

SVSU Mechanical Engineering Laboratory and Machine Shop Policies for 2007 - 2008

General Safety Precautions

- Become very familiar with the SVSU **Code Of Student Conduct**; On the SVSU Home page, select 'Current Students,' which will direct you to 'Student Services' and select '*Code of Conduct*' which will tell you most of everything you will need to know to be successful and safe while at SVSU; **Note:** Departments creating special usage regulations not specifically covered in the code become, in fact, subject to the same conditions, procedures and penalties contained within the code.
- The following are typical industry 'standard-of-care' guidelines:
- Think through the entire task before starting and ask for help if you have questions ...
- Safety glasses must be worn at all times by everyone in the Machine Shop whenever any equipment is being operated or hand tools are being used ... Protect your eyes at all times because they're the only pair you will ever get ...
- Follow all written and verbal instructions; If you do not understand a direction or a procedure, whether written or oral, ask your Instructor before proceeding ...
- Never work alone; No student may work in a Lab or Machine Shop environment without another student being present; Students are encouraged to care about their health and safety and that of others ...
- The industry standard is absolutely no 'boom boxes', or any music-playing devices are allowed in a Machine Shop environment when equipment is being operated; the Machine Shop is not an entertainment center and distractions of this type can lead to accidents; it is imperative that one be able to hear and 'listen' to what the machine is doing and 'saying' at any given time and this attention to safety is particularly critical when rookie student operators are learning to use the equipment;
- For Labs, students must return equipment to its proper location and clean up their work areas prior to leaving the lab: Students will be instructed on the location of critical operational equipment which we identify as vacuum cleaners, brooms and dustpans ...
- For the M.E. Machine Shop, Housekeeping and Safety go together, simply stated, you cannot have one without the other; Trip, fall and slip hazards are to be eliminated when they occur at all times ... Safety is Job #1 and Housekeeping is Job # 1.1, therefore, clean up your mess when you are done working; Machine surfaces and work tables must be free from machining and work debris by vacuuming, sweeping, or wiping; Floor area must be swept daily and wet mopped as needed, not less than one time per week; Special project groups and teams must dump their own trash frequently and daily if necessary and includes the necessity to empty shop vacs regularly ...
- Material 'stock' - whether metal, wood, composite or other - for Machine Shop projects is not to be left on the floor, but must be put in the proper rack to prevent trip hazards ...
- If a machine requires set-up for an extended period, identify with a 'Do Not Use, Machine Is Set Up' sign located in the Machine Shop and inform the M.E. Lab Tech as to time required and particular operation in process ..

- Gas cylinders for welding processes must be shut off when task is complete; This includes 'bleeding' the regulators of residual fuel ...
- Operators of Machine Shop equipment are required to operate the equipment properly, which means ensuring that tool rests for grinders and other sanding equipment be set to no more than 1/8" at all times; Equipment requiring coolant must be maintained at all times and oil levels not be allowed to drop to dangerous levels where the component is not protected ...
- For the Machine Shop, parts and tooling must be secured and then double checked to make sure that nothing can fly off and cause injury to the operator or others in the area prior to turning on the machine; Any hand tool being used around rotating machinery must be kept as far away from the point of operation as possible; Contact the M.E. Lab Tech if you need assistance securing a work piece to a machine ...
- Do not leave chuck keys or wrenches on lathes, drill presses or mills; the key or wrench can be thrown out with great force when the machinery is turned on ...
- Do not use compressed air to blow chips off machinery because it drives the chips into machine ways, scatters them about the shop and could injure someone; never use compressed air to clean debris from clothing or skin; serious personal injury can result ...
- Use push sticks to move stock through blade when using bandsaws and table saws; Protect your hands at all times ...
- To help control airborne dust, use a shop vac when machining or sanding non-metallic substances ... Do not spray paint anywhere in Pioneer Labs or Machine Shop ...
- When welding, ensure the area is free from hazardous and flammable materials and that everyone in the area is aware that welding processes will be soon commenced and they must protect their eyes: Use the fume extractor at each welding location; wear protective gloves, jackets and face/eyeshields when welding ...
- Never wear gloves when operating dynamic i.e. rotating equipment ; Holding objects with a rag nearing moving equipment is not permitted; Gloves and rags can be easily caught in machines that are in motion, pulling the operator into the equipment; vise-grip type grips can be used to hold small pieces securely when grinding or sanding ...
- Never work on Machine Shop equipment when you are impaired, too tired, too stressed or too hurried to work cautiously ...
- Dust, chemicals and smoke can be dangerous, so work in well ventilated areas at all times ...
- All lab and shop machines must be operated with all required guards and shields in place ...
- Never remove electronic lab equipment from it's location without the knowledge and consent of the M.E. Lab Tech ...
- Because the lab equipment is susceptible to damage due to liquids or other foreign objects, no food or drink is permitted in the M.E. Labs ...
- If you have questions on how lab equipment is to be operated, ask your Instructor or the M.E. Lab Tech for assistance ...
- Loading pornographic files on Pioneer Hall or other University computers is strictly prohibited and sexual harassment charges, including a referral to the SVSU judicial system for dismissal, will be brought against any and all perpetrators ...

- Students are expected to conduct themselves in a professional manner at all times. Any type of disruptive behavior will not be tolerated and horseplay, practical jokes and pranks are dangerous and prohibited ...
- Always work in a well ventilated area; Use area specific ventilation and/or fume hoods when working with noxious substances or strong vapors; Never place your head into a fume hood ...
- Students are not permitted in the fenced storage crib areas in the labs, except for the M.E. Tool Crib in the Machine Shop ...
- Students will be instructed on the proper use of the Safety Eyewash, Safety Showers and Fire Extinguisher: Be aware of the location of First Aid Supplies as well as Telephone and Emergency Phone Numbers ...
- All injuries in the Lab requiring off-site treatment must be reported to the Instructor and Public Safety where a report will be taken ...
- Dress properly during a laboratory or machine shop activity; Long hair, dangling jewelry and loose and baggy clothing are a hazard in a lab and machine shop environment; Long hair must be tied back and dangling jewelry and loose and baggy clothing must be secured so as not to get caught in equipment that rotates, such as drill press, lathe, mill, sanders or grinders; Shoes must completely cover the foot and no sandals are permitted, especially critical in the Machine Shop and welding areas; No bare feet are allowed in any Lab or the Machine Shop at any time ...
- If a chemical should splash in your eye(s) or on your skin, immediately flush with running water from the eyewash station or safety shower for at least 20 minutes and tell your Instructor or Lab Tech ...
- All chemicals in the lab environment are to be considered dangerous; Do not touch, taste, or smell any chemicals without knowing their composition;
- Never return used chemicals or oils to their original containers
- Never use mouth suction to fill a pipette; Use a rubber bulb or pipette pump ...
- Always read all pertinent Material Safety Data Sheets (MSDS) before you use or handle a material or chemical that is foreign to you; MSDS Sheets are in a 3-ring black binder attached to the Machine Shop storage crib fencing ...
- Report damaged electrical equipment immediately and do not use damaged electrical equipment ...
- No stand-alone flammable containers of gasoline or other highly combustible fuels or chemicals are permitted to be stored in any lab of Pioneer Hall for any reason; Flammable materials are to be stored only in cabinets designated as 'Flammable'; Ensure that the material is secured in a leak proof container;
- No activity should be engaged in that has the potential to put you or others in harms way to unsafe practices or conditions ...
- No internal combustion engines, or other devices that produce carbon monoxide are to be operated inside of Pioneer Hall at any time, other than within the Race Lab Dyno Room; Operators of that room are to ensure that all exhaust and ventilation systems and Carbon Monoxide detection are operational ...

- Race cars or other vehicles of groups or special teams are not to be tested in the south parking lot of Pioneer Hall due to that area being a pedestrian walkway; Vehicle testing in parking lots is by permission only from Campus Public Safety ...
- On Machine Shop or Lab equipment, disabling safety devices, overriding safety devices, intentionally running equipment with inoperable safety devices, or the unauthorized removal of padlocks on power panels is a serious offense that will result in loss of work privileges in the shop or lab...
- In the Machine Shop, keep the main aisles open and unobstructed to all pedestrian and garage doors at all times.