



SANTA CLARA UNIVERSITY

# Senior Design Safety Requirements

## 2023 Junior Convocation

**Sean Collins**

**Environment, Health and Safety Dept.**

**[www.scu.edu/ehs](http://www.scu.edu/ehs)**





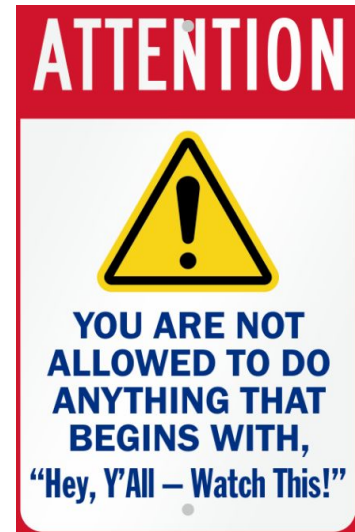
## Your Safety is our Primary Concern

SCU is committed to providing a safe learning environment for all students

The primary responsibility for safety relies with everyone – *including you!*

**You must integrate safety into your projects**

- This is required not just for the obvious reason of preventing accidents and injuries but also critical to avoiding project delays and possible project cancellation





## To ensure your project is successful *and safe...*

- = **Project Advisor must approve project before work can commence**
  - Other approvals may be necessary – Dept. Chair, Dean's Office, EHS, Facilities, etc.
- = **Conduct project work only at approved SCU and third party locations**
  - Third party site work requires a signed formal agreement
- = **Complete a Project Hazard Assessment and obtain necessary signatures**
- = **Obtain permission from space owner (e.g. Lab/Shop Manager, Facilities, etc.)**
- = **Commit to following safe work practices and procedures**
- = **Never work alone with hazardous materials, tools or equipment**
- = **Report all incidents, injuries, safety concerns with Project Advisor**



## Hazardous Project Work Must Be Reviewed and Approved

- = Complete the Student Project Hazard Assessment Form if project involves **hazardous agents, conditions and/or activities**:
  - **Electrical**: Electrical parts and assemblies with High Voltage (> 50 Volts) and/or High Current; batteries; control panels, etc.
  - **Mechanical**: Power tools and equipment; machine guarding/power transmission (gears, rotors, wheels, shafts, belt/chain drives, rotating moving parts, pinch points); robotics; sharp objects; stored energy (springs, gravity, etc.)
  - **Physical**: Extreme temperatures (high temperature fluids: water > 160 °F, superheated steam, etc., Cryogenic fluids: boiling point < -240 °F, hot surfaces > 140°F); lifting heavy objects; elevated heights (scaffolding, ladders, roofs, etc.); slip, trip or fall hazards; overhead falling objects (cranes, hoists, drones, projectiles, etc.); vehicle traffic; confined spaces; dust; etc.



## Hazardous Project Work Must Be Reviewed and Approved

- = Complete the Student Project Hazard Assessment Form if project involves **hazardous agents, conditions and/or activities**:
  - **Pressure**: Work with pressurized systems greater or less than atmosphere; compressed gases
  - **Procedures**: Metal fabrication (welding, cutting, brazing, grinding, drilling, machining, etc.); soldering; construction, etc.
  - **Chemical, biological, radiation, high noise**
  - **Other hazards**
  
- = **Site access, training and supervision requirements must also be identified and addressed**



## Hazard Assessment Form

1. Determine hazards associated with project tasks
2. Identify risk connected with each hazard
3. Develop controls to eliminate hazard and/or reduce risk
4. Create safety plan

### Student Project Hazard Assessment Form

This form is to be used for student projects where the primary hazards are associated with engineering work (physical, mechanical, electrical, etc.). Chemical and biological focused projects require a separate form.

Complete this form and obtain all the required approvals (Faculty Advisor, Department Chair, Laboratory Manager, EH&S, etc.) before proceeding with the project. Please refer to the hazard assessment guide for assistance in filling this form.

Project Title:			
Project Team Members:			
Project Advisor			
Name:	Department:	Phone:	Email:
Proposed Project Location(s) (Department, building, room#):			
Anticipated Dates of Project Duration:			
Summary of Project Objectives:			



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## Additional Guidance

- = **Never conduct any work you feel unsure or unsafe about**
- = **When in the planning stages of your project - anticipate, recognize, evaluate and control potential safety issues in advance**
  - Consult with your Faculty Adviser, area owners, Lab Managers, TAs, EHS Dept., etc.
  - Address these issues upfront to avoid project interruptions.

**The EHS Department can be a resource:**

**[spcollins@scu.edu](mailto:spcollins@scu.edu)**



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