

Module 8

Safety and Mid-Term Review

Objectives

5.1 Use Appropriate Safety Procedures

SAFETY

Occupational Safety and Health Administration (OSHA)

- Federal agency charged with the enforcement of safety and health legislation
- OSHA requirements for a safe work environment:
 - A. Provide properly maintained tools and equipment
 - B. Keep records of accident reports
 - C. Display an OSHA poster in a prominent location



Safety Rules

1. Familiarize yourself with your lab and the people that share it
2. Familiarize yourself with the exits and the routes to them
3. Stay alert and on the lookout for any condition that might pose a health and/or safety threat
4. Notify the administrator immediately when you find a safety hazard or concern
5. Always turn off the computer before moving it

Safety Rules

6. Do not remove or install components while the computer is on or plugged in
7. No food or drinks in the work area
8. Remove all jewelry and watches.
9. Keep the work area clean and orderly
10. Keep computer disks away from magnetic fields, heat, and cold

Safety Rules

11. Do not touch any computer components with a magnetic screwdriver
12. Do not use a pencil or metal tipped instrument to change DIP switches, jumpers, or touch components
13. Cover sharp edges with tape when working inside the computer case
14. Check all plugs and cords for wear damage prior to use

Safety Rules

15. Never open or work on a monitor or power supply (AMPS KILL)
16. Never look into a laser beam found in computer related equipment
17. Make sure that a fire extinguisher and first aid kit are available and you know where they are and how to use them
18. Read safety labels on all equipment in the lab, including the fire extinguisher

Safety Rules

19. Always use a grounding wrist strap
20. Allow 15 seconds to pass before touching any sensitive electronic components with bare hands
21. Do not allow anyone who is not properly grounded to touch or hand off computer components
22. Work on a tile or concrete floor



Safety Rules

23. Hold cards by the edges

24. Use anti-static bags to store and move computer components

25. When laying components down put them on top of an anti-static bag or mat

Fire Extinguisher Ratings

1. Class A – Ordinary materials (burning paper, lumber, cardboard, plastics)
2. Class B – Flammable and combustible liquids (gasoline, kerosene, solvents)
3. Class C– Electrical equipment (appliances, switches, panel boxes, power tools, and computers)
4. Class D– Combustible metals (magnesium, titanium, potassium, and sodium)
5. Most general use fire extinguishers are rated “ABC”.



Material Safety Data Sheet (MSDS)

1. Form containing information about the properties of a particular substance
2. Intended to provide workers and emergency personnel with procedures and emergency phone numbers for handling or working with that substance in a safe manner
3. Included information:
 - A. Physical data – Storage
 - B. Hazard rating – Disposal
 - C. Toxicity – Protective equipment
 - D. Health effects – Spill handling procedures
 - E. First aid

Hazardous Materials

NFPA Rating Explanation Guide

Rating Number	Health Hazard	Flammability Hazard	Instability Hazard
4	EXTREME – Highly Toxic – May be fatal on short-term exposure.	EXTREME – Extremely flammable gas or liquid. Flash Point below 73° F.	EXTREME – Explosive at room temperature.
3	SERIOUS – Toxic – Full protective suit and breathing apparatus should be worn	SERIOUS – Flammable. Flash Point 73° F to 100° F.	SERIOUS – May detonate if shocked or heated under confinement or mixed with water.
2	MODERATE – Breathing apparatus and face mask must be work.	MODERATE – Combustible. Requires moderate heating to ignite. Flash Point below 200° F.	MODERATE – Unstable. May react with water.
1	SLIGHT – Breathing apparatus may be work.	SLIGHT – Slightly combustible. Requires strong heating to ignite.	SLIGHT – May react if heated or mixed with water.
0	MINIMAL – No Precautions necessary.	MINIMAL – Will not burn under normal conditions.	MINIMAL – Normally stable. Does no react with water.



Rating Symbol	Special Hazard
ALK	Alkali
ACID	Acidic
COR	Corrosive
OXY	Oxidizer
W	Use No Water
	Radiation

MID-TERM REVIEW

Review Hardware Components

Review Module 1-7:

1. Differentiate form factors and cases
2. Choose an appropriate power supply
3. Differentiate between different bus structures
4. Differentiate between motherboard components, their purposes, and properties
5. Configure and apply BIOS settings
6. Differentiate among various CPU types and features
7. Select the appropriate cooling method
8. Compare and contrast RAM types and features
9. Install and configure storage devices and use appropriate media
10. Compare and contrast various connection interfaces and explain their purpose
11. Compare and contrast RAID types
12. Compare expansion devices
13. Evaluate video components and standards
14. Evaluate monitors
15. Evaluate peripheral devices
16. Evaluate and select appropriate components for a custom configuration, to meet customer specifications or needs

Review for Mid-Term

1. Review Modules 1-7 presentations
2. Review study guides/labs
3. Appropriate A+ Exam #1 materials

Motherboard Parts and I/O Ports

