



MONASH  
University

MALAYSIA

# **Gerontechnology Lab**

## **Equipment**

1.



## Age Simulation Suit

A wearable suit that stimulates the various common bodily ailments that come with old age.

2.



## Smartwatch

A computerized wristwatch with built-in heart rate sensor. It allows users to track their fitness and activity level with coaching advice to maintain a healthy lifestyle.

3.



## Digital Weight Scale and Height Rod

An electronic weight monitor with height rod that allows a quick BMI check.

4.



## Blood Pressure Monitor

Basic blood pressure monitor for blood pressure and heartbeat check at Health Station.

5.



## Health Tracking Band

Health tracking band that is able to track steps, distance walked, sleeping patterns, water consumed and nutritional intake.

6.



## Brain Rehabilitation Science

It is a non-invasive device that analyzes brainwaves, provides a report, and supports personalized treatments and neurofeedback therapy to improve brain function and prevent issues.

7.



## Ophthalmoscope

For eye examination. It is use to detects and evaluate symptoms of various retinal diseases

8.



## Hand Grip Dynamometer

Gives precise measurement of hand grip strength and muscle health assessment at Health Station. Ideal for tracking rehabilitation progress and overall physical strength.

9.



## Brain machine interface (EMOTIV EPOC+ 14 Channel Mobile EEG)

A brain machine interface for controlling robot by brain, already integrated with a casual robotic arm made of hard materials and will be integrated with soft robotic arm.

10.



## 3 in 1 Kit (Beauty Body Washer + Beauty Comb + Beauty Multi Purpose Grip)

A 3-in-1 Beauty Kit with a long comb featuring a curved, non-slip handle, a multipurpose grip for various tools, and a lightweight body washer with machine-washable cloths, designed for comfort and accessibility.

11.



## Paroos Portable Urine Detector with Clothes On (Yellow)

Discreetly signals when a diaper change is needed, reducing embarrassment for elderly users and babies. Lightweight, clothing-friendly, and free of electromagnetic waves, it ensures safe and easy use.

12.



## Blissfull Life Elderly Monitoring System

Provides 24/7 real-time monitoring with optional call center support, instantly alerting family members in emergencies. Easy to use and low-maintenance, it has a long battery life and ensures privacy without CCTV surveillance.

13.



## 7x4 Medical Box for Medicine

Compact, multi-compartment organizer with 28 sections, ideal for sorting medications by day and time. Durable and portable, designed to keep pills secure and easily accessible. Perfect for managing weekly dosages and promoting medication adherence.

1.



## Smartphone Home System

A gerontologically designed home system to control electronic devices, interfaced with an everyday smartphone and set-top boxes.

2.



## Stand-up Recliner Chair

A sofa chair with motors that allow it to unfold and tilt to an upright position to assist users to their feet and when sitting back down again

3.



## HappyHome Nail Clipper with Magnifier

Features a 4x magnification lens for precise trimming and less eye strain, with a stable suction base and an ergonomic handle for easy use.

4.



## Motion Sensor Night Light 4 units | ClinSav

Automatically illuminates pathways and doorknobs when it detects movement, ensuring safer nighttime navigation. Wireless and USB rechargeable, it offers up to three months of use on a single charge, helping reduce fall risks for seniors.

5.



## Etac Tasty plate with Push Against Edge

Has a raised edge for easy one-handed food pickup, making mealtime assistance simple. Its non-slip rubber base keeps the plate secure, enhancing feeding for both users and caregivers.

6.



## EazyHold Youth to Adult 5 Pack - Universal Cuff, Silicone Adaptive Grip Aid

The EazyHold Universal Cuff is a non-toxic, latex-free silicone grip aid for all ages. Adjustable and dishwasher-safe, it fits various utensils and accommodates both right and left hands.

7.



## Silicone Jar Opener | Tenura

Effortlessly opens jars and containers of all sizes, making it an essential kitchen tool. Its versatile design also grips cupboard handles and doorknobs, making it ideal for those with arthritis or a weakened grip.

8.



## Grab Bar 30cm - Adhesive Mount | Etac Flex

The 30cm Grab Bar offers easy adhesive installation and a firm grip, staying secure even when wet. Its connectable and adjustable design adapts to various bathroom needs, ensuring improved safety.

9.



## Wooden 5 Function Rotation Home Care Bed with Mattress

The Wooden 5-Function Rotating Home Care Bed supports up to 250 KG and features adjustable backrest, footrest, height, rotation, and tilt options. It enables easy shifts from lying down to sitting up, providing both comfort and accessibility.

10.



## High-back Ergonomic Chair

High-back Ergonomic Chair with contoured backrest for lumbar support, thick padded seat and backrest for prolonged comfort, and side padding for headrest. Wheelchair-friendly design allows easy transfer, enhancing accessibility and support.

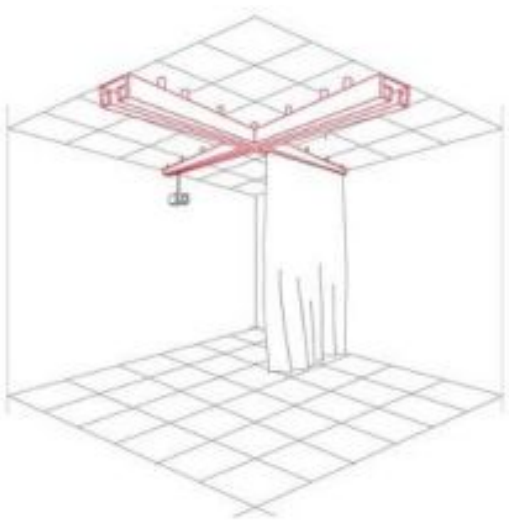
1.



## Ergonomic Forearm Supportive Walking Stick

Specially designed to provide additional support to the forearm

2.



## Four-way Ceiling Rail

The Lab can be effectively partitioned into four separate areas/stations with the use of four-way, ceiling-railed curtains.

3.



## Turtlebot 3 Research Robot Platform

A modular autonomous mobile robotic platform. It can also be integrated with soft gripper or controlled by brain-machine interface

4.



## Laevo Exoskeleton LV2.56-0220

The Laevo is a wearable chest and back support that adapts to every posture. The Laevo transfers force from the rest to the thighs

5.



## EksoWorks General Configuration

### V-1.0-0295

This is an upper body exoskeleton that elevates and supports a worker's arms to assist them with tasks ranging from chest height to overhead.

6.



## CarbonBond Smart 2-in-1 Umbrella Walking Cane

The CarbonBond Smart 2-in-1 Umbrella Walking Cane combines a detachable umbrella and cane, featuring a self-standing quad tip for stability. It includes an SOS fall alarm, built-in MP3 and radio player, and a pivoting anti-slip tip for enhanced mobility and safety.

7.



## Metro Car Handle Plus | Stander

Metro Car Handle Plus offers sturdy support for vehicle entry and exit, with a non-slip grip, ergonomic design, and built-in flashlight for nighttime safety. Fits most door strikers and supports up to 300 lbs.

8.



## Rollators and Walkers

Provide mobility assistance, enhancing safety and independence for older adults by reducing fall risks, improving balance, and supporting an active lifestyle.

1



## Touchscreen TV

Showcase an in-housed developed application that highlights renowned actors, sportsman and singers in a Malaysian context. Aims to stimulate older adult's memory.

2



## Workstation

A monitor desktop setup for use by researchers.

1.



## Prototype Devices

A display of various prototype devices either being currently developed or are seeking investment.

2.



## ZERO - 6 axis Vertical

### Articulated Robot | Zeus

The ZERO 6-axis Vertical Articulated Robot by Zeus is a compact, precise, and easy-to-install robot, ideal for space-limited environments. With patented pass-through technology and open-source programming support, it enhances productivity and simplifies operation.

3.



## Interbotix X-Series LoCoBots

Versatile, open-source robot designed for easy integration of object recognition, navigation, and robotic manipulation tasks. It's ideal for educational and research use, allowing for the development and testing of AI-driven assistive technologies in gerontechnology.