

Certificate in Pavement Construction and Maintenance

INTRODUCTION

Pavement construction and maintenance are integral to maintain a good system of roads which is the underlying backbone of our infrastructure. Contractors need to have the expertise to supervise and coordinate pavement construction and maintenance to ensure quality work. A number of supervisors in the industry may be unfamiliar with the relevant road construction technology and supervision methods to supervise the works properly and co-ordinate well to achieve the high standard expected by the clients and authorities.

This course will enhance participant's competencies in managing and supervising pavement construction and maintenance work. It opens up opportunities to become technical specialists for road construction, road management and road maintenance. Graduates can move to higher supervisory and management roles in this specialized area of road works.

LTA had made it mandatory for all supervisors of road openings and road works to possess this Certificate issued by the Building and Construction Authority.

OBJECTIVES

At the end of the course, the participant would acquire the skills and knowledge to:

- Describe the basic principles in flexible and rigid pavement design;
- Explain the properties of asphalt, concrete and interlocking blocks;
- Supervise road construction, evaluation and maintenance works to LTA's quality standards;
- Plan and organize road work sites for effective construction and maintenance management;
- Implement safe road site and yard practices.

CONTENTS

MODULE 1 - Contract Administration and Site Organisation

- Brief history of roads in Singapore
- Types of roads & roadworks in Singapore
- Road construction management
- LTA's standard contractual/technical specifications requirements

MODULE 2 - Surveying and Subgrade preparation

- Sub grade preparation
- Drainage works
- Related works
- Basic survey techniques

MODULE 3 - Asphalt Technology

- Asphalt concrete
- Mix design
- Manufacture of asphalt mix
- Visit to production plant

MODULE 4 - Flexible Pavement Construction and Maintenance

- Basic principles of flexible pavement design

- Paving operation
- Defects identification and rectification
- Assessment of construction quality
- Reinstatement work for flexible pavement

MODULE 5 - Rigid Pavement Construction and Maintenance

- Concrete technology
- Basic principles of rigid pavement design
- Concrete road construction equipment
- Defects identification and rectification
- Reinstatement works
- Laboratory Works

MODULE 6 - Interlocking Blocks Construction and Maintenance

- Basic principles of interlocking block pavement design
- Laying of roadside kerbs, drainage system, turfing
- Field practice
- Perforated carpark slabs

ENTRY REQUIREMENTS

The Applicant must be a Singapore Citizen or Permanent Resident or holder of a valid employment pass/work permit and;

- attain at least 3 GCE 'O' levels in English (Grade 1 to 8), Mathematics (Grade 1 to 6) and one other subject (Grade 1 to 8) with minimum 2 years relevant working experience; or
- possess one of the following recognised qualifications with experience:
 - a) Certificate in Facilities Maintenance Supervision; or
 - b) Certificate in Building Measurement or Certificate in Leveling and Setting Out or Certificate in Interior Decoration or Certificate in Landscape Coordination or Certificate in Substructure Construction with minimum 1 year relevant working experience; or
 - c) Construction Trade Foremen Certificate with minimum 2 years relevant working experience and pass the English and Mathematics test conducted by BCA Academy; or
 - d) Advanced Builder Certificate with GCE 'O' level in English (Grade 1 to 8), Mathematics (Grade 1 to 6) or pass both English and Mathematics tests conducted by BCA Academy; and 2 years of relevant working experience

An applicant who has attempted the GCE 'O' level examination but does not meet this course's specified grade in English or Mathematics, is subjected to take an English or Mathematics test conducted by BCA Academy to determine his/her enrolment eligibility.



DETAILS

Date: Mar 2023
Duration: 6 months (120 training hrs)
Time: 6.30pm to 9.30pm
Venue: BCA Braddell Campus

Fee (incl of GST): **S\$3,200.00**

SkillsFuture Singapore (SSG) funding is available for eligible participants as follows:

<i>Singaporeans 40 years old and above OR SME company sponsored Singaporeans or Singapore PRs. Fee payable after 70% funding support</i>	S\$1,106.54 <i>(incl of GST)</i>
<i>Singaporeans, Singapore PRs and non SME company sponsored participants. Fee payable after 50% funding support</i>	S\$1,704.67 <i>(incl of GST)</i>

Participant must achieve at least 75% attendance and pass all assessments. BCA Academy reserves the right to recover the funded amount from the participant (self-sponsored) or employer (company sponsored) if participant did not meet the eligibility criteria. Details of SSG's funding can be found in <https://www.enterprisejobskills.gov.sg/content/upgrade-skills/course-fee-and-absentee-payroll-funding.html> (TGS-2020500031)

TARGET AUDIENCE

Engineers, roadwork supervisors, foremen and civil engineering technical personnel who supervise pavement construction and maintenance work, including those who have relevant experience but lack formal training.

EXAMINATION & AWARD OF CERTIFICATE

A participant must attain at least 75% of physical attendance to be eligible to take the examination at the end of the course. Those who pass the examination will be awarded Certificate in Pavement Construction and Maintenance.

REGISTRATION



To register, please log into our Online StoreFront (OSF) at <https://eservices.bcaa.edu.sg/registration/#/login> or scan QR code and search for course code **74008**