



# Adults Workshop

Ignite your career with the power of code. Now is the perfect time to dive into programming and open doors to new possibilities in your career and personal growth.

Whether you want to enhance your skills, transition to a tech career, or innovate in your current role, this workshop is your gateway. Embrace the challenge and explore what's possible with code.



# MEET THE SENIOR TEAM



## DR. OKA KURNIAWAN

Dr. Oka is a Senior Lecturer for Singapore University of Technology and Design. His research areas include Computer Science Education.

**CURRICULUM SPECIALIST**



## DR. SCARLETT MATTOLI

Dr. Scarlett is a Psychotherapist/Counsellor, Coaching Psychologist & Supervisor and Psychometrist, specialising in psychological and therapeutic support.

**CHILD PSYCHOLOGIST  
SPECIALIST**



## DR. COLLIN ANG

Dr. Collin is the Managing Director of Decision Science and is a thought leader in the industry for digital transformation and analytics

**TECHNOLOGY SPECIALIST**

# PYTHON ESSENTIALS FOR BEGINNERS

## FOR KEEN ADULT LEARNERS

### Course Benefits

- Practical Skills: Develop coding skills applicable to real-world problems.
- Career Opportunities: Enhance your resume with a foundational programming skill.
- Personal Growth: Gain confidence in your ability to learn and use new technologies

- No Programming Background Needed – Ideal for beginners
- Practical Application Focus – Hands-on introduction to coding and hardware integration
- Clarify Future Path – Helps decide if a full computing curriculum is the right investment
- Essential Knowledge for Starters – Covers foundational skills for junior developers and system testers

**JOIN US FOR A FUN-FILLED LEARNING EXPERIENCE!**

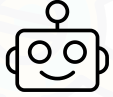
# COURSE OVERVIEW

This course offers an introduction to Python programming, emphasizing hardware programming through LEGO Robotics Education. Learners will be introduced to programming concepts to understand what Computational Thinking and Programming Languages are. They will also learn the syntax and structure of the Python programming language. By the end of the course, learners will implement a program as a small-scale project.

## TARGET LEARNERS

This course is designed for individuals without any programming background who want to explore programming through practical, hands-on applications. It provides an introduction to basic programming and hardware integration, giving learners a clearer understanding of whether to pursue comprehensive computing courses for a career in the industry. The workshop covers fundamental skills essential for beginners, such as junior developers and system testers.

# REQUIREMENTS



21 years and Above



Possess minimally a Secondary Level and/or listen, speak, read, and write English at a proficiency level equivalent to Employability Skills System Workplace Literacy (WPL) Level 4



Use numeracy skills equivalent to the Employability Skills System Workplace Numeracy (WPN) Level 4



Possess immediate computer literacy



Minimum 1 month of working experience

# COURSE CURRICULUM

## Learning Outcomes

- LO1 Apply standard scripts and tools to deploy and execute modifications to software configuration
- LO2 Conduct basic tests and checks of software products to identify compatibility and functionality issues
- LO3 Record software product updates and release activities for future reference

<b>Session 1: (4 hours)</b>	<p>A. Computational Thinking Understand what is computational thinking and how it can be used to solve problems without writing codes.</p> <p>B. Introduction to Programming Languages Understand the different forms of programming platforms and the role of AI in future programming.</p> <p>C. Introduction to Python Learn about the essential commands of Python including:</p> <ul style="list-style-type: none"><li>• Input and Output operations</li><li>• Variables and Data Types</li><li>• Logic Control Statements</li><li>• Looping operations</li></ul> <p>D. Formative Assessment (30min)</p>
<b>Session 2: (4 Hours)</b>	<p>A. Introduction to Lego Spike and Lego Spike Application.</p> <p>B. Python Programming in Lego Spike App</p> <ul style="list-style-type: none"><li>• Using library commands to control Lego modules</li><li>• Applying Python knowledge to build algorithms</li></ul> <p>C. Summative Assessment (30min)</p>

# ASSESSMENT GUIDELINES

## **Overview**

The assessment includes formative assessments to provide ongoing feedback and a summative assessment to gauge overall competency by the end of the course.

## **Assessment Outcomes**

By the end of the course, learners should be able to:

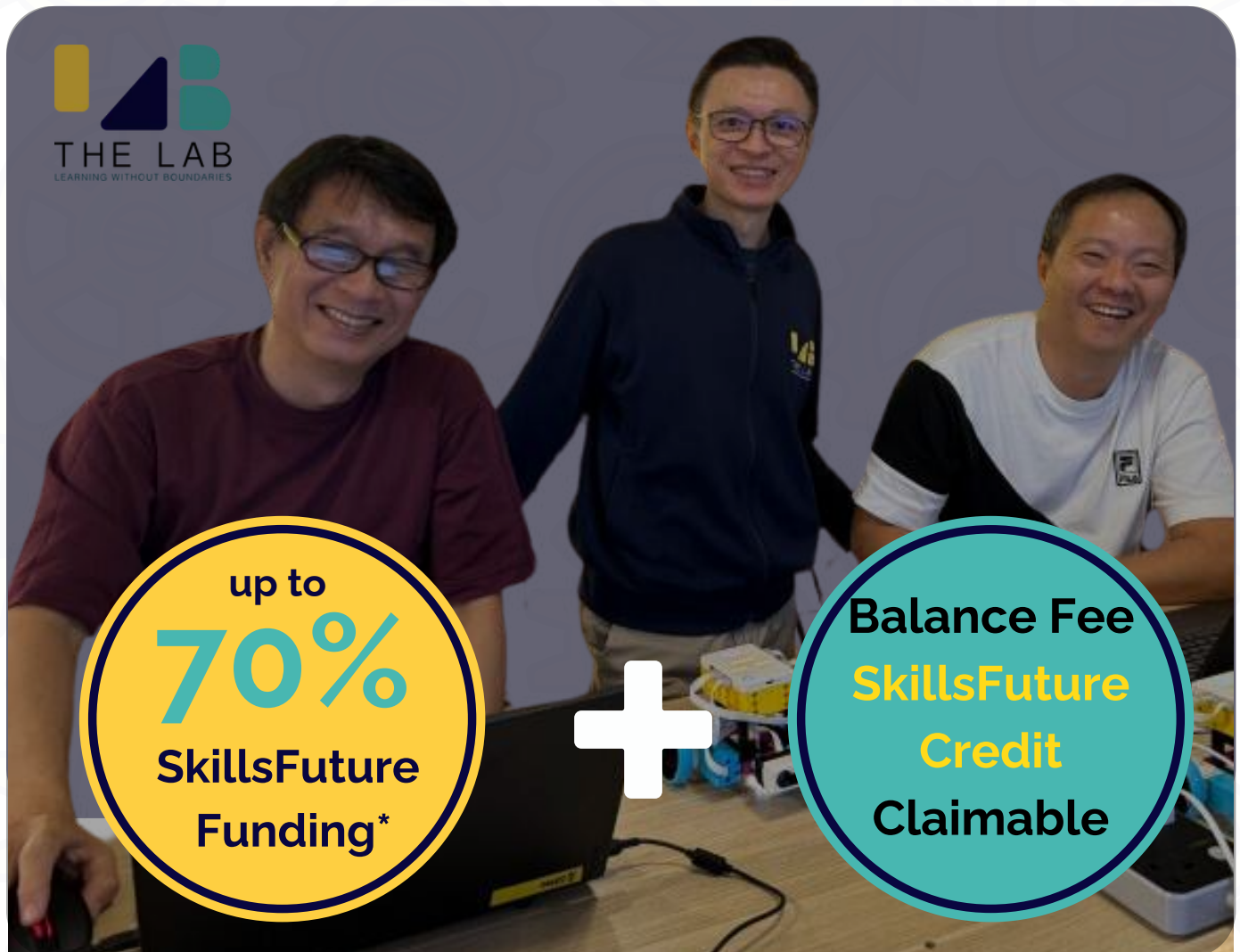
1. Write basic Python programs.
2. Understand and utilize fundamental data types and variables.
3. Implement control structures (conditional statements and loops) in Python.
4. Apply Python knowledge on Lego Spike to build a functioning robot.

## **Assessment Components**

1. Formative Assessment (45%)  
Short coding exercises to assess understanding of the key concepts.
2. Summative Assessment (55%)  
Short Lego Spike project to assess proficiency in application using Python



# JOIN US AT



	For Singapore Citizens and PRs (Self-sponsored individuals)	For Singapore Citizens aged $\geq$ 40 years old (SkillsFuture Mid-)
Course Fees:	\$600	\$600
WSG Funding:	-\$300	-\$420
Skillsfuture Credits:	-\$300	-\$180
Nett:	\$0	\$0

SIGN UP NOW AT  
[HTTPS://WWW.THELAB.SG/THE-LAB-PROGRAM/ADULT-WORKSHOP/](https://www.thelab.sg/the-lab-program/adult-workshop/)

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