FACILITIES GUIDELINES FOR DESIGN AND OPERATIONS

ENVIRONMENTAL CONDITIONS AND OCCUPANCY SCHEDULING

5/1/24 REVISION

SUMMARY & PURPOSE

The primary purpose of this document is to achieve a high level of thermal comfort, resulting in increased productivity and educational outcomes. The setpoints are based on industry guidelines to ensure comfort for the highest number of occupants. Other benefits are to promote simplicity and consistency in operating our buildings across campus, while recognizing the unique needs of various spaces within the University and allowing for flexibility. Energy savings is important, but it is a secondary consideration. This is achieved primarily through the limitation of temperature setpoints and seasonal adjustments.

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Environmental Conditions by Zone Type

CLASSIFICATION ENVIRONMENT TYPE OneU Zones [1]	ENVIRONMENTAL CONDITIONS						
	Ambient Temperature Adjust [5]	Occupied Deadband	Unoccupied Deadband	Temperature Setpoint	Occupied Median Temperature Range	Adjust (+/-)	Minimum Airflow Percent [4]
Student/Faculty (Main Campus)	+/- 2.0°F	+/-2.0°F	+/-5.0°F	72.5°F	70.5°F - 74.5°F	4	35%
24/7 Support (Main Campus)	+/- 2.0°F	+/-2.0°F	+/-5.0°F	72.5°F	70.5°F - 74.5°F	4	N/A
Fitness (Main Campus)	+/- 2.0°F	+/-2.0°F	+/-5.0°F	70.0°F	68.0°F - 72.0°F	4	35%
Lab - Instruction (Main Campus)	+/- 2.0°F	+/-2.0°F	+/-5.0°F	72.0°F	70.0°F - 74.0°F	4	[3]
Lab - Research (Main Campus)	0	+/-1.5°F	+/-1.5°F	70.0°F	68.5°F - 71.5°F	6	[3]
In-Patient (UHealth)	+/- 1.0°F	+/-1.5°F	+/-4.0°F	71.0°F	72.5°F - 75.5°F	6	N/A
Staff (UHealth)	+/- 1.0°F	+/-1.5°F	+/-4.0°F	72.0°F	70.5°F - 73.5°F	4	35%
Clinical (UHealth)	+/- 1.0°F	+/-1.5°F	+/-4.0°F	69.0°F	67.5°F - 70.5°F	4	35%
Clinical: Cool (Uhealth)	None	+/-1.5°F	+/-4.0°F	66.0°F	64.5°F - 67.5°F	4	35%
Public/Circulation	+/- 2.0°F	+/-2.5°F	+/-6.0°F	72.5°F	70.5°F - 74.5°F	3	35%
Comm. Closet	None	Cooling only	N/A	75.0°F / 80.0°F [2]	75.0°F	2	N/A
Semi-Conditioned	None	+/-5.0°F	N/A	72.0°F	62.0°F - 82.0°F	3	N/A
Quality-Control	None	+/-1.5°F	N/A	71.0°F	69.5°F - 72.5°F	5	N/A

[1] Common applications for listed temperature ranges.

[2] When rooms have redundant cooling systems, the primary shall be set to 75° F & the backup shall be set to 80° F.

[3] Design documents should define when a reduction of airflow is allowed and to what rate. If not specified, no modification to airflow is allowed.

[4] Reference Memo: *Minimum Airflow for Unoccupied Hours*, dated 1/19/21 for additional details.

[5] Temperature setpoints will change relative to outside air temperature. Smaller ranges are intended for spaces where a tighter temperature ranges are desired, often when clothing worn is consistent year round. The smaller range is intended primarily for clinical spaces. Larger ranges are intended for spaces where wider temperature ranges are desired, often when clothing worn changes with outside temperature. The outside air temperatures that determine the ambient temperature adjust shall be adjustable.
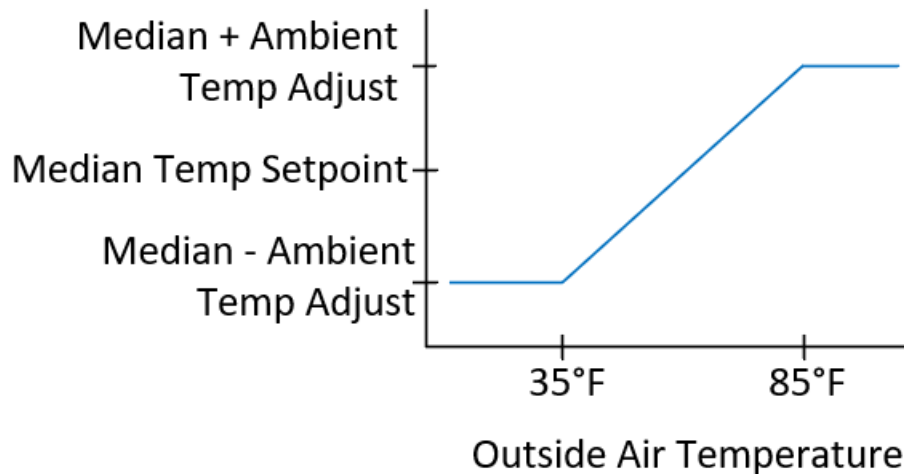
Temperatures

OneU Zone types shall be specific to each building. Staff shall have the ability to change the following parameters on the front end:

- OneU Zone types for individual zones
- Median temperature setpoint
- Ambient temperature adjust
- Outside air limits that impact ambient temperature adjust
- Deadbands
- Temperature adjustability of each OneU Zone

Adjustment of the following parameters shall only occur on the back end by the controls programmers:

- Percent of minimum unoccupied airflow
- New zone type creation

Permission levels may be revised by the controls shop, district or building staff.

All zones will have the ability to adjust temperatures for demand response events from plant operations. Plant operations will have the ability to determine the length in time and value of temperature offset. Individual zones shall have the ability to ignore a centralized demand response signal. Critical zones & 'Quality' zones shall ignore a demand response signal; non-critical and all other zone types shall accept a demand response signal.

Scheduling

Schedules will be decoupled from temperature requirements and specific to each building. Staff shall have the ability to change the following parameters on the front end:

- Adjust schedule times for each defined category
- Adjust schedules for individual zones

Adjustment of the following parameters shall only occur on the back end by the controls programmers:

- Schedule creation or removal

Graphics

Provide a link on the home page of each building to a summary table for the temperatures and schedules. A summary of status (occupied/unoccupied) will be listed on the schedule summary page.
All zones will clearly show the OneU Zone type, schedule, effective heating & cooling setpoint & user adjust (when applicable).