

### WEEK 1 PRINCIPLES OF RISK MANAGEMENT AND WHS

#### 5 Steps to risk management

1. IDENTIFY hazards and hazardous jobs
  - Review reports and records
  - Observe work activities
  - Ask staff and students
  - Review procedures
  - Review labels or instructions that relate to the activity.
  - Observe indicators such as absentee rates, low morale, conflict between employees, ill health, fatigue and poor work quality.
2. ASSIGN PRIORITY for each hazard and hazardous job
  - Look at low, medium, high and very high risk chart.
3. ASSESS the risk to find out exactly what makes it hazardous.
  - Eliminate – substitute – engineering controls – minimize – rearrange – establish safe practice – training and supervision – PPE.
4. CONTROL the risk or fix the problem
5. EVALUATE periodically to check that WHS risks are being effectively managed.
  - Whenever there is a change in the work process or there's new workers.
  - When new information about the hazard or process becomes available.
  - If risk controls are not in place or not effective, return to step 3 and re-assess the risk.

### WEEK 2 OBSERVATION OF NORMAL MOVEMENT

#### KINEMATICS (motion description)

- DISPLACEMENT – linear/ angular (standing up)
- VELOCITY – varies through movement and can be cyclical (how quickly we move).
- ACCERLERATION – influences smoothness of movement (jerk)

#### KINETICS (numbers, forces, dynamics)

- FORCE
  - cases or tends to cause a change in a bodies motion or shape
  - starts or modifies movement
- EXTERNAL FORCE
  - ground reaction force, external loads, active bodies, passive resistance.
- INTERNAL FORCES
  - muscle activity, ligaments, friction in muscles.
- TORQUE
  - force which causes a rotation and acts on the joints in the body.
  - e.g elbow flexion against resistance

#### TYPES OF MUSCLE CONTRACTIONS

- CONCENTRIC – muscle actively shortening to move a joint
- ECCENTRIC – Muscle activity lengthening to control speed or direction of joint movement.
- ISOMETRIC – Muscle producing tension but no movement.