JAMES COOK INSTITUTE

DIGITAL & IT

BASIC

SkillsFuture for Digital Workplace 2.0 Built Environment

(Classroom + Asynchronous E-learning)



Description

This course is targeted at those working in the built environment sector. We will cover the technological advances that are impacting or will impact the sector. In this course, we will help learners understand the implications of various technological advancements and digital tools that will affect how the built environment sector operates and the required manpower skills.

Learners will be introduced to competencies such as analytics to understand construction costs and the use of digital tools regarding additive manufacturing, like 3D printing for construction, augmented reality (using goggles), and Generative AI at the worksite.

Course Objectives

By the end of this course, learners will be able to:

- State the jobs and digital skills required in the current and future digital economy.
- Describe the work requirements in a technology-rich environment and know the associated cybersecurity risks.
- Identify various digital applications and tools in work applications, including widely applicable national and sectoral platforms.
- Suggest how data and information can be used.
- Perform functional outcomes such as the use of digital tools and software to access various learning paths and content.
- Develop a post-course action plan to continue learning (i.e., to identify courses that would allow participants to further deepen their skills in the four key areas).
- Acquire knowledge of Generative AI and the know-how of prompts

Course Duration

15 Hours

Course Reference No.

TGS-2023037504

Mode of Training

(Classroom + Asynchronous E-learning)

Funding Validity

Till 31 Dec 2027

Full Fee $530

(Subject to 9% GST)

Pricing	Funding	Nett Fee (After GST)
SME OR SINGAPOREAN AGE 40 AND ABOVE	90%	$67.31
NON-SME OR SINGAPOREAN AGE 21 TO 39 OR PR	70%	$173.31

Subsidies available: SFC, SFEC, UTAP

As pre-requisites may differ by course, we strongly encourage you to review the details and contact us for any clarification.

Visit our Website

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Course Content

Learning Unit 1: Data Analytics

- Introduction to SFDW
- Digital Skills and Jobs Awareness for the Built Environment Sector
- Importance of Data Analytics for the Built Environment Sector
- Use data analytics and visualisation tools such as Excel PivotTable and Power BI to analyse construction costs

Learning Unit 2: Automation

- Introduction to Automation in the Built Environment sector
- Programmable Automation (3D printing and additive manufacturing tools for fabrication of parts and 3D printed housing)
- Conversational Automation, such as Google Assistant, chatbots in government and corporate websites (AskBecca for BCA, AskURA for URA, Ask HDB for HDB, etc.)
- Using Power Automate to improve work process productivity
- Autonomous Robots and Internet of Things in Built Environment
- Future trends for automation in the Built Environment sector

Learning Unit 3: Cybersecurity Risk

- Introduction to Cybersecurity Risk
- Areas of cybersecurity risk and its implication and effect to the individual and organisations in the Built Environment sector
- How to mitigate cybersecurity risks? (physical, software, policy and regulatory)

Learning Unit 4: In-demand Digital Tools

- Artificial Intelligence in the Built Environment sector
- Generative Artificial Intelligence such as Gemini and Copilot in areas such as project planning, interpreting customer requirements, responding to queries, provide information on regulations, building codes, etc.
- Basic concepts of Generative AI and its risks
- How to design prompts
- Nationally launched applications
- Explore upcoming digital technology used in Built Environment
- Develop a learning plan to take ownership of own skills upgrading

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