

AUGUST 2020

SPACE NEEDS, REDUCTION, AND RESTRUCTURING

How will college campuses evolve to meet the current crisis and beyond?

COVID-19 has changed lives around the world, from the way people work, learn, teach, and deliver or receive healthcare. At HMC Architects, we are exploring the pandemic as an opportunity to learn, reinvent, and most importantly help our clients amid this crisis.

As part of this ongoing research effort, we are committed to sharing our findings with the industry on five main areas of Technology, Adaptability and Flexibility, Regulatory/Budgetary/Institutional Impacts, Space Needs, Reduction, and Restructuring, and Impact to Wellness/Mental Health. In this article, we cover our findings on evolving space needs, reduction, and restructuring as it relates to the higher education sector.

METHOD

A group of representatives including higher education clients, students, contractors, and consultants were invited to participate in individual phone interviews to share their insight and understanding of the short-and long-term impacts of COVID-19 on facility design and operation for college campuses and universities.

PLANNING FOR SOCIAL DISTANCING AND DISTANCE LEARNING

While most people we spoke with felt strongly that change was inevitable, many felt that

change should be driven by pedagogy and support the learning environment, not hinder it as has been the case so far. Learning from the initial short-term fixes put in place, institutions are now developing more proactive strategies and tools to move forward. Early adaptations of existing buildings focus on providing adequate space for social distancing. Common strategies include establishing one-way circulation paths and reducing class sizes to provide more space for social distancing. A lot can also be accomplished with the furniture layout, reducing the seat count, and increasing spacing, but this is not a sustainable solution. Other approaches range from distance learning to hybrid models of instruction delivery, with classes split between half learning remotely and half physically in the classroom on alternating days. Since in the short-term space usage on campus has declined, not all classrooms need to be converted to this model.

FLEXIBILITY IS KEY

Looking to the future, beyond these temporary adaptations to existing buildings, designing with flexibility in mind will be critical. New construction should allow for quick adaptability to the need for scalable social distancing. While we cannot anticipate program and design changes with any certainty in the long term due to the prospect of a vaccine, colleges are



San Diego State University Zura Hall, HMC Architects

interested in being better prepared for the future. Our conversations yielded the following suggestions:

- Reevaluate space needs. Certain types of classes may remain online permanently with 60 percent of the student body continuing to take online classes in the future, potentially reducing the need for facility expansion in the future.
- Configure circulation to accommodate one-way traffic as needed.
- Widen hallways to allow for more separation with “sticky” spaces for students to sit but be out of the circulation path.
- Plan large open flexible spaces with room for students to work individually on laptops.
- Prioritize small, flexible rooms rather than large unchangeable lecture halls with fixed seats.
- Provide fewer faculty offices since staff are working from home and holding virtual office hours.
- Avoid fixed desk computer labs and room configurations that are difficult to adapt.
- Allow for more frequent and deeper sanitizing of shared spaces. These often-

unseen support functions will need bolstering as many colleges lack resources and staff to achieve.

- Focus on durable, cleanable materials and fabrics for soft seating. While durability has always been important, it has taken on renewed significance.
- In mild climates such as Southern California, hold classes outdoors where feasible.

While some classes can be remote or taught in a hybrid format, labs, technical, and career training classes such as nursing or welding require hands-on instruction. This means splitting labs into smaller groups with more space between equipment and holding the lecture portions of lab courses online to limit in-person contact. More and/or larger lab spaces may also be needed in order to safely distance students. Alternatively, labs and hands-on classes could be scheduled more frequently with smaller groups to avoid building larger spaces.

STUDENT HOUSING

Housing density may be the biggest challenge as institutions move to house students in single rooms, at least until a vaccine is developed. There may even be an increased interest in developer-led housing, relieving institutions of some of the burden. Most we spoke with, however, feel there

“

We should also consider this new learning environment through the lens of the end user and their needs, which are clearly not limited to the campus.

”



Chaffey College, Lewis Center Interdisciplinary Academic Building, HMC Architects

will be no long-term impact as students ultimately want the full college experience and colleges will strive to get back to pre-COVID densities. Due to the cost savings, triples and quads are still anticipated to be popular options. Thus, institutions are not redesigning actual spaces, rather simply scaling usage to reduce the occupancy as many students will continue to distance learn in the short-term. As with academic buildings, wider hallways with pockets for social space and additional signage for “traffic control” are important to allow for increased distancing. Dining areas for the time being will limit self-service, focus on grab-and-go, and limit seating capacity for indoor dining areas.

One important takeaway is the value the social experience still holds for students. Common spaces for socialization and the cultivation of friendships will be crucial to maintain and cultivate in some form.

RESTROOM FACILITIES

In the near term, quick fixes include closing stalls to limit occupants, and switching to hands-free appliances wherever possible (although that may create future maintenance issues). It is not realistic to restructure existing restrooms to increase size due to upfront cost, so establishing protocols for more frequent cleaning and disinfecting can achieve safety goals.

TECHNOLOGY AND MECHANICAL SYSTEMS

There is an immediate need for upgraded classroom acoustics and audio-visual systems with capture capabilities (cameras and microphones) to achieve various forms of in-person learning, hybrid classes, and recorded lectures.

Many campuses are also investigating adding facilities for simple video recording and editing. These “content creation centers” can be subdivided from an existing classroom or included in the planning of new facilities. These spaces will centralize the equipment and services a faculty member needs (cameras and microphones, simple editing equipment, and software, etc.) to create content for distance learning.

We should also consider this new learning environment through the lens of the end user and their needs, which are clearly not limited to the campus. Where institutions may have been able to quickly adapt by providing laptops and switching to distance learning, some students and faculty have faced significant challenges with the lack of adequate equipment, Wi-Fi, and broadband access at home. Colleges will need to explore ways to support their students beyond the campus.



Flexibility and scalability need to be integrated into all higher education projects to respond to evolving needs.



Although it seems counterintuitive, on-campus IT infrastructure is not yet seeing the need for increased space for data rooms as most distance learning is cloud-based and these rooms have been trending smaller, not bigger. Unfortunately, there is little benefit to recapturing any of this space since the rooms are comparatively small and buried in the building footprint. But as with previous recommendations, when planning for future IT infrastructure it is essential to build in flexibility. The systems and cabling should be easy to access and change.

Technology also offers software tools for managing space usage on campus. Effective programs for room scheduling and real-time room use tracking can help institutions make sure to maximize use of their facilities.

Mechanical systems will also be part of the solution. Filtration and ultraviolet (UV) sterilization will be needed, along with more frequent outside air changes, potentially impacting the energy efficiency of existing systems and increasing the size of new systems. Planning mechanical systems to be accessible (above acoustic lay-in ceiling tiles versus above hard ceilings, for instance) will facilitate adaptability. Operable windows and natural ventilation may also provide benefits in some circumstances.

LOOKING FORWARD

As we look at the lasting impact of this pandemic, it's critical that we plan properly and not engage in knee-jerk reactions that could cause long-term issues. For example, could reducing class space capacities or over-sizing rooms for social distancing create unintended consequences down the line?

Our planning of educational environments must focus on supporting the essential function of learning under our current circumstances and what other challenges the future may bring. Flexibility and scalability need to be integrated into all higher education projects to respond to evolving needs.

Simply put, we'll need to ask ourselves at each step of the design process, "if needed, can this be reconfigured?"

For additional questions, contact:

Ken Salyer
Higher Education Practice Leader
ken.salyer@hmcarchitects.com

Brian Nichols
Senior Project Designer
brian.nichols@hmcarchitects.com