

## Los Rios Community College District - Job Safety Analysis

<b>Job Category: Science/Vocational/Technical - Aeronautics, Automotive Technology, Fire Technology, Mechanical/Electrical Technology, Welding (Instructor/Instructional Assistant /Laboratory Technician) (For Specifics See Below*)</b>		
Required and/or recommended personal protective equipment: Protective goggles, hard hats, gloves, steel-toed shoes, coveralls, masks		
Sequence of Basic Job Steps	Potential Hazards	Recommended Action or Procedure
Standing for long periods of time	Leg/knee problems, back problems	Follow good health physiology practices: Do not lock knees, exercise good posture, change stance, and move back and forth. Stretch, exercise and maintain appropriate body weight. Avoid fatigue.
Audio visual presentations	Muscle strain, back injury	Apply proper technique to lifting and moving heavy equipment. Use mobile carts whenever possible.
Chemically, emotionally and psychologically imbalanced students	Physical harm	Contact college police for assistance and protection if student appears to be out of control. Use non-aggressive communication skills.
Driving and parking vehicles	Vehicle accident resulting in personal injury  Criminal activity	Wear seat/shoulder belts at all times. Follow safe driving rules/regulations. Practice defensive driving. Park in legal spaces, not obstructing traffic. Do not consume alcoholic beverages or other intoxicants prior to or during work.  Lock vehicle when unattended. Park close to entrance or in well-lit areas.
Office work (after hours, evenings/weekends)	Physical harm	Lock office door if working late at night and alert college police of your presence on campus.
Lifting/moving heavy parts, equipment and tools	Back injury, muscle strain/sprains	Follow proper body mechanics to avoid injury, utilizing large leg muscle, hydraulic lifts, handcarts and dollies. Know physical limitations and do not exceed, seek assistance from others.
Dismantle and Assemble Auto	Limb and back injury	Follow proper procedures. Use hydraulic lifts/jacks to raise and lower automotive parts. Use proper lift techniques for heavy parts. Wear protective footwear.
Testing with special equipment	Electrical shock	Train employees in proper use and safety for all power equipment. Follow established procedures of operation.
Cleaning auto parts and tools	Inhalation of harmful fumes Burns and irritation to skin surfaces	Use proper protective clothing and gear. Make sure area is properly ventilated.

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Batteries	Burns on surface or to eyes; contact with corrosive substances	Use protective clothing, gloves, goggles and aprons. Know how to neutralize acid spills. Clean up spills immediately.
Welding	Burns, eye damage due to molten substances	Wear protective clothing, gloves, masks and face shields.
Grinders	Flying debris	Wear protective clothing, gloves and goggles.
Physical demands: lifting, standing, pushing/pulling, climbing, balancing, stooping, bending, kneeling, crouching, reaching, handling, fingering, twisting	Bodily injury, muscles strain/sprains, cramping	Do warm-up stretch routine to increase blood supply to muscles/tissues to avoid/reduce possible injury. Know personal physical limitations and do not exceed. Avoid over exertion.
Noise	Permanent loss of hearing	Wear protective earplugs or mufflers.
Dust/Fumes	Inhalation of dust/fumes	Wear protective masks. Keep area well ventilated.
Fuel	Fire and explosion	No smoking during fueling process. Avoid inhaling vapors when fueling. Turn engines off when refueling.
Operation of aircraft engines	Getting caught in moving parts, amputation of limbs by propellers, electrical shock	Make sure all guards are in place. Make sure area is clear before starting engine. Use caution when working on engine/equipment with moving parts. When possible, stop engine before servicing. Follow safety procedures when working with electrical connections of engine. Keep equipment at least 20 feet from power lines.
Use of hand-held tools	Musculoskeletal injuries	Hand-held tools should be kept in good condition. Use appropriate tool for the task performed.
Use of pneumatic and electric tools	Musculoskeletal injuries	Provide training for all power and pneumatic equipment. Wear protective clothing, gloves, and face shields when required. Disconnect from power source when not in use.
Use of welding equipment, grinders, metal working equipment	Cuts, amputation, flying particles	Wear protective clothing, gloves, goggles, and face shield. Provide thorough training on all power equipment.

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Use of hoists, jack	Bodily injury due to vehicle falling off hoists	Follow safety procedures; check position of vehicle on racks before raising above ground.
Use of hand, power and pneumatic tools	Musculoskeletal injuries	Use standard operation procedures, which prevent injury. Disconnect when not in use. Do not use electrical tools while in or near water.
Batteries and battery acid	Contact with corrosive substance on clothing, skin and eyes	Wear protective leather apron, goggles. Store in well-ventilated area. Know how to neutralize and clean spills.
Date: January 18, 1995 / Analysis By: S. Davies, C. Turner, D. Goff, R. Jones / Reviewed By: Clarice Bettencourt		

\*Note: This Job Safety Analysis form includes the following positions in the Los Rios Community College District: Electronics Calibration and Repair Technician; Instructional Assistant - Advanced Transportation Technology; Instructional Assistant -Aeronautics; Instructional Assistant - Electronics Laboratory; Instructional Assistant - Mechanical Electrical Technology; Instructional Assistant - Mechanics; Instructional Assistant - Welding Technology; Instructor - Aeronautics; Instructor - Automotive Technology; Instructor - Fire Technology; Instructor - Mechanical/Electrical Technology; Instructor – Welding Technology; Laboratory Technician -Aeronautics; and Laboratory Technician – Mechanics.