JAMES COOK INSTITUTE

DIGITAL & IT

BASIC

SkillsFuture for Digital Workplace 2.0 (Manufacturing)

Description

This course is targeted at those in the manufacturing sector. Learners will learn about key technological advances that are impacting or will impact the sector. There will be interactive experiences for learners to engage with technologies, such as Chatbots, 3D printing, Virtual Reality (using goggles), and mobile app usage.

Learners will be introduced to security risks associated with using emerging technologies and how to mitigate those risks. Learners will understand and apply digital tools for the manufacturing sector, such as additive manufacturing and augmented reality.

They will also use analytics to understand operational insights and utilize AI, Generative AI and robotic tools in a manufacturing environment.

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 use
- Perform functional outcomes such as the use of digital tools, including Generative AI, 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)

Course Duration
15 Hours

Course Reference No.
TGS-2023037502

Mode of Training
Classroom

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

Visit our Website

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Course Content

Learning Unit 1: Data Analytics

- Introduction to SFDW
- Digital Skills and Jobs Awareness for the Manufacturing Sector
- Importance of Data Analytics in the current and future digital economy for the Manufacturing Sector
- Use data analytics and visualisation tools such as Excel PivotTable and Power BI to create actionable insights with manufacturing data

Learning Unit 2: Automation

- Introduction to Automation in The Manufacturing Sector
- Programmable Automation (3D printing and additive manufacturing tools for fabrication of parts and customised items)
- Conversational Automation in The Manufacturing Sector such as Google Assistant, chatbots in government and corporate websites (MTI, etc.)
- Using Power Automate to improve workflow productivity
- Autonomous Robots Use for Manufacturing Sector

Learning Unit 3: Cybersecurity Risk

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

Learning Unit 4: In-demand Digital Tools

- Introduction to Digital Tools for The Manufacturing Sector
- Generative AI such as Gemini and Copilot to generate reports/analysis, customised workflow documentation, etc.
- Basic concepts of Generative AI and its risks
- How to design prompt
- Application of Artificial Intelligence in The Manufacturing Sector
- Nationally Launched Applications
- Using VR and AR
- Enhancing Productivity and Efficiency with Autonomous Visual Recognition Robot
- Explore Upcoming Digital Technology and Impact on How We Work, Live and Interact
- Develop a learning plan to take ownership of own skills upgrading

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