

# Milken Institute School of Public Health

THE GEORGE WASHINGTON UNIVERSITY

## Milken Institute School of Public Health Self-Guided Tour Guide

### ***Tour begins in lobby atrium.***

Welcome to the Milken Institute School of Public Health at The George Washington University. The building houses 300 faculty and staff all supporting the academic mission of the Milken Institute for Public Health

This is the university's very 1st LEED platinum building at GW and also the first university academic building in the DC area. LEED stands for Leadership in Energy and Environmental Design. LEED ratings were developed by the US Green Building Council. Levels range from Certified, Silver, Gold, and Platinum -- our building is platinum.

- Building planning started in 2007, construction began 2012, building opened in 2014
- Building brings together departments and more of our labs into one building
- The majority of Public Health classes and events are held in this building in one of the 14 classrooms or four auditoriums
- On the first floor we also have a four room convening center that can be adapted for workshops, seminar, business meetings and special events.

### ***Your tour starts here in the seven story atrium- unique on campus.***

***Go to the touch screen in lobby atrium called LUCID. It has visuals and descriptions of green features in not only our building but around campus. It also has charts showing our energy and water use both for the Milken Institute School of Public Health but also the eight other LEED buildings on campus.***

In the case of the Milken Institute School of Public Health, in order to achieve platinum status, we had to achieve points in all seven LEED environmental categories including the following:

- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor environmental Quality
- Innovation and design
- Materials and resources
- Regional priority credits

Site Location: We are one block from the Foggy Bottom Metro. It is an easy walk to shops, restaurants and drugstores -- as well as DC icons like the White House, Kennedy Center and Watergate. To encourage efficient transportation, there is no onsite parking, but several spaces have been reserved for low-emitting and fuel-efficient vehicles in the existing garage under Ross Hall. Bus stops, Bike share and the metro let you easily get around town.

Did you notice the bike racks outside? We also have indoor bike storage too -- as well as showers and changing rooms in the basement for bike commuters.

### ***Touch the touch Screen in the lobby atrium***

- This touch screen offers real-time monitoring of electric, gas and water usage in the building.
- It educates occupants about resource usage and encourages reduced consumption of electricity and water
- The educational screen helped us earn bonus points for LEED Certification.
- Throughout the first floor you will also see educational signage highlighting LEED features.
- The screen includes videos and images of building areas that contribute to sustainability but that aren't publicly accessible such as our green roof [NOTE: the roof is not a public space and NO ONE is allowed up there other than building staff].

### ***Touch the "green features" leaf icon on the screen to pull up an image of the green roof***

- The building roof is covered with sedum plants that trap rainfall and create a cooling effect on the building.
- Rain is collected on the roof and stored in an 8,000 gallon underground cistern.
- After treatment with bag filters and UV lights, rainwater is used within the building for things like flushing toilets and urinals. Note the "blue water" in the toilets to indicate it is recycled greywater (i.e. not drinkable).
- By recycling rainwater and using low-flow faucets, toilets, urinals and showers, potable water use is reduced throughout the building.
- Building has a predicted **40% reduction in water** compared to a standard commercial building.

### ***Walk through the Auditorium main doors (if empty)***

- The 220 seat auditorium is used for large classes and special events, such as featured speakers or conferences. It is also wired with speakers and video cameras so that we can webcast events live over the internet. The newest AV technology that encourages learning and communication is found throughout the school allowing us to broadcast beyond our walls to remote locations around the globe.
- We are finding that our DC location gives students access to top public health leaders from government and industry. Last fall PBS staged the new Ken Burns series on Cancer with Katie Couric here in the auditorium
- The Pan-American Health Organization, White House and other organizations are within walking distance of the school.

- We recently co-sponsored a press conference with the White House on international health security in this space. Almost every week there is an important conference, workshop or dialogue happening at the school.

***Exit auditorium (left side), Enter large teal-colored classroom***

- The classroom next door to the atrium is used as overflow space in the event of a really large event and can display a feed from the cameras in the auditorium.
- This classroom is particularly large; the classrooms normally have between 20-40 seats.
- Effort was made to use recycled materials, local materials and materials with low Volatile Organic compounds (VOCs) in the building.
- The carpet tiles are made by FLOR. They are no VOCs and required no glue during installation. If a carpet tile gets a stain and needs to be replaced, we can easily pull up and replace only that one tile. This means we use fewer new materials to keep the building in good repair.
- Formerly on this site was the Warwick building. When the building was demolished, we saved pieces of stone from that building and used them in this building. You can see the pieces of limestone on the walls above the granite on the exterior of the first floor of the building. These limestone blocks those are from the old Warwick building.

***Notice the Bike rack room and bathrooms/water fountains. Move towards the stairway/elevator area, pointing out the plants between the 1st and 2nd floors.***

**INDOOR AIR QUALITY**

Notice the natural light from skylights and plants throughout the building. Since most workers spend 90% of time inside us are turning our attention to the importance of indoor air pollution. Plants in the planter help filter the air. Oftentimes in modern buildings air inside a building can be more polluted than the outdoor air. In our building, indoor plants help clean the air inside the building. The plants between the 2nd and 1st floors are called “snake plants”. They are one of the most efficient plants for cleaning the air of chemicals and releasing fresh oxygen. There is an irrigation system to keep them watered.

- By the front door, we have ten linear feet of walk-off mats to trap particles entering on people’s shoes to keep the indoor environment clean.
- GW chose carpets, paints, and other materials that possess low VOC’s (volatile organic compounds) qualities to ensure optimal indoor air quality.
- The air in the building is constantly monitored for pollutants and harmful gases such as carbon monoxide.

***Take the stairs to the basement - walk through the exercise science labs***

- Although they are not factors for our LEED Platinum status, there are a number of unique features in our building that promote health
- The grand staircase spanning all seven floors is accessible from the lobby, promotes physical activity during the workday, and discourages elevator usage thus saving electricity. Some people call this is the “Escher Stairs” due to its resemblance to the artwork of M.C. Escher who is known for drawings of gravity-defying stairs.

- The basement level houses Exercise Science and Nutrition teaching labs and exercise rooms in addition to two auditoriums for all to use.

***Walk down the hallway of the Exercise and Nutrition Labs - point out water refilling station and locker rooms.***

Showers and changing rooms allow people to work out before or during the work day or change into comfortable clothes and mentally recharge with a yoga or meditation class.

The water bottle filling station encourages people to drink water and to bring their own water bottles that they can reuse and refill at the station.

***Stop by the Exercise Science Lab***

- The exercise testing lab is available to the general public, as well as the GW-community at a substantial discount. We have equipment like the “Bod Pod” and DEXA scanner, Machines that can measure muscle, fat and bone density.
- The labs can be used to determine athlete’s VO2 max, which is a measure of cardiovascular fitness.
- Exercise and Nutrition students help run the labs, gaining work experience with these specialized machines.
- Classes are held in the labs and yoga studio continuously throughout the day.

***Exit the hallway for exercise science and move back towards the elevators***

Also on this floor is a motherhood room to provide privacy to nursing mothers. The room has a comfortable chair, refrigerator, and sink. We have two small auditoriums/lecture halls down here (seating 95 and 102 respectively. These are used for events such as alumni guests speaking on career panels, or public health documentary movie screenings in addition to some of the larger lecture classes.

***Take the elevator to the 7th floor***

We encourage walking between floors whenever possible. Since you’re going all the way to the top of the building though, feel free to take the elevator.

*Welcome to the top floor of the Milken Institute School of Public Health!*

- The building is roughly split down the middle by the atrium and central stair.
- The side of the building that faces Washington Circle houses the student study spaces, the classrooms and student kitchenettes.
- The west side of the building facing away from Washington Circle houses faculty and staff offices. Each of the floors 3-6 has 21 offices and 28 cubicles. The second floor has a slightly different configuration with a few more offices and less cubes. It is the student services floor.

***Walk over to the Case Study Room and Student Resource Room (Washington Circle side of the building)***

This floor contains the Deans’ offices, executive case study room and student resource room.

Throughout the building over one million dollars went towards purchase of AV systems in the classrooms and public areas. The executive case study room is equipped with over 50 desktop microphones and an amplification system. This large space also offers the potential for school-wide faculty gatherings and special workshops and seminars. It is perfect for high level board meetings.

Throughout the building the student spaces face Washington Circle and offer a beautiful view of Washington Circle Park. The building has triple-glazed windows to make it more energy efficient. On the other end of the building, the south facing windows have exterior sunshades to reduce the need for air conditioning.

We have an energy cost savings of 46% compared to other commercial buildings due to efficient HVAC system that incorporates active chilled beams using less air, less energy, less ductwork, & operating on a quieter level. The building is monitored through a BAS system allowing the building manager to monitor temperature fluctuations and trouble shoot as needed.  
\* (see explanation of chilled beam technology)

***Take gray staircase down to the 5<sup>th</sup> floor [any room without classes currently]. Walk through classroom followed by the student space looking out over Washington Circle. The large classroom on the 5th floor has a row of standing desks in the back.***

Instead of being dark and scary, the fire stairwells in the building have lots of natural light to encourage people to use the stairs.

- We have four 20-seat classrooms, four 30-seat classrooms, and four 40 seat classrooms and 20 50 seat rooms. In addition there are the four larger rooms including the three auditoriums and executive case room.
- Classrooms are equipped with digital screens to display course materials.
- Each floor has its own accent coloring and classrooms alternate carpet coloring.
- All the carpeting, paint and other furniture was selected to be low to no VOC.
- Some classrooms have chairs and desks on casters, so they can be reconfigured between lectures and small group work.
- Other classrooms have a more traditional layout and have some standing desks in the back of the room.
- In the ceiling, you can see perforated metal panels. Behind these panels are our active chilled beams. The building does not use traditional ducting and air conditioning. The chilled beams house hot and cold pipes, and as air blows over the cold liquid pipe, the air is cooled. It is similar to placing a frozen bottle of water or wet towel in front a blowing fan to cool the air, and is more energy efficient and less drying than traditional air-conditioning this type of system is popular in Europe and becoming more common in the United States.

### ***Point out study spaces and lockers***

Floors 2-7 have student space similar to this for studying and socializing.

- Views of Washington Circle are amazing and the natural light is incredible.
- More than four hundred Student lockers are located through.

- Special renewable wood used throughout

Throughout the building you will see the beautiful Rulon Paneling. This is a renewable bamboo that has incredible acoustic qualities. Other sustainable materials include the 20% of the materials used in the construction with recycled content or produced within 500 miles of the site. Additionally, over 80% of construction waste was diverted from landfills or incineration.

***Tour continues down the central stairwell to floor 4***

So as not to disturb others, no talking please as you go through the departmental offices

- Each floor has one copy machine, 21 offices (10x11') 28 cubicles (6x6'), a kitchenette, and two meeting rooms. Additionally, conference rooms on the 2nd and 7th floor are equipped with audio visual equipment.
- Sunshades help shield the building from the sun (*Turn left after you enter the offices and go down the hall to see these*).
- All desks have the ability to convert into standing desks, and faculty members have an electronically controlled desk with the ability to save preferred settings. This ergonomic design supports back health and increases the number of calories burned. Five percent of seats in select classrooms also incorporate standing desks, which we'll see an example of in a minute.

***Tour continues down to the 2<sup>nd</sup> Floor***

***The large classroom on the 2nd floor has standing desks in the back row.***

***Walk through 2<sup>nd</sup> Floor Kitchenette, to printing station***

- Healthy snacks in vending machines (sparkling water, fair-trade chocolate, protein bars, coconut water, vegan cookies)
- The vending machines take credit cards and World cards
- Kitchen for fresh food preparation
- Access to filtered tap water for water bottle filling
- Recycling stations have separate cans for paper, trash, and other recyclables.
- GW has pledged to increase recycling on campus to an impressive fifty percent collection rate on campus by 2017.
- Housekeeping staff has been trained in proper recycling procedures too, and we regularly educate students and staff through engagement events and educational signage.
- We have printing stations so that students can print materials out when needed.

***Tour returns to first floor. Point out the convening center***

- This conference space is four conference rooms in one, each equipped with projectors and screens, as well as air walls that easily separate the rooms.

- The space is very flexible and can be used for conferences as well as large events like new student orientation. Adjacent to the convening center is the furniture storage area and the catering prep room. Where caterers can plug in ovens etc. if needed.
- Events are loaded in from the rear, West side of the building.

***(Chilled beam: active chilled beams (ACB) are a type of heating and cooling technology first adopted in Europe in the 1990s. Energy consumption can come in by as much as 60% of traditional system. The ACB technology takes advantage of the fact that a small volume of water can carry heat more efficiently than a large volume of air. ACB systems generate less noise and require less maintenance than an all air VAC system. )***

This concludes the tour of the building. If you have any additional questions feel free to contact us at