

CORRELL HALL (0739)

Correll Hall was opened in 2015 as the first Phase of the Business Learning Center. The building spans four stories and 74,291 square feet. The building includes 10 classrooms, an innovation lab, a graduate commons, project team rooms, interview rooms, student lockers, and spaces for formal and casual interaction among faculty, students, alumni and employers.

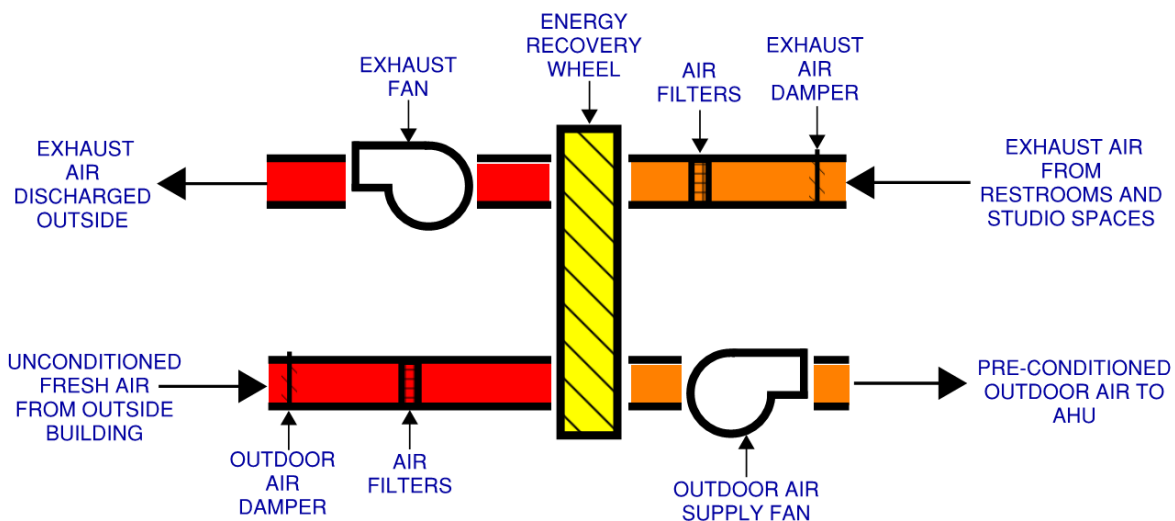
All four floors of the building, including the auditoriums, offices and classrooms, are served by three variable volume air handling units (AHUs) with chilled and hot water heating coils located in the attic of the building.

Outdoor ventilation air is provided to the building via an Energy Recovery Ventilation Unit (ERV) that helps pre-condition the outdoor air coming into the building by recovering some of the energy from the exhaust air. The pre-conditioned outdoor air from the ERV is supplied to each of the building AHUs where it is mixed with recirculated air and cooled before being distributed throughout the building via above ceiling ductwork.

There are a total of 12 Fan Coil Units that provide heating and cooling within attic electrical, mechanical and data rooms and in stairwells within the building. These units have no ventilation requirements and operate with 100% recirculated room air.

ENERGY RECOVERY VENTILATION UNIT

Ventilation and building exhaust is provided by a single Energy Recovery Ventilation Unit located in the attic. The energy recovery unit preconditions the incoming outdoor ventilation air using a total energy recovery wheel that is exposed to the outdoor airstream flowing into the building and the exhaust airstream leaving the building. Exhaust air is drawn through the building via ductwork by exhaust fans in the ERV where it passes through a filter bank and then through a turning energy recovery wheel that transfers both sensible and latent heat to/or from the exhaust air stream. The incoming outdoor air is drawn through the ERV via separate fans within the unit where it passes through a filter bank and the turning total energy recovery wheel where it is pre-conditioned with energy transferred from the exhaust air stream.



ENERGY RECOVERY UNIT SCHEMATIC

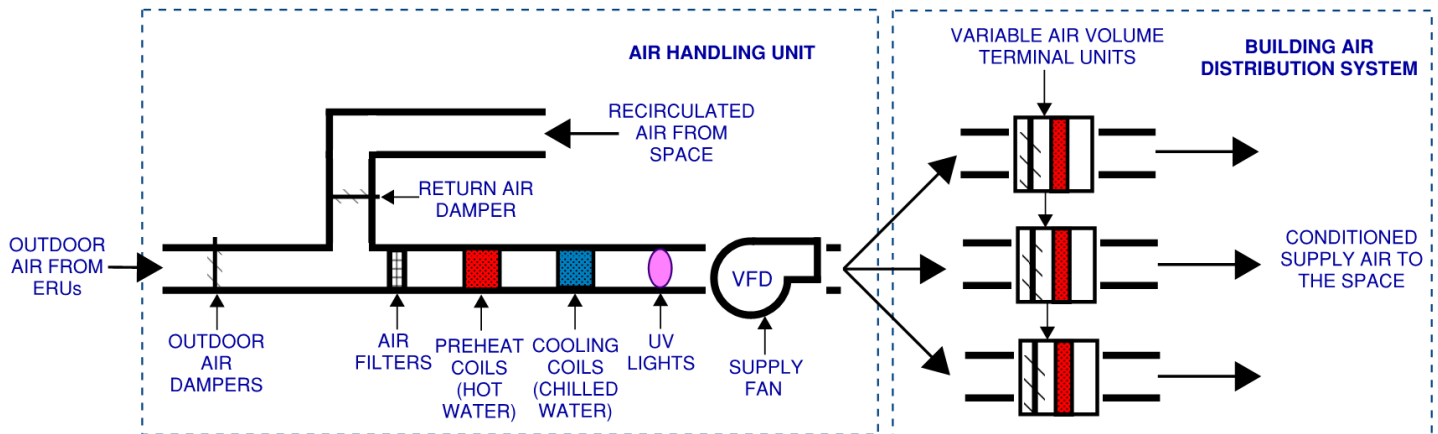
VARIABLE VOLUME AIR HANDLING UNITS

The air handling units deliver a variable volume of conditioned air consisting of a mixture of recirculated building air (except for laboratories) and fresh air from outside of the building. The building return air is filtered, mixed with outdoor air and cooled with chilled water coils in the air handling unit before being supplied to rooms throughout the building via above ceiling ductwork. The Variable Air Volume zone terminal units (VAVs) are equipped with an air damper to regulate the volume of air delivered from the central AHU to the space based on the current space temperatures. In areas requiring heat, the zone terminal units also include a fan, a hot water coil and a filter combination that will mix in air from the above ceiling plenum with the conditioned air from the central AHU when the space requires heating.

Air is recirculated from the spaces back to the air handling unit through ceiling mounted air return registers located in each space. Return air is pulled from a plenum space above the ceiling. Exhaust is provided in restrooms on each floor to remove odors and to maintain a slightly positive building pressurization.

The AHUs have a demand controlled ventilation program that reduces ventilation to the building based on sensed occupancy in the larger classrooms. This energy saving function has been disabled in order to maintain higher ventilation rates as part of FMD's COVID 19 response plan. The AHUs have an operating schedule that turns them off during unoccupied periods. The operating schedule has been modified to operate continuously to provide additional ventilation while the building is unoccupied as part of FMD's COVID 19 response plan. Each AHU is also equipped with an ultraviolet filtration unit (UV) which inhibits biological activity within the units.

Chilled water is supplied throughout the building from the campus chilled water system. Heating hot water, distributed throughout the building for heating, is provided from the campus heating hot water system.

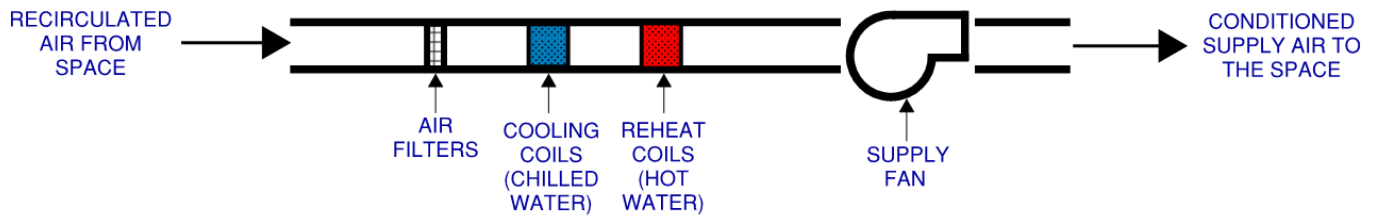


VARIABLE VOLUME AIR HANDLING UNIT SCHEMATIC

FAN COIL UNITS

A fan coil unit is fairly simple: it's a fan with a coil or coils (like a car radiator) that can add heating and cooling to the air stream flowing through it. The FCUs have air filters to remove particulate matter from the air, a hot water coil and chilled water coil for heating and cooling the air, and a supply fan for forced air circulation through the unit and into the space. There is no ventilation air provided for these FCUs because they are located in spaces with transient occupancy.

Chilled water is supplied throughout the building from the campus chilled water system. Heating hot water, distributed throughout the building for heating, is provided from the campus heating hot water system.



4-PIPE FAN COIL UNIT SCHEMATIC