Report of the Ad Hoc Committee on Learning Space Improvement

University of Wisconsin-Madison

March 2016

Executive Summary

The Ad Hoc Committee on Learning Space Improvement was formed in the Fall of 2015 by the Provost's Office and Facilities Planning and Management to identify priorities for learning space improvement projects. The committee received input from Department Chairs across campus and examined recent projects at other R-1 peer and UW System institutions. They also considered growing trends and practices that reflect recent studies on learning in higher education particularly in regard to active learning and new forms of student engagement.

The University is in a transition state between traditional lecture-based teaching methods and emerging active learning techniques[1] often enabled with technology, with some instructors wishing to use the prior and some wishing to use the latter in the same space in any given day of instruction. The physical classroom requirements for one method versus the other are dramatically different. Many department chairs reported faculty desiring to shift their teaching to active learning methods but being constrained to traditional lecture-based teaching methods by the physical classroom layout and furnishings.   In particular, large class sizes (approximately 120 students or more) provide both some of the greatest needs and the greatest challenges for classroom venues that facilitate active learning. The committee noted that in general, the UW-Madison campus has an existing classroom infrastructure that is physically outmoded, lacking the flexibility and technology necessary for optimal teaching and learning innovation, despite a few examples of exemplary active learning environments. In addition, the current policies and planning processes used for course scheduling neither allow optimization of the use of the physical infrastructure nor provide flexibilities needed to accommodate the transition to greater use of active learning approaches.

A large scale plan would be needed to bring many outdated learning spaces to a contemporary standard. Some of the most difficult learning spaces are in outdated buildings and would require

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[1] There is not one universally accepted definition of active learning although most definitions are similar. Definitions applicable to this report can be found here: http://www.cte.cornell.edu/teaching-ideas/engaging-students/active-learning.html and https://en.wikipedia.org/wiki/Active_learning

disproportionate funds to upgrade to contemporary learning environment standards. In considering this challenge, the committee makes the following broad recommendations[2]:

1. Create "**neighborhoods**" across campus of shared contemporary active learning spaces to enable access and maximal utilization with cost efficiencies in staffing, technologies and upkeep.
2. Re-examine policy and procedures on course scheduling to better align with instructional needs to more efficiently use our physical T&L infrastructure and emerging technological tools that provide new teaching & learning capabilities.
3. Identify funding sources for classroom upgrades that could supplement allocations from UW System. In contrast to major structural remodeling, many classroom redesign needs may be accomplished with less expensive furniture and technology upgrades.
4. Return on investment should guide learning space remodeling, even though that return on investment may be based on subjective data.
5. Seriously deficient classrooms that are either too expensive to upgrade, or that are located in buildings that are not envisioned to have a significant remaining life, should be taken out of the general assignment classroom pool and repurposed, even if small investments must be made to repurpose them.

Figure 1. Historical photos of learning spaces at the University of Wisconsin-Madison contrasted to modern active learning spaces. (top left: Pharmaceutical lecture hall[3], lower left: Empty classroom[4], top right: WisCEL space in Helene C. White Library[5], lower right: DesignLab in Helene C. White Library[6])

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[2] More specific and detailed recommendations are in the body of the report.
[3] http://www.wisconsinhistory.org/Content.aspx?dsNav=Ny:True,N:4294963828-4294955414&dsNavOnly=Ntk:All%7clecture+hall%7c3%7c,Ny:True,Ro:0&dsRecordDetails=R:IM8226

1 Background

1.1 Goal and Introduction

The Ad Hoc Committee on Learning Space Improvement was formed in the Fall of 2015 by the Provost's Office and Facilities Planning and Management to identify priorities for learning space improvement projects.   The committee was intentionally populated with those involved in the teaching mission of the University including faculty, staff and students.

The goal of the committee was to develop a learning space improvement plan which embodied the goals and principles of Educational Innovation while leveraging the funding opportunities in the biennial UWS capital budget.   The committee developed recommendations that will lead to the creation of collaborative, flexible learning spaces with adequate resources and the needed support to sustain their operation.

To accomplish this goal, the committee sought to:
- Establish a set of principles to guide decision making on instructional space remodeling.
- Consider learning environment requirements reflecting active learning pedagogies and anticipated trends in student learning.
- Frame recommendations within the context of existing facilities and reasonable transitions from existing situations to anticipated needs.
- Inventory all types of learning spaces on campus to determine alignment with current priorities and future needs.
- Identify essential elements of the current collaborative, flexible learning spaces on campus to guide fiscally responsible renovation decisions.
- Evaluate the utilization rates for all classrooms, classrooms with instructional technology, and all collaborative learning environments.
- Explicitly consider the types and anticipated life cycles of learning technologies in physical learning spaces.
- Recommend scheduling policies, revised processes, and improved practices which maximize the utilization and access to flexible learning environments by all faculty and students.

Learning is brain activity[7] as well as a social activity. Historically it was up to the learner to engage and to focus their brain activity on learning, and ultimately it still is. But research shows there is much that both the teacher and the learner can do to make the learning process easier and more efficient. Higher education institutions are researching and implementing strategies that enhance learning by making it easier for learners to engage with content and easier for teachers to achieve learning goals.   These approaches require systematic change including simultaneous changes to

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[4] http://www.wisconsinhistory.org/Content.aspx?dsNav=Ny:True,Ro:0,N:4294963828-4294955414&dsNavOnly=Ntk:All%7clecture+hall%7c3%7c,Ny:True,Ro:0&dsRecordDetails=R:IM75851&dsDimensionSearch=D:classroom,Dxm:All,Dxp:3&dsCompoundDimensionSearch=D:classroom,Dxm:All,Dxp:3

[5] http://learningspacetoolkit.org/space-browser/space-type/wiscel/

[6] The DesignLab image belongs to UW Library. contact Rosemary Bodolay <rosemary.bodolay@wisc.edu>

[7] Sousa, D. (2011) *How the Brain Learns*, 4th ed.   Corwin, Thousand Oaks, CA, 334 pgs.

pedagogy, digital learning tools and physical learning spaces. These approaches fall under a broad and simplifying characterization of "active learning" and are moving beyond the stage of experimentation[8].   In the face of emerging evidence on the benefits of active learning approaches, there are calls for higher education institutions to move away from the lecture as the teaching standard[9]. By definition, active learning requires action from the learner and that action cannot occur without creating a learning environment where action is enabled and social interaction encouraged[10].

Our peers have been moving aggressively in these directions by designing new learning spaces that facilitate active learning. Univ. of Maryland[11], Univ. of Minnesota[12], and Purdue[13], have recently built or are in the process of constructing new active learning buildings. Within the UW System, UW Eau Claire[14] has recently constructed Centennial Hall which combines extensive active learning spaces with traditional classrooms. These buildings feature rooms with seating configurations that allow students to collaborate and work in teams, with room capacities ranging from approximately 50 to 200 seats. Traditional lecture halls have not been completely eliminated in these designs, but they tend to be fewer in number and arranged to allow some student collaboration. The University of Iowa[15] and Indiana University[16] as well as the prior institutions have programs in place to align active learning courses with appropriate redesigned learning spaces designed to improve interaction amongst the learners and with the instructor.   The bottom line is that educational innovation, a campus priority, is not only about pedagogy. It also includes the digital and physical infrastructures in which learning occurs. Our university must adapt on several fronts to provide modern, competitive learning experiences for students.

We have pockets of modern learning spaces on campus that are national models for active learning. The WisCEL learning spaces[17] in Wendt Commons and Helen C. White Library were at the time (2010) national leaders in providing active learning spaces. These spaces continue to be under high demand, serving more than 5,000 students in more than 40 courses at UW-Madison.   These spaces are currently scheduled and supported outside our general assignment classroom scheduling process to promote optimal use and access. Those outside of UW-Madison, look to these spaces as models of contemporary spaces for learning. For example, administrators of an accreditation

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[8] Wieman, C. (2014) Large-scale comparison of science teaching methods sends clear message, *Proc. Natl Acad Sci USA*, 111: 23, pp. 8319-8320.

[9] Freeman S, et al. (2014) Active learning increases student performance in science, engineering, and mathematics. *Proc Natl Acad Sci USA* 111:8410–8415.

[10] Lave, J., & Wenger E. (2011) Situated Learning: Legitimate peripheral participation, Cambridge University Press, New York, NY, 138 pgs.

[11] http://umd.edu/esjcenter/

[12] http://www.classroom.umn.edu/projects/alc.html

[13] https://www.purdue.edu/physicalfacilities/energy-and-construction/construction/featured-projects/active-learning-center.html

[14] https://www.youtube.com/watch?v=Rk28EouvUIo

[15] http://tile.uiowa.edu/content/about-tile

[16] https://uits.iu.edu/mosaic

[17] http://www.wiscel.wisc.edu/

agency visited UW-Madison in September of 2014 to see exemplars of active learning spaces based on the recommendation of a visiting accreditation team. They toured WisCEL and College of Engineering classrooms, and ultimately designed their training facilities based on what they saw during their visit to Madison.

UW System initiated the Instructional Technology Improvements Program (ITIP) in the 1995-97 biennium to leverage capital resources for improving instructional environments across all System campuses. As of January 2014, UW-Madison had renovated 32 classrooms from this program at a total cost of over $14.8M. The UW System program continues in the current biennium as Classroom Renovations/Instructional Technology Improvements (CRITI) and serves as a vital funding source to upgrade instructional environments at UW-Madison.

When we consider active learning, different disciplines will approach this somewhat differently. However, the committee agreed on the need for flexible spaces that can be reconfigured to meet a variety of learning scenarios, and associated scheduling procedures that align spaces with needs for optimal utilization and accessibility.

1.2   Committee Processes

1.2.1 Scope of study

This report provides guidance for the allocation of resources to learning space improvement projects with a specific objective to inform UW System funding requests in the 2015-17 biennium and the 2017-19 biennium. The committee focused on general assignment and other spaces available for instruction on campus. The committee did not examine or propose priorities for academic department-controlled spaces with specific schools/colleges or other specialized disciplinary spaces. The committee categorized learning spaces into the categories shown in Table 1 and counts of sizes and types of spaces are included.

Table 1. Taxonomy of types of UW-Madison learning spaces and counts

No.	Name	Description	Count	
1	Seminar Room	Classroom equipped with tables and chairs for discussion type instruction (usually with a capacity of 20 or less)	Total: GA: Departmental: Seats =20: Seats >20:	91 25 66 23 45
2	Standard Classroom	Classroom that does not require specialized equipment but may include a lectern and projector (capacity 21-54)	Total: GA: Departmental: Seats <21: Seats 21-54: Seats >54:	348 255 93 21 302 25
3	Lecture Hall	Large classroom generally having sloped floor, fixed seating and lectern or demonstration area (usually with a capacity of 55-149).	GA: Departmental: Seats <55: Seats 55-149:	73 28 1 60
4	Mega-Lecture Hall	Very large classroom generally having sloped floor, fixed seating and lectern or demonstration area (usually with a capacity of 150 or more).	Seats >149:	40
5	Disciplinary Instructional Laboratory	Laboratories that support instruction and experiments specific to a discipline	Total: Class-Lab Open-Lab	807 365 442
6	Student group study areas	Common areas where groups of students can study and do group work	Total:	121
7	Collaborative learning spaces – large	Collaborative spaces equipped with group tables and various levels of technology (capacity of over 65)	Seats >64:	7
8	Collaborative learning spaces - medium	Collaborative spaces equipped with group tables and various levels of technology (capacity of 21-64)	Seats 21-64:	19
9	Computer Labs		DoIT Total: Seats <=30: Seats >30: CAE and other s/c labs Total:	18 10 8 NA
10	Spaces for repurposing	Spaces whose purpose is no longer a high priority and are under consideration to redirect for instructional use.	No audit taken	

1.2.2 Basis of Committee Recommendations

The committee's recommendations were based on the inputs described below. There are other voices and experts on campus that should also be included in future deliberations. The recommendations in this report should be taken as a starting point in informing campus direction and investment. Given the limited time and scope of this project, the committee was only able to take a broad and high-level approach to the review of learning spaces. The recommendations should be revisited on an ongoing basis with further and more detailed input provided in each subsequent iteration.

1. The recommendations were naturally influenced by makeup of the committee and the experiences and perspectives each provided. While balancing the need for a practical size working committee, a wide variety of viewpoints were sought. The committee consisted of:
   - Beth Fahlberg, Clinical Professor, School of Nursing and Faculty Associate, Division of Continuing Studies
   - Daniel Kleinman, Professor of Community and Environmental Sociology and Associate Dean of the Graduate School
   - Doug Rose, Director, Space Management Office, Facilities, Planning and Management
   - Douglas Rouse, Professor of Plant Pathology
   - Elisa Shapson, undergraduate engineering student
   - John Booske, Professor and Chair of Electrical and Computer Engineering, Director of WisCEL
   - Jon McKenzie, Professor of English, Director of Design Lab
   - Lesley Moyo, Associate University Librarian for Public Services, General Library System
   - Linda Jorn, Director of DoIT Academic Technology
   - Nancy Westphal-Johnson, Senior Associate Dean for Administration and Undergraduate Education in the College of Letters and Sciences
   - Scott Owczarek, Registrar
   - Steve Cramer, Professor of Civil and Env. Engineering and Vice Provost for Teaching and Learning.
2. A campus-wide solicitation to department chairs to identify problem learning spaces (April 2015)
3. Unsolicited comments from faculty and instructional staff (AY 2015)
4. This report did not explicitly incorporate school and college master plans as generally those plans were either still in development or do not contain specific recommendations about learning spaces.

1.3 Future Considerations

There are emerging tools to guide the assessment of learning spaces particularly with regard to active learning. These emerging tools were not employed in this study because of the immaturity of the tools and the relative cost of implementation. The Educause Learning Initiative created a

working group to develop a Learning Space Rating System (LSRS)[18]. This system provides a standard approach to evaluate rooms for active learning effectiveness resulting in a numerical value.   This system is developing and has not yet received widespread trial testing and implementation.

FLEXspace[19] is an open access repository populated with examples of learning spaces with the intent to showcase innovative design solutions.   Located at FLEXspace.org, the site is sponsored by public and private entities including several universities. This repository has a linkage with the ELI LSRS and those ratings can be entered as part of the repository.

The committee did not closely investigate either of these emerging entities. However, both should be given closer scrutiny as the UW-Madison learning space strategy develops.

While the committee felt strong progress was made in the evaluation and discussion leading to the recommendations herein, a deeper and on-going effort is needed to correct a deteriorating situation concerning suitable and modern learning spaces at UW-Madison.

2   Recommendations on Learning Space Improvement

2.1   Committee Philosophy

Over the course of its deliberations, the committee developed a consensus view of teaching and learning spaces on campus.   Regarding active learning, the campus is in transition. Although the campus investments should be directed for wider adoption of active learning, learning space configurations should neither drive those to adopt a pedagogy they are unprepared or unwilling to implement, nor discourage those from adopting new pedagogies.   Research shows that large lectures where students listen and take notes generally yield limited learning gains[7] but improved learning is tied to methods that better engage students in course content rather than narrow definitions of how content is delivered[20]. Online content delivery options are increasingly available and used as an alternative or supplement to large-scale lectures. As curricula become more streamlined and enrollments in select courses grow, delivering content in a "live" format to hundreds of students packed shoulder-to-shoulder in large lecture halls is generally not a strategy in which the university should invest.   Most universities are continuing to place lecture halls in new buildings, but they are limiting the size of those lecture halls and simultaneously investing in large collaborative learning spaces.   The large lecture is so embedded in academia that no one is yet ready to give it up despite a growing multitude of alternatives for content delivery and improved student interaction.

[18] http://www.educause.edu/library/resources/7-things-you-should-know-about-learning-space-rating-system
[19] http://flexspace.org/
[20] Falhberg, B. Rice, E., Meuhrer, R., Brey, D., (2014) Active Learning Environments in Nursing Education: The Experience of the University of Wisconsin-Madison School of Nursing, *New Directions for Teaching and Learning, Special Issue: Active Learning Spaces,* Vol 2014, Issue 137, pages 85–94.

Based on a cursory review of teaching and learning spaces and anticipated near-term budget limitations, the committee found that a quick turn-around of the university infrastructure to many modern, technology-rich sets of active learning spaces is likely unattainable.   ***The committee recommends a strategy of creating "active-learning neighborhoods" to provide access to faculty and instructional staff interested in active learning pedagogies.*** These neighborhoods are envisioned as a combination of formal classrooms and informal group study spaces.   It is envisioned that neighborhoods be created and eventually expanded to meet the demand for active learning spaces in each school and college.

2.2   The Learning Space Environment – Furniture, Technology, People

2.2.1   Fixed seating

By far, the strongest and most consistent feedback the committee received were complaints about the inability to teach in new ways in classrooms where seating is fixed and bolted to the floor. We heard direct testimonials from many instructors across campus how student seating fixed to the floor inhibited collaborative practices they were attempting to institute in their classes. ***The committee recommends systematically phasing out fixed seating in learning spaces over the next 5 to 10 years where structurally feasible.   The committee also recommends that campus avoid building additional sloped and tiered large lecture halls spaces that lack future flexibility and only support the traditional mode of lecture delivery. Where tiered lecture halls are deemed necessary, incorporate features that allow for student collaboration, use flexibility and possible later reconfiguration as teaching modes change.***

2.2.2   Electrical power access in learning spaces

Electronic devices require frequent charging necessitating ubiquitous power outlets. This is a high priority need from a student perspective in both formal learning spaces and informal places where students gather to study and work on homework. ***The committee recommends that all formal and informal learning space renovations consider the ubiquitous student need to access electrical power for recharging devices.***

2.2.3   Classroom writing surfaces

Writing surfaces support a wide variety of active learning forms. We received several comments from instructional staff concerning the need for more writing surfaces in classrooms. In some instances, as technology has been added to classrooms, the use of technology with projection screens has come into conflict with writing surfaces.   Instructors in our classrooms need both. ***The committee recommends a renewed emphasis to provide multiple writing surfaces that are accessible by both instructors and students. Extra efforts should be taken to resolve conflicts between projection screens and writing surfaces.***

2.2.4 Technology needs

Technology installed in general assignment learning spaces varies widely across campus. The current room scheduling process relies on the student information system and that system provides only general descriptions of room attributes. This limits the ability to match instructor

needs with room technology via a secondary digital tool called R25. The campus digital infrastructure and corresponding policies need refinement to address these limitations. Various manual and decentralized practices are emerging to counter these limitations that are neither efficient nor optimal.

The College of Engineering and the Wisconsin School of Business have nearly all classrooms equipped with standard technology configurations but they also provide within their budgets staffing to maintain that equipment.

There is a broad desire to have a projection screen, digital projector and a document camera in every general assignment classroom. Other technology needs are discipline and instructor specific and identification of such needs were beyond the scope of this study.   Funding not only for such equipment but also for support staffing and ongoing maintenance costs would be needed to equip our classrooms in this manner.   Large class spaces may require expanded wireless capacity as instructors engage students through their electronic devices.

An expanded technology (hardware and software) infrastructure could reduce the capacity pressures on learning spaces.   The need for large lecture halls could be significantly reduced if content and the limited interaction which occurs in large lectures can be redirected through technology.   Some faculty are ready to move in this direction now, but many are not.

Technologies are evolving rapidly. Given the importance of reaping maximum return on future investment of any and all learning space renovations and construction, it is important to achieve maximum flexibility for future use and emerging technologies in each space*.   **The committee recommends that campus planners develop learning technology standards for new or renovated learning spaces, addressing factors such as electrical power capacity, wifi bandwidth, share-able display monitors, etc. It is recommended that campus policy require every upgraded space to meet, if not exceed, minimum standards on instructional technologies, putting a premium on those that enable flexible use.***

2.2.5 People

Active learning at UW-Madison and the success of our learning spaces will ultimately depend on transforming the classroom experience of students, instructors, and staff. Shifting away from lecture-based pedagogies requires new organization of curricula, new types of assignments, and more interactive relationships between students and instructional staff. ***The committee recommends actively integrating new learning spaces with existing learning initiatives and resources, including Wisconsin Experience, Educational Innovation, DoIT Academic Technology, the Libraries, and the Teaching Academy.***

2.3   Structural changes

The committee received only limited input on needed structural changes to learning spaces. In general, the comments we received from instructors and dept. chairs appealed to larger, flexible learning spaces but lacked specifics.   Spaces that can accommodate enrollments from 75 to 125 in an active learning format are in short supply in certain parts of campus. This will necessitate in

some cases removal of walls between adjacent rooms and extensive remodeling to achieve more spaces in this range of capacity.

Some learning spaces require extensive structural changes to make them more usable learning spaces. In some cases there are obstructing columns and lack of code compliance concerning required exits. In some cases bringing these classrooms to modern standards is simply cost prohibitive despite the obvious need for remodeling. ***It is recommended that the worst performers be taken off the classroom general assignment list and solutions be developed to use them for other purposes where remodeling costs can be reduced but an acceptable level of functionality can be achieved.*** Options such as graduate student offices may provide a solution. The removal of classrooms from the general assignment pool will likely require an optimized use of our better learning spaces and may require instructional staff to travel farther between their offices and classrooms; however, the learning experience for some students could be dramatically improved with these measures.

3 Spaces outside the general assignment framework

3.1 Departmental spaces

There are two type of learning spaces of importance outside the general assignment framework. As donors fund more building projects on campus, academic departments have retained control of those spaces to address the wishes of their donors and to preference the facilities toward their own use. We refer to these spaces as departmental-controlled spaces.   In the past and as re-affirmed by this committee, ***our recommendation is to restrict the use of limited campus wide funds to spaces which are available to the broad campus community.***

While we do not challenge the base reasons for academic department spaces, they create at least two sets of challenges. The first is that these spaces eventually also require remodeling and updating. As departmentally-controlled spaces, and consistent with current campus practice, departments with their school/college would be responsible for the cost of the upgrade. Secondly, departmental spaces are inventoried but are not scheduled with the general assignment classrooms and as result gathering of campus-wide facility data and optimizing use of the campus-wide infrastructure are fragmented.

3.2 Repurposed spaces

Over time, the need for types of space change. The campus is moving to a time when more dynamic changes in space are needed.   One example is the increasing usage of library spaces for formal classroom activities. In particular some library spaces offer large, untiered rooms that are well suited for large class active teaching and learning. The committee embraced these opportunities for collaboration to solve learning space problems and ***recommends that dynamic and optimal use of campus learning space requires consideration of spaces that may not be currently assigned to the general classroom pool.***   The committee also recognized that some of these spaces serve local departmental needs that should be considered in any potential repurposing. In some cases it will be

less costly to remodel these spaces to achieve active learning environments than to remodel some of our traditional classroom spaces. Aside from library space, large amounts of space are allocated to the schools/colleges and the policies and oversight exercised by those units varies.

4   Implementation Strategies

4.1   Need for other funding sources

Without doing a full needs and cost assessment, it was clear to the committee that UWS biennial funding allocations are inadequate to remodel and maintain a large, modern campus.   The current campus infrastructure has many substandard learning spaces and there currently is no clear financially viable path to quickly correct a deteriorating situation.   This situation prompted the committee to consider providing neighborhoods of active learning spaces while a different strategy will be needed to provide broader, but more minimal learning space upgrades. ***The committee recommends the need for learning space remodeling become a higher priority amongst the many needs on campus and that other funding sources for classroom upgrades (beyond the biennial UW System allocation) be identified and pursued.*** In contrast to major structural remodeling, many classroom redesign needs may be accomplished at modest cost with furniture and technology upgrades.

4.2   Needs for policies and systems that support learning space assignment

The current system of learning space assignment is derived from a course scheduling system where faculty choose teaching times they prefer.   This has led to a situation where there are peak and bottleneck teaching times and corresponding periods of high classroom demand followed by periods where our infrastructure sits unused. There is an increasing tendency to schedule classes on Monday through Thursday, leaving Friday relatively unscheduled. A full one third of undergraduate seniors have no formal classes on Friday. While some faculty and students prefer this schedule, it leads to poor utilization of our infrastructure.

The committee recommends that both scheduling tools and policies be examined for revision to allow load leveling in scheduling practices while still allowing some faculty autonomy in selecting preferred times and locations for instruction. In essence there are tradeoffs between time and teaching location. If faculty and departments are provided options for course selection, autonomy and optimization could both be achieved at some level beyond what is possible today.

5   Specific recommendations for 2015-2017 biennium

The following rooms and spaces were proposed for remodeling in the UWS request for 2015-17.   These rooms were selected to conform to the recommendations provided in the body of the report.

140 Steenbock will convert library stack space to create a flexible, collaborative learning environment with a capacity of approximately 150 students ($1.255M)

115/116 Ingraham will combine two classrooms to create a flexible, collaborative learning environment with a capacity of 48 students ($419K)

214/215 Ingraham will combine two classrooms to create a flexible, collaborative learning environment with a capacity of 48 students ($416K)

4028 Vilas will remodel a fixed-seat flat floor lecture hall to create a flexible, collaborative learning environment with a capacity of 64 students ($297K)

119/121 Babcock will remove and replace a wall to a larger flexible learning environment with capacities of 30 and 54 students ($42K)