

Los Rios Community College District – Job Safety Analysis

Job Category: Science/Vocational/Technical - Biological Sciences (Instructor/Instructional Assistant/Laboratory Technician) (For Specifics See Below*)		
Required and/or recommended personal protective equipment: Protective clothing, gloves, goggles		
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.
Moving, lifting and storing supplies	Back injury, muscle strain, sprains	Use hand trucks and push carts to transport the 5-gallon drum. Follow good body mechanics to avoid back injury and muscle strains/sprains.
Ethers, alcohols and acetones	Skin burns, eye/nasal irritation, spills	Good ventilation, chemicals stored in small quantities to keep spills to minimum and to provide easy handling. Store in flammable resistant cabinets. Have absorbent materials handy in case of spills.
Flammable substances	Fire, vapors	Keep away from open flame. Control vapors with upper and lower exhaust hood.
Heating and boiling substances	Nocuous fumes, explosion, flying glass pieces	Work under a hood to provide proper ventilation. Check pressure relieved systems to minimize explosions of closed systems. Wear goggles.
Electronic testing equipment	Electrocution	Caution in using equipment. Use equipment at very low voltage within safety margins.

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Sequence of Basic Job Steps	Potential Hazards	Recommended Action or Procedure
Acids, bases, solvents	Skin burn, nasal/eye irritation, spills and broken glass containers	Refer to Material Safety Data Sheet (MSDS) binder for proper handling, storage and disposal of hazardous substances. Purchase plastic coated safety bottles; wear protective clothing, gloves and goggles. For strong acids and bases, facial masks are strongly recommended. Use eyewash and showers if spilled.
Pressurized tanks	Explosion	Secure in upright position at room temperature or below.
Storage	Corrosive action, fumes	Store in cool place at room temperature or below 72 degrees F. Do not store reactive chemicals in same location. Use flame resistant cabinets.
Carcinogenic	Ingestion of chemical substances	Do not eat any foods or drinks while working with chemicals. Wash prior to eating or drinking after working with chemicals.
	Tissue changes, mutation	Eliminate use of such substances as much as possible. Limit exposure to known substances and use protective coverings.
General work area	Slips, skin burns	Neutralize and clean spills immediately. Proceed with caution on wet surfaces.
Glass ware	Cuts, flying pieces, chemical burns	Handle with caution. Clean up any breakage and dispose of glass in proper container.
Dissection of stored cadaver	Long term effect: possible cancer Short term effect: eye/nasal/skin irritation, allergies	Proper handling with glove and adequate ventilation.
Bacteria, virus and fungi	Exposure to infectious bacteria and allergies	Proper destruction by sterilization. Adequate sterilization of equipment and disposal. Use disposable dishes and test tubes.
Other biological materials, i.e. blood	Possible contamination or AIDS and Hepatitis B	Proper disposal. Use animal blood rather than human blood. Use protective clothing, gloves. Have vaccination for Hepatitis B.

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Sequence of Basic Job Steps	Potential Hazards	Recommended Action or Procedure
Sharp instruments, dissecting equipment	Cuts, bacterial infection	Proper disposal of disposable equipment. Sterilize all other equipment. Use viricides, bactericides and fungicides.
Radio active testing	Exposure to radio activity	Use very low-level emitters, below safety standards.
Stain procedures which require heat	Nocuous fumes generated	Well-ventilated rooms as impractical to do everything under hood. Proper sanitation and sterilization techniques.
Date: February 14, 1992 / Analysis By: R. Haro, G. Harper, R. Roland / Reviewed By: Clarice Bettencourt		

*Note: This Job Safety Analysis form includes the following positions in the Los Rios Community College District: Instructional Assistant – Biology; Instructional Assistant - Chemistry; Instructional Assistant – Chemistry/Math; Instructional Assistant - Life and/or Physical Science; Instructor – Biology; Instructor – Chemistry; Instructor – Physics; Laboratory Technician - Science; and Lead Laboratory Technician – Science.