VCSU SAFE OPERATING PROCEDURES:
Weather/Body Stress

The thermal (heat or cold) stress of any given working situation is the combination of all of those factors which result in heat gains or losses relative to the body or which prevent the body’s temperature regulating mechanisms from working efficiently.

**Hot Weather**
People may suffer from heat stress during hot, humid conditions. To prevent heat stress, employees should limit strenuous physical activity during the hottest portion of the day, wear a brimmed hat when in the sun, take frequent breaks, and drink plenty of fluids. Heat stress occurs in two forms: heat exhaustion and heat stroke.

**Heat Stress**
Heat stress occurs when excessive heat can place an abnormal stress on your body. The body temperature rises above normal and you can experience the following:

- Muscle cramps
- Weakness and disorientation
- Feeling dangerously ill
- Tiredness, irritability, inattention

You can remedy heat stress by drinking a lot of fluids (it is very important to stay hydrated) and by taking frequent breaks in a cool place.

**Heat Exhaustion**
Heat exhaustion is usually caused by strenuous physical activity and hot, humid conditions. Because heat exhaustion is the body’s response to insufficient water and salt, it should be treated as quickly as possible. Signs and symptoms of heat exhaustion include the following:

- Exhaustion and restlessness
- Headache
- Dizziness
- Nausea
- Cold, clammy, moist skin
- Pale face
- Cramps in abdomen and lower limbs
- Fast, shallow breathing
- Rapid, weak pulse
- Falling body temperature
- Fainting

You can remedy heat exhaustion by resting in the shade or a cool place, drink plenty of water and loosen clothing to allow body to cool (you can also use cool wet wags to assist with cooling the body).

**Heat Stroke**
Heat stroke is usually caused by exposure to extreme heat and humidity and/or a feverish illness. Heat stoke occurs when the body can no longer control its temperature by sweating. Heat stroke is extremely dangerous and may be fatal if not treated immediately. The signs and symptoms of heat stroke include the following:

- Hot, dry skin
- Headache
- High temperature
- Strong pulse
- Noisy breathing
- Unconsciousness

Immediately take the following steps to administer first aid for heat stroke:

- **CALL 911!**
- If possible, move the victim to a cool place.
- Remove the victim’s clothing.
- If the victim is conscious, place the victim in a half-sitting position and support the head and shoulders. If unconscious, place the victim on the side with the head facing sideways.
- Fan the victim and sponge the body with cool water.

**Guidelines for Heat Protection**

- **Eye Protection**
  - Wear sunglasses that are designed to block out 95% of UV.

- **Skin Protection**
  - Wear sunscreen!
  - Apply sunscreen 20 minutes before going outside. Reapply sunscreen every 2 hours if you are sweating a lot.
  - Wear clothes that cover your arms, legs, and neck, that are made of lightweight fabrics to ensure full protection. Also, wearing a hat, sunglasses and working in shaded areas (if possible) will provide more protection.

- **Know the sun!**
  - The sun is at its peak from 10am-2pm
    - Beware of the effects the sun has on you.
    - Stay hydrated.
    - Cool-down in air conditioning or near fans.
    - Pace yourself during strenuous activities.

- **Protect yourself from insects!**
  - When the temperature rises, insects become very active.
  - If you are stung by a bee, remove the stingers using a card- do not try to pinch it out- doing this will inject more venom into your system. Yellow jackets, hornets and wasps will sting repeatedly.
  - To help protect yourself against insects, apply insect repellants that contain DEET prior to working outside.

**Cold Stress**

When your body temperature drops even a few degrees below normal (which is about 98.6 degrees Fahrenheit), you can begin to shiver uncontrollably, become weak, drowsy, disorientated, unconscious, even fatally ill. This loss of body heat is known as “cold stress” or hypothermia. It is important that persons who work outdoors or in cold indoor environments (e.g. coal storage bunker, warehouses, etc.) learn about how to protect against serious health conditions.

**Frostbite**

- Body tissue may freeze when skin is exposed to extreme cold or if touched by a very cold object.
  - Nose, ears, cheeks, fingers and toes are at the greatest risk.
- Worst cases can cause permanent tissue damage, loss of movement in affected parts, possible unconsciousness and death from heart failure.
  - Damage may be greater if the body part is thawed, then refrozen.
- Symptoms:
  - Feeling extremely cold, then numb with possible tingly, aching, brief pain.
  - White or grayish, yellow glossy skin, which may blister.
  - Confusion, failing eyesight and shock as condition progresses.
• First Aid
  o Warm the frozen part immediately with blankets or warm (not hot) water.
  o Avoid touching the frozen part; do not rub or hit it.
  o Keep the frozen part away from hot stoves, baths, heat lamps and water bottles.
  o Do not break blisters.
  o Exercise the body part once it is warm, but do not walk on frostbitten feet.

**Hypothermia**
• Exposure to cold may send body temperatures to dangerously low levels. This can occur in above-freezing temperatures if there is high wind, you are exhausted or are wearing wet clothes.
• Worst cases can lead to unconsciousness and death.
• Symptoms:
  o Chills, shivering, numbness and sometimes pain in the extremities.
  o Slurred speech, poor coordination, confusion and drowsiness.
• First Aid
  o Cover the victim with blankets or lie next to them to share body heat.
  o Keep the frozen part away from hot stoves, baths, heat lamps and water bottles.
  o Keep the person awake.
  o Get emergency help immediately if the person loses consciousness.

**Prevention**
• Avoid bathing, smoking or drinking before going out in cold conditions.
• Wear layers of clothing (dry). If possible, wear wool underneath and a waterproof layer on top.
• ALWAYS cover hands, feet, face and head in the cold.
• Change out of wet clothes immediately if you are planning to continue staying out in cold weather.
• Keep moving while working; take regular breaks in warm areas.
  o Move to a warm area when you start to feel very cold or numb.