



HEATING, VENTILATION, & AIR CONDITIONING (HVAC) SYSTEMS & HOW THEY RELATE TO COVID-19 RESUMPTION PLANNING

HVAC systems are used within buildings to maintain fresh air and a comfortable temperature. They use fans to circulate air through ductwork and to individual spaces in a facility. Air temperature is modulated with heating or cooling coils to maintain consistent temperature and humidity. Air within buildings is recirculated to maximize efficiency and mixed with a percentage of outside air to keep it fresh. Temperature set points are set based on providing certain amounts of fresh air per occupant, data from built-in sensors, field measurements, and balancing.

Modern HVAC systems also pass air through a filter prior to distribution. Most of our HVAC filtration on campus are MERV-8 efficiency. This means is that they are capable of removing coarse airborne particulates, but let most fine particles pass through. These filters remove particulate that has potential to cause damage to HVAC equipment. Changing filters to a higher MERV rating would increase the filtration capability of the system; however, most of our systems are not engineered to run with more restrictive filters. This would risk significantly diminished air flow and increased strain on HVAC equipment, potentially damaging systems components.

The University is taking a multi-faceted approach regarding safely returning faculty, staff, and students to campus. An option under consideration involving HVAC systems is to maximize outside air intake in buildings where we have the capability. This would reduce heating and cooling efficiency and consistency, but also reduce the potential for recirculation of contaminants that are originating inside of our buildings. Our science buildings already operate using no recirculation, so the conditions within these buildings should remain static. Outside of the sciences, users would notice additional airflow, or more obvious pressurization of spaces.

Other steps under consideration include planning for occupancy loads based on the locations of supply and return vents in conjunction with workstation locations, physical distancing, and public-facing locations. This will help us to use our existing air flow within buildings to control where and how air flow works within work spaces in relation to where people are located.

OTHER RESOURCES:

- For CDC information on office buildings visit: [d.gov/coronavirus/2019-ncov/community/office-buildings](https://www.cdc.gov/coronavirus/2019-ncov/community/office-buildings)
- To access the online "UO Covid-19 Safety Training" visit: uomytrack.pageuppeople.com/learning/3027

