, and wish to deepen their understanding of the principles and basics of airfield planning and design, the engineering of airfield pavement construction, materials selection and maintenance, the concepts of airfield pavement performance evaluation and prediction, the safety implications and environmental impacts of airfield operations, the mechanisms of interactions between aircraft and airfield pavement, the processes of airfield pavement deterioration and failures, and the rationales of airfield maintenance and rehabilitation treatments.

The new FAA (U.S. Federal Aviation Administration) and ICAO (International Civil Aviation Organisation) airfield pavement design and evaluation methods will be discussed.

ENTRY REQUIREMENTS

- Bachelor degree in Engineering or related discipline, or
- Bachelor degree in non-engineering discipline with minimum two years of related airport engineering experience.

COURSE ADMINISTRATION

- Venue: NUS campus (TBA)
- Course dates: 4, 6, 7 & 8 July 2022
- Course fees: SGD 3,800.00 (before GST, up to 90% funding available, see fees breakdown below)
- Registration period: 19 May - 24 June 2022
- Registration details: Self-sponsored participants to register directly via [NUS Online Application Portal \(OAP\)](#), refer to guide [here](#).
- Corporate-sponsored participants (invoice issued to company) are to contact Ms Sally Ng (sally.ng@nus.edu.sg) for assistance.

Min. 75% attendance required for certificate of participation.



AIRFIELD PAVEMENT ENGINEERING

TOPICS / COURSE OUTLINE

DAY 1

- Course Introduction
- Fundamental concepts in airport planning and airport pavement engineering
- Airfield runway capacity and traffic load analysis
- Structural design of airfield pavement (including the latest FAA methods)

**4 JUL'22,
MON
9AM - 6PM**

DAY 2

- Airfield pavement resurfacing and overlay design
- Structural evaluation of airfield pavements (including latest ICAO ACR-PCR methods)
- Airfield pavement materials and construction
- Visit to NUS pavement laboratories

**6 JUL'22
WED
9AM - 6PM**

DAY 3

- Airfield pavement drainage design
- Pavement maintenance management
- Pavement roughness evaluation and management
- Pavement Design and Evaluation Hands-on Session

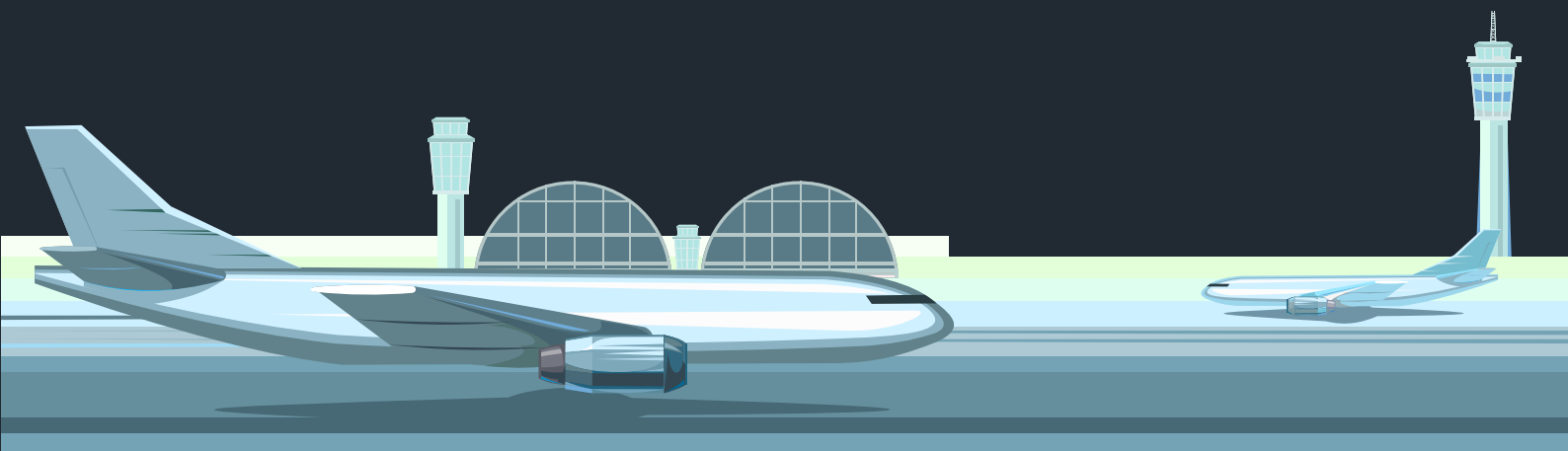
**7 JUL'22
THU
9AM - 6PM**

DAY 4

- Pavement friction testing and management
- Case studies in airport pavement engineering
- Course Summary and Revision
- Course Evaluation

**8 JUL'22,
FRI
9AM - 6PM**

*Lunch and teabreaks will be provided



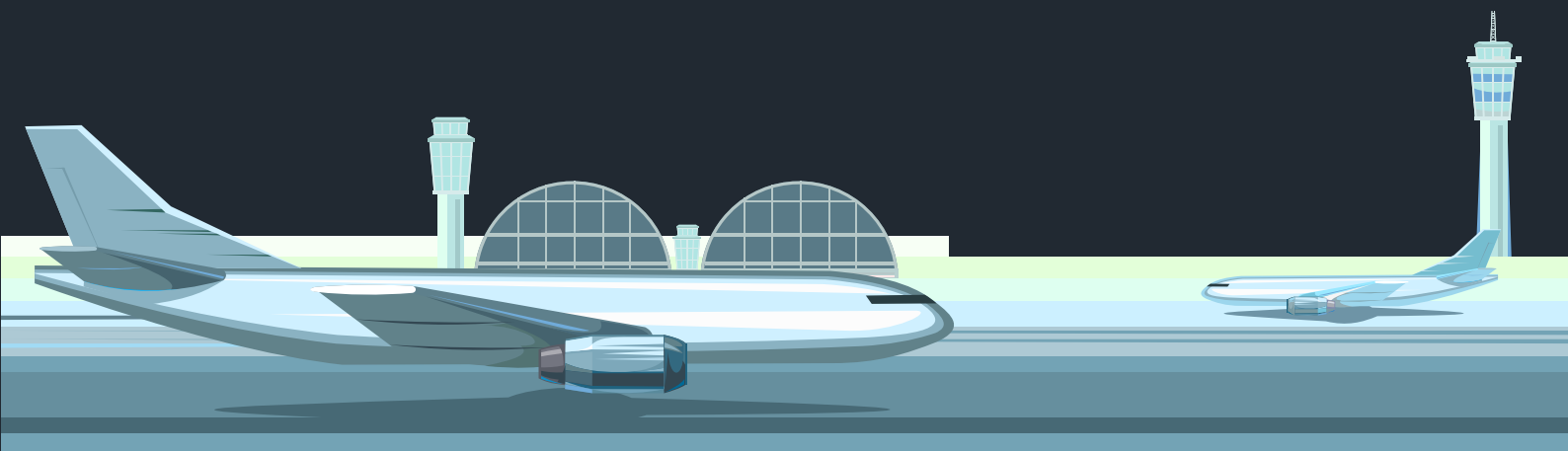
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COURSE FEES

	International Participant	Singapore Citizen 39 years old or younger	Singapore Citizen 40 years or older eligible for MCES **	Singaporean PRs	Enhanced Training Support for SMEs
Full Programme Fee	S\$3,800.00	S\$3,800.00	S\$3,800.00	S\$3,800.00	S\$3,800.00
SSG Funding* Eligible	-	(\$2,660.00)	(\$2,660.00)	(\$2,660.00)	(\$2,660.00)
Nett Programme Fee	S\$3,800.00	S\$1,140.00	S\$1,140.00	S\$1,140.00	S\$1,140.00
7% GST on Nett Programme Fee	S\$266.00	S\$79.80	S\$79.80	S\$79.80	S\$79.80
Total Nett Programme Fee Payable, Incl. GST	S\$4,066.00	S\$1,219.80	S\$1,219.80	S\$1,219.80	S\$1,219.80
Less Additional Funding if Eligible Under Various Scheme	-	-	(\$760.00)	-	(\$760.00)
Total Nett Programme Fee. Incl. GST, after additional funding from various funding schemes	S\$4,066.00	S\$1,219.80	S\$459.80	S\$1,219.80	S\$459.80

*Learners must fulfil at least 75% attendance and pass all assessment components to be eligible for SSG funding.

**SkillsFuture Mid-Career Enhanced Subsidy



AIRFIELD PAVEMENT ENGINEERING

INSTRUCTOR



ASSOCIATE PROFESSOR ONG GHIM PING RAYMOND

Dr Ong Ghim Ping Raymond is an Associate Professor and Associate Head (Research) in the Department of Civil and Environmental Engineering at the National University of Singapore (NUS). He graduated with a B.Eng (Civil) (First Class Honours) with a minor in Business from the National University of Singapore in 2003 and obtained his PhD in Civil Engineering from the National University of Singapore in 2007.

Dr Ong's research interests include pavement materials and engineering, and multimodal transport infrastructures and operations, with emphasis on future mega-transport infrastructures/operations (such as car-lite/car-free towns, next generation seaports and airports). He has authored or co-authored over 65 peer-reviewed journal articles as well as over 90 international conference papers in these research areas. He is also actively involved in translational research grants/projects related to the engineering development of critical mega-infrastructures in Singapore (including the Tuas mega-port, Changi East Development, and Woodlands Checkpoint).

Dr. Ong is currently serving in various scientific committees in the Transportation Research Board of the National Academies, the American Society of Civil Engineers, the American Society for Testing and Materials and the Eastern Asian Society of Transportation Studies. He is also currently serving in editorial roles in several peer-reviewed international journals. He has received several scientific awards in recognition of his achievements in transportation research, including the Alfred Noble Prize (ASCE), the Hanjin Prize (IAME), the inaugural Takeuchi Yoshio Award (OCDI) and the inaugural iSMARTi Early Career Award. His research expertise and achievements have also led to him to serve as consultant to agencies and companies such as Changi Airport Group, Defence Science and Technology Agency, Surbana Jurong Infrastructures Pte Ltd, Global Maritime and Port Services Pte Ltd, and the Korean Maritime Institute.

Dr. Ong is also passionate about sharing his thoughts on current and future issues related to his research expertise to the public. He has frequently appeared in mainstream print or internet media (such as Straits Times, Lianhe Zaobao, The New Paper, Today Online) and live or pre-recorded TV interviews (such as Channel NewsAsia, Channel 8 info-ed programs and news, and Suria info-ed programs) speaking on issues on transport infrastructure and operations, active mobility and car-lite/car-free initiatives.

