Ergonomic Workstation Design Guidelines

Office workstations should meet the recommended guidelines listed below. Consult the Americans with Disabilities Act regulations to ensure compliance with facilities designs (i.e. number of ADA workstations per building, dimensions of ADA workstations, etc.).

- Office task chairs should have all the following features:
  - Adjustable seat height, 15 – 22 inches (38 – 56 cm)
    - Can be accommodated with alternative height pistons
  - Lumbar support height adjustment
  - Adjustable, lockable seat back tilt
  - Adjustable seat pan depth
  - Adjustable armrest height
  - Adjustable armrest width
  - Ability to remove the armrests
  - Waterfall contour of seat pan
  - Minimum five-star base.
- Keyboard trays should have the following features:
  - Functional width of tray should be a minimum of 26 inches (66 cm)
  - Depth of tray should be a minimum of 11 inches (28 cm)
  - Trays should have adjustable and lockable height settings, minimal range of 6 in (15 cm)
  - Trays should have an adjustable and lockable tray tilt feature with ability to negatively tilt
  - Trays should accommodate pointing device use on the left or right side
- Computer Workstations (used continuously for more than one hour by the same employee) should have the following features:
  - Surface heights of multi-user stations: Bi-level units should allow the user to easily adjust both keyboard/mouse height and monitor height to proper and comfortable levels. Monitor surface of bi-level workstations should be adjustable down to a height of 27 inches (68 cm) and up to a height of 36 inches (91 cm); the keyboard/mouse surface should be adjustable down to 22 inches (56 cm) and up to 30 inches (76 cm). The keyboard/mouse surface height of standing workstations should be adjustable within a range of 37 to 46 in (94 – 117 cm). The keyboard/mouse surface of bi-level stations should have a functional width of at least 26 in (66 cm) and be at least 11 inches (28 cm) deep.
  - Surface height of single-user stations: Single surface workstations and the keyboard/mouse surface of bi-level workstations should be adjustable down to a height of 22 inches (56 cm), and up to a height of 30 inches (76 cm). The keyboard/mouse surface of standing workstations should be adjustable within a range of 37 to 46 inches (94 – 117 cm). The keyboard/mouse surface of bi-level stations should have

a functional width of at least 26 in (66 cm) and be at least 11 in (28 cm) deep.
    - Table width should be a minimum of 27 inches (68 cm) to allow the mouse to sit beside the keyboard.
    - Functional work depth should be at least 30 inches (76 cm). This may be accomplished with the installation of a keyboard tray. Table depth (without a keyboard tray) should be at least 30 inches (76 cm) deep to allow adequate monitor viewing distance.
    - Leg/ Knee clearance (OSHA recommendation): There should be a minimum under-table depth of 17 inches (43 cm) at knee level and 24 inches (61 cm) at foot level. The knee space width should be at least 20 inches (51 cm).
    - Work surface should be no thicker than 2 inches (5 cm).
    - Designs that force the keyboard and mouse to be at different heights (e.g. keyboard cutouts) are not allowed.
    - Workstations that are designed for using laptop computers should follow the functional dimensions above. The work surface should provide room to accommodate a separate keyboard, mouse, and monitor (or laptop riser).
    - The work surface should have a matte finish to minimize reflections.
- Lighting Recommendations
    - Windows that are adjacent to workstations should have blinds/shades installed to control outside light sources.
    - The Illuminating Engineering Society of North America recommends that lighting intensities (at the horizontal work plane) not exceed 500 lx (50 fc) for computer workstations (IESNA, 2000).
        - Reference: Illuminating Engineering Society of North America (2000). IESNA lighting handbook (9th ed.). New York: IESNA.

Laboratory workstations should meet the guidelines listed below. Consult the Americans with Disabilities Act regulations to ensure compliance with facilities designs (i.e. number of ADA workstations per building, dimensions of ADA workstations, etc.).

- Laboratory stools should have all the following features:
    - Adjustable seat height, 21 – 28 inches (53 – 71 cm)
    - Independently adjustable seat back height
    - Adjustable, lockable seat back tilt
    - Adjustable armrest height
    - Adjustable armrest width
    - Ability to remove the armrests
    - Waterfall contour of seat pan
    - Minimum five star base
    - Chair fabric that resists the absorption of liquids and the effects of cleaning agents (e.g. vinyl).

- Laboratory Workstations:
    - Leg/ Knee clearance: There should be a minimum under-table depth of 17 inches (43 cm) at knee level and 24 in (61 cm) at foot level (OSHA). The knee space width should be at least 20 in (51 cm). Storage areas should be considered when designing labs to prevent equipment storage under seated workstations.
    - The work surface should have a matte finish to minimize reflections.
    - Ergonomic considerations should be made when designing specialized laboratory workstations (e.g. microscope stations) to decrease exposure to awkward postures and compressive forces. Consultation with EHS is recommended.
- Computer workstations located in a laboratory:
    - Task chairs should have the same features as office task chairs as well as chair fabric that resists the absorption of liquids and the effects of cleaning agents (e.g. vinyl).
    - Workstations should follow the standards for computer workstations.