

STUDENT AFFAIRS INSIGHTS

Spacing It Right

Designing Higher Education Institutions for Student Success

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The design of campus spaces plays a critical role in supporting student learning and success. By fostering inclusion, engagement, and community, institutions invite students into the shared learning experience of higher education (Strange & Banning, 2015). From the medieval university quad to the multifaceted layouts of today's campuses, institutional designs have evolved to meet students' diverse educational, personal, and social needs.

This publication offers the views of an educational researcher and a seasoned senior-level practitioner. Both have engaged in research and practice but have focused on one aspect or the other as primarily faculty and predominantly administrator. Together, the authors offer complementary perspectives on contributions to learning environments on college and university campuses, reinforced by extensive research and substantiated by decades of experience. In this context, the terms *student learning*, *learning environments*, and *learning spaces* (Oblinger, 2006) refer broadly to those experiences and spaces when and where students engage in an array of activities related to self-growth, development, and understanding. Gaining a new insight from a classroom discussion, developing a new skill in the process of leading a residence hall committee, exploring a new interest in joining a campus organization, and feeling more confident after completing a co-op experience are all examples of what

it means to learn in a learning space (Moneta, 2021). The challenge for educators is clear, as one university administrator and researcher noted:

Helping the campus community understand how spatial arrangements preclude or support retention, graduation, pedagogical innovation, and a host of campus priorities is an essential first step. From governing boards and legislatures (in the case of public institutions) to central administration, facilities planners, maintenance operations, faculty, and students all must realize that good space is not a luxury but a key determinant of good learning environments. (Chism, 2006, p. 21)

This challenge entails not only an understanding of the basic components of any campus environment but also the purposes served by their various arrangements, most especially their physical designs, which is the express focus of this analysis.



Grinnell College Humanities and Social Studies Center

RINGLING COLLEGE OF ART AND DESIGN

CUNNIFFE COMMONS

Designed by Ayers Saint Gross

Ringling College of Art and Design's Cunniffe Commons has become the new heart of campus where students, faculty, and staff come together daily not just for food but for connection and respite, to study, and to see and be seen, reflecting an integration of *welcoming, inclusive, sociopetal, functional, and reflective spaces*. The design of the dining venues is inspired by modern, urban food halls with a wide selection of offerings that accommodate the dietary and cultural sensibilities of Ringling's diverse community. *Flexible* seating arrangements provide a variety of settings for large, boisterous groups as well as for those who want to lounge and relax. The interior design of the main seating area is inspired by the experience of being under a canopy of live oak with Spanish moss hanging in vertical strands. Through its siting, function, and design, Cunniffe Commons is knit into the physical and cultural fabric of the campus.



Components and Purposes of the Campus Environment

Campus environments create conditions that support or detract from the student learning experience. Among these are (a) the *human aggregate* or composition of students, faculty, and staff that shapes campus culture; (b) the *organizational structures* in place that frame policies and practices for supporting students; (c) *collective social constructions*, as expressed through institutional culture, traditions, and participant perceptions contributing to the overall campus experience; and (d) *physical dimensions*, including buildings, outdoor spaces, and facilities. Although campus physical design and space is the primary focus of this analysis, it must be considered in the context of the other components (Strange and Banning, 2015).

All these components are necessary for creating a cohesive campus ecosystem supportive of student learning (Kenney et al., 2005). Thus, appropriately designed and integrated, the composition of institutional participants, the organizational structures and systems that guide decision-making and action, and the complementarity of campus culture and tradition all must align to influence (a) students' sense of *inclusion and security* on campus; (b) their active *engagement* in the learning process; and (c) their participation in a shared experience of *community*. These goals form a concentric model of design purposes supportive of student learning and success, and their application spans the full breadth of student settings and experiences, ranging from the particular (e.g., attending class, living in residence, visiting a commuter center, studying in a library, exercising in a recreation facility, attending campus

events) to the general (i.e., immersion in the overall institutional ethos that communicates what it means to be a student at a particular college or university).

This paradigm (see Figure 1) asserts that the goal of campus design is to create wherever possible experiences of community—conditions that enhance learning and offer lasting connections. However, achieving this in any given setting depends on fulfilling these conditions:

- 1. Inclusion and security.** As the innermost circle indicates, students must first feel welcomed, valued, and free from undue risk in their various settings. This foundation is essential but not sufficient on its own.
- 2. Engagement.** Extending outward, engagement and active participation in campus learning opportunities build on the sense of belonging and security to facilitate personal achievements essential for success.
- 3. Community.** Most comprehensive are the conditions of community, as inclusion, security, and engagement align over time and shared purposes and connections among students, faculty, and staff emerge to represent the goal of any well-designed and powerful learning experience.

These conditions are additive and interdependent. Without inclusion and security, engagement is unlikely. A lack of engagement jeopardizes the formation of community. Thus, the aim of any successful college or university must be to include, secure, engage, and invite students into the learning community of higher education.

Inclusion and Security

The first and fundamental goal in creating successful learning environments is to ensure that students feel that they belong. This objective involves more than simply inviting students to participate—it requires a deliberate effort to remove barriers and foster a welcoming atmosphere. For example, a 5-year, four-college research project at Duke University (2023) focusing on students’ resilience and well-being revealed the following:

Factors that contribute to students’ feelings of belonging are those that contribute to their sense of fit on campus and to the perception that they are valued members of the campus community. Having high-quality friendships, having a sense of enthusiasm and gusto for academic work, and even being a fan of Duke varsity sports are key predictors of belonging that reflect the fit dimension. Perceptions of identity safety (that is, feeling that one won’t be judged negatively or stereotyped based on their group memberships) and perceptions that faculty and other adults on campus care about students and view them as whole people with a range of personal values, social identities, and relationships are key predictors of belonging that reflect the value or mattering dimension. (para. 3)

When inclusion and security are prioritized, students are more likely to engage in their learning and succeed at their goals.

Engagement

Although feeling included and feeling secure are prerequisites, they alone are not sufficient for ensuring success. Students’ active participation in their own learning is the real engine of success in that it elicits a sense of responsibility and drives achievement. Research on student engagement over the past several decades has underscored the value of students’ active involvement in their own education. According to data from the National Survey of Student Engagement (2008), select active learning and high-impact practices (Kuh, 2008) significantly enhance student outcomes when offered early and throughout a student’s academic journey. Among these practices, for example, are collaborative learning techniques, flipped classrooms, service-learning, internships, study abroad programs, and research opportunities.

FIGURE 1. A CONCENTRIC MODEL OF LEARNING SPACE DESIGNS



Note. This figure is informed by concepts presented in Strange and Banning’s (2015) *Designing for Learning: Creating Campus Environments for Student Success*.

Engagement must be intentional and supported through institutional structures and facilities that encourage collaboration, interaction, and exploration. As included, secured, and engaged students carry out the activities of learning over time, something special happens. Individual efforts give way to a collective sense of achievement in creating a powerful and memorable experience recognized as community. For some students, that experience may emerge in an especially powerful class. For others, it may arise while planning and implementing a significant campus event (e.g., institution-wide festival or campaign) or creating a new campus organization. Still others may recognize it through living together with a special group of peers such as in a residential learning community.

THE UNIVERSITY OF UTAH

LASSONDE STUDIOS

Designed by CannonDesign

The University of Utah's Lassonde Studios demonstrates how the integration of living, making, and social spaces can drive sustained student engagement and entrepreneurial learning. At its core, a 20,000-square-foot maker space—featuring movable partitions, multimodal workstations, and open prototyping zones—provides a highly *flexible, fit-for-purpose* environment that enables rapid transitions among ideation, collaboration, and fabrication. Residential floors with loft-style rooms, shared lounges, and focus spaces support diverse cognitive and social modes, while visual and physical connections to the maker space create inherently *sociopetal* environments that foster interaction, exchange, and collective problem-solving.



By fostering community, institutions not only enhance the educational experience but also create environments that students remember fondly long after they leave.



Community

Conditions of community then emerge over time when students feel included, secured, and engaged, leading to a shared sense of purpose and achievement. The notion that conditions of community constitute the most powerful learning experience has long been supported by educational leaders. From Newman (1852/2015) came an early reference to educational community as that experience “where the conversation of all is a series of lectures to each” (p. 146). Palmer (1998) proffered the idea of a “web of truth seeking” requiring “many eyes and ears, many observations and experiences...a continual cycle of discussion, disagreement, and consensus over what has been seen and what it all means” (p. 20). He concluded further that “knowing and learning are [inherently] *communal* acts” and that “community must become a central concept in ways we teach and learn” (p. 25). Whatever the source, under conditions of community, the standard rises to that of an experience of togetherness, where “unifying purposes and values, traditions and symbols of belonging and engagement, and mutuality of care, support, and responsibility encourage a synergy of participation and worth, checking and cross-checking, to create a positive [and powerful] learning environment” (Strange & Banning, 2015, p. 214). Ultimately, powerful learning communities are recognized by their collaborative experiences, mutual support, and lasting connections. By fostering community, institutions not only enhance the educational experience but also create environments that students remember fondly long after they leave.

Role of Campus Physical Design and Layout

“Each aspect of the built environment is created to fulfill human purpose. As those purposes and actions are manifold, so too are the reasons to design and build.” (Bartuska & Young, 1994, p. 5)

As discussed earlier, institutional environments are composed of multiple components, all contributing to student learning and success as they fulfill conditions of students’ sense of belonging and security, their active engagement in learning, and their culminating experience of community. Significant factors in achieving these goals are the features of the natural and built environments that constitute the design and layout of institutional spaces. College and university campuses feature design principles that guide institutional development of buildings and grounds. The following example is from the University of Pennsylvania (2025):

The purpose of a campus is to bring together diverse people and their ideas in an environment that creates potential for intellectual and social exchange. While the physical character and quality of a campus is defined by both its buildings and its open space, it is the open space which has the greatest potential for unifying and equalizing the shared space of the campus. It can promote the sense of community derived from actively shared space and provide for the enriching experiences of both planned and chance encounter. Comprised of streets, walkways, greens, courtyards, plazas, gardens and playfields, open space has the potential to knit together the diverse elements of the campus in a coherent way.

Individual buildings should also be designed to maximize the opportunities for social and intellectual exchange. Public spaces should be generous, provide places for conversations, and be visible to those using buildings and passing by them. Each school should have both indoor and outdoor spaces suitable for gatherings and social occasions. While there will always be pressure to maximize the proportion of dedicated spaces in buildings, their success will ultimately depend upon balancing the public and private spaces. (p. 3)

Similarly, the physical campus supports the mission and vision of Stanford University (2025), where program drivers and objectives guide the planning and development of a vibrant and healthy community to do the following:

- ◆ Accelerate scholarship and research by encouraging connections between school, programs, and facilities.
- ◆ Sustain a vibrant residential campus.
- ◆ Encourage wellness and integrate active and passive recreation.
- ◆ Infuse culture and art in the programming, architecture, and landscape.
- ◆ Cultivate a vibrant community that promotes diversity, equity, and inclusion through intentional programmed placemaking.
- ◆ Advance a robust sustainability culture. (p. 4)

NORTH CAROLINA STATE UNIVERSITY

FITTS-WOOLARD HALL

Designed by Clark Nexsen

North Carolina State University's Fitts-Woolard Hall embodies the principle of engineering on display, demonstrating how transparency can transform learning environments into engaging, *sociopetal* spaces. Throughout the four-story facility, high levels of transparency create visual connectivity. Structural testing labs are visible from both exterior streets and interior corridors, turning educational activities into shared experiences that invite curiosity and interaction. By revealing structural and mechanical systems as instructional tools and incorporating *flexible* research spaces where students apply classroom knowledge, the building creates a *distinctive* learning environment in which physical design directly reinforces the institution's mission of integrated problem-solving. Fitts-Woolard Hall illustrates how architectural transparency can foster both individual engagement and a sense of collective community in academic settings.

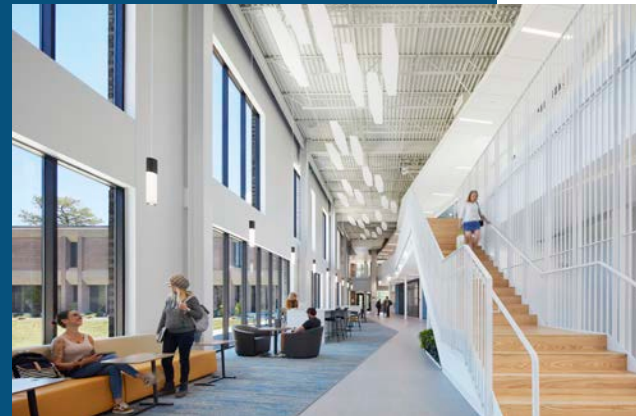


BLUE RIDGE COMMUNITY COLLEGE

PATTON BUILDING

Designed by Clark Nexsen

Blue Ridge Community College's Patton Building is *accessible* and *inclusive*, supporting diverse learners throughout their educational journeys. By consolidating three separate academic buildings into a single, centralized facility, the design creates a more *proximate* environment, improving convenience for students navigating campus and reducing barriers to engagement. The front-and-center placement of the Student Success Center ensures that all students can easily access support services, reflecting a commitment to *welcoming* design that communicates a sense of belonging from the moment of entry. Modern common areas designed for collaboration, group study, and social interaction create *sociopetal* spaces that encourage the human connections fundamental to learning communities.



Likewise, Carnegie Mellon University's (2013) Simonds principles state the following:

Building and landscape design should be innovative and reflect the culture, history, and sensibilities of the university and the distinct place it holds in the city, region, nation, and world. Interior and exterior space design must facilitate student, faculty, and staff activities and interactions; increase connectivity with internal and external communities; and enhance the life of the campus. (p. 11)

Each of these design statements reflects institutional values and directives that ensure perpetuation of campus culture and history while addressing newer principles associated with sustainability, flexible uses, and efficiency. A scan of various campus design standards reveals mixed attention to formal and informal learning and the well-established science that could influence campus design. This analysis seeks to advance familiarity with principles and practices that optimize the learning outcomes associated with campus design.

Spatial Design Concerns, Options, and Impacts

"Whether it's work on existing buildings or new construction projects, campus facilities professionals must be aware of potential impacts on those who are teaching, learning, living or working on a campus." (Ezarik, 2022, para. 13)

Campus features and spaces shape and influence the experiences of participants, whether students, faculty, or administrative personnel. Their designs can contribute to or detract from the espoused purposes served and the goal of building communities of learning.

Figure 2 presents a qualitative design checklist of attributes to consider in the design and evaluation of campus spaces—both natural and built—that support student learning and success. These attributes include spaces that are proximate, welcoming, accessible, inclusive, functional, sociopetal, flexible, aesthetic, reflective, regenerative, distinctive, and sustainable. Collectively, they blend into a variety of designs capable of including, securing, engaging, and inviting students into the learning community of higher education. Each attribute is discussed as a distinct descriptor in the sections that follow, but their inherent interconnectedness cannot be overstated.

FIGURE 2. CHECKLIST OF ATTRIBUTES FOR EFFECTIVE LEARNING SPACE DESIGN

A learning space can be characterized by the extent to which it is:

- Proximate**
Appropriately located for those for whom it is designed
- Welcoming**
Fosters a sense of belonging and security for participants
- Accessible**
Incorporates principles of universal design
- Inclusive**
Affirms identities and supports expressions of self and others
- Functional**
Supports key working functions and tasks
- Sociopetal**
Encourages spontaneous encounters and human interactions
- Flexible**
Adapts to multiple purposes and participant imprint
- Aesthetic**
Inspires a creative sensibility and uplifts the human spirit
- Reflective**
Encourages quiet imagining and meaning making
- Regenerative**
Restores energy and motive for continuing
- Distinctive**
Creates unique and memorable impressions
- Sustainable**
Maintains viability through scale, right proportion, and resource



Emory University
Student Center

EMORY UNIVERSITY

STUDENT CENTER

Designed by Duda|Paine Architects

Emory University's Student Center, located at the heart of the campus, features a broad, gently curving facade that engages the surrounding buildings. It serves as a crossroads connecting athletics, academics, student housing, and professional schools. Its strategic *proximate* placement along a primary student pathway creates a natural sense of *welcoming* beneath a grand stair framed by a terracotta canopy. Transparent sidewalls and built-in seating along the passageway foster an *inclusive* and *sociopetal* environment that encourages spontaneous interaction. The building is designed as a series of smaller pavilions and terraces, reinforcing the relationship between indoor and outdoor student spaces. Strong visual and physical connections to the surrounding campus have made the center a vital part of the student experience. The commons, filled with natural light and offering expansive campus views, serves as the core gathering space, supporting both large groups and quieter moments of reflection and study.



An accurate description of any given campus space requires reference to multiple attributes. In addition, attention to any single attribute is impossible without reference to several of the others. Likewise, they are interdependent—change in one often effects changes in several others. They can be thought of as 12 operative questions for consideration in examining the impact of any extant or planned campus space. These considerations function as a design palette to guide decisions about campus spaces of all kinds intent on supporting a range of student learning opportunities.

Proximate Spaces

This attribute refers to the role of proxemics in the layout, design, placement, and assignment of campus spaces. Student use of campus spaces is often a function of proximity. Proximate spaces are appropriately convenient for those for whom they are designed. Proxemics shapes the experience of campus subcommunities (e.g., fraternities and sororities, living-learning communities, academic departments) and the overall institution. The classes students select, the time of day they are offered, and the distance in between are all influenced by the proxemics of campus spaces. Students with back-to-back classes at the opposite ends of campus may be limited in their experiences of spaces

in between. Differences in distances might also factor into enrollments at night versus daytime. And use of campus recreation facilities might be encouraged or discouraged, depending on their distance to and from. These considerations, of course, vary widely, given the nature of each institution's setting and context. Suburban and rural campuses may have fewer spacing challenges to overcome than an institution in a large urban area. Regardless, colleges and universities intent on encouraging a sense of belonging and security, active engagement in learning within and beyond the classroom, and a powerful experience of community must consider the effects of proxemics in distributing programs and services as well as long-range master planning in campus layout and design.

Campus proxemics influence many of the other attributes. For example, placement of an identity center influences both accessibility and inclusivity. Campus master plans organize building and grounds alignment around various principles, including the convenience and relevance of adjacencies. Commonly, one will find teaching and research facilities focused on STEM (science, technology, engineering, mathematics) fields oriented around a "science campus." Business, law, and other policy-oriented schools may be colocated to support and encourage scholarly collaboration. Undergraduate

residence halls, recreation and athletic facilities, and student centers, when thoughtfully aligned, promote a host of student engagement and well-being activities. Well-placed plazas, sculptures, hard surface spaces, and lawns promote reflection and regeneration. Grassy lawns may invite casual play or prohibit foot traffic. Both can make sense as long as alternatives are available to suit community needs for movement and stillness.

Welcoming Spaces

Whether an entrance portal to an institutional website or a door to a campus admission's office, outward-facing spaces speak volumes about any college or university whose first impression is unique to everyone encountering it. Feeling welcomed and included is a powerful motive for engagement. Within an institution, opportunities abound in its facilities and spaces (e.g., buildings, centers, departments, administrative offices, residences, unions, outdoor spaces) for communicating to students and others that they belong there.

Characteristics of welcoming will vary among institutional types. Sports imagery might attract some prospective students but discourage others from considering enrollment. The environment of an urban campus is distinctive, as is the landscape of a small, rural college. Regardless, a welcoming influence will feature institutional authenticity—a true representation of the culture, character, and ethos of the college or university. At a glance, the student will discern institutional values (e.g., diverse representation and presence, social hierarchy, community priorities), campus aesthetics (e.g., quality and care of facilities and grounds), and a host of messages about priorities, investments, and aspirations.

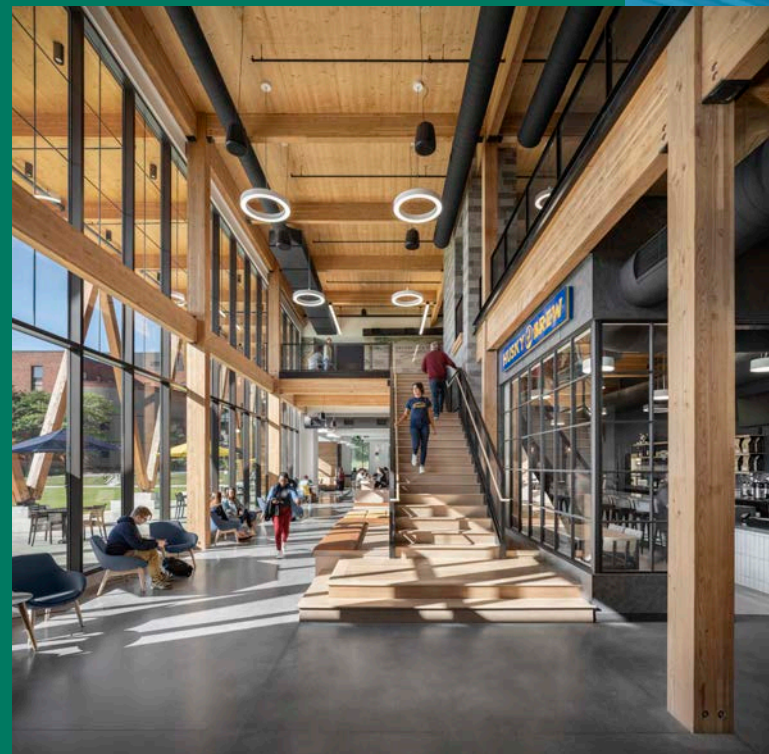
The physical characteristics of the welcoming experience begin from afar, with way-finding that helps students and their families navigate the campus, access convenient parking, understand the layout, and know where the “see and be seen” places are to be found. Landscaping that celebrates local environments and frames major campus entries and institutional architecture that reflects a campus ethos and aesthetic also contribute to a sense of place. In contrast are “backside” spaces of campus buildings (e.g., loading docks, service and storage facilities, parking lots) that, when mostly facing adjacent local communities, might prove challenging to neighbors and visitors. Regardless, welcoming others is fundamental to transforming a mere interest or curiosity into an engagement in the setting. Within the concentric model of environmental design, its importance is obvious. Without a sense of welcome, chances are slim that students will feel included or secure in that space.

THE UNIVERSITY OF SOUTHERN MAINE

MCGOLDRICK CENTER FOR CAREER AND STUDENT SUCCESS

Designed by Elkus Manfredi Architects

The University of Southern Maine's McGoldrick Center for Career and Student Success welcomes, supports, and enriches the entire student community on the Portland campus. A mass timber portico, galvanized metal, raw concrete, and a green lawn work together to create an *aesthetic* reflective of the rugged, authentic, and maritime culture of Portland. Open spaces—including a double-height lobby, café, brewpub, student store, and *flexible* lounges—form a *sociopetal* environment that encourages socialization, connection, and gathering. The second floor is dedicated to academic and career advising, while the third floor features *inclusive*, student-centered spaces, including prayer and wellness rooms; affinity lounges for veterans, LGBTQIA+, Black, and Latinx students; and a student-run food pantry. Together, these interconnected spaces support students in achieving their full potential.



FLORIDA INTERNATIONAL UNIVERSITY

CASACUBA

Designed by HKS

The core intent of Florida International University's CasaCuba is to offer a *welcoming, inclusive* home for Cuban and Cuban American heritage that is at once academic, cultural, and communal. The site strategy centers on a courtyard and a sequence of spaces that range from intimate study areas and sculpture gardens to a celebratory amphitheater, creating a sociable outdoor network that supports everyday gathering, festivals, lectures, and intergenerational exchange. These spaces directly advance *sociopetal* and *functional* goals. Covered porches that recall traditional Cuban homes, along with rhythmic patterns in planting and paving and framed views through arcades, establish a spatial language that affirms identity and signals care for cultural detail, contributing to an *aesthetic* of personal and collective remembrance. *Accessible* walking paths and generous seating within cooled microclimates support frequent, low-friction encounters that reinforce social capital and extend the building's usable footprint without significant energy demands. The mix of classrooms, seminar spaces, digital archives, galleries, and a banquet hall with catering is deliberately *flexible*, allowing the center to shift from scholarly convenings to large community celebrations. CasaCuba aspires to be *distinctive* in both form and mission, resulting in a memorable and identity-rich environment and a *sustainable* setting positioned to serve as a cultural and academic anchor for generations.



Accessible Spaces

"When it comes to accessibility, it isn't simply enough to be able to get to a place. To fully enjoy a space, people must be able to navigate it and spend time there with dignity and confidence." (Peinhardt, 2023, para. 4)

Accessible campus spaces benefit all participants. Principles of universal design call for spaces that are responsive to diverse abilities, are flexible in use, can be understood simply and intuitively, are easily perceived, are capable of tolerating user error, require minimal physical effort, and are of appropriate size

Whether through new construction or renovation, accessible spaces are important for the sense of belonging and safety of all students.

and dimension to facilitate their approach and use by anyone (Center for Universal Design, 1997). Whether through new construction or renovation, accessible spaces are important for the sense of belonging and safety of all students. Furthermore, they broaden the range of engagement experiences, thus accommodating a maximum number of participants. Accessible spaces are fundamental to the first two spheres of campus environmental design: inclusion and safety and engagement in learning.

Accessibility is not limited to issues of mobility or other physical attributes. An accessible campus is mindful of students' dietary distinctions, neurodiversity, and the varying ways individuals prefer to connect and engage with others. As discussed further, the accessible campus features loud and quiet spaces, places for crowds and places for solitude, opportunities for celebration, and opportunities for personal reflection. Student centers, residence halls, community gathering spaces, athletic and recreational facilities, and labs and classrooms are all venues in which accessibility is key.

Inclusive Spaces

Spaces that affirm identities and support expressions of self and others are equally important when considering questions of access and how students are welcomed in institutions (Wise & Jaffe, 2022). Rather than an

exclusive focus on physical design, the inclusive quality of campus spaces is often of a psychological nature and experience. “Hard architecture” (Sommers, 1983) is resistive to individual design and imprint. Resident rooms, for example, that fail to accommodate personal preferences and artifacts dampen opportunities for students’ sense of belonging. Likewise, department spaces that fail to reflect the diversity of those whom they serve may make it more difficult to foster a sense of security and belonging. Decorations, physical artifacts, and flexible design features help attract students to campus spaces. Both are requisites for engagement in the learning experience.

Inclusive spaces have historically included cultural and identity centers, faith-based facilities and offices, and centers dedicated to international communities and cultures. Striking a balance between identity-specific spaces and programs and those that engage students across cultures, identities, and interests is increasingly complex, and each institution must determine its own approach to design and implementation. Inclusion is also practiced intentionally through dining options mindful of dietary and cultural needs, attention to the costs associated with academic and social participation, and the strategic placement of key offices and centers on campus. For example, an LGBTQIA+ center located on the outskirts of campus sends a far different message than one prominently located on the main level of the student center.

Functional Spaces

Functionality is a fundamental quality directly related to engagement in the learning experience. Are there enough spaces? Can a particular space support the activities intended for it? Are the spaces flexible enough to accommodate a variety of uses? These questions arise, for example, when students host a meeting for their campus organization, a department plans a meeting or staff retreat, residents sponsor an event in their hall, an instructor implements new active approaches to learning, or team members work to strengthen their collaborative skills.

The functionality of campus spaces is closely tied to how those spaces are intended to be used, as intended use establishes the parameters within which a space can effectively support learning. At times, those parameters limit desired outcomes. For example, group discussion may be constrained by the design of a large lecture hall with tiered, fixed seating. In contrast, functional spaces facilitate engagement, such as small project rooms equipped with online connectivity and sufficient storage for use by multiple student groups. Doing the work

THE UNIVERSITY OF NORTH DAKOTA

NISTLER COLLEGE OF BUSINESS AND PUBLIC ADMINISTRATION

Designed by JLG Architects

The University of North Dakota’s Nistler College of Business and Public Administration can be found at the heart of campus and exemplifies all 12 attributes of effective campus design. Reflecting the university’s Collegiate Gothic architectural style, the building establishes a timeless yet innovative environment organized around a set of strategic components that create an **accessible** and **welcoming** environment for students, faculty, and the broader community: openness; dining; small study spaces; formal and informal hub spaces; historic storytelling and branding; daylighting; collaborative spaces; **flexible** spaces; right-sized spaces; a balance of public and private areas; distance learning; and real-world career preparation. The design connects three main levels across 108,000 square feet, including an 8,750-square-foot community hub, 28 classrooms and labs, 10 group study rooms, a 5,000-square-foot auditorium, multiple indoor and outdoor dining options, and a skywalk connection to Chester Fritz Library and Merrifield Hall.

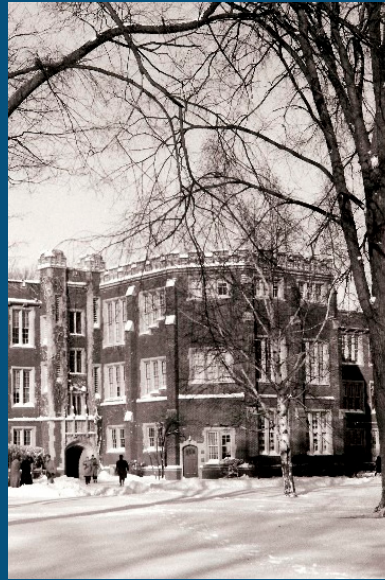


GRINNELL COLLEGE

HUMANITIES AND SOCIAL STUDIES CENTER

Designed by Page, now Stantec

Grinnell College's Humanities and Social Studies Center is a 125,000-square-foot addition that unifies two historic landmark buildings—including a 1905 Carnegie library—to create an immersive environment for multidisciplinary collaboration, active inquiry, and intellectual exchange across 15 departments. The program is organized within a three-story structure that includes 40 technology-rich classrooms, teaching laboratories, and specialized learning centers. The building's planning reflects an *inclusive* approach and encourages nonconformity by incorporating a variety of circulation typologies that allow departments to express their identities while alleviating concerns about the loss of individuality. As its *sociopetal* core, a three-story atrium—formed at the intersection of four pavilions, two new and two renovated—serves as the central gathering space for 145 faculty across 15 disciplines. The new structure embraces the historic Alumni Recitation Hall, creating a light-filled, *distinctive*, interior courtyard that looks toward the future of liberal arts education while honoring the heritage of one of Grinnell's most treasured landmarks.



Then and now at Grinnell College: The historic Alumni Recitation Hall tower is now enclosed in the main atrium of the Humanities and Social Studies Center. The tower is accented by a halo skylight above.

of learning, whether within or beyond the classroom, requires usable spaces that support the achievement of learning goals. Creating such conditions is the purpose of engaged campus environments.

Functionality is also a dynamic characteristic, subject to distinctive designs and requirements as defined by each campus and under varying conditions. What is considered functional in a residence hall may range from traditional double-loaded corridors with two-person rooms and community bathrooms to four-person suites with private kitchens and bathrooms. Both are functional in a basic way, but the preferred design will reflect institutional and conditional preference for user functionality. Comparable consideration must be given to designs for student centers, recreational buildings, academic facilities, and community gathering and socializing spaces. A carefully developed functional use plan that precedes facility and space designs ensures effective functionality consistent with institutional community engagement goals.

Sociopetal Spaces

Campus sociopetal spaces facilitate spontaneous encounters and human interactions, both as a means of capitalizing on the engaging features of campus spaces and of promoting their communal qualities. Sociopetal or interactive “people places” encourage community members (i.e., students, faculty, staff) to come together, for example, to enjoy one another's company, engage in a discussion about ideas and experiences, observe events and activities, make new friends, and celebrate reunions. Departmental waiting areas, food courts, building atria, hallways, patios, recreational facilities, unions, libraries, and open courtyards are all examples of campus spaces where chance encounters and interactions can reinforce a sense of belonging, deepen engagement in learning, and lay the foundation for a complete community experience.

On one campus, for example, a hard-surface plaza was constructed in place of an unattractive, narrow, concrete walkway to encourage community interaction and engagement rather than simply passage. The plaza connected an array of student- and campus-serving spaces. With the addition of a wellness building, multiuse auditorium, and a renovated main campus dining venue, it evolved into a new campus “downtown,” attracting students, faculty, alumni, and other visitors. By day, this space serves as the hub of multiple activities and as the primary crossroad and stopping point for all who traverse the campus. By night, the plaza is the place to be for students eager to connect and engage with others.

Flexible Spaces

Although seemingly redundant, flexibility in spatial design bears highlighting as a distinct attribute necessary for achieving all three spheres of campus environmental design—inclusion and security, engagement in learning, and the experience of community. Being able to adapt to a variety of purposes and participant characteristics is critical for accommodating a range of learning activities, providing welcoming spaces, and affirming all participants as significant members of the campus community. Inflexible spaces, such as those characterized as hard architecture, require participants to adapt to their fixed features rather than offering options responsive to varied purposes and needs. Flexibility removes barriers and invites participants to engage in learning experiences appropriate to their expectations. It also allows spaces to adapt as needs evolve and new purposes emerge across time, empowering participants to redesign spaces as they see fit.

Requirements for flexibility on campus are more varied than ever, extending to both the structural design and outfitting of institutional spaces. Campus housing designed for one purpose today may need to serve different populations tomorrow as enrollments fluctuate; for example, shifting from undergraduate housing to accommodations for graduate and professional students or even to other administrative or academic uses. Similar questions arise for other campus facilities: What will be the ideal design of future libraries or campus centers? Will the transformation of academic disciplines require entirely new conceptions of formal teaching and learning spaces?

Designed by Shepley Bulfinch

Lehigh University’s Clayton University Center is strategically located at the heart of the campus. Reenergized through new entrances and outdoor terraces, its *proximate* location fosters spontaneous interactions that connect interior and exterior spaces. The design is *welcoming* and *inclusive*, offering an array of dining venues—from grab-and-go kiosks to a full-service pub—along with multiuse lounges and club hubs that invite students of all backgrounds to gather, collaborate, and experience a sense of belonging. Infrastructure upgrades, including universal access ramps, enhanced lighting, and improved interior flow, ensure the building is fully *accessible* and *functional*. The renovation also champions *sociopetal* and *flexible* design principles: open staircases, glass-enclosed meeting rooms, and adaptable club and study spaces with moveable furniture support a range of interactions, from group events to quiet reflection. The restored stone facade, preserved “postcard” view, and thoughtfully landscaped exteriors introduce *aesthetic*, *reflective*, and *distinctive* qualities that honor the university’s heritage while uplifting the campus spirit. *Sustainable* design is demonstrated through LEED Silver certification, energy-efficient systems, natural daylighting, material reuse, laser scan-enabled preservation, and waste diversion, all contributing to a *regenerative* and *sustainable* model for resource-conscious campus design.

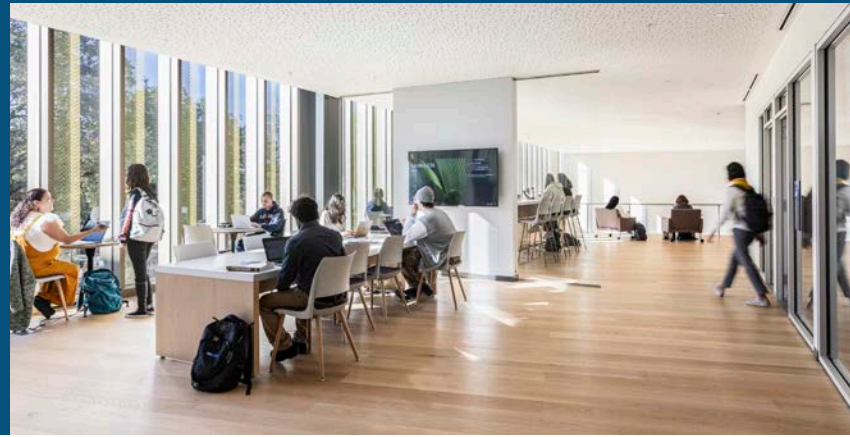


SANTA ROSA JUNIOR COLLEGE

THE LINDLEY CENTER FOR STEM EDUCATION

Designed by SmithGroup

The Lindley Center for STEM Education at Santa Rosa Junior College cultivates a sense of belonging and provides a strong foundation for students pursuing careers in STEM fields. The MESA Center serves as a hub of support, providing for essential needs such as food and drink while offering comfortable study spaces and resources for success in STEM and health professions. Transparency throughout the building creates a **welcoming, inclusive, and distinctive** environment. Design, Make, and Break labs—where students engage in the full design and fabrication process—showcase the building's **functional** purpose while making STEM learning visible to students.



Aesthetic Spaces

In addition to accessibility, function, and usefulness, spaces with well-designed aesthetic qualities serve to inspire a creative sensibility and uplift the human spirit. The work of learning often benefits from creative inspiration and the spaces that promote it. Reflection and amazement are all possibilities in spaces that evoke an imaginative response that fulfills the human experience of awe. Inspiration, rather than effectiveness and efficiency, is the goal of aesthetic design. Campus spaces full of natural light, mystery, open air, and artifacts of art and sound invite participants to pause and enjoy, be amused, rest in the object or scene, and explore new arrangements and effects. In doing so, sense of self and connection to others are enhanced in a common experience of something beautiful and reflective of



The work of learning often benefits from creative inspiration and the spaces that promote it.



human imagination. Open indoor spaces with potted growth, running water, and ambient sound fulfill such needs, as do well-designed outdoor spaces that renew a sense of personal wholeness and peace (Eckert, 2012). These factors all contribute to participants' sense of belonging and security as they engage in learning and reap the benefits of the campus community.

Like beauty, aesthetic quality is often in the eye of the beholder. As a result, aesthetic environments involve considerable subjectivity and must be framed within each institution's design principles and practices. The more serene aesthetic environment described here may be particularly appropriate for a main campus green or quad, whereas the aesthetic of a student center may welcome expressive art, bolder colors, louder music, and more solid surfaces. As with many of these attributes, the key is for design choices to be deliberate and aligned with intended audiences, purposes, and conditions. Graffiti on the walls of a library might appear garish, while the same artistry in a student union may celebrate student presence and engagement.

Reflective Spaces

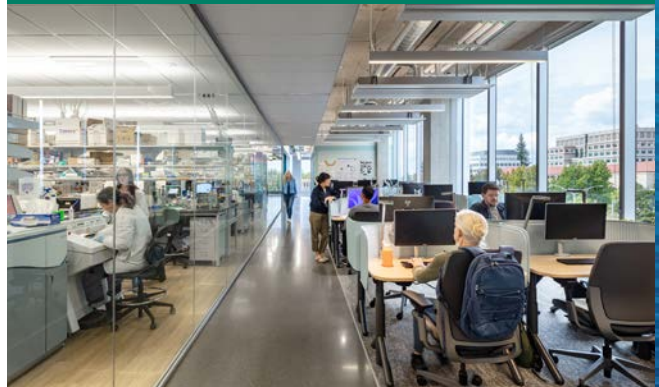
Like aesthetic spaces, reflective spaces are intentionally designed—perhaps even more so—to encourage quiet imagining and meaning making. Powerful educational environments engage and challenge learners to expand their ways of thinking, doing, and being by integrating new perspectives into their sense of identity and constructing more complex patterns of understanding and application. Such outcomes mean taking risks and expending extraordinary energy as old patterns are challenged, released, or revised within a context of uncertainty and ambiguity. Quiet, isolated reflection complements the engaging interaction with others (as is the case with sociopetal and regenerative spaces) to encourage development of personal insights and evolving constructions. A quiet study area, a sun-filled nook, a practice room, a natural outdoor setting—all spaces where solitude and solace are possible—can support learners' sense of personal agency and effectiveness within the educational community.

Many U.S. colleges and universities were founded with religious affiliations and, as such, have chapels or comparable facilities on campus. The chapel at Duke University, for example, serves as the heart (and some would say the soul) of the university. Although Duke's Methodist ties no longer exist, the chapel still offers considerable opportunity for individual, group, and community reflection. Other examples might include the Reflective Walk at Furman University, reflection rooms at Colorado State University, and the Sudama sculpture installation at American University.

The Mindfulness Institute for Emerging Adults (n.d.) features reflective practices with evidence of their positive effect on students' well-being. Encouragement of mindfulness and meditation practices complements the provision of reflective spaces, such as the Lotus Meditation Center at the University of North Dakota, the Heart of Zen Meditation Group at Loyola University Maryland, and the Mindful University Project at the University of Rochester.

Designed by ZGF

Aggie Square at the University of California, Davis, is an innovation district that advances student success by creating a **welcoming** and **inclusive** environment that dissolves traditional boundaries among higher education, industry, and the surrounding community. Located adjacent to the university's Sacramento Medical Center, the district brings institutional research, academic life, and public activity into a walkable environment inspired by Sacramento's red-brick materiality, tree-lined streets, and porch culture. Across its public, research, and medical education spaces, spatial organization and **flexible** planning reinforce the **functional**, **regenerative**, and **aesthetic** dimensions of student success. The first two levels are designed to welcome the public and establish a sense of place that is both **distinctive** and familiar. Public-facing spaces invite students into the daily life of the innovation ecosystem, demystifying advanced research and encouraging learning. Transparent lobbies, abundant seating, and works by local artists affirm identity and foster a sense of belonging. Porous pathways and multi-sided entries create an intuitive and open experience. Together, these strategies generate **sociopetal** conditions in which students, researchers, faculty, and community members meet organically, strengthening the social and professional networks essential to student flourishing.



Regenerative Spaces

Complementing spaces that encourage quiet reflection, regenerative spaces on campus incorporate lively interactions and experiences that also help restore energy and motivation. At different points in the academic calendar, the demands of engaged learning can be especially taxing for students as they manage assignments and deadlines, evaluate feedback, and consider plans for their next schedule of courses. As students prepare for graduation, the weight of the next step in life becomes more apparent in a world of complex and often confusing options. Restoring energy and motivation at appropriate intervals in the learning journey is more of a necessity than a luxury. Spaces that offer such renewal include campus commons and places for food and lively exchange; indoor facilities where fitness goals are pursued and achieved; outdoor recreation spaces where teamwork reinvigorates engagement and a sense of belonging and community; and “third places”—on or off campus and separate from academic and work settings—where time is experienced casually and relaxation is expected. Each of these spaces supports a sense of inclusion, security, and community while encouraging students to take on the next challenge.

Regenerative spaces may take many forms, including running trails on or around campus, ropes courses that challenge physical and mental endurance, community gardens, and campus farms, to name a few. For example, the WE/Me Farm project at Paul Quinn College converted a football stadium to an extraordinary regenerative space. Likewise, the three-story climbing wall at Gardner-Webb University and the labyrinth at Coastal Carolina University provide considerable opportunities for regeneration by supporting activities such as relaxation, wellness, spiritual reflection, and meditation.

Restoring energy and motivation at appropriate intervals in the learning journey is more of a necessity than a luxury.

Distinctive Spaces

All colleges and universities feature spaces that create unique and memorable impressions (Thomas & Brownlee, 2000). These may include notable facilities or buildings, outdoor works of art, unusual entrance or gathering spaces, signature features such as clock towers or bridges, sports stadiums and arenas, and campus layouts that evoke both a sense of mystery and ease of wayfinding. The value of such features is that they connect participants to a common experience and a sense of community. Institutional guides direct visitors to these spaces, and returning alumni frequently share memories associated with them. Knowledge of these spaces reinforces participants’ connection to the institution and stands as evidence of having experienced a unique, formative stage of life in a particular time and place. “Old Main” may become a place of endearment, while a futuristic technology center attests to the progress of research and development, both reinforcing feelings of distinction and pride among those who studied there.

Distinctive college and university spaces are as diverse as the Ben Franklin bench at the University of Pennsylvania, the Bryan Hall clock tower at Washington State University, and the Old Well at the University of North Carolina at Chapel Hill. Campus greens, often located at the center of campus, frequently serve as primary community gathering areas and attract alumni and visitors to the core of the institution.

A corollary to this distinctive quality is memorability. Memorable spaces often become signature elements of college and university campuses. The waterfalls at Mount Holyoke College, the Lawn at the University of Virginia, and the Split Button at the University of Pennsylvania are memorable spaces. Further examples can be found on campuses across the country. Many of these landmarks were likely never designed with iconic status in mind; nevertheless, the deliberate development of memorable spaces contributes substantially to campus aesthetics, identity, and appreciation.



Blue Ridge Community College Patton Building

Sustainable Spaces

Sustainability is an attribute that promotes the endurance and viability of campus spaces through appropriate scale, proper proportion, and adequate resources. In doing so, it supports many of the other qualities discussed here. Sustainable space depends on achieving the right balance of scale and proportion. A space that is too large may feel overwhelming, while one that is too small may be inadequate for the needs it is meant to serve. Spaces designed for one purpose may also prove ineffective for another; for example, a large lecture hall may or may not support active learning, and a small room might be insufficient for a popular introductory class that attracts many students. Right proportion also refers to the ratio of persons to opportunities within a given space. When too many participants compete for too few opportunities, engagement may decline, a sense of belonging may diminish, and the community experience may be weakened. Whatever the purpose being served, effective spaces rely on appropriate designs supported by adequate resources.

As with several of the spatial qualities discussed here (e.g., flexibility, functionality, aesthetics), contemporary design coupled with novel technologies can reinforce optimal sustainability. For example, buildings designed with moveable, acoustically sound partitions; modular components that allow rooms to be reconfigured; varied lighting options; and a degree of portability that permits alternative layouts all contribute to the sustainability and endurance of campus spaces.

Conclusion

The 12 qualities and attributes detailed in this brief are closely interconnected in the assessment and design of campus spaces. Accessibility, for instance, often depends on the flexibility of a space, and welcoming spaces are both accessible and inclusive. These spatial qualities and attributes are therefore interdependent and complementary: improving one frequently necessitates attention to others, while erosion in one can diminish the quality of others.

The goal of these spatial qualities and attributes is to build forms of community on campus wherever possible. Classes, departments, student groups and organizations, residences, centers, and events are all capable of supporting students' experience of community. Properties of proximity, welcoming, accessibility, and inclusiveness communicate a sense of belonging and security. Functional, sociopetal, flexible, aesthetic, reflective, and regenerative spaces engage students in their learning. Like an artist's palette of color, hue, and texture, campus planners should examine their inventory of spaces for how well they reflect these qualities and attributes in support of the institutional mission to include, secure, engage, and invite students into the learning community of higher education.

Designing educational spaces is about more than material efficiencies—it is about creating environments where students feel included, secure, and engaged while experiencing community. By addressing inclusion, fostering engagement, and nurturing community, institutions can create transformative learning conditions that leave a lasting impact. Campuses that achieve this balance distinguish themselves as places of purpose, connection, and success and ensure that all students can thrive in their learning experience.

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