

# **UTS SAFE WORK METHOD STATEMENT (SWMS)**

1. FACULTY/SUBJECT	
Faculty/Subject title	41013 Industrial Robotics
Subject supervisor/coordinator	Gavin Paul
SWMS prepared by	Michele Liang (13980230), Rohit Bhat (14160232), Yves Gayagay (14278055)

#### 2. WORK ACTIVITY DESCRIPTION

E.g. Operating, Handling, Using.. Include names of hazardous equipment, substances or materials used, and any quantities and concentrations of substance(s) or reaction

Describe the work activity

Use the mechatronics lab to operate real robotic arms to carry out tasks that are approved by the supervisor.

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

#### **Work Environment**

products.

- Working in Remote Locations
- Working Outdoors/fieldwork
- Clinical/Industrial setting
- <u>Poor ventilation</u>/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
- Postrict 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 operator
- Test and tag electrical equipment
- Restricted access
- Regular breaks
- Task rotation
- Work in pairs
- Document Chemical risk assessment
- Ladder / Sling register

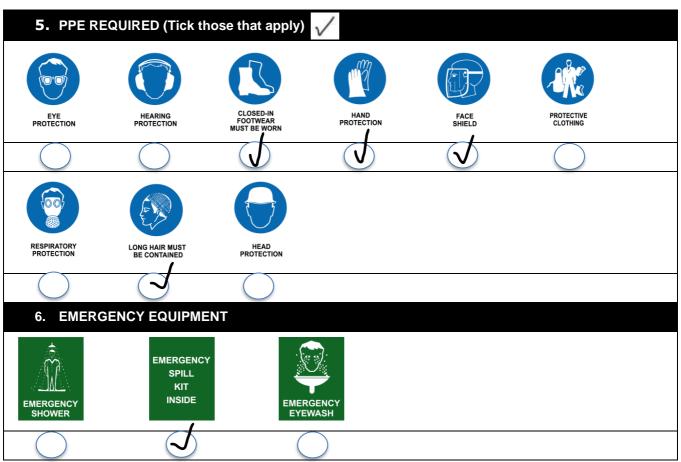
# **Emergency Response Systems**

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

Other controls not listed

**UTS SWMS form (Modified)** 03/2022 1/2





## **WORK ACTIVITY STEPS**

#### **BEFORE YOU START:**

- Remember to wash hands and wear clean gloves before food handling
- Check the functionality of all equipment, with no wiring exposed
- Survey the workspace for obstacles
- Ensure the robot works without collisions in the simulation
- Get approval for code from supervisor
- Read through the robot's manual and datasheets to understand its limitations
- Ensure familiarity with the operating procedures

#### STEPS IN WORK ACTIVITY:

- 1. Assure the pre-requisites stated above are checked before commencing
- Operate the robot with supervis
   Upload the code into the robot Operate the robot with supervision
- 4. Observe the robot from a safe distance, while identifying potential hazards that may come up during operation and address them accordingly.
- 5. Make sure the robot has shut down before engaging directly with it.
- 6. Before leaving, clean up the workspace and make sure the robot is turned off and stored properly.

### **EMERGENCY PROCEDURES:**

- Press emergency button
- Notify security or dial 6 using the UTS internal phone
- Notify 000 in case of dire emergencies

### TRAINING REQUIRED:

- Robot operation (under supervision)
- Robot code self-approval training by the supervisor
- Lab inductions
- Kitchen safety and cleanliness induction

8. SIGN OFF		
PREPARED BY:	LAB SUPERVISOR	DATE: 13/10/2023
NAME: MICHELE LIANG	NAME: MICHAEL LEE	REVIEW DATE: