FAQ: Heating Ventilation and Air Conditioning (HVAC) Systems on Campus

I’m concerned about COVID-19 and the air quality in my work area. How do I know my work area has adequate ventilation?

SFU buildings are supplied with outside air through mechanical means or natural ventilation. The systems are maintained to provide ventilation and thermal comfort as designed, through the following activities:

- HVAC systems are set to maintain appropriate air flow and temperatures, as designed.
- Air filters are equipped in most buildings with mechanical heating, cooling and ventilation systems
- Laboratory ventilation systems operate continuously, typically with 100% fresh outdoor air
- Exhaust fans in restrooms are operating continuously in most cases.
- The process for reporting building HVAC issues at SFU continues to remain in place via the online Facilities Services Webpage - http://www.sfu.ca/fs.html
- Where possible SFU has reduced recirculated air and increased ventilation as recommended by accredited bodies such as ASHRAE and WorkSafeBC

How does the building ventilation system work?

While the HVAC systems are being maintained and continue to operate, they vary from building to building, by design and age of the building. For instance, most science laboratories utilize 100% outside air while most office spaces and classrooms utilize recirculated air for ventilation. The number of air changes per hour (ACH) is dependent on space type as per regulatory requirements and best practices governed by ASHRAE

Note, most buildings on the campus can use 100% outside air to ventilate the space during April to October given our mild weather, and as outside air temperature drops, the percentage of outside air will need to be reduced to minimize impact on building temperature.

How is the University preparing HVAC systems for the resumption of on-campus activities?

Facilities had adjusted the heating, cooling and ventilation requirements in spaces that have reduced or no-occupancy to support the University's GHG mandate. Despite reduced occupancy since the start of the pandemic the HVAC systems have remained in operation and systems, including filters, have been regularly inspected and replaced.

In preparation for gradual re-entry and increased occupancy, Facilities Services have taken the following steps.

- Ensure that mechanical systems are working, and air is moving in/out of buildings
- Ensure that filters are regularly inspected and functioning appropriately
- Check the air balance of the classrooms and teaching labs
Can existing filters in the ventilation system be upgraded?

The University has reviewed and aligned HVAC systems with the relevant legislative requirements and industry guidelines, including WorkSafe BC, ASHRAE and ACGIH.

According to WorkSafeBC, “at this time, there is no evidence that a building’s ventilation system, in good operating condition, is contributing to the spread of the virus.”

Accredited bodies such as ASHRAE and ACGIH recommend building owners increase the filtration efficiency of the system to MERV 13 if equipment allows, while assuring the air flow and pressure drop can be maintained. Depends on the type of buildings, MERV 10 and 13 are commonly used on the campus.

What are the operating hours of the buildings?

Departments are encouraged to contact Facilities Services before re-occupying.

During occupied hours, ASHRAE recommends building owners operate the mechanical system for minimum period of 2 hours prior to occupants re-entering building. Facilities is committed to operating the system for a minimum period of 2 hours prior to occupancy.

Facilities Services and Scheduling department are working together to implement the ventilation schedule based on class schedules.

Useful Links:
