THEMATIC UNIT Nº1

SAFETY STANDARDS.

1.1. GENERAL RULES.

They are rules linked to the general instructions of the University of Murcia (http://www.um.es/sprevencion/documentos/seguridad-salud.doc). Within that link is advisable to pay particular attention to paragraphs 5.21: Painting and varnishing and 5.28: Plaster and plastering. Next we will show you some of the most important rules:

- It must be known emergency exits and fire extinguishing media available in the space, for use if necessary.
- Do not block the access routes to classroom or the evacuation.
- You are not allowed to fire, except in those areas ready prepared for that propouse.
- You are not allowed to enter or store food or drink in areas where chemicals stored or used.
- Smoking is not permitted. It is not allowed to eat or drink.

1.2. SAFETY STANDARDS IN WORKSHOPS AND LABORATORIES.

- It must be used the appropriate personal protective equipment for activities as directed by the teacher or workshop's coach: safety glasses, gloves, masks and footwear appropriate for the type of task.
- It must be used the correct protective clothing (lab coat or overall) so that the limbs are covered.
- May be harmful if used as means of fire or contact with chemicals can cause injury or irritation
- It is recommended to wear the hair up.
- It isn`t recommended to wear bangles, bracelets, necklaces, pendants, sleeves, etc.
- You can't work alone in the workshop when using hazardous materials or tools.

1.3. TOXICITY OF THE MATERIALS USED IN PAINTING WORKSHOP.

The table below shows some of the dangers associated with materials that students can use in painting and printmaking and is followed by a list of precautions.

Activity	Material	Potential Hazard
Painting	Paint pigments/ Chalk dust	May be toxic by ingestion or inhalation (if mixing dry powders, sanding paints, or using pastels). Many inorganic pigments contain highly toxic metals and some organic pigments may cause

		long-term effects such as cancer. Wherever possible, substitute powdered pigments containing lead, cadmium, or mercury by less toxic materials.
Painting	Vehicle	Painting Vehicle. Vehicles in paints may include solvents, oils, resin, and polymer emulsions that are released to the air as the paint dries. They are moderately toxic. Some vehicles are adsorbed through the skin and others may cause skin disorders.
Painting	Solvents	Solvents are used to thin paints and clean up materials. Solvents commonly used include turpentine, mineral spirits, acetone, toluene, xylene, acetates, and petroleum distillates. These materials evaporate quickly, contaminating the air, and are moderately toxic by inhalation. Some solvents are adsorbed through the skin. Many are flammable.
Painting	Varnishes and lacquers	Because the materials used for making varnishes for artistic purposes, there are some risks in handling it is important to consider. The most important factors of risk are: Risk of inflammation. Most components of the varnish (solvents, resins, oils and drying) are flammable and easily burn. Inhalation hazard. Is caused by solvents that form part of the varnishes when working in poorly ventilated places or without specific protective masks for each solvent. Absorption hazard. It occurs when working with varnishes in contact with the skin, as usually happens when using your fingers to retouch or apply varnish acids with the heel of the hand. It is also very important not to clean the paint from the skin directly with the solvent, and not to wash the brushes and tools generally by hand. Ingestion hazard. The varnish can be ingested through the mouth through poorly washed hands or food and beverages consumed in the workspace. These risks can be avoided by taking basic hygiene measures. Given the hazardous nature of the varnishes is very important to keep an update on the products used in its making and its health consequences.
Spray	Paint pigments,	Spray guns, airbrushes, and aerosol spray cans release very fine mist of particles that can remain in the air for several hours and are easily inhaled.

application	vehicles, and solvents, varnishes/ lacquers	All of the materials identified above (solvents, pigments, resins, and paint vehicles) may be present. Spraying dramatically increases your risk of exposure to these toxic materials. Many of these solvents are also flammable and spraying them into the air creates a flammable atmosphere. High-pressure spray guns may actually inject paint directly under the skin if it gets in the way of the spray.

1.4. BASIC STANDARDS OF GOOD PRACTICE.

- Always must be kept the order and cleanliness of the workplace during practice and at the end. Sometimes when it comes to primers with rabbit glue and egg tempera emulsions, students forget that they are of organic origin and therefore corrupt producing odors and poor hygiene.
- The student is responsible for looking after the furniture in the room normally used: easels, stools, shelves storage, etc.
- When materials are heated the temperature must be checked prior to grab them with bare hands (do not have to catch with bare hands hot materials or irritants, corrosives or unknown).
- To warm materials are always used electric stove to avoid possible gas leaks, poisoning, etc.
- The student is responsible for looking after the works that remain in the classroom during their process of development and evaluation. The classrooms have metal cages to store works correctly and free up the space properly. In any case, the works, once evaluated and given the difficulty of storage and preservation, shall be removed by students in order to keep the workspace as operational as possible, both for the following work to the daily cleaning of the classroom-workshop.

On rare occasions there have been thefts allegedly caused by their own comrades who share the teaching. These attitudes always reprehensible and fortunately minority must be corrected because they cause damage to the institution and their own peers and demonstrate a lack of respect for the work of others. Similarly, creating a climate that affects anything appropriate lack of confidence and therefore limiting further opening of the classroom-workshop after class hours of the subject.

All works will be documented photographically with the idea of having a graphic file of the student work.

CHEMICAL PRODUCTS

- Before using a chemical for the first time you have to read the product label and consult the MSDS.
- You must properly label the containers of decanted products or prepared mixes (with the product name and hazard information).
- Don't reuse containers that originally contained food or drink to save chemicals, solvents or other substances.
- Unnecessary materials must be stored and order or have to be disposed of as waste, to avoid the accumulation of easily combustible materials that could spread the fire.
- Flammable products must be used in the necessary amounts and stored in a right place (cabinet). Containers are not to be left open while working.
- After handling chemicals products, hands should be washed.
- Do not smell or taste directly any chemicals.

ENVIRONMENT AND WASTE

- When possible, it is necessary to replace the toxic solvents by other less toxic such as the ecologic vegetable solvents.
- Solvents and other flammables are not to be used indiscriminately, oil paint dirty brushes can be cleaned with soap and water.
- Some pigments containing plumb, chromium and other heavy metals are very harmful to human health and the environment, so it is not for resale by the European Union. An example is plumb white.
- Waste (remains of solvents, paint, grease soaked rags, etc.). Not be washed in the sink, must be managed in accordance with the rules of the Environmental Management System -waste- of the Faculty currently in force. In any case, as a remind, the student should know that the remains of turpentine and solvents should be pouring into the reciples authorized for that purpose, generally located under sinks in the classroom and paint solid residues must be introduced into the dustbins that are available.
- Spills of toxic materials must be collected immediately and is best done with suitable absorbent material.
- Avoid as much as possible the use of products in the form of sprays because they are highly flammable, harmful and polluting. Use them in any case in a controlled way and outside the building.

MACHINES

- Do not operate machinery without prior knowledge and without the presence of the responsible professor or teacher's workshop.
- You must know the instructions for use and the risks associated with its use.
- Before starting work you have to observe the state of the machine (wires, plugs, parts, tools, etc.). And protective devices are in place and well maintained.
- You can't remove the protective devices under any circumstances. During the work handles must be used to approximate parts.
- When the machine is in operation, the presence of others around the user must be avoided.
- When the machine is not used must be completely stopped, disconnected and the protections put.

TOOLS

- You must use the right tools to every job.
- You can not use dangerous tools without the knowledge and authorization of the responsible professor or teacher's workshop.
- You must check the power wires that plug tools before using them.
- Avoid extension wires whenever possible.
- The tools must be kept in good use and have to be kept in place when work is over.
- When tools have to be transported, sharp partsShould be protected and used the appropriate containers.

1.5. BIBLIOGRAPHY AND WEB LINKS.

BIBLIOGRAPHY.

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MCCANN, Michael. *Health Hazards Manual for Artists.* Lyons & Burford Publishers, New York 1994.

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Safety Guide. Allworth Press, New York 1994.

SHAW, S. & ROSSOL, M. *Overexposure: Health*

Hazards in Photography. Allworth Press, New York 1991.

SPANDERFER, M., *Making Art Safely:*

Alternative Methods & Materials in Drawing,

Painting, Printmaking, Graphic Design and

Photography. Van Nostrand Reinhold, New York 1993.

WEB LINKS.

Government Resources

Occupational Safety & Health Administration. United States. [Accessed: February 7, 2012]. Available at:

www.osha-slc.gov/SLTC/healthguidelines/index.html

Lots of additional information on most of the topics

discussed in this guide, as well as many additional

links. [Accessed: February 7, 2012]. Available at:

www.osha-slc.gov/SLTC/contents.html

The National Institute for Occupational Safety and Health (NIOSH). *Contains additional information on the topics*

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Occupational Safety and Health Administration. [Accessed: February 7, 2012]. Available at: www.osha.gov

Environmental Protection Agency. [Accessed: February 7, 2012]. Available at: www.epa.gov

National Institute of Standards and Technology. [Accessed: February 7, 2012]. Available at: www.nist.gov

Art-Specific Resources *services, publications, and links to ACTS (Arts,*

Crafts and Theater Safety) e-mail addresses where

individuals can obtain answers to safety questions.

Also offers a monthly newsletter with current

research, new regulations, and other relevant news

items.

[Accessed: February 7, 2012]. Available at:www.caseweb.com/ACTS *Lists*

Web site for ACMI (Art & Creative Materials

Institute) which certifies materials as safe for use by

children and offers product substitution ideas. Lists

certified products, informational publications, and

other resource information. [Accessed: February 7, 2012]. Available at: www.acminet.org

Goshen College's Art Department Web site contains

safety information on a variety of art materials and

art processes. It includes gopher pages with

information on hazards associated with the arts and

their control. [Accessed: February 7, 2012]. Available at:

www.goshen.edu/art/DeptPgs/safety.htm

Web site for the National Art Materials Trade

Association. [Accessed: February 7, 2012]. Available at:

www.arcat.com/arcatcos/cos08/arc08376.cfm

OUIMET, Thomas. *Safety Guide for Art Studios*, United Educators, Maryland, 2000. [Accessed: February 7, 2012]. Available at:

http://www.units.muohio.edu/ehso/downloads/brochures/Art%20Safety%20Brochure.pdf