Purpose of Orientation

• Inform you:
  ▪ of the hazards that exist
  ▪ how to deal with the hazards
  ▪ of your rights as an employee
  ▪ how to seek help in an emergency
  ▪ what is expected of you as an employee
Accidents

- Report Accidents to Supervisor Immediately
- WASHINGTON WORKERS' COMPENSATION INSURANCE
  -- Chapter 296-17 WAC
  - Wage and medical benefits to employees who suffer on-the-job injuries or illnesses; and
  - Immunity from lawsuits for employers as a result of workplace injuries or illnesses suffered by their employees.
First Aid

• Obtaining Treatment
First Aid

Symbol Key
EW – Eye Wash (3)
S – Emergency Shower (3)
M – Medical/First Aid Kit (?)
First Aid

PACCAR 2nd Floor

Symbol Key
EW – Eye Wash (6)
S – Emergency Shower (6)
M – Medical/First Aid Kit (?)
First Aid

Symbol Key
EW – Eye Wash (7)
S – Emergency Shower (7)
M – Medical/First Aid Kit (?)

PACCAR 3rd Floor
First Aid

• Obtaining Treatment

• Location and Operation of Equipment
  ▪ Deluge Showers
    • Remove clothing if necessary to reduce contamination
    • Pull handle and remain under shower for 15 minutes
    • Rinse affected area, do not scrub with bare hand
  ▪ Eye Wash Station
    • Remove safety glasses
    • Push handle and continue rinsing for 15 minutes
    • Use free hands to help keep eyes open
  ▪ First Aid Kit
    • Move to injured party if appropriate
    • Use necessary items (notify Safety Coordinator if stock depleted)
First Aid

• Obtaining Treatment
• Location and Operation of Equipment
• Location and Names of First Aid Trained Employees
  ▪ Joshah Jennings – Office 133
  ▪ Scott Lewis – Office 131
Potential Hazards on the Job

• Safety Data Sheets (SDS)
  • In file cabinet in each laboratory that uses hazardous materials
  • Identify hazardous material, contact information, treatment, etc.

• Right-To-Know – You have the right to know what you are working with and can ask for a different assignment if not satisfied with hazard controls/risk assessment
Potential Hazards on the Job

• What they are:
  Equipment -- ?
  Hazard -- ?
  Hazard Controls – ?

• All equipment requires additional training prior to use

• Eye protection required in all laboratory work areas
  ▪ You/your supervisor are responsible for providing safety glasses

• Lockout/Tagout- Unplug or lockout all electrical connections prior to servicing any equipment.
Room 217 – Imaging

Imaging Equipment: FTIR, SEM, Light Microscope

Hazard – Liquid nitrogen

Hazard Controls – Eye protection, gloves (required when handling or transporting LN₂)
Analytical Equipment: DMA, DSC, RDA
Hazard – Heat, liquid nitrogen, compressed gasses
Hazard Controls – Gas cylinder tie downs, eye protection, gloves (required when handling or transporting LN$_2$)
Room 225 – Wet Chemistry

Wet Chemistry Equipment: Glassware, Water Bath, etc

Hazard – Open flame, compressed gasses, liquid nitrogen, liquid and dry chemicals

Hazard Controls – Eye protection, gloves, fume hoods, lab coat
MSDS sheets must be filed upon receipt of new hazardous materials
Broken Glassware disposal:

Place any broken glassware in cardboard box with the green tub, when full it may be emptied into dumpster behind building.

Chemical Disposal: Follow all University regulations and safety guidelines. Fill out online request and place in room 127.

Properly store and label all materials.
Room 118 – Biodegradation

Equipment: Freezer, Ice maker

Hazard –

Hazard Controls – Eye protection

Properly store and label all materials
Room 119 – Rheology

Equipment: Hot Press, Torque Rheometer, Capillary Rheometer, Extruders, Injection Molding machine

Hazard – Heat, pinch, pressure

Hazard Controls – Eye protection, gloves
Room 119 – Rheology

Capillary Rheometer

Torque Rheometer

Pinch Points
Hazard, by equipment:
Injection Molder

Hazard – Heat, crushing, fumes
Hazard Controls – Eye protection, gloves
Room 119 – Rheology

Equipment: 18mm Extruder & Braebender extruder
Hazard: Heat, fumes
Hazard Controls – Gloves, eye protection, guards, no loose clothing
Room 115 & 117 – Test Lab

Equipment: 2,000lb Electromechanical Universal Test Frame, 30,000lb Electromechanical Universal Test Frame, 200,000lb Test Frame

Hazard: Crushing, flying objects

Hazard Controls – Eye protection, shielding
Room 117 – Test Lab

Equipment: 22,000lb Hydraulic Universal Test Frame

Hazard: Crushing, flying objects
Hazard Controls – Eye protection, shielding, emergency shutoff
Hazard, by equipment: 55,000lb hydraulic universal test frame

Hazard – Heat, pressure
Hazard Controls – Gloves (heat), no loose clothing
Hazard, by equipment: H-Frame

Hazard – Pressure, flying objects
Hazard Controls – Eye protection, emergency shutoff
Hazard, by equipment: S-Frame

Hazard – Pressure, flying objects
Hazard Controls – Eye protection

Suite C – Room W34 – Strongback Floor
| Room 105 – Strongback Floor |

Hazard, by equipment: Strongback floor

Hazard – Pressure, flying objects
Hazard Controls – Eye protection
Room 105– Strongback Floor

Hazard, by equipment: Bridge crane

Hazard – Crushing, pinning

Hazard Controls

Additional training required
Hazard, by equipment:
Lift Truck

Hazard – Crushing, pinning falling objects, LP gas
Hazard Controls – Eye Protection, gloves

Additional training (licensing) required
Room 105 – Simpson Strong Floor

Equipment: -- hand tools (screwdrivers, wrenches, saws, etc.), cordless and corded drills and saws

Hazard – Laceration, crushing, noise

Hazard Controls – Eye protection, hearing protection, gloves, guards
Hazard, by equipment:
12” compound miter saw

Hazard – Laceration, flying objects
Hazard Controls – Eye protection, guards
Hazard, by equipment: drill press

Hazard – Laceration, flying objects
Hazard Controls – Eye protection, no loose clothing, guards
Room 105a – Wood Shop

Hazard, by equipment: belt sander

Hazard – Abrasion, flying objects
Hazard Controls – Eye protection, no loose clothing, guards
Hazard, by equipment: 10” table saw

Hazard – Laceration, flying objects, kick back

Hazard Controls – Eye protection, guards

Room 105A – Wood Shop
Room 105A – Wood Shop

Hazard, by equipment: 20” band saw

Hazard – Laceration, flying objects
Hazard Controls – Eye protection, guards
What to do in the event of an emergency

- Exit locations and evacuation routes
Exit locations and evacuation routes

PACCAR 1st Floor

Meeting area in Green 1 Parking Lot
Exit locations and evacuation routes

PACCAR 2nd-4th Floors

Meeting area in Green 1 Parking Lot

Proceed to stairways on each end of the building. Exit the building one the 1st floor and then proceed to the meeting area West of the building.
Location of fire alarms and extinguishers

PACCAR 1st Floor

Symbol Key
FA – Fire Alarm (7)
F – Fire Extinguisher (5)
Location of fire alarms and extinguishers

PACCAR 2nd Floor

Symbol Key

FA – Fire Alarm (2)
F – Fire Extinguisher (6)
What to do in the event of an emergency

- Exit locations and evacuation routes
- Location and operation of fire alarms and extinguishers
  - Operation of fire extinguisher
    - Remove from holder, bring to fire, point nozzle at base of fire, remove pin in handle, squeeze handle and empty extinguisher.
    - If not successful, notify Emergency Services (911 or Fire Alarm)
  - Operation of Fire Alarms
    - Pull handle downward
What to do in the event of an emergency

• Exit locations and evacuation routes
• Location and operation of fire alarms and extinguishers
• Specific procedures for medical, chemical fire emergencies and use of 911
  - All telephones in facility can reach emergency service by dialing 911
  • Identify yourself, state your location and the nature of the emergency, stay on phone if possible to assist with emergency
What to do in the event of an emergency

• Exit locations and evacuation routes
• Location and operation of fire alarms and extinguishers
• Specific procedures for medical, chemical fire emergencies and use of 911
• Emergency response plans in place
Function of safety committee and meetings

- Safety committee and associated meeting are responsible for training, education, discussion of safety issues and concerns
The Total Safety Program

• Function of safety committee and meetings

• Safety Committee Representatives
  - Joshah Jennings – Office 133
  - Scott Lewis – Office 131
The Total Safety Program

• Function of safety committee and meetings
• Safety Committee Representative
• Safety policies and rules and their value
  ▪ Ensure the safety of ALL employees and visitors in our facility and at the University.
  ▪ Goal: Everyone goes home every day with no accidents or injuries
The Total Safety Program

- Function of safety committee and meetings
- Safety Committee Representative
- Safety policies and rules and their value
- Safety division resources
  - Police, Fire, Safety Services and Environmental Health Services
    - Here to help and assist us with all of our health and safety needs
Personal work habits

• Proper lifting techniques, avoiding slips and falls
  ▪ Lift with your legs, not your back
  ▪ Rotate your upper and lower body together
  ▪ Get up and move occasionally
Personal work habits

• Proper lifting techniques, avoiding slips and falls

• Good housekeeping
  ▪ Keep walkways clear, minimize/secure trip hazards
  ▪ Your must clean your work area prior to leaving your work area for the day
  ▪ Clean your own work area
  ▪ Empty trash containers into dumpsters in rear of building on a daily basis
  ▪ This is a shared work area and you are responsible for cleaning to minimize hazards for others
  ▪ ‘Clean as you go’ to improve safety for everyone
Personal work habits

• Proper lifting techniques, avoiding slips and falls
• Good housekeeping
• Safe work procedures
  ▪ You will be instructed and observed on safe work procedures prior to using any equipment in the lab.
  ▪ Do NOT blow yourself off with compressed air, air bubbles may enter your blood stream and cause death.
Specific Training

• You must receive operation and safety training on all equipment prior to use.
Specific Training

• GENERAL LABORATORY SAFETY GUIDELINES
• WEARING EYE PROTECTION is NOT AN OPTION! Eye protection with side shields or goggles MUST be worn when cutting, grinding, or handling hazardous material. Protective eyewear is NOT intended to protect the forehead or hair.

• Hard hats must be worn when exposed to the possibility of falling or flying objects. For example, if you are working four feet below another work area, then you must wear a hard hat.

• Open-toed shoes are not permitted in the laboratory.

• All accidents must be reported to an immediate supervisor as soon as possible, regardless how minor they may appear.
Specific Training

- **GENERAL LABORATORY SAFETY GUIDELINES**
- Unsafe practices, or anything that may constitute a potential hazard, must be reported to the safety representative or your supervisor immediately.
- Allow enough time to clean up your work area when finished before leaving the laboratory.
- All tools used during the regular work hours must be returned to their proper storage area before you leave for the day.
• **GENERAL LABORATORY SAFETY GUIDELINES**

• Never proceed to use equipment with uncertainty. If you have any questions about safety or laboratory operations, please ask for assistance or clarification from either Scott Lewis or Bob Duncan.

• All WSU facilities comply with the "Drug-Free Workplace Act of 1988," which prohibits the consumption of controlled substances in the workplace. Controlled substances include any mind-altering substances, i.e., antihistamines, and prescriptions with warnings about using machinery while taking the drugs. We expect everyone who has an association with the laboratory to honor our compliance and act responsibly for their safety and that of others.
Specific Training

- **The CMEC Two-People Rule**
  - There must always be at least two people present in the laboratory whenever (including before, during, and after regular work hours, weekends, or holidays) you plan to be working in the laboratory:
  - The *Two-People Rule* is for your own protection and must be observed.
Building Security

• The building should remain locked after regular business hours and on weekends and holidays.
  • Personal safety
  • Equipment and data security

• Do not prop doors open.
On-the-job Training

- You will be observed regularly during your employment and will be instructed on necessary changes to your work procedures.
- Take 5
  - Take 1 – Take time to evaluate what you are doing
  - Take 2 – Take time to clear the work area
  - Take 3 – Take time to re-evaluate what you are doing
  - Take 4 – Take time to perform your work
  - Take 5 – Take time to clean up when finished
If you have any questions or concerns contact Joshah Jennings