

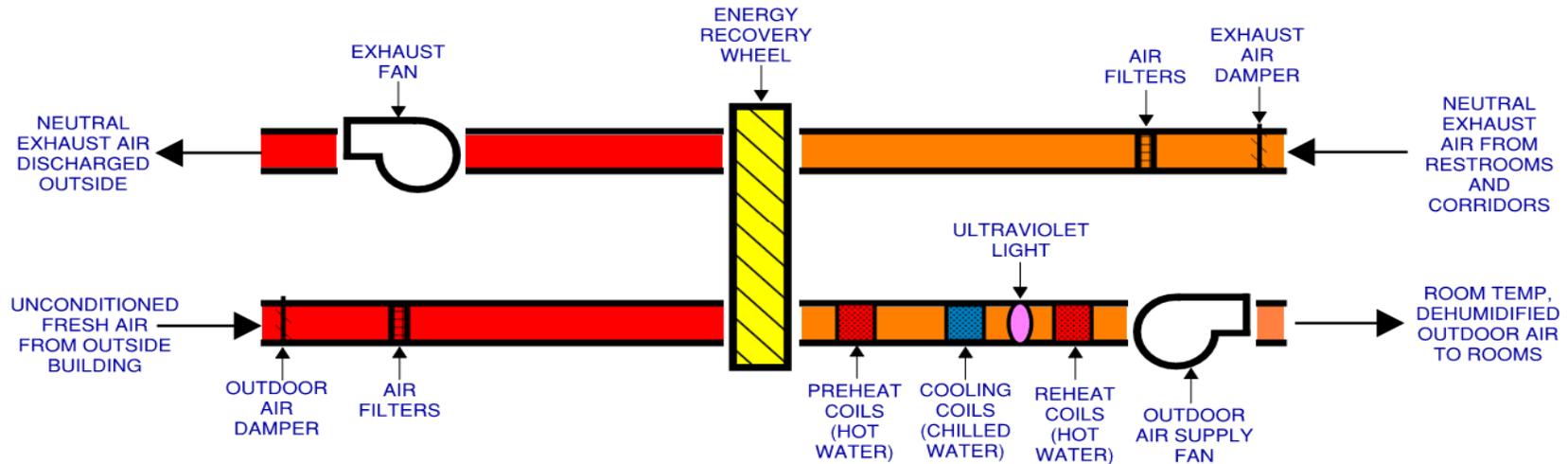
## PARK HALL – OLD PARK

Original Park Hall is served by separate air distribution systems, one for ventilation and the other for space heating and cooling. Old Park's HVAC systems were renovated in 2013.

### VENTILATION SYSTEM

The ventilation system can be thought of as a whole-building fresh air system that brings in outside air, dehumidifies and conditions it to a moderate temperature, and distributes it directly to each classroom and office. This also includes a controlled exhaust which provides exhaust at restrooms on each floor to control odors and maintain appropriate building pressurization. The two Dedicated Outdoor Air System (DOAS) units include an energy recovery wheel that helps pre-condition the outdoor air coming into the building by recovering some of the energy from the exhaust air. The exhaust and outdoor air streams are kept separate from each other in the process.

The DOAS units are also equipped with UV lights to inhibit biological activity within these units. The two DOAS units serving original Park Hall were designed with ventilation rates that exceed current code required ventilation by more than 50%.



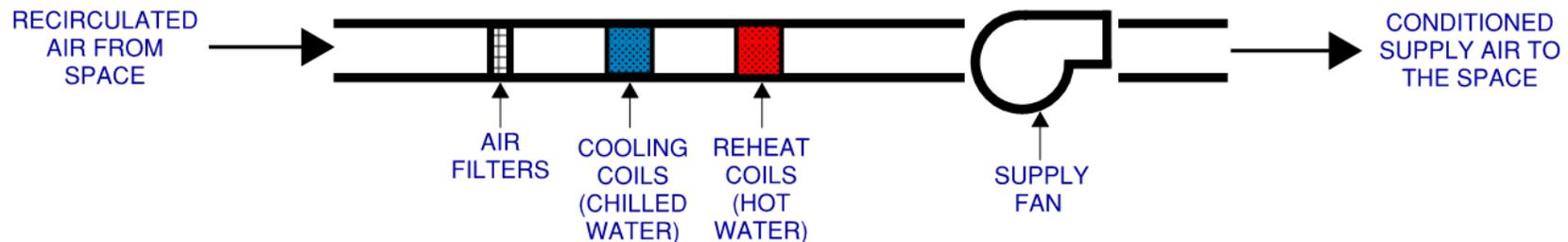
**DEDICATED OUTDOOR AIR SYSTEM - UNIT SCHEMATIC**

## SPACE HEATING AND COOLING SYSTEM

The space heating and cooling system consists of approximately 50 Fan Coil Units (FCUs) that are mostly located along exterior walls below windows. Most individual offices have a single FCU to heat and cool the space, while classrooms typically have two FCUs with a shared thermostat to provide space heating and cooling.

With a dedicated FCU serving each office individually, there should be minimal room air circulated between spaces, except where room air from offices and classrooms is pulled through door undercuts into corridors and eventually exhausted through ceiling exhaust registers located in restrooms. The FCUs pull air from the space(s) they serve, condition as needed, and supply it back into the space. Both the fan in the fresh air system and the fans in the FCUs run all the time.

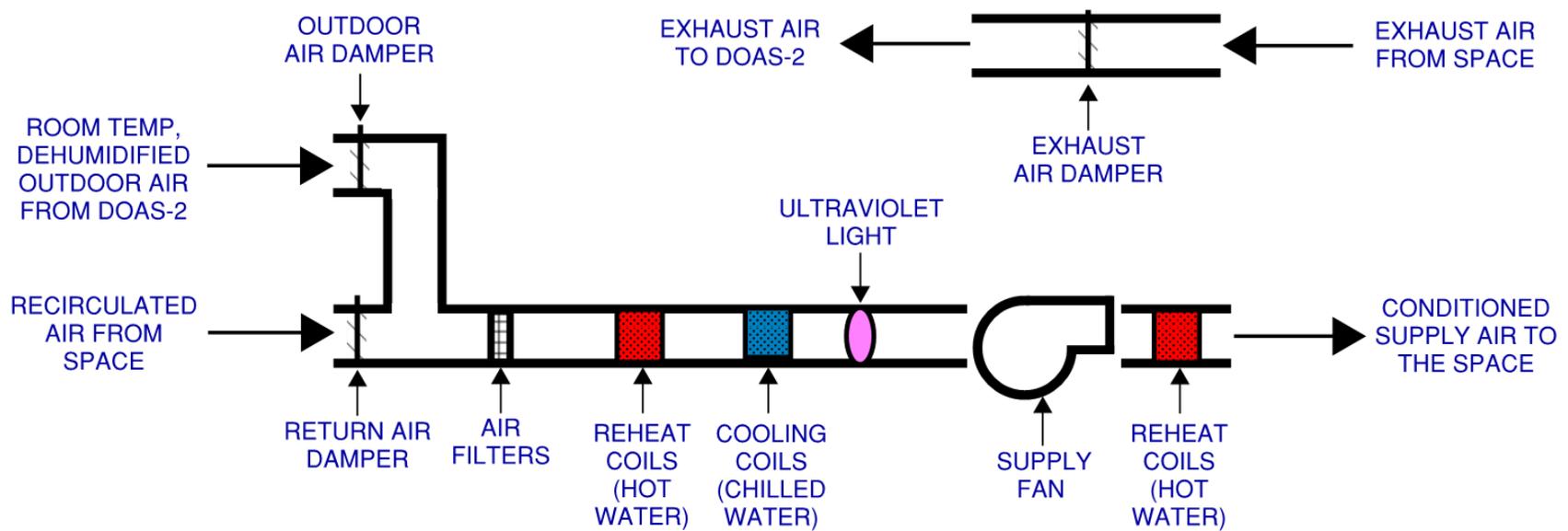
**FAN COIL UNITS-** A fan coil unit is fairly simple: it's a fan with a coil or coils (like a car radiator) that can add heating and cooling to the air stream flowing through it. The FCUs in old Park Hall have air filters to remove particulate matter from the air, a hot water coil and chilled water coil for heating and cooling the air, and a supply fan for forced air circulation through the unit and into the space. The hot water is produced in the mechanical room by way of a heat exchanger that takes heat from the campus steam system and adds it to Park Hall's hot water loop. The chilled water is provided from UGA's central campus chilled water district and a building chiller located in the basement of Park Hall.



**4-PIPE FAN COIL UNIT SCHEMATIC**

AIR HANDLING UNIT RM 265 - There is a single zone, dedicated Air Handling Unit (AHU) serving large classroom 265. The AHU mixes in fresh air that has been pre-conditioned and dehumidified from DOAS-2 with recirculated air from the classroom. There is also general exhaust provided in room 265 which serves to continuously remove a portion of the air in this room from the building. This is done to avoid over pressurizing the space, but also serves to continuously remove a portion of the room air from the building..

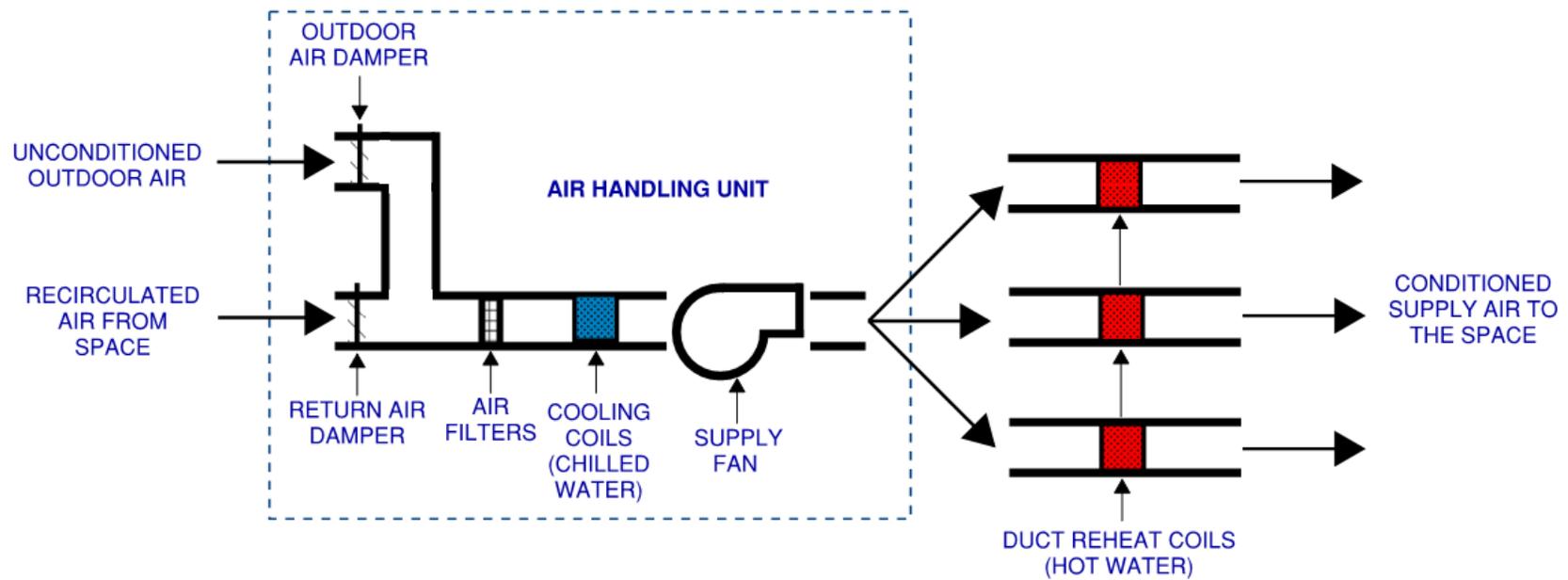
The AHU fans run continuously according to a building schedule (currently 24/7 operation as part of FMD's COVID-19 response program). The AHU is equipped with air filters, along with hot water and chilled water coils to heat, cool and dehumidify the air delivered to the space. This unit is equipped with demand based ventilation controls which reduce ventilation during periods when the classroom is vacant as an energy savings measure. The demand controlled ventilation strategies have been disabled in order to provide continuous ventilation even while the classroom is not in use as a means to increase the air changes in the space as part of FMD's COVID-19 response program.



**ROOM 265 - AIR HANDLING UNIT SCHEMATIC**

## **PARK HALL – NEW PARK**

The West addition to Park Hall uses the original Multizone Air Handling Units from 1968, located on each floor which provide ventilation, cooling and air distribution functions for the building. The air handling unit delivers a constant volume of conditioned air which comes from a mixture of recirculated building air 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 each of the four building air handling units before being supplied to rooms throughout the building through above ceiling ductwork. Space heating is provided by ~40 duct mounted, hot water reheat coils located in supply ductwork throughout the building. 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, in lieu of ductwork. Exhaust is provided in restrooms on each floor to remove odors and to maintain a slightly positive building pressurization.



**NEW PARK - AIR HANDLING UNIT SCHEMATIC**