

KAUNAS UNIVERSITY OF TECHNOLOGY

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APPROVED BY

The order No. A-372 of the Rector of
Kaunas University of Technology
Of September 12, 2016

SAFETY AND HEALTH INSTRUCTION FOR THE EMPLOYEES WORKING WITH VIDEO TERMINALS (COMPUTERS)

NO. DS-1

CHAPTER I GENERAL PROVISIONS

1. The employees are allowed to work with video terminals (computers), if they have had a medical examination, are adequately prepared for work with video terminals (computers), and have participated in the introductory briefing on employee's safety and health under established procedure.

2. The employees working with video terminals (computers) (hereinafter – employees), must:

2.1. Follow legitimate instructions of the manager and Occupational Safety Group;

2.2. Protect their own health and cause no harm to the health of other employees;

2.3. Have their medical examination under established procedure;

2.4. Not work with the equipment with technical defects;

2.5. Use video terminals (computers) in accordance with the requirements specified in their certificates;

2.6. Immediately notify direct manager and Occupational Safety Group (tel. (8 37) 30 00 32) about any situation at workplace, in the premises, which, to their knowledge, can endanger employees' safety and health, also notify about violations of the requirements of safety and health of employees, which they cannot or do not have to eliminate themselves;

2.7. Immediately notify direct manager, Occupational Safety Group about injuries incurred during work and other work related health problems;

2.8. Know the requirements of fire safety instruction and follow them, know the place of fire extinguishing appliances, know how to use them and avoid the actions that could possibly cause fire;

2.9. Follow internal rules of procedure, not use alcoholic beverages and narcotic substances, not smoke during work;

2.10. Follow requirements of personal hygiene, maintain order at the workplace.

3. The employees have a right to:

3.1. Demand from their direct manager to provide safe working conditions;

3.2. Get informed by their direct manager about the factors in working environment, which are hazardous to health or dangerous;

3.3. Refuse to work in case there is danger to their health or life;

3.4. Demand compensation for damage to their health due to unsafe working conditions under procedure established by the law.

4. Responsibility established in the legislation of the Republic of Lithuania and internal legal acts of Kaunas University of Technology is imposed on the employees, who fail to follow requirements of this instruction.

CHAPTER II

OCCUPATIONAL RISK FACTORS AND SAFETY MEASURES AGAINST THEIR EFFECT

5. The main occupational risk factors at the employees' workplaces:
 - 5.1. Impact of electric current;
 - 5.2. Insufficient lighting of the workplace;
 - 5.3. Increased visual tension;
 - 5.4. Uncomfortable working position;
 - 5.5. Untidy workplace;
 - 5.6. Slippery floor.
6. Video terminal (computer) equipment should not cause any risk to the employees:
 - 6.1. All equipment of video terminals (computers) in use has to have CE marking, confirming its compliance with Electrical Products Safety Regulation;
 - 6.2. Symbols in the monitor have to be brightly contoured and easily readable;
 - 6.3. Display has to be stable without flickering;
 - 6.4. An employee working at the monitor has to have a possibility to control brightness and contrast of symbols and background easily, adjusting them to the conditions of working environment;
 - 6.5. The distance between the employee's eyes and the monitor has to be at least 40 cm;
 - 6.6. The monitor has to have a regulated stand, enabling change of its position according to the employee's needs;
 - 6.7. The monitor has to be free of shadows and reflections tiring the employee's eyes; a workplace has to be equipped to avoid blinding caused by light sources, brightly coloured equipment or walls with their minimum reflection in the monitor, so that it would not cause unpleasant sensations and eye fatigue to the employee;
 - 6.8. Measures allowing reduction of the luminous flux falling on the workplace have to be installed in the windows or next to them;
 - 6.9. Display in the monitor has to be stable, without shining and other disturbances;
 - 6.10. Keyboard has to be placed on a suitable height to maintain a correct posture and avoid fatigue of hands, wrists and shoulder section;
 - 6.11. Sufficient space has to be in front of the keyboard allowing the employee to put his/her hands and wrists;
 - 6.12. Wrists have to be in neutral position: hand and forearm have to be on the same height, without bending a wrist;
 - 6.13. Keyboard and symbol keys have to be located in a manner easy to use;
 - 6.14. Keyboard and mouse have to be on the same height;
 - 6.15. Keyboard has to be movable and separate from the monitor to make it possible for the employee to find a comfortable working position without causing fatigue to hands and wrists;
 - 6.16. Keyboard surface has to be matt.
7. Work table and surface of the work table have to be of sufficient size for a comfortable situation of monitor, keyboard, documents and other necessary equipment. Surface of the work table has to be low reflective.
8. Document holder has to be stable, adjustable and adjusted to reduce eye and muscle fatigue to the minimum.
9. Construction of the work table has to correspond to the ergonomic requirements and ensure employee's comfortable posture with sufficient space for its choice.
10. Work chair has to be stable, allowing quick and free movement of the employee and possibility to choose comfortable posture.
11. Construction of the work chair has to comply with the ergonomic requirements.

12. Workplace has to be equipped in a manner allowing the employee to access it freely, to have sufficient space for work related and other movement and change of posture.

13. Premises have to be provided with natural and artificial lighting corresponding to the hygiene standards.

14. Illuminance of the premises has to be sufficient for performance of all work related actions, complying with the nature of work and satisfactory for the characteristics of employee's eyesight.

15. Illuminance of the general lighting for the surface of work table has to ensure sufficient illuminance of the work surface and contrast between monitor and background, taking into consideration the characteristics of vision related work and the characteristics of employee's eyesight

15.1. Illuminance of the general lighting for the surface of work table has to be at least 300 lx;

15.2. Illuminance of the monitor surface has to be at least 100 lx.

16. Sources of natural and artificial illuminance have to be installed and located in a manner allowing the employee to avoid blinding effect of flashes and reflection on the monitor.

17. If needed, a local artificial lighting has to be installed in the work premises. Local illuminance cannot cause blinding flashes in the monitor.

18. Workplaces have to be installed in a manner ensuring that sources of light, such as windows and other openings, transparent or semi-transparent walls, brightly coloured lamps or walls do not glow and reflect on the monitor.

19. It should be possible to cover the windows for reduction of the stream of daylight falling into the workplace.

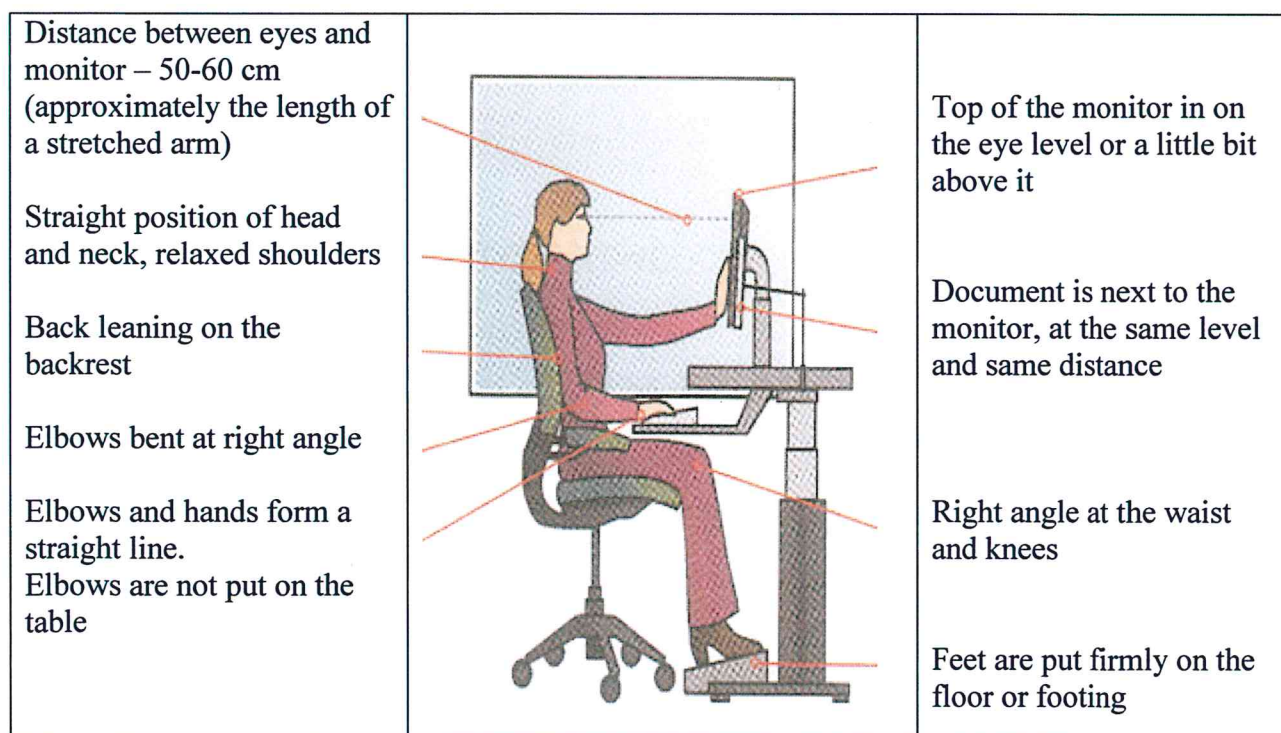
20. Thermal environment of the work premises has to comply with the requirements of the applicable legal acts.

21. Heating, ventilation and air conditioning of the work premises have to be installed under the requirements of the applicable legal acts.

22. Any kind of radiation cannot exceed the levels harmful to health.

23. Permissible level of electromagnetic field has to comply with the established requirements.

24. To avoid the eye and body fatigue at work it is mandatory to follow recommendations for sitting at the work table specified in the picture.



Picture. Correct posture of the employee working with a video terminal (computer)

CHAPTER III EMPLOYEE'S ACTIONS BEFORE WORK

- 25. Before the beginning of work, the employee must:
 - 25.1. Check the workplace and remove everything that could interfere with work;
 - 25.2. Check if equipment, devices and inventory that will be used for work are in good working order;
 - 25.3. Put the devices of the video terminals (computers), working tools and documents in orderly manner;
 - 25.4. Visually check video terminals (computers) and other electrical devices that will be used for work:
 - 25.4.1. If the electrical wires connecting the device to electricity grid are not broken and their insulation is not damaged;
 - 25.4.2. If the wires connecting the device to electricity grid do not touch hot and wet surfaces, cables, sharp edges, other grounded devices, radiators of central heating, pipes;
 - 25.4.3. If the wires are protected against accidental mechanical failure. The wires have to be connected to electrical sockets in a manner providing no possibilities to step or stumble on them while walking;
 - 25.4.4. If the plug of electrical cable and electrical socket that the device is to be plugged into are in good working order;
 - 25.4.5. If any casing of the device is taken of.
- 26. In case any malfunctions that endanger the safety of employees are noticed, the direct manager has to be notified immediately and work cannot be started until the malfunctions are eliminated. It is prohibited for the employees to eliminate malfunctions themselves. It has to be performed by the electro technical personnel with respective qualification.

CHAPTER IV EMPLOYEE'S ACTIONS DURING WORK

- 27. During work the employee must:
 - 27.1. Maintain cleanliness and order at the workplace;
 - 27.2. Work only with grounded equipment and devices;
 - 27.3. Control his/her posture;
 - 27.4. Not touch the grounded parts and metal parts of the electrical equipment at the same time;
 - 27.5. Not work with electrical tools, devices and equipment if liquid is spilled on them;
 - 27.6. Not touch electrical equipment, wires, plugs, and sockets with wet hands or clean them with wet cloth;
 - 27.7. Make sure that a printer is unplugged from the grid before connecting it to the video terminal (computer);
 - 27.8. Not unplug the printer while it is printing;
 - 27.9. Hold the printer vertically while moving it to another place;
 - 27.10. Unplug the printer immediately and take the paper off if the paper gets wrinkled and stuck while printing;
 - 27.11. Not touch and take out any parts of the printer.
- 28. During work it is prohibited to:
 - 28.1. Use the equipment, devices and inventory that are not in good working order;
 - 28.2. Use electrical installation equipment that is not in good working order;
 - 28.3. Work with video terminals (computers) if electric current is felt when touched;
 - 28.4. Repair video terminals (computers) or other electrical equipment by themselves.

29. The employee's working time has to be planned in a manner that allows taking periodical breaks (included in the working time) during every-day work at the monitor, or change the activities reducing workload at the monitor.

30. It is allowed to work at the video terminals (computers) continually for 1 hour maximum.

31. During 8-hour working day regulated (special) breaks of 5 (10) min. have to be taken 1 hour after the beginning of work with video terminals (computers).

32. During 12-hour working day (40 hours per week), regulated (special) breaks have to be taken according to the schedule of 8-hour working day for the first 8 hours; during the remaining 4 hours a 15 min. break is to be taken after each hour of work.

33. For reduction of fatigue and stress during breaks and at the end of work it is recommended to perform special exercises for eyes and physical exercises at working place or leisure area. (Appendix).

34. In case any malfunctions of video terminals (computers), defects of cables, plugs or sockets are noticed, the work should be terminated and direct manager has to be notified immediately.

35. If employees leave premises for a longer period of time and there are no other employees in the premises, video terminals (computers) have to be turned off.

CHAPTER V

EMPLOYEE'S ACTIONS IN EMERGENCY (EXTRAORDINARY) SITUATIONS

36. In case of an emergency situation (if electric current is felt, supply of electricity is interrupted, wire insulation is damaged or a characteristic smell of burning insulation is felt, increased noise or vibration is noticed, in case of fire) the employee has to turn the video terminal (computer) and other electrical equipment off immediately and notify about the event his/her direct manager.

37. The employee, who notices a fire, must:

37.1. Immediately notify a fire safety service calling emergency number **112**;

37.2. Take measures to inform people about the fire and organise evacuation of people and material assets;

37.3. Extinguish the fire using available measures;

37.4. Summon the direct manager to the place of fire.

38. In case of accident, the employee must:

38.1. If he/she is capable, immediately notify his/her direct manager and specialists of Occupational Safety Group (tel. **(8 37) 30 00 32**). The person, who witnesses or is informed about the accident, has to provide first aid to the victim immediately and notify specified persons about the accident;

38.2. Make sure that workplace and condition of the equipment remains the same as it has been at the time of the accident until the investigation of the accident is started. If it endangers life and health of other employees, minimal changes can be made recorded by a respective act;

38.3. Direct manager has to organise first aid immediately, if needed - take the victim to the hospital and inform specialists of Occupational Safety Group (tel. **(8 37) 30 00 32**) about the accident.

CHAPTER VI

EMPLOYEE'S ACTIONS AFTER WORK

39. After work the employee must:

39.1. Put his/her workplace in order;

39.2. Unplug a video terminal (computer) and other electrical devices and equipment from the electricity grid;

39.3. The last employee leaving has to turn off the lighting and check the premises in terms of fire safety.

40. Notify direct manager about all defects noticed during work.

INSTRUCTION IS PREPARED BY



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Exercises for the break

Eye exercises.

Exercises are performed in seated position, keeping head straight. Each exercise is repeated 4–5 times.

1. Close your eyes without causing any tension to your eye muscles. Then open your eyes wide and gaze into the distance.
2. Focus on the end of your nose. Afterwards gaze into the distance.
3. Without moving your head perform rotation movement with your eyes: up – to the right – down – to the left. Repeat rotation to the opposite side. Then look up and later look straight. In the similar way: look down and straight, to the right and straight, to the left and straight.

Exercises improving blood circulation in the brain.

1. Lift your arms above your head. Spread your elbows widely to the sides, bend your head back. Push your elbows forward. Relax your arms and move them down, bend your head forward. Repeat this exercise 4-6 times. Perform it slowly.
2. Slowly and carefully bend your head back. Then slowly and carefully bend your head forward, do not raise your shoulders. Repeat this exercise 4-6 times. Perform it slowly.
3. Spread your arms to the sides, spread your fingers. Embrace yourself strongly on the shoulders and hold as long as possible. Repeat this exercise 4-6 times. Perform it slowly.
4. Hands on the waist. Turn your head right, then return to the initial position. Turn your head left, and then return to the initial position. Repeat this exercise 6-8 times. Perform it slowly.

Exercises reducing fatigue of shoulder section and arms.

Each position of tension has to be performed for a few seconds (as possible) and then returning to the initial position. It is sufficient to repeat these exercises 5-10 times for relaxation. Muscle tension exercises are performed 15-20 times, three times per day.

1. Raise your shoulders, and then put them down. Repeat this exercise 6-8 times. Relax the muscles of shoulder section. Perform it slowly.
2. Put your hands outer side on the waist. Push your elbows forward and bend your head down. Then push your elbows back, raise your head and straighten up. Perform it slowly. Repeat this exercise 4-6 times, then put your arms down and shake them relaxed.
3. Stretch your right arm forward and a left arm up. Change position of your arms. Finish the exercise, put your arms down and shake your hands. Repeat this exercise 4-6 times. Perform at average pace.
4. Raise your arms to the sides in free movement, slightly arch your back, let your arms fall, then raise them and cross on your chest. Repeat this exercise 4-6 times.

Each employee should plan an exercise programme for his/her 5-10 min breaks. Choose exercises, their order and duration of performance. Learn this set of exercises and use it during breaks. Periodical change of posture facilitates blood circulation and protects against tension of one part of the body.