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| **INSTRUCTIONS:**  **Tool must be completed by individual(s) who are doing the tasks identified.** Tool can be used to evaluate all tasks for a specific occupation or activity.   1. List all work activities in the column 1. It is acceptable to group activities together when the hazards encountered are the same for all of the activities 2. List the existing and potential hazards associated with each task in the column 2, include both health and safety hazards. 3. List the type of hazard encountered in column 3. The hazards are Chemical, Biological, Physical, Environmental, Ergonomic, Radiation, and Psychosocial. 4. Complete the risk analysis and determine the overall risk level by assigning the Incident Probability (column 4), Incident Severity (column 5) and enter the Risk Level in column 6. 5. List the current or proposed controls for each hazard identified in column 7. The complexity of the controls should be proportional to the overall risk level. 6. Identify if the controls are already in place and complete in column 8. It is the responsibility of the Supervisor to ensure controls are put in place in a reasonable timeframe 7. Supervisors & Individuals completing the hazard assessment must review and sign off on the document. 8. The document must be kept on file by the supervisor or designate, usually in the training records for the work site. 9. The supervisor or designate must ensure that the results of the hazard assessment including identified controls are communicated to any impacted employee. 10. Supervisors must review relevant portions of the hazard assessment when there is an operating or infrastructure change. 11. The entire hazard assessment also must be reviewed at 3 year intervals.   **Incident Probability** 4=*Probable* (may happen at least once a year)  3=*Occasional* (may happen once every 1-5 years)  2=*Remote* (not likely to happen, but possible once every 5-10 years)  1=*Improbable* (not likely to happen)  **Potential Severity** 4=*Severe* (death, serious injury/illness more than 2 days in the hospital, permanent disability, property damage > $100,000, extensive environmental damage)  3=*Substantial* (lost time injury/illness, temporary disability, potential injury, damage >$50,000, substantial environmental damage, significant adverse public reaction)  2=*Minor* (medical aid injury, minor illness, minor property damage <$50,000)  1=*Minimal* (first aid injury)  **Risk Value**  = Incident Probability X Potential Severity  **Risk Level** > 11, *High Risk* (take immediate action to eliminate the risk or implement appropriate controls to lower the risk)  = 4 – 11, *Medium Risk* (take timely action to implement appropriate controls to lower or minimize risk)  < 4 *Low Risk* (continued operation is permissible with minimal controls) |

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| **Completed By**  Rahmat Saeedi | **Job Title(s)**  **Student** | **Department**  **Electrical** | **Date: (year/month/day)**  2017/11/03 |

| 1. **Task** | 1. **Existing and Potential Hazards (Include environmental, health and safety hazards)** | **3. Hazard Classification**  **(Include Chemical, Biological, Physical, Ergonomic, Radiation, Psychosocial)** | **Risk Value** | | | **7. Controls (such as immunizations, health screenings, safe work procedures, supervision, training, contingency plans, emergency plans and kits, PPE, etc.)** | **8. Are Controls in Place? If not, how and when?** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **4. Probability (1-4)** | **5. Severity (1-4)** | **6. Risk Level (Low, Medium High)** |
| Powering up circuitry with 12V battery | Electrical Shock  Frying onboard microchips & circuitry  Short-circuiting 12V battery | Physical | 1 | 1 | Low | Safe handling of 12V battery, avoiding short-circuiting the battery |  |
| Soldering components | Burning & inhalation of chemical fumes | Physical,  Biological | 3 | 1 | Medium | Using personal protective equipment’s  Using approved soldering station |  |
| Handling 12V battery powered DC motors | Touching DC motor that is on | Physical | 1 | 1 | Low | Safe handling small DC motors |  |
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SIGNATURES:

**SUPERVISOR NAME: SUPERVISOR SIGNATURE: DATE:**

**STAFF NAME:** Rahmat Saeedi **STAFF SIGNATURE:** *Rahmat Saeedi*  **DATE: Nov 3, 2017**

**STAFF NAME:** Xinru Song **STAFF SIGNATURE:** *Xinru Song* **DATE: Nov 3, 2017**

**STAFF NAME:** YiFeng Wang **STAFF SIGNATURE:** *YiFeng Wang* **DATE: Nov 3, 2017**

**STAFF NAME:** Yuyong Yao **STAFF SIGNATURE:** *Yuyong Yao* **DATE: Nov 3, 2017**

**STAFF NAME: STAFF SIGNATURE: DATE:**

**STAFF NAME: STAFF SIGNATURE: DATE:**

**STAFF NAME: STAFF SIGNATURE: DATE:**

**NEXT SCHEDULED REVIEW** (3 years after last review)**:**

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| **CONTROLS:**  **“Controls”** may include a wide variety of items, from training to protective equipment. Every control that you identify in this document should be acted on in some wat.  Here are some helpful steps to implement controls to manage hazards:   1. The University of Alberta does require a base level of Personal Protective Equipment for all Laboratory work. See the web for more details. 2. Occupational Requirements such as Respirator use, Vaccinations, and health screenings should be copied into Support Staff job descriptions and postings under “Knowledge” 3. Contact your Facilities and Operations Building Manager for controls that involve changes to the building infrastructure, such as eyewash stations or fire extinguishers 4. EHS does provide a lot of safety training; contact us at ehs.info@ualberta.ca for more information.   **SPECIAL CONSIDERATIONS:**  **Biological Materials:** Hazard Assessments for working with biological agents can follow the same processes, but must be done in consultation with the University`s BioSafety Guidelines, considering Pathogenicity, Virulence, Mode of Transmission, Infectious Dose, Communicability, Survivability, Host Range, Economic / Public Health, and Prophylaxis & Therapeutics. [More info here](http://www.ehs.ualberta.ca/EHSDivisions/~/media/Environmental%20Health%20and%20Safety/Documents/Biosafety/Biosafety_Guidelines.pdf) |