THE SEVEN PRINCIPLES OF UNIVERSAL DESIGN

(1) **Equitable Use:** The design is useful and marketable to people with diverse abilities.
   - Providing the same means of use for all users, identical whenever possible, equivalent when not.
   - Avoiding segregating or stigmatizing any user.
   - Ensuring that privacy, security, and safety are equally available to all users.
   - Making the design appealing to all users.

(2) **Flexibility in Use:** The design accommodates a wide range of individual preferences and abilities.
   - Providing choice in methods of use.
   - Accommodating right and left-handed access and use.
   - Facilitating the user’s accuracy and precision.
   - Providing adaptability to the user’s pace.

(3) **Simple and Intuitive Use:** Use of the design is easy to understand, regardless of the user’s experience, knowledge, language skills or current concentration level.
   - Eliminating unnecessary complexity.
   - Remaining consistent with user expectations and intuition.
   - Accommodating a wide range of literacy and language skills.
   - Arranging information consistent with its importance.
   - Providing effective prompting and feedback during and after task completion.

(4) **Perceptible Information:** The design communicates necessary information effectively to the user, regardless of ambient conditions or the user’s sensory abilities.
   - Using different modes (pictorial, verbal, tactile) for redundant presentation of essential information.
   - Providing adequate contrast between essential information and its surroundings.
   - Maximizing “legibility” of essential information.
   - Differentiating elements in ways that can be described (i.e., makes it easy to give instructions or directions).
   - Providing compatibility with a variety of techniques or devices used by people with sensory limitations.

(5) **Tolerance for Error:** The design minimizes hazards and the adverse consequences of accidental or unintended actions.
   - Arranging elements to minimize hazards and errors, (i.e., conveniently placing most used elements and eliminating, isolating, or shielding most hazardous elements).
   - Providing warnings of hazards and error.
   - Providing fail safe features.
   - Discouraging careless action in tasks that require vigilance.

(6) **Low Physical Effort:** The design can be used efficiently and comfortably, and with a minimum of fatigue.
   - Allowing the user to maintain a neutral body position.
   - Using reasonable operating forces.
   - Minimizing repetitive actions.
   - Minimizing sustained physical effort.

(7) **Size and Space for Approach and Use:** Appropriate size and space is provided for approach, reach, manipulation and use, regardless of user’s body size, posture or mobility.
   - Providing a clear line of sight to important elements for any seated or standing user.
   - Making reach to all components comfortable for any seated or standing user.
   - Accommodating variations in hand and grip size.
   - Providing adequate space for the use of assistive devices or personal assistance.

(Adapted from The Center for Universal Design’s “Principles of Universal Design” © Copyright 1997, NC State University, The Center for Universal Design, an initiative of the College of Design. Compiled by advocates of universal design, listed in alphabetical order: Bettye Rose Connell, Mike Jones, Ron Mace, Jim Mueller, Abir Mullick, Elaine Ostroff, Jon Sanford, Ed Steinfeld, Molly Story, & Gregg Vanderheiden. Please visit www.design.ncsu.edu:8120/cud/univ_design/princ_overview.htm for more information.)