UTS SAFE WORK METHOD STATEMENT (SWMS)

1. FACULTY/SUBJECT

Faculty/Subject title	Sensors and Control
Subject supervisor/coordinator	Gavin Paul
SWMS prepared by	Connor Rudd & Claire Matthews

2. WORK ACTIVITY DESCRIPTION

Describe the work activity E.g. Operating, Handling, Using.. Include names of hazardous equipment, substances or materials used, and any quantities and concentrations of substance(s) or reaction products.	This project aims to develop a colour-based automated sorting system utilizing a DoBot robot and an RGB-D camera to detect and categorize objects by colour. Once detected the colours will be picked and placed into corresponding locations. Essential hazard equipment includes the DoBot robot and imaging sensors (RGB-D camera), which are integral to the automation process.

3. HAZARDS: Choose those hazard types that will need to have control measures in Section 4

Work Environment
- Working in Remote Locations
- Working Outdoors/fieldwork
- Clinical/Industrial setting
- Poor ventilation/Air quality
- Temperature extremes
- Working at Height
- Slip/Trip/Fall hazards

Plant
- Noise
- Vibration
- Working with compressed air
- Lifts Hoists or Cranes
- Moving parts (Crushing, friction, cut, stab, shear hazards)
- Pressure Vessels or Boilers

Chemical
- Hazardous Chemicals use
- Skin/eye irritant
- Sensitiser
- Mutagen
- Carcinogen
- Toxic to reproduction
- Aquatic toxicity
- Toxic
- Corrosive
- Dangerous when wet

Ergonomic/Manual Handling
- Repetitive or awkward movements
- Lifting heavy objects
- Over reaching
- Working above shoulder or below knee height
- Poor workstation set up

Electrical
- Plug in equipment
- High voltage
- Exposed wiring
- Exposed conductors

Radiation
- Ionising Radiation
- Non-ionising radiation (Lasers, Microwaves, Ultraviolet light)

Biological
- Sharps/Needles
- Cytotoxins
- Pathogens/infectious materials
- Infectious materials
- Communicable diseases
- Animal/insects
- Work with fungi/bact/viruses

Psychosocial
- Aggressive or violent clients/students
- Working in isolation
- Working with timeframes
- Staffing issues

4. CONTROLS MEASURES: Choose those that apply for hazards identified

Eliminate/Isolate/Substitute / Engineering Controls
- Remove hazard
- Restrict access
- Redesign equipment
- Guarding / Barriers / Fume Cupboard / exhaust
- Biosafety cabinet
- Use safer materials/substances
- Ventilation
- Regular maintenance of equipment
- Redesign of workspace / workflow

Admin specific: Licenses/permits Work Methods
- Training Information or Instruction
- Licensing or certification of operators
- Test and tag electrical equipment
- Restricted access
- Regular breaks
- Task rotation
- Work in pairs
- Document Chemical risk assessment
- Ladder / Sling register

Emergency Response Systems
- First aid kit
- Chemical spill kit
- Safety shower
- Eye wash station
- Emergency Stop button
- Remote Communication Mechanism

Other controls not listed

5. PPE REQUIRED (Tick those that apply) ✓


EYE PROTECTION


HEARING PROTECTION


CLOSED-IN FOOTWEAR MUST BE WORN


HAND PROTECTION


FACE SHIELD


PROTECTIVE CLOTHING

○	○	✓	○	○	○


RESPIRATORY PROTECTION


LONG HAIR MUST BE CONTAINED


HEAD PROTECTION

○	✓	○

6. EMERGENCY EQUIPMENT

○	○	○

7. WORK ACTIVITY STEPS

BEFORE YOU START:

- Safety Induction course
- Inspect wires and cabling
- Know load specs
- Shutdown robot
- Clean work area, return everything to start pose
- Electrically isolate
- Clean robot (if needed)
- Power on robot
- Announce start of robot movements (warn people around)

STEPS IN WORK ACTIVITY:

1. Check all cameras and sensors are clear and receiving data
2. Stand next to e-stop button
3. Stand next to laptop/control system
4. Supervise entire movement and remain outside workspace area
5. Let people around know when activating
6. Power off robot
7. Enter workspace
8. Inspect results

EMERGENCY PROCEDURES:

- Press emergency button
- Activate fire alarm
- Remove all people in proximity
- Call emergency services

TRAINING REQUIRED:

- CoBot Rapid Global Induction
- Supervisor of use

8. SIGN OFF

PREPARED BY:	LAB SUPERVISOR	DATE: 28/08/24
NAME: CONNOR RUDD, NORA SULAIMAN & CLAIRE MATTHEWS	NAME: MICHAEL LEE	REVIEW DATE: 28/08/2024