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9 **Asbestos, Environment, Fire, Health, Safety, and Security Policy**

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11 This document establishes the Texas Tech University Computer Science Department's
12 policy for the protection of life, environment, health, safety, and security. The intent is to
13 maintain a safe and healthful environment conducive to the accomplishment of the
14 mission of the department, college and university. This policy will be reviewed and
15 changes implemented if necessary in June of even number years.

16
17 Responsibility for the administration of this program is vested in the department lead
18 technician who reports to the department chair. The primary tasking of our Occupational
19 Safety and Health, Radiation Safety, Environmental Health, Fire Safety, Asbestos
20 Management, and Security is to prevent and control the impact of accidents and incidents
21 involving faculty, staff, students, and the environment, thus avoiding consequences that
22 could disrupt our department or portray us as a department with little or no concern for
23 these issues. The department is very concerned with these issues and that concern must
24 be reflected in our daily activities by establishing this department as a leader rather than a
25 reluctant complier in each of these areas.

26
27 All department employees (faculty, staff, teaching assistant, research assistant and
28 student assistant) have the responsibility to assure compliance with these policies and
29 procedures as well as promote sound work practices and good housekeeping, develop
30 safe work habits, be familiar with hazards present in their work area, follow all
31 procedures and rules, and contact their supervisor whenever a potential hazard is
32 recognized. Demonstrated failure to conscientiously discharge these responsibilities by
33 either supervisors or other employees may be grounds for dismissal since it is in direct
34 conflict with department stated goal of providing a safe and healthful work environment.

35
36 With full cooperation at every level, the department can continue to maintain a safe and
37 healthful work environment while minimizing occupational injury and illness to
38 employees, students and loss to the department, college and university.

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40 Chair
41 Computer Science Department Texas Tech University
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Safety Related Operating Policies/Procedures

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|-----------------------|--|
| Asbestos | 60.08 Asbestos Compliance and Abatement Program |
| Chemical Hygiene | 60.17 Chemical Hygiene Plan |
| Chemical Hygiene | 60.02 Hazard Communication Act |
| Chemical Hygiene | 60.04 Use of Laboratory Hoods, Biological Cabinets and Special Exhaust Ventilation |
| Electrical Safety | 60.06 Lockout/Tagout System Procedures |
| Emergencies | 60.03 Hazardous Material Spills |
| Fire Safety | 60.14 Building Decorations and Decorative Materials |
| Fire Safety | 60.13 Reporting of Fires/Fire Drills |
| Fire Safety | 60.12 Fire Safety Program |
| General Safety | 60.01 University Health & Safety Program |
| Lab Safety | 60.10 Use and Disposal of Sharp Objects |
| Radiation Safety | 60.11 Procurement, Usage & Disposal of Radioactive Materials, Radiation Producing Devices and Lasers |
| Respirators | 60.05 Respiratory Protection Program |
| Reporting | 60.16 Safety Activity Reporting |
| Reporting | 60.07 Safety Hazard Report |
| Workers' Compensation | 70.13 Workers' Compensation Insurance |
| Appendix A | Copy of Relevant Forms |

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The Key To Safety Success, The Supervisor

The key to the success of any safety program is the actions of supervisors. No safety program can be successful without their support, cooperation, and participation. There are many reasons for this and a few will be examined. Supervisors – any department employee: faculty, staff, teaching assistant, research assistant, student assistant – all who may at any time be supervising other individuals.

Supervisors have detailed knowledge of the tasks each employee performs and are in the best position to observe employee attitudes and actions. This familiarity with job and worker allows them to know what physical hazards are present and to provide training in avoiding accidents related to those hazards.

Supervisors have daily contact with the workers they supervise in most cases. This routine contact gives the supervisor the opportunity to adopt the role of mentor regarding the safest way for the employees or students to discharge their duties. By teaching employees and students to incorporate safety as they learn their jobs, it all becomes a routine part of performing the task. For those workers already trained, daily contact allows the opportunity to detect and correct any unsafe practices due to poor previous training or development of bad safety habits.

In most cases, supervisors have the trust and respect of their workers. This means the worker will often heed warnings from the supervisor more readily than those from labels, Material Safety Data Sheets, or safety manuals. This feeling of trust and respect cannot be sustained if the worker begins to feel that the supervisor is failing to maintain safe and healthful work conditions.

It is commonly said that the safer a workplace, the more productive it is. This is a logical premise since workers performing with injuries or away from work due to injury certainly will not be as productive as workers who are on the job functioning at 100% of their physical capability. Since among other duties a supervisor has productivity to deal with, keeping the employees safe and healthy should be of prime interest.

The supervisor has the authority, by virtue of his/her position, to demand adherence to safety policies and procedures. Nobody else is in a position to enforce safety standards in as immediate and direct a way as the supervisor. The supervisors' ability to make compliance an integral part of a satisfactorily completed job makes these positions unique.

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2 All of the above reasons for supervisors being the key to a successful safety program
3 really come back to one thing...responsibility. The supervisor is responsible for the
4 productivity and welfare of the employees, for properly and safely training them, and for
5 evaluating their performance in safety as well as other areas. Altogether, this amounts to
6 a rather hefty burden. There are many resources available at the federal, state and
7 university levels. Some of these are the accident investigation and workplace survey
8 programs, advice on specific problems and help on safety training needs. The department
9 will rely heavily on the university environmental health, fire, security and safety
10 professionals seeking their advice, complying with their procedures, and coordinating
11 annual and bi-annual tours and meetings with department employees.

12
13 Once each semester during a semi-monthly faculty and staff meeting (1st and 3rd Friday
14 lunch meetings) issues related to this play will be discussed.

15 16 The Role of the Safety Coordinator

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18 The safety coordinator is the department's Micro/PC Specialist. All department
19 employees have a duty to ensure safe operations. The safety coordinator is the focal
20 point for safety and serves as the chair's primary agent for safety matters. He/she acts as
21 the point of contact within the department and as liaison with all other college, university,
22 state and federal safety agencies. This includes: being knowledgeable about how to fill
23 out accident forms and hazard reports as well as having forms on hand; being the conduit
24 for information from and questions to these agencies so questions can be answered as
25 they arise; determining and arranging for safety twice a year; reporting unsafe conditions
26 and stopping unsafe acts where possible; coordinating visits by safety agency personnel
27 and accompanying them during these visits; and promoting general safety awareness in
28 the department. The safety coordinator is not a safety expert; having received only
29 limited training and generally training time and money is limited. The safety coordinator
30 is the department's go to person to coordinate all safety related activities.

31 32 Accident Reporting

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34 TTU EH&S (Environmental Health & Safety) has copies of accident reporting forms, MS
35 1090, and can assist the department in filling them out. The forms are:

- 36
37 1) Employer's First Report of Injury/Illness, TWCC-1S, - accident involving lost
38 time or medical costs – supervisor, chair
39 2) Witness Statement, WCD-74 – witness/witnesses
40 3) Employee's Election Regarding Utilization of Sick Leave, C-80 – employee
41 4) Employee's Report of Injury, WCD-29 – employee
42 5) Authorization for Release of Information, 24-016-C – employee
43 6) Supplemental Report of Injury/Illness, TWCC-6 – employee
44 7) Supervisor's Investigation of Employee's Accident/Incident, AGS-10-91/TWCC-
45 121 – supervisor, chair

- 1 8) Accident Report for University Vehicles, MS 1101, 2-3841, Contracting & Risk
- 2 Management
- 3 9) Incident Report Form, to EH&S for incident & near miss, no lost time & no
- 4 medical cost injury
- 5 10) Hazard Report Form, to EH&S

6 7 Accident Investigations

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9 The investigation of accidents will be conducted at the discretion of TTU EH&S. If an
10 investigation is deemed necessary, TTU EH&S established procedure will be followed;
11 the department will assist as directed.

12 13 Periodic Workplace Surveys

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15 The department safety coordinator and chair will participate in the biannual workplace
16 surveys and visit by TTU EH&S. Activities on the visit may include, but are not limited
17 to: measurement of noise and lighting, hazard communication program review, and walk-
18 through of facilities for identification of hazards. During these safety surveys,
19 recommendations for the abatement of hazards will be presented orally and a
20 memorandum will be sent to the chair with a copy to the safety coordinator.

21 22 Hazard Communication Program

23
24 The Texas Hazard Communication Act (THCA) requires that all employees who work in
25 non-exempt areas be informed about chemical hazards in their workplace by means of
26 container labeling, Material Safety Data Sheets (MSDS) and training. Areas which are
27 exempt have been informed of this fact in writing by EH&S. The department is not
28 exempt.

29
30 To comply with the THCA, the following actions have been taken:

- 31 1) The supervisor/safety coordinator has enabled a Hazard Communication Program
- 32 which is accessible to employees on all work shifts.
 - 33 a. The department semiannually updates employees at faculty/staff meeting
 - 34 b. Within the first week of employment briefs new employees
 - 35 c. During the first lab session briefs students
 - 36 d. During the first research session briefs research assistants
 - 37 e. Maintains MSDS notebooks in each respective lab/office area
- 38 2) Ensure that all containers for products containing hazardous chemicals are
- 39 properly labeled
- 40 3) Ensure that all employees know that the University has a centralized collection of
- 41 MSDS's located in EH&S (MS 1090, 303 Drane Hall). Copies of MSDS's have
- 42 been requested from EH&S by memorandum to EH&S or to supplier and
- 43 maintained in a notebook in each respective lab/office area
- 44 4) Supervisors/safety coordinators must provide the following information and
- 45 training to all employees working in a non-exempt area:
 - 46 a. The requirement of the THCA

- b. The location and availability of the written Hazard Communication Program
- c. The location and availability of MSDS's within the department or work area
- d. Identification of chemicals or chemical products present in the work place operations
- e. Physical and health effects of the hazardous chemicals
- f. How to use the identified chemical products safely
- g. How to read labels and MSDS's to obtain appropriate hazard and safety information

5) Training must be documented and the documentation kept on file within the department for 30 years

If non-exempt, your department's hazard communication program must be permanent and continuous. When new products are received, an MSDS must be made available and, if the product introduces a new hazard to the workplace, all employees must receive training on the new hazards prior to working with the product. All new employees must be trained prior to working with any hazardous substances.

Obtaining MSDS's

MSDS requirements are set by the Occupational Safety and Health Administration (OSHA). TTU EH&S will assist the department in determining if the chemical requires a MSDS. The manufacturer/supply is the first option to provide the MSDS. TTU EH&S will also assist the department in obtaining the required MSDS. Copies of MSDS will be stored in alphabetical order in notebooks in the respective department lab/office area. Original MSDS will be maintained by TTU EH&S.

Interpreting Material Safety Data Sheets

The department initial and periodic training will review interpreting of MSDS. Specifically:

- 1) Identity – the product name used to identify the substance on the MSDS must be the same as on the product label and on your inventory. This section often contains synonyms which may be useful when looking for information in references.
- 2) Physical and Chemical Characteristics – this section contains information such as flash point, vapor pressure, appearance, odor, specific gravity, boiling and freezing points, etc. This data can be very useful for determining things like whether vapors from the substance will rise or sink. The odor and appearance information can be used to train workers about how to recognize the presence of a particular substance.
- 3) Physical Hazards-information concerning the potential for fire, explosion, or reaction is found here. The type of extinguishing agent appropriate for the product will be given here. Checking this section can tell you whether or not you have the right type of extinguisher in your work area. If reactivity data is given, information about what substances are incompatible with the product will normally accompany it.

- 1 4) Health Hazards-this section presents information about the signs and symptoms of
2 overexposure, acute and chronic health effects, and any medical conditions which
3 might be aggravated by exposure. Please don't interpret this to mean that if you
4 use this product, these things will happen to you. The information is given so you
5 will be aware of how you might react to a significant exposure and is usually
6 based on accidental overexposure or animal studies. The information should be
7 used as an indicator of possible overexposure or sensitivity.
- 8 5) Primary Routes of Entry-the way the substance may enter or interact with your
9 body is detailed here. This is typically given as ingestion (entry through the
10 mouth), inhalation (entry through the respiratory system), absorption (entry
11 through the skin or eyes), and contact (doesn't enter the body, but damages or
12 irritates the skin or eyes). This information should be used to reinforce
13 administrative controls and work practices such as washing hands after product
14 handling or prohibiting food and drink in areas where hazardous materials are to
15 be used.
- 16 6) Exposure Limits-OSHA Permissible Exposure Limit (PEL), the American
17 Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit
18 Value (TLV), National Institute of Occupational Safety and Health (NIOSH)
19 recommended Exposure Limit (REL), or other recommended exposure limits will
20 be presented in this section. These values are given in parts per million (ppm) or
21 milligrams per cubic meter (mg/m^3) and are based on an eight hour time-weighted
22 average (TWA) for a forty-hour work week. Some type of sampling and analysis
23 or readings with equipment followed by calculations is necessary in order to have
24 data to compare to these exposure standards. This function will be performed by
25 EH&S or other personnel with specialized training.
- 26 7) Carcinogenic Effects-this section must disclose information about whether the
27 substance is recognized as a known or suspected carcinogen (cancer-causing
28 agent) by the National Toxicology Program (NTP), International Agency for
29 Research on Cancer (IARC) or OSHA. Products with carcinogenic ingredients
30 must be handled with extra caution and require written procedures as to how they
31 will be stored and used.
- 32 8) Handling data-this section provides information regarding any special precautions
33 for handling and use. Appropriate hygiene practices, decontamination
34 procedures, and spill and cleanup actions are found here.
- 35 9) Control Measures-here you will find data concerning engineering controls, work
36 practices, administrative controls, and personal protective equipment. These
37 requirements are based on worst case conditions, but must be followed unless
38 EH&S has performed an evaluation and informed you in writing that less
39 stringent controls will be satisfactory.
- 40 10) Emergency and first aid procedures-necessary emergency response and first aid
41 procedures are detailed here. Remember when reading this information that it is
42 assumed that you have the required training and equipment to perform any
43 emergency response or rescue actions discussed. If you don't, attempting
44 response or rescue will probably just add another victim, so please call for
45 qualified, properly equipped assistance.

- 1 11) Date of MSDS preparation-manufacturers or importers are required to list the date
2 of preparation or date of the last change on the MSDS. Please check these dates if
3 you have more than one copy of MSDS's for a product. The MSDS must cover
4 the period of manufacture for the stock of product you have on hand. If the
5 formulation has changed, the hazards may have changed as well.
6 12) Manufacturer's data-this must contain the name, address, and telephone number
7 of someone who can provide additional information on the hazardous substance
8 and emergency procedures, if necessary.
9

10 Safety Activity Reporting

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12 The department will complete a TTU Department Safety Activity Report (SAR-93)
13 annually in accordance with OP 78.29 to TTU EH&S by 15 September to report data for
14 the previous fiscal year.
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16 Hazardous Waste Disposal

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18 Minimize amount of waste generated by:

- 19 1) Surplus chemicals can be exchanged among labs, sections, or departments. This
20 applies not only to 'virgin' materials, but to the end products of processes or
21 experiments which could be of use to someone else.
22 2) Materials may be distilled to recover them to a point of usability, if not to the
23 original user, to another user on campus. This is greatly facilitated by segregating
24 potential wastes to the extent practical at the point of generation.
25 3) Substitution of a less hazardous material for one requiring special handling will
26 not only cut disposal costs, but reduce hazards in a the laboratory as well.
27 4) Micro-scale operations reduce the waste volume by proportionately reducing the
28 amount of chemicals input for the reaction.
29 5) Neutralization – Acids and bases, uncontaminated with substances of a different
30 hazard category, can be treated to bring the pH within the range of 5 to 9 and
31 washed down the drain with 50 times their volume in water. There is no reason to
32 turn in materials that can be neutralized at the point of generation.
33 6) Steps must be taken to ensure faculty and staff members do not depart until all
34 substances in their work areas are clearly marked as to contents. Compliance with
35 the Texas Hazard Communication Act will eliminate most problems of this type,
36 however, the cost of analysis for the identification and hazard classification of
37 unknowns is high enough to make this a cost effective endeavor.
38

39 Once it has been determined that the substance can't be exchanged, recycled, or
40 neutralized, contact EH&S to arrange for it to be picked up for entry into the waste
41 stream. Waste pickups are made on Tuesday and Thursday of each week. Wastes should
42 not be allowed to accumulate as this presents health and environmental hazards. When
43 calling EH&S to arrange for a waste pickup, provide the following information:

- 44 1) Name and telephone number of person requesting pickup.
45 2) Department and room number where waste is located.
46 3) Department and room number of requestor, if different than above

1 4) Types and numbers of containers, e.g. one 5 gallon can, two 4 liter bottles, one 55
2 gallon drum, etc.

3 5) Whether or not the 'Request for hazardous waste pickup & disposal' form is
4 complete

5 The above information should be available prior to calling to arrange a pickup.

6

7 EH&S labels are available. The waste generated should fill out the following
8 information:

9 Contents – List all wastes in the container

10 Building – your facility

11 Room #-self explanatory

12 Accumulation start date-the date you first placed any waste in the container

13 Hazard-Check the appropriate block for the hazard(s) associated with the waste

14

15 Department of Computer Science, Texas Tech University

16 Laboratory Policy for Students

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18 The following policies apply to all students (graduate and undergraduate) working in the
19 departmental labs, research facilities and touring field locations. Violation of these
20 polices will result in suspension of lab and research privileges.

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- 22 1. The University does not provide insurance to cover medical bills incurred by a
23 student. Consequently, students injured in the lab are responsible for their own
24 medical bills.
- 25 2. Students must review the Material Safety Data Sheets before using any chemicals.
- 26 3. Students must operate all lab equipment in a safe manner.
- 27 4. Fire Extinguishers are marked. In case of fire call 9-911.
- 28 5. In general, students will be very safety conscious, and exercise common sense
29 such as not leaving equipment laying on the floor that could cause tripping.
- 30 6.

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New Department Employees Orientation Briefing

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33 The department safety coordinator will brief all new employees (faculty, staff, teaching
34 assistant, research assistant and student assistant) during their first week on environment,
35 fire, health, safety, and security issues and procedures related to their job assignments.

36 This may include:

- 37 1) Material Safety Data Sheets
- 38 2) Proper Lifting Procedures
- 39 3) Fire Procedures
- 40 4) Storm and Tornado Procedures
- 41 5) Handling of Hazard Chemicals
- 42 6) Electrical Hazards and Procedures
- 43 7) Unique Issues Related to Research and Lab Facilities
- 44 8) Health Issues
- 45 9) Safety Issues
- 46 10) Security Issues

- 1 11) Environmental Issues
- 2 12) Other Issues

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Department Research and Lab Facilities

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6 The department has several unique research and lab facilities which require special
7 consideration. Prior to accessing each of these facilities permission must be granted and
8 training received by the respective facility faculty coordinator. The department chair and
9 department safety coordinator will assist individuals to gain access by coordinating with
10 the respective facility faculty coordinator. Each facility has additional separate safety
11 and health issues.

12

13 1) PE 118 Computer Lab

14 a. Department computer security procedure.

15 2) PE 119 Computer Lab

16 a. Department computer security procedure.

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18 (Should we also list the Unix Lab? What about the research labs?)